

Crenshaw/LAX Transit Project



Metro®

CRENSHAW/LAX TRANSIT 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).

OCTOBER 2019

TABLE OF CONTENTS

	Page No.
Project Overview	1-6
Executive Summary.....	7-11
Project Update	
• Project Schedule	
○ Project Summary Schedule.....	12
○ Progress Summary.....	13
○ Planned vs. Actual Progress.....	13
○ Key Milestones Six-Month Look Ahead.....	14
○ Major Equipment Delivery Status.....	15
○ Critical Path	16
○ Project Schedule Contingency Drawdown.....	17
○ Risk Management Narrative.....	18
• Project Cost	
○ Project Cost Status & Analysis.....	19-20
○ Cost Contingency Drawdown and Analysis.....	21
○ Summary of Contract Modifications.....	22
Disadvantaged Business Enterprise (DBE)	23-24
Project Labor Agreement.....	25-26
Financial/Grant.....	27
Project Staffing	28-29
Real Estate	30
Quality Assurance.....	30
Environmental	30
Construction and Community Relations	31
Creative Services	31
Safety and Security.....	32
Appendices	
• Chronology of Events.....	33-34
• Project Cost Status – Southwestern Yard.....	35-36

PROJECT OVERVIEW

Project Background

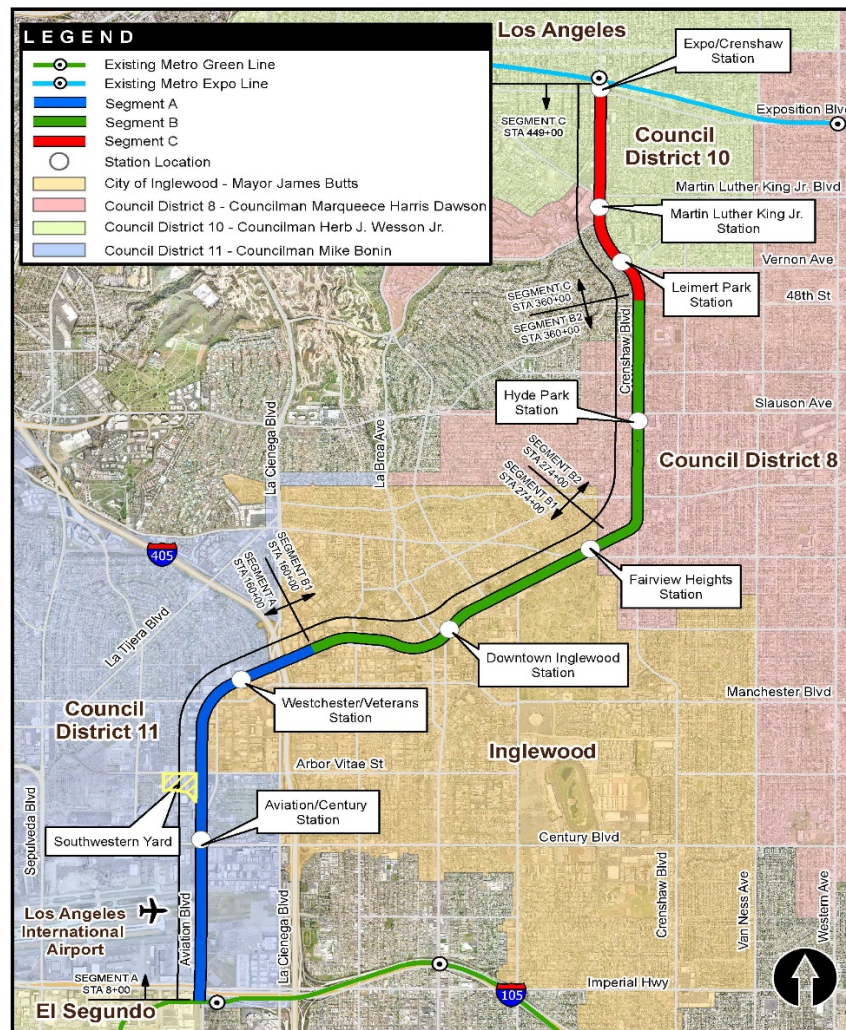
The Crenshaw/LAX Transit Project is a north/south corridor that serves the cities of Los Angeles, Inglewood, Hawthorne and El Segundo as well as portions of unincorporated Los Angeles County. The alignment extends 8.5 miles, from the intersection of Crenshaw and Exposition boulevards to a connection with the Metro Green Line at the Aviation/LAX Station. The project provides major connections with the Los Angeles International Airport (LAX) as well as links to the Metro Green Line, the Exposition Line and countywide bus network.

Two additional stations, Leimert Park and Westchester/Veterans were funded by the City of Los Angeles and by Metro and were approved to be part of the project by the Metro Board in May 2013. The Metro Board in July 2014 and again in May 2015, approved a revision to the project alignment to include accommodations to the alignment at 96th street to not preclude a future light rail Metro Rail station being developed as part of the Airport Metro Connector (AMC) project. The accommodations included shifting the ultimate track configuration to the west side of the alignment to confine the revised track-work on Metro right-of-way to mitigate potential cost exposure. These accommodations are not funded by the Crenshaw/LAX Transit Project but are paid for by the AMC project.

The alignment is comprised of a double-tracked right-of-way consisting of sections of at-grade in-street, at-grade within railroad right-of-way, aerial, and below-grade guideway sections, eight stations, park and ride facilities at two locations, utilities, landscaping, roadway improvements required by the project and a maintenance & storage facility (Southwestern Yard).

The Project configuration is based on years of planning and environmental work that is reflected in the following milestones:

- Major Investment Study – 2003
- Metro Board approval of Alternative Analysis – December 2009
- Initiation of Preliminary Engineering – September 2010
- Metro Board certification of Final EIS/EIR – September 2011
- FTA issuance of Record of Decision – December 2011
- TIFIA and TIGER II Grants approved September 2012



Major Procurements

Contract C0990 Crenshaw/LAX Advanced Utility Relocations

The design of several early utility relocations was advanced sufficiently into final design to allow for bidding of critical early utility relocations. This contract includes relocating three (3) existing duct banks that feed various NAVAIDS on the south airfield complex. New ductbank infrastructure was built by Metro with the fiber replacement work and cut-over by FAA/LAWA. These ductbanks contain fiber lines and power lines which belong to both LAWA and FAA. Since the track alignment is below grade at these crossings, the ductbanks were relocated in advance to allow for the construction of the track alignment. In addition, other wet utilities along the Harbor Branch and Crenshaw Boulevard segments of the corridor that can be relocated in advance were included as part of this contract.

Design-Build Contract C0988 Crenshaw/LAX Transit Corridor

This is the largest project contract which completes final design and construction of the infrastructure required along the corridor alignment. The structures required to be constructed are eight stations (at-grade, elevated and underground), grade separations including flyover structures, cut and cover trenching, tunneling and three park-n-ride facilities. The scope of work includes all the necessary systems work including train control, traction power supply substations and distribution, overhead catenary, communications, and systems tie-in to the existing Metro Green Line. The project delivery method for this contract was design-build utilizing a two-step best value procurement approach with submittal of qualification statements through an RFQ process, prequalification of qualified proposers followed by release of a RFP soliciting technical and price proposals with an option at Metro's discretion for best and final offers (BAFO).

Design-Build Contract C0991 Southwestern Yard

The Board-adopted 2009 Long Range Transportation Plan (LRTP) for Los Angeles County envisioned one new central Light Rail Transit (LRT) Maintenance facility to be used by all projects. Since the LRTP adoption, substantial progress on light rail system planning and development, including more accurate vehicle assignments, cost estimates, and functional requirements, has led Metro to conclude that two new LRT yards, an Eastern Yard and a Southwestern Yard, are necessary. This contract constructed the Southwestern Yard which consolidated maintenance facility requirements for this project as well as the operating Metro Green Line, proposed South Bay Metro Green Line Extension and proposed Metro Green Line to LAX. Southwestern Yard is complete and turned over by the contractor to Metro Operations.

Contract C0992 Crenshaw/LAX Concrete Ties and Assembly Items

Metro added a contract for procuring owner-supplied equipment for the Design-Build Contract C0988 Crenshaw/LAX Transit Corridor Contractor. The equipment within the contract scope of work includes concrete ties and assembly items.

Contract C0992A Crenshaw/LAX Rail and Bumping Posts Procurement

Metro added a contract for rebidding the procurement of running rail and bumping posts for the Design-Build Contract C0988 Crenshaw/LAX Transit Corridor Contractor including a bumping post for the Design-Build Contract C0991 Southwestern Yard.

Light Rail Vehicles

The Board approved exercising Option 1 of Contract P3010 with KinkiSharyo International (KI) to provide light rail vehicles (LRV) for the Crenshaw/LAX project. The total number of vehicles in the Option is 28 which include 20 LRVs for the Crenshaw/LAX project and two additional cars for spares. The remaining six cars are for replacement of Metro's current fleet. The first Option 1 P3010 car was delivered in May 2017. The final P3010 car (22nd car) for Crenshaw/LAX project was delivered in September 2017, completing the Option delivery for the Crenshaw Project. All twenty-two Crenshaw cars are currently in revenue service on the Green and Blue Lines. KinkiSharyo/ASTS to work on the Cutover (revenue service) software development to include Crenshaw's final alignment, track profiles, and

berthing locations. Once completed, a series of lab software validation tests were performed prior to implementation on the P3010s. Vehicles software will be field verified and tested following each Segment's (A, B and C including the Green line junction) SIT-1 completion. This will be done in coordination with the mainline contractor.

Rail Operations Center (ROC)

The existing functional operations at the ROC are being expanded to accommodate the central control functions associated with five new rail lines including Crenshaw/LAX Project. The Project is contributing \$3.5 million towards this expansion which is scheduled to be completed in time for Crenshaw/LAX Project System Integration phase 2 testing (SIT-2), pre-revenue, safety drills and revenue service. ROC is on target to complete installation, testing and be ready for SIT-2 by the end of 2019. A remote terminal is being considered to start SCADA pre-testing prior to ROC being available.

Fare Collection

A notice-to-proceed was issued on January 30, 2018 to the existing Metro Universal Fare System (UFS) contractor, Cubic Transportation Systems, to procure UFS equipment for the Crenshaw/LAX Project eight stations. The contractor commenced manufacturing of the equipment in February 2018 and completed manufacturing of the equipment and shipped to a local storage area where it is being stored until the Crenshaw/LAX Project stations become ready for its installation. UFS contractor and mainline contractor are coordinating the details required for preparation, access and installation at each station.

Program Management

The WSCC contract is being managed by a team of Metro and consultant personnel jointly located at the Integrated Project Management Office (IPMO). Mott MacDonald provides engineering and design support services while Stantec, Inc., provides construction management support services. An overview of staffing is provided under the Staffing section of this report. The on-site program management team is also supported by Metro Headquarters resources to include, but not limited to, engineering, risk management, environmental, quality management, operations, and creative services departments. In addition, a Project Management Support Services (PMSS) consultant is providing resources to supplement staff.

Project Schedule and Budget:

The Revenue Service Date (RSD) is forecast for summer/fall of 2020.

In May 2013, the Metro Board approved a Motion that amended the fiscal year 2014 Proposed Metro Budget to include funding for an underground station at Leimert Park Village and an at-grade station at Hindry as part of the baseline project. This Motion added \$135 million to the LOP budget which included \$80 million in uncommitted fiscal year 2014 funding and \$55 million from the City of Los Angeles. Metro reached agreement with the City of Los Angeles to cover the incremental cost of the stations above the \$80 million identified in fiscal year 2014 funding which the Metro Board approved in May 2013.

With Metro Board approval on June 27, 2013, the additional \$135 million is included in the sources of funds chart as well as the additional \$160.1 million for the increased cost of the base work. All recommendations were approved by the Metro Board on June 27, 2013 except that change order authority was maintained at \$500,000. This board action amended the life of project budget to \$2,058 million.

The Metro Board approved on May 28, 2015, an increase in the amount of funding that the Crenshaw/LAX Project is contributing toward the total cost of the Southwestern Yard Project. An additional \$10.8 million is required to be funded by drawdown from the Unallocated Contingency Current Budget SCC 90 and added to the Southwestern Yard Current Budget SCC 30. The current budget includes the 49% cost allocation share that the project is responsible for paying which includes funding of the design and construction for the Southwestern Yard. This amount is revised to \$150.2 million out of a new total of \$307.2 million adopted by the Metro Board.

The amount of funding available for the Crenshaw/LAX Transit Corridor Project, excluding the Southwestern Yard \$150.2 million allocation and Environmental/Planning budget of \$26.0 million is \$1,881.8 million. Although there is no change to the Total LOP Current Budget there was a reallocation for changes to the SCC elements within the Current Budget in April 2017. The reallocation was required due to the drawdown to date of the SCC 90 Allocated Contingency for changes issued to the design-build contractor, additional relocations of utilities by third parties, additional legal services, and special service as well as an increase in professional services for construction and project management oversight.

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.

The Project is also engaged in social media outreach and various marketing and advertising efforts designed keep the public informed and excited about the Project. These efforts are aimed at promoting businesses that are affected by construction.

System Integration:

The Project's integration of three separate lines, each possessing distinct system technologies, presents significant challenges for both the Project and Metro. The Project is coordinating the systems interface design, construction, testing, and commissioning while the Agency maintains revenue service on the operating lines.

Metro project team is coordinating progress with operations, mainline contractor and ROC management team to ensure all requirements are in place to support System Integration Testing Phase 2 (SIT-2).

Rail Activation:

The Project and Metro Operations recognize the extensive planning required in preparation for rail activation of the new regional light rail service the Project will enable through the south Los Angeles area. Associated detailed planning and scheduling efforts to optimize the extensive efforts are underway.

As of the end of October 2019 the Project has achieved 94.2% completion based on earned value measurements for design and construction. The focus of the Project continues with facilitating critical path construction activities. Work is trending behind schedule due to the alignment contractor's progress. The following is an overview of current design and construction activities.

EXECUTIVE SUMMARY

Design Status

Design - Build Contract C0988 (Mainline Contractor) –

Walsh-Shea Corridor Constructors (WSCC) continues design and engineering in support of construction, installation, and testing. The design/engineering support during construction is identified as potential risk in the project due to extensive repair and rework required (for more details see Key Concerns 3 and 4) affecting almost all areas of construction, installation and testing.

Design - Build Contract C0991 Southwestern Yard Contractor (Division 16) -

Hensel Phelps/Herzog JV (HPH) has completed final design including design and engineering in support of construction and Contract closeout. A separate package for future expansion of the main shop was developed (preliminary engineering level only) and turned over to Metro.

Construction Status

Mainline Contractor - WSCC continues construction along all areas of the alignment. The four at-grade stations structure concrete placements are substantially complete and finish work continues for these stations. All six bridge superstructures are substantially complete and continuing with finishes, systems installations and testing. The aerial station structure concrete placement is substantially complete. The three underground stations remain at various levels of completion with emphasis on electrical, mechanical, systems and finish work inside the stations and entrance structures. WSCC is continuing with systems LFAT and has started livewire and clearance testing in the south section of the Project.

Trackwork is nearing completion with wayside and OCS/OCR work continuing along the alignment. System work continues in the stations for traction power, communication and train control including Local Field Acceptance Test (LFAT). WSCC and Metro continue to coordinate with DWP and SCE for power energization and other utilities (water, gas, communication, phone) at various locations.

Road restoration of Crenshaw Bl. is substantially completed in the Hyde Park neighborhood. Road restoration work includes the removal of concrete panels, underground utility improvements, back-fill and roadway paving.

Southwestern Yard (Division 16) – HPH has achieved Substantial Completion as of January 30, 2019 and temporary certification of occupancy was issued on February 15, 2019. The contractor completed all punch list items and is working on closeout items which should be completed by end of the year. Metro continues the closeout process for this Contract.

Cost and Schedule Summary

Metro issued in September 2018 a non-compensable unilateral change order to WSCC to extend their substantial completion milestone to December 11, 2019. Metro is evaluating a potential 2020 date for revenue service based on the revised substantial completion milestone date.

WSCC in September, submitted a preliminary schedule update for the July 2019 period of performance. This update indicated the contractor has alleged an additional 32 calendar days delay to their Substantial Completion date. Meetings have been held with contractor to address the alleged issues and potential contractor mitigation.

No schedule updates by WSCC have been submitted for the August 2019, September 2019 and October 2019 periods of performance.

WSCC Schedule Metrics – Mainline Contractor

	Original Contract Date/Duration	Time Extension (CD)	Current Contract Schedule	Forecast (Contractor)	Variance CD (Trending)
NTP	09/10/13				
Substantial Completion	09/08/18	459	12/11/19	5/12/20	-153 days

HPH Schedule Metrics – Southwestern Yard Contractor

	Original Contract Date/Duration	Time Extension (CD)	Current Contract Schedule	Forecast (Metro PMS)	Variance CD (Trending)
NTP	06/29/15				
Substantial Completion	10/31/18	91	01/30/19	01/30/19 (Actual)	Completed

Project costs continue to track within budget and projected contingency limits. To date, the design and construction changes for WSCC related to base scope represent approximately 13.8% of the contract value with a potential to increase to 14.8%. For HPH, the changes represent 1.2% of the contract value. Detailed cost information is provided later in this report.

Key Management Concerns

No. 1: WSCC Construction Schedule Progress

Status/Action

Metro is evaluating a potential Summer/Fall of 2020 date for revenue service based on the revised WSCC Contract Substantial Completion Milestone date of December 11, 2019. The contractor's schedule submittal, July 2019, reflects additional alleged delays of 32 calendar days since previous update. The total reported slippage is now 153 calendar's day delay. No schedule updates by WSCC have been submitted for the August 2019, September 2019 and October 2019 periods of performance. Metro's assessment is that WSCC's progress is continuing to slip behind schedule. This trend will continue unless mitigation measures are developed, agreed to and are implemented by the contractor.

Progress on construction activities continue to slip based on WSCC's weekly six-week look ahead schedule. Efforts to stop the continuous schedule slippage may include resequencing of work, additional resources, selective overtime and weekend work. Coordination and integration of field work needs to be strengthened in all areas of construction, including electrical, finishes, systems, motor control centers/communication interface cabinets, TPSS/Auxiliary power, motor control centers, communication interface cabinets, overhead conductor rail, traction power, distributed power, train control installation, and testing. In addition to the above issues, elevator structural frames fabrication and installation are being delayed and progress on the elevator installation work is slower than contractor's plan.

No 2: Remaining Contingency is less than 2% of Total Project Budget.

Status/Action

Metro monthly monitors and reports on the drawdown of contingency. In October 2019 there was a replenishment to contingency of \$4.2 million which increased the remaining contingency to \$16.5 million. The remaining contingency is 0.8% of total project current forecast and 10.1% of total project cost-to-go.

Metro initiated in July 2018 reallocating the associated expenditures to date for specific scope of work. The reallocation allows the Project to use these funds for additional contractor modifications, increased third party requirements and professional services modifications to support a revised forecast completion schedule. The reallocation therefore allows Metro to replenish a portion of the Crenshaw/LAX Project contingency.

Metro has \$60 million in fiscal year 2020 available for specific scope of work that is eligible to be reallocated to a non-Crenshaw/LAX Project. This \$60 million is in addition to the \$68 million made available in fiscal year 2019, for a combined total of \$128 million. In fiscal year 2019, \$68 million was reallocated. In fiscal year 2020, of the \$60 million available, there has been \$17.5 million reallocated through the end of October 2019.

No. 3: WSCC Design/Engineering Support during Construction, Installation and Testing

Status/Action

Various elements of design support during construction are affecting almost all areas of construction and impacting the work progress without having a clear plan to improve performance in the field. These impacts include items such as the emergency fans seismic calculations submittals taking longer than planned creating potential delays to construction, installation and testing schedule and inefficient work progress due to damaged and repair requiring engineering solutions (RFI's, submittals, material, etc.) and time for rework. There are other engineering/design support activities that are impacting progress such as test procedures, power coordination studies, submittals, requests for information (RFI's) and deviation requests. Metro strongly believe that the Engineer of Record (EOR) needs to be present during LFAT and systems integration testing (SIT) Phase 1 to address field issues. The presence of the EOR could help mitigate potential delays.

No. 4: WSCC, Damaged, Repair, Rework and Incomplete Work

Status/Action

Several areas of work along the alignment that is the responsibility of the contractor to perform could not be completed due to damaged, incomplete and missing components. This has caused the contractor's progress to be less than planned, impacting the follow-on subcontractors work and creating inefficient performance. These issues impact the contractor's progress payment amounts, slows down progress and pushes activities to be performed in parallel creating crewing availability issues. In addition, the required rework has an impact on design, procurement, installation, testing and commissioning progress.

Contractor has been investigating and addressing blocked, damaged conduits and systems pathways in tunnels and underground stations. Metro has requested the contractor to reflect all these forensic investigation activities and corrective measures in their monthly schedule update, but only a few activities have been added to the schedule. The magnitude of damage to conduit is significantly greater than originally known by the contractor affecting all tunnel invert conduits and various stations systems including fire alarm system. Contractor is preparing shop drawings and procuring material and has started the surface mounted conduits in the tunnels. An action plan and recovery plan are required to be prepared by the contractor for all the rework including the conduit rework in the tunnels.

No. 5: 3rd Party Coordination and Impact on follow on activities

Status/Action

Multiple areas of work along the alignment are being affected due to contractor coordination issues with 3rd parties. Multiple items such as power and water services, plus other interfaces with gas, telephone, communication and City of Los Angeles known requirements are affecting work progress.

Affect of contractor's 3rd party utility coordination continues to progress slower than anticipated. The progress and energization of auxiliary power sites are affecting the distribution of power to underground facilities. The contractor needs to mitigate to avoid impact to critical testing activities.

Project Construction Photos



EXPO/CRENSHAW STATION – Placing reinforced concrete pipe for U – storm drain on the west side of the intersection of Obama Blvd. and Crenshaw Blvd.



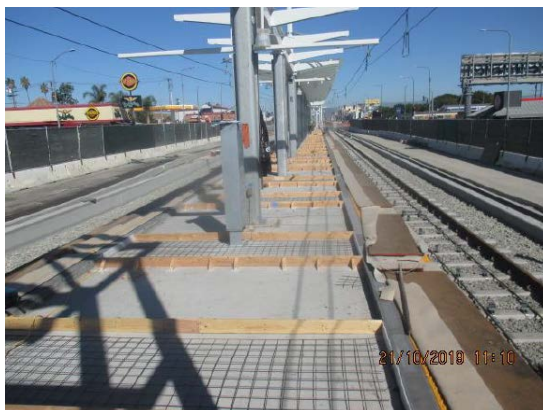
LEIMERT PARK STATION – Setting canopy piece over main entrance of the portal at the plaza level.



MARTIN LUTHER KING JR. STATION - Excavating Capri sewer line for E - Line. storm drain at the topside.



PARK MESA – Curb and gutter placement on the southbound side of 60th St. and Crenshaw Blvd.



HYDE PARK STATION – Installation of blocking for topping slab on the platform.



UNDERGROUND STRUCTURE #3 - Continued forms installation of overhead conductor rail for contact System on the southbound tunnel at Sta. 286 + 56.

PROJECT UPDATE

PROJECT SCHEDULE

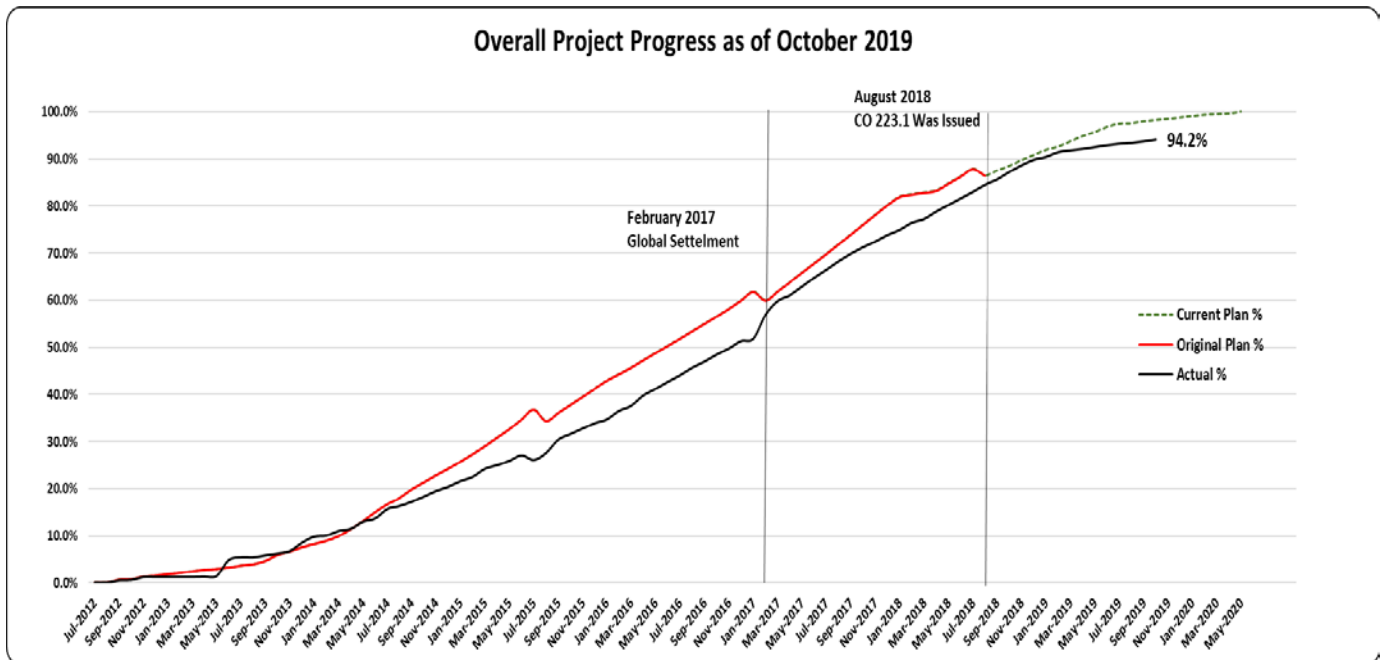
Project Summary Schedule

Activity Name	Crenshaw/LAX Level 1 Schedule				MASTER SCHEDULE OCTOBER 2019					
	Finish	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Crenshaw/LAX Transit Corridor - Master Schedule	24-Oct-20									
Milestones & Key Dates	14-Oct-20									
Program Elements	20-Jul-20									
865512 - Crenshaw/LAX	24-Aug-20									
C0990 - Advanced Utility Relocation	27-May-16 A									
C0992 - Concrete Ties and Assembly Items	15-Aug-14 A									
C0992A - Running Rail & Bumping Post	08-May-15 A									
C0988 - Pre-Construction Crenshaw/LAX	12-May-20									
C0988 - Construction & Installation	24-Aug-20									
Sitework	21-Nov-19									
Stations	24-Feb-20									
Guideway & Track	02-Jan-20									
System-Wide Components	20-Feb-20									
Systems	13-Jan-20									
Testing	12-May-20									
Substantial Completion	12-May-20									
Start Up	24-Aug-20									
Pre - Revenue Operations	24-Oct-20									
Revenue Service	24-Oct-20									
Revenue Service Summer/Fall of 2020	24-Oct-20*									
860003 - Southwestern Yard and Paint Body Shop	30-Jan-19 A									

Progress Summary

	Status	Change from Last Period	Comment
Current Revenue Service:	10/30/2019	0	Under Review
Forecast Revenue Service:	-	0	Revenue Service Summer/Fall of 2020
TIFIA Revenue Service:	10/30/2019	0	Under Review by TIFIA Office
Final Design Progress:			
Contract C0988	99.8%	0.0%	Design Services During Construction Behind Schedule
Contract C0990	100%	None	Design Completed
Contract C0991	100%	None	Design Services During Construction Completed
Contract C0992	100%	None	Design Completed
Contract C0992A	100%	None	Design Completed
Construction Contracts Progress:			
Contract C0988	91.1%	0.1%	Behind Schedule
Contract C0990	100%	None	Completed
Contract C0991	100%	None	Completed
Contract C0992	100%	None	Completed
Contract C0992A	100%	None	Completed

Planned vs. Actual Progress



Key Milestones Six Month Look Ahead

	Milestone Date	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20
OCS Live wire and Clearance SIT-1 Tests (Segment A)	10/30/19A	⬡					
Ventilation Equipment and Dampers - UG #3 Installation *	11/07/19		⬡				
MCC Procure Deliver and Set - 60th Aux Power *	12/04/19			⬡			
MCC Procure, Deliver and Set - Victoria Aux Power *	12/05/19			⬡			
MCC Procure, Deliver and Set - 104th Aux Power *	12/11/19			⬡			
Contractual Milestone 3, Start All System Integration Tests (SIT-1), Forecast *	12/12/19			⬡			
Ventilation Equipment - MLK Station Installation and Testing *	01/07/20				⬡		
Aux Power at Victoria Ave - Permanent Power Drop - LADWP - Install Equipment, Cable, Energize & Monitor *	01/09/20				▽		
TPSS-10 Permanent Power Available Expo *	01/10/20				⬡		
Ventilation Equipment - Expo. Station Installation and Testing *	01/21/20				⬡		
Ventilation Equipment and Dampers - Leimert Station Installation *	01/23/20				⬡		
TPSS-09 Permanent Power Available MLK *	01/24/20				⬡		
Aux Power at 60th St - Permanent Power Drop - LADWP - Install Equipment, Cable, Energize & Monitor *	01/29/20				▽		
Aux Power at 104th St - Permanent Power Drop - LADWP - Install Equipment, Cable, Energize & Monitor *	02/07/20					▽	
Radio Room Ready Ready - UG1	02/08/20					⬡	

 MTA Staff
  MTA Board Action
  FTA (Federal Transit Administration)
  Utility Company
 Other Agencies
  C0991 D/B Contractor
  Design Consultant
  C0988 D/B Contractor
 "A" following date is actual and completed
 * New Date

Major Equipment Delivery

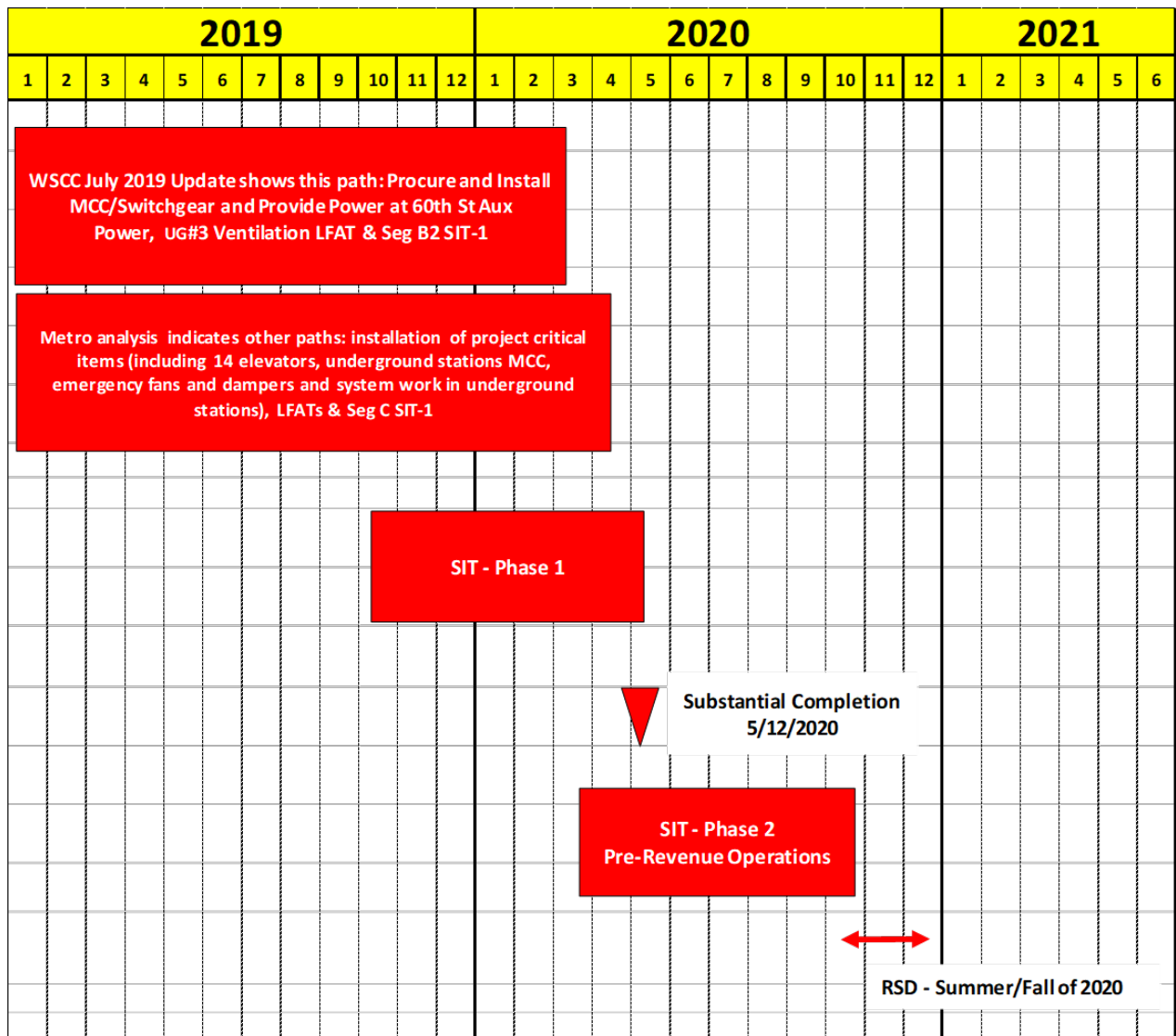
Metro Supplied Equipment

Equipment	Initial Procurement	Scheduled Delivery	Scheduled Installation
LRT Vehicles	(NTP) 8/20/12 A	Option 1 9/1/17 A	N/A
Ticket Vending Machines and Equipment	1/30/18 A	2/28/19 A (Warehoused)	5/1/2020 (Prior to RSD)

Mainline Contractor Equipment Delivery Requirements

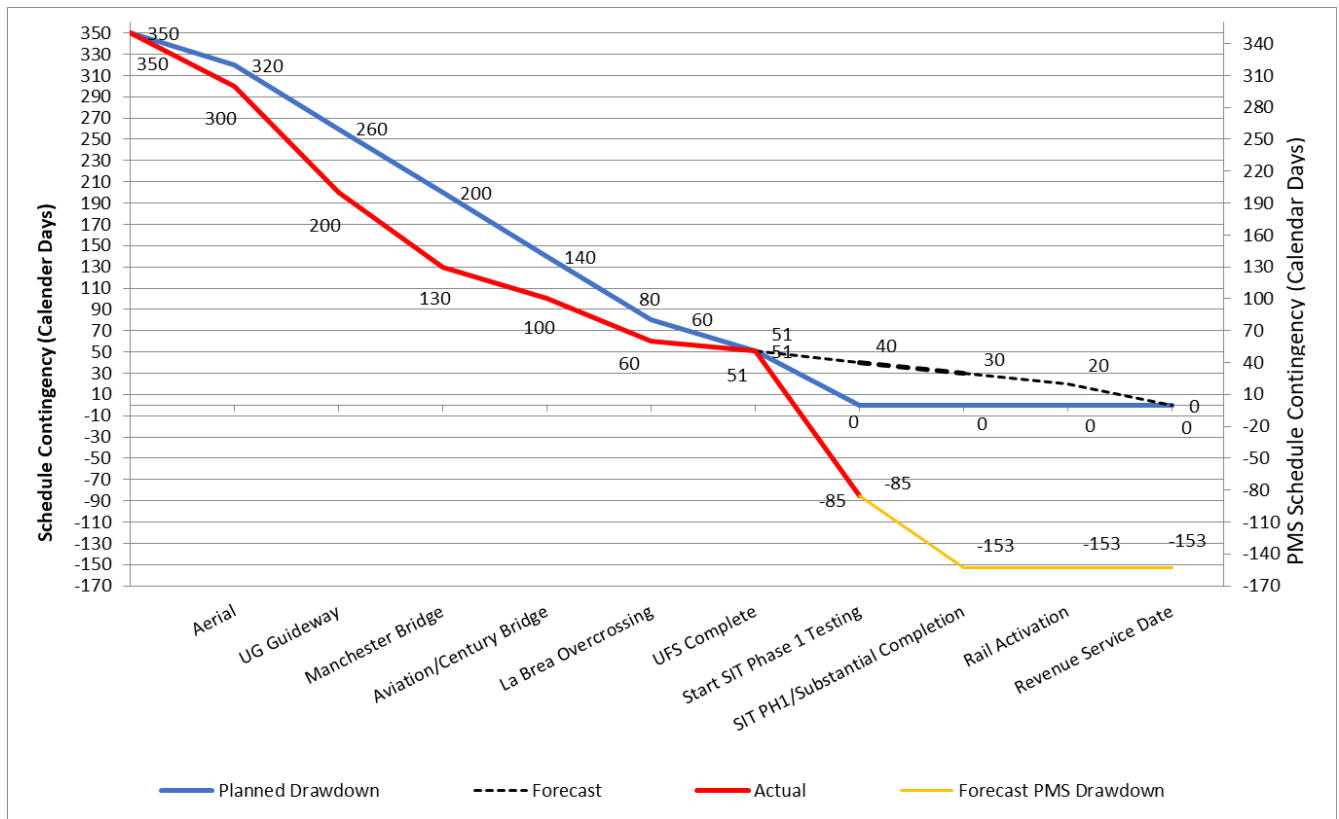
Activity Name	Early Finish	Need Date
Fabricate, Edge Lights – MLK Station	March 2020	September 2019
Fabricate, Edge Lights – Expo Station	March 2020	September 2019
Fabricate, Edge Lights – Leimert Station	February 2020	August 2019
Fabricate, Test & Deliver MCC's - 104 th Street	November 2019*	August 2019*
Fabricate, Test & Deliver MCC's - Victoria/60 th Street	November 2019*	June 2019*
*Requires schedule mitigation by Mainline Contractor		

Critical Path



The critical path of the Project remains completing construction activities, then systems wiring and commissioning of communications, train control, OCS/OCR installations and field acceptance testing. The critical path then flows through Systems Integration Testing (SIT), Phase I (by WSCC) and then SIT Phase II (by Metro), leading to pre-revenue services and revenue service.

Project Schedule Contingency Drawdown



Metro issued in September 2018 a non-compensable unilateral change order to WSCC to extend their substantial completion milestone to December 11, 2019. Thus, performance measurement is now tracked against this new date.

The contractor last schedule update submitted was for period as of July 2019. They reported they are behind schedule, adding additional alleged delays reported for this period. Metro assessment is that WSCC is behind schedule by at least 153 calendar days. Metro expects that part of the alleged delay could be mitigated and Metro is meeting with WSCC to discuss detail schedule issues and possible path forward.

Metro is evaluating a potential summer/fall 2020 date for revenue service based on the revised substantial completion milestone date.

Risk Management Narrative

Summary of Risks

Within this reporting period no risks were closed. No additional new risks were identified and added. There is a total of thirty (30) risks to be managed in the next reporting period.

Of the thirty (30) risks, eleven (11) are scored as high (10 to 20 risk rating), seven (7) as medium (4 to 9 risk rating), and twelve (12) as low (Less than 4 risk rating).

Top Risks: The table below shows the top project risks:

Risk ID	SCC	Risk Description	Risk Rating
124	50	Main Line testing prior to pre-revenue operations may take longer than expected, resulting in increased Main Line Metro and Consultant costs and potential delay to December 11, 2019 - Substantial Completion.	18
359	80	Extended Overhead or productivity loss claims exposure not covered by cost impacts in individual risks.	18
362	50	Schedule activities that are critical to completion (Trackwork, OCR/OCS, TPSS and Auxiliary Power Energization, Emergency Fans, Train Control wiring/testing and Communications equipment installation/wiring/testing, Fire Alarm including Damaged Tunnel Conduits).	16
372	20	WSCC Design/Engineering Support during Construction, Installation and Testing	15
373	20	WSCC Damaged, Repair, Rework and Incomplete work including tunnel conduits, Track plinths, Communication (Fire Alarm System).	15
369	20	Delay of fire rated conduit/cable installation.	15
374	50	3rd Party coordination of civil work and street improvement additional scope work requirements and Auxiliary Power sites.	13
355	50	Issues with long lead delivery or improper planning for integration, testing and startup of Communication systems.	12
201	50	DB unable to obtain critical skilled specialty workers needed for complex systems, elevator testing, etc.	12
277	50	SCADA interface between ROC & field installations could impact Metro's SIT2.	11
354	50	Issues with energization of Traction Power. Auxiliary Power equipment procurement, and coordination with DWP and Edison.	11

Newly Identified Risks

- There is one new item added to the risk register.

Closed Risks

- Two risks were closed in this period.

Risk Score Changes

- *Risk score for top risk item (369) was changed from 20 to 15 risk rating.*

Actions in Next Reporting Cycle

Continuous efforts in Risk Management will be made through the following actions:

- Update the project risk register.

PROJECT COST

Project Cost Analysis

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	GUIDEWAYS	471,335,000	-	450,354,375	-	438,881,218	6,020,703	430,941,336	-	438,881,218	(11,473,157)
20	STATIONS	153,906,000	-	315,050,000	-	311,216,717	4,479,807	282,043,585	-	311,216,717	(3,833,283)
30	SUPPORT FACILITIES SOUTHWEST YARD	66,673,000	-	71,164,000	-	67,318,266	140,816	66,066,965	-	67,338,361	(3,825,639)
40	SITWORK/SPECIAL CONDITIONS	235,576,000	-	395,798,361	(4,801,874)	398,953,526	(10,274,076)	344,644,564	(4,801,874)	399,380,550	3,582,189
50	SYSTEMS	125,132,000	-	169,436,000	-	174,966,183	4,288,407	137,986,476	-	174,969,936	5,533,936
	CONSTRUCTION SUBTOTAL (10-50)	1,052,622,000	-	1,401,802,736	(4,801,874)	1,391,335,910	4,655,657	1,261,682,927	(4,801,874)	1,391,786,783	(10,015,953)
60	RIGHT-OF-WAY	132,294,000	-	127,490,000	(1)	133,697,246	19,605	133,563,584	-	133,697,247	6,207,247
70	LRT VEHICLES	87,780,000	-	83,571,544	-	83,571,544	-	81,362,870	-	83,571,544	-
80	PROFESSIONAL SERVICES	273,147,000	-	368,734,466	514,080	406,085,572	3,626,868	374,703,659	636,139	406,404,715	37,670,250
	SUBTOTAL (10-80)	1,545,843,000	-	1,981,598,746	(4,287,794)	2,014,690,273	8,302,130	1,851,313,040	(4,165,735)	2,015,460,289	33,861,543
90	UNALLOCATED CONTINGENCY	177,157,000	-	50,401,254	-	-	-	-	4,165,735	16,539,711	(33,861,543)
	TOTAL PROJECT 865512 (10-100)	1,723,000,000	-	2,032,000,000	(4,287,794)	2,014,690,273	8,302,130	1,851,313,040	-	2,032,000,000	-
	ENVIRONMENTAL/PLANNING - 405512	5,526,150	-	5,526,150	-	5,526,150	-	5,526,150	-	5,526,150	-
	ENVIRONMENTAL/PLANNING - 465512	20,473,850	-	20,473,850	-	20,022,881	-	20,022,881	-	20,473,850	-
	TOTAL PROJECTS 405512 & 465512 (ENV/PLANN'G)	26,000,000	-	26,000,000	-	25,549,031	-	25,549,031	-	26,000,000	-
	TOTAL PROJECTS 405512, 465512 & 865512	1,749,000,000	-	2,058,000,000	(4,287,794)	2,040,239,304	8,302,130	1,876,862,071	-	2,058,000,000	-

1. Expenditures are Cumulative through November 1, 2019.
 2. Expenditures exclude \$6.6 million for State Board of Equalization (SBOE) decision to tax LRT Vehicle deliveries since August 2016. Metro is appealing the decision by the SBOE but paid tax so as not to incur any late fees.
 3. Expenditures exclude \$5.5 million for various right-of-way and professional services costs that are being reallocated to other local funding.

The project numbers 405512, 465512, 865512 and 860003 are internal to Metro and are used to differentiate between environmental/planning and construction components of the project.

Original Budget:

The Board in October 2011 established the Life-of-Project (LOP) Original Budget of \$1,749 million for the Crenshaw/LAX Transit Project.

Current Budget:

There have been two increases in the total LOP Current Budget to date:

- The Board in December 2012 approved an increase of \$13.9 million for a new LOP Current Budget total of \$1,762.9 million. The Unallocated Contingency Standard Cost Category (SCC) 90 budget line item was increased by the \$13.9 million for a new total of \$191.1 million.
- The Board in June 2013 approved an increase of \$295.1 million for a new LOP total of \$2,058.0 million. The total increase was based on two actions:
 - Increase LOP base project scope in the amount of \$160.1 million, and
 - Increase LOP to include the options for Crenshaw/Vernon Station (Leimert Park Village) and Florence/Hindry Station in the amount of \$135.0 million.
- The Board in May 2015 approved an increase in the amount of funding that the Crenshaw/LAX project is contributing toward the total cost of the Southwestern Yard Project. An additional \$10.8 million was drawdown from the Unallocated Contingency Current Budget SCC 90 and added to the Southwestern Yard Current Budget SCC 30. The Current Budget includes the 49% cost allocation share that the project is responsible for paying which includes funding of the design and construction for the Southwestern Yard. This amount was revised to \$150.2 million.

The \$150.2 million is spread among the SCC 30, 40, 60, 80 and 90 in the Cost Report by Element table above. A project cost status chart depicting the LOP Current Budget for the Southwestern Yard Project is included in the appendix section of this report. The Current Budget allocation for Crenshaw/LAX Transit Project only, excluding the Southwestern Yard Project \$150.2 million 49% allocation and the Environmental/Planning Current Budget of \$26.0 million, is \$1,881.8 million.

Although there is no change to the Total LOP Current Budget there was a reallocation for changes to the SCC elements within the Current Budget in April 2017.

Commitments:

Commitments decreased by \$4.3 million this period to \$2,040.2 million which represents 99.1% of the current budget. The total decrease is related to design-build Contract C0988 Crenshaw/LAX Transit Corridor, real estate acquisition, professional services and unencumbering cancelled purchased orders. The total commitments include \$149.8 million for the Southwestern Yard 49% allocation.

Expenditures:

Expenditures increased by \$8.3 million this period to \$1,876.9 million which represents 91.2% of the current budget. The total increase is for costs associated with design-build Contract C0988 Crenshaw/LAX Transit Corridor, real estate acquisition and professional services. The cumulative expenditures to date include \$143.9 million for the Southwestern Yard 49% allocation.

Current Forecast:

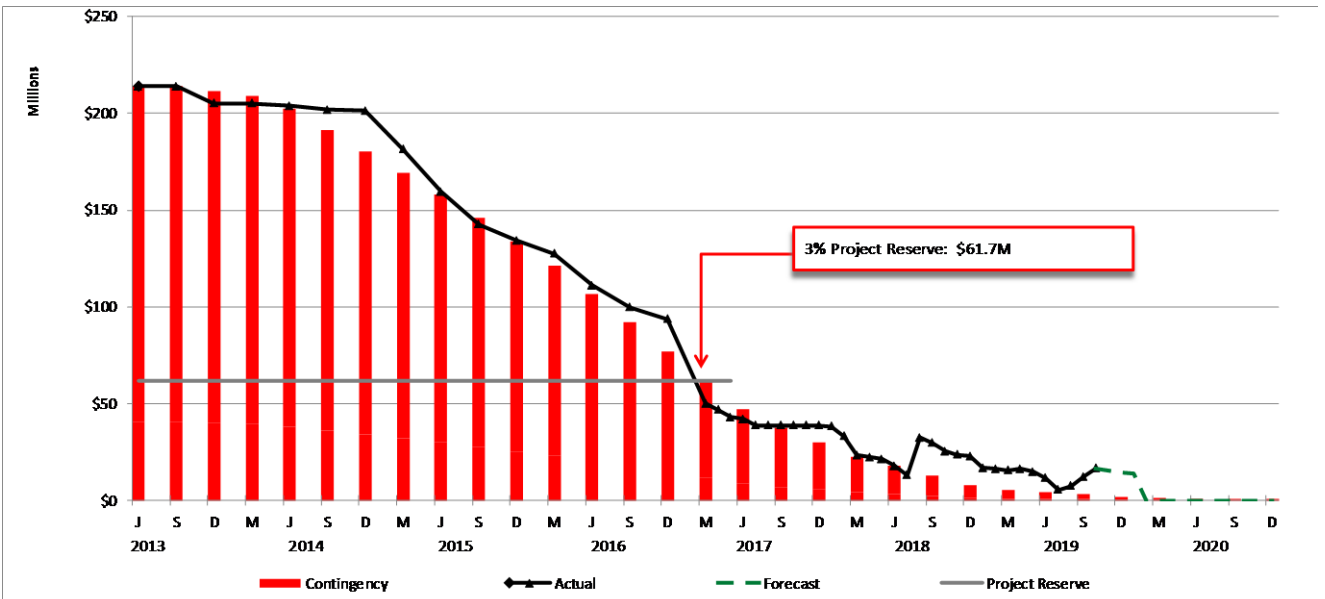
The total current forecast remains the same as the total current budget.

Non-Crenshaw/LAX Transit Project Funded Scope of Work

The costs shown in the table below are not part of Crenshaw/LAX Transit Project costs but are funded by other Metro projects using the services of the alignment design-builder (Contract C0988).

C0988 NON-CRENSHAW/LAX TRANSIT PROJECT FUNDED SCOPE OF WORK									
DESCRIPTION	CURRENT BUDGET		COMMITMENTS		EXPENDITURES		CURRENT FORECAST		FORECAST VARIANCE
	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	
405556 SYSTEMWIDE TRANSIT PLANNING	-	320,035	-	320,035	-	320,035	-	320,035	-
210090/93 FARE GATE PROJECT	-	2,566,226	-	3,066,226	-	2,291,126	-	2,566,226	-
210152 CRENSHAW/LAX BUS TRANSFER FACILITY	-	2,200,000	-	2,200,000	-	582,999	-	2,200,000	-
460303 AIRPORT METRO CONNECTOR	-	37,914,465	-	37,072,922	-	37,047,674	-	37,914,465	-
500013 C/LAX LAWA SCOPE OF WORK	-	1,575,362	-	581,918	-	545,439	-	1,575,362	-
405522 HIGHWAY PLANNING	498,787	4,479,724	498,787	4,479,724	-	1,894,532	498,787	4,479,724	-
TOTAL	498,787	49,055,812	498,787	47,720,825	-	42,681,805	498,787	49,055,812	-

Cost Contingency Drawdown



Cost Contingency Drawdown Analysis

The project current budget of \$2,058,000,000 includes a contingency amount of \$213,866,792. The drawdown plan is correlated to anticipate risk trends and measures drawdowns moving forward.

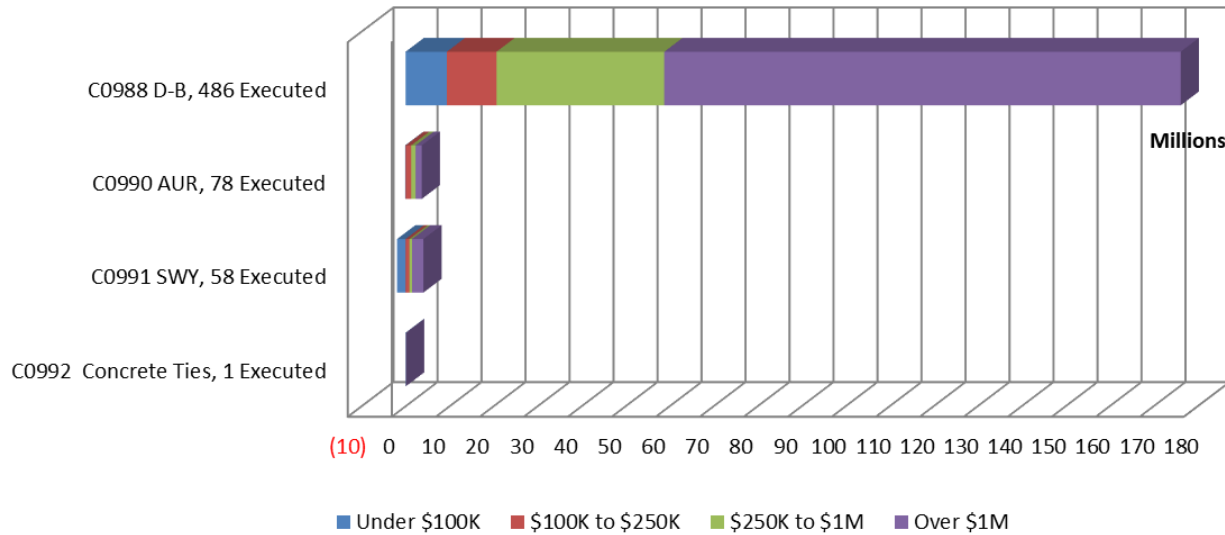
Included in the project contingency drawdown is a 3% project reserve threshold. The Board is to be notified when it becomes necessary to drawdown contingency below the project reserve line to cover project costs. This notification request was adopted by the Metro Board of Directors in September 2012. In February 2017, the project contingency drawdown curve went below the 3% project reserve level and the Board was notified.

This month, there was a replenishment of \$4,165,735 back to contingency. The remaining total project contingency (allocated and unallocated) is \$16,539,711.

PROJECT COST CONTINGENCY (through 01-Nov-2019)					
UNITS IN DOLLARS					
	Original Contingency	Previous Period	Current Period	To-Date	Remaining Contingency (Forecast)
Unallocated Contingency	173,500,000	(161,126,025)	4,165,735	(156,960,290)	16,539,710
Allocated Contingency	40,366,792	(40,366,792)	-	(40,366,792)	-
Total Contingency	213,866,792	(201,492,817)	4,165,735	(197,327,082)	16,539,711

SUMMARY OF CONTRACT MODIFICATIONS

Contract Modifications (MODs) by Cost Level



	C0988	C0990	C0991	C0992	Total
	486 Executed	78 Executed	58 Executed	1 Executed	
Under \$100K	\$ 9,376,991	\$ (70,251)	\$ (1,918,854)	\$ 81,738	\$ 7,469,623
\$100k to \$250K	\$ 11,285,504	\$ 1,280,184	\$ 875,202	\$ -	\$ 13,440,889
\$250K to \$1M	\$ 38,132,406	\$ 984,662	\$ 590,334	\$ -	\$ 39,707,403
Over \$1M	\$ 117,387,403	\$ 1,417,202	\$ 2,590,000	\$ -	\$ 121,394,605
Total Contract MODs	\$ 176,182,304	\$ 3,611,797	\$ 2,136,682	\$ 81,738	\$ 182,012,520
Contract Award Amount	\$ 1,272,632,356	\$ 7,827,500	\$ 172,312,695	\$ 2,161,297	\$ 1,454,933,848
% of Contract MODs	13.84%	46.14%	1.24%	3.78%	12.51%

Four hundred and eighty-eight (486) changes with a total value of \$176.18 million have been executed since award of Contract C0988. There are an additional thirty-five (35) changes with a total value of \$3.61 million pending the administrative approval process.

Seventy-eight (78) changes with a total value of \$3.61 million have been executed for completed Contract C0990.

Fifty-eight (58) changes with a total value of \$2.14 million have been executed since award of Contract C0991.

One (1) change with a value of \$81,738 was executed for completed Contract C0992.

Percent of Contract modifications equals the total Change modifications divided by the Contract Award amount

DISADVANTAGED BUSINESS ENTERPRISE (DBE)

Contract C0988 Crenshaw/LAX Transit Corridor Design-Build

(Reported Data as of September 2019)

- **DBE Goal (Design)** – A numerically expressed percentage of funds apportioned to Design Contracts and is calculated based upon the relative availability of DBE firms as compared to all firms in the relevant geographic market area. **20.00%**
- **Current DBE Commitment** – Total DBE Committed Dollars divided by Total Contract Value for Design or Construction. **\$26,799,791 (20.00%)**
- **Current DBE Participation** – Total amount paid to date to DBEs divided by the amount paid to date to Prime. **\$29,570,536 (23.38%)**

Twenty-Six (26) Design subcontractors have been identified to-date

- **DBE Goal (Construction)** - A numerically expressed percentage of funds apportioned to Construction Contracts and is calculated based upon the relative availability of DBE firms as compared to all firms in the relevant geographic market area. **20.00%**
- **DBE Commitment** - Contract commitment divided by current contract value for Construction **\$259,865,769 (20.00%)**
- **Current DBE Commitment** - Actual commitments as Construction work is awarded **\$287,954,665 (22.16%)**
- **Current DBE Participation** - Total amount paid to date to DBEs divided by the amount paid to date to Prime **\$305,259,287 (26.37%)**

317 Construction subcontractors have been identified to-date.

DISADVANTAGED BUSINESS ENTERPRISE (DBE)

Contract C0991 Division 16: Southwestern Yard Design-Build

(Reported Data as of September 2019)

- **DBE Goal (Design)** – A numerically expressed percentage of funds apportioned to Design Contracts and is calculated based upon the relative availability of DBE firms as compared to all firms in the relevant geographic market area. **20.93%**
- **Current DBE Commitment** – Total DBE Committed Dollars divided by Total Contract Value for Design or Construction. **\$2,467,837 (20.93%)**
- **Current DBE Participation** – Total amount paid to date to DBEs divided by the amount paid to date to Prime. **\$2,534,509 (21.61%)**

Ten (10) Design subcontractors have been identified to-date

- **DBE Goal (Construction)** - A numerically expressed percentage of funds apportioned to Construction Contracts and is calculated based upon the relative availability of DBE firms as compared to all firms in the relevant geographic market area. **16.00%**
- **DBE Commitment** - Contract commitment divided by current contract value for Construction. **\$25,930,837 (16.00%)**
- **Current DBE Commitment** - Actual commitments as Construction work is awarded **\$32,929,280 (20.32%)**
- **Current DBE Participation** - Total amount paid to date to DBEs divided by the amount paid to date to Prime **\$32,293,428 (21.10%)**

Ninety-six (96) Construction subcontractors have been identified to-date

PROJECT LABOR AGREEMENTS (PLA)
Contract C0988 Crenshaw/LAX Transit Corridor Design-Build

(Reported Data as of August 2019)

- | | |
|--|---------------|
| • Targeted Worker Goal – Construction work to be performed by residents from Economically Disadvantaged Area of LA County | 40.00% |
| • Targeted Worker Current Attainment | 60.03% |
| • Apprentice Worker Goal – Construction work to be performed by Apprentices | 20.00% |
| • Apprentice Worker Current Attainment | 23.67% |
| • Disadvantaged Worker Goal – Construction work to be performed by Disadvantaged Workers whose primary place of residence is within LA County | 10.00% |
| • Disadvantaged Worker Current Attainment | 11.67% |

PROJECT LABOR AGREEMENTS (PLA) STATUS

Contract C0991 Division 16: Southwestern Yard Design-Build

(Reported Data as of July 2019)

- **Targeted Worker Goal** – Construction work to be performed by residents from Economically Disadvantaged Area of LA County **40.00%**
- **Targeted Worker Current Attainment** **49.23%**
- **Apprentice Worker Goal** – Construction work to be performed by Apprentices **20.00%**
- **Apprentice Worker Current Attainment** **29.89%**
- **Disadvantaged Worker Goal** – Construction work to be performed by Disadvantaged Workers whose primary place of residence is within LA County **10.00%**
- **Disadvantaged Worker Current Attainment** **10.20%**

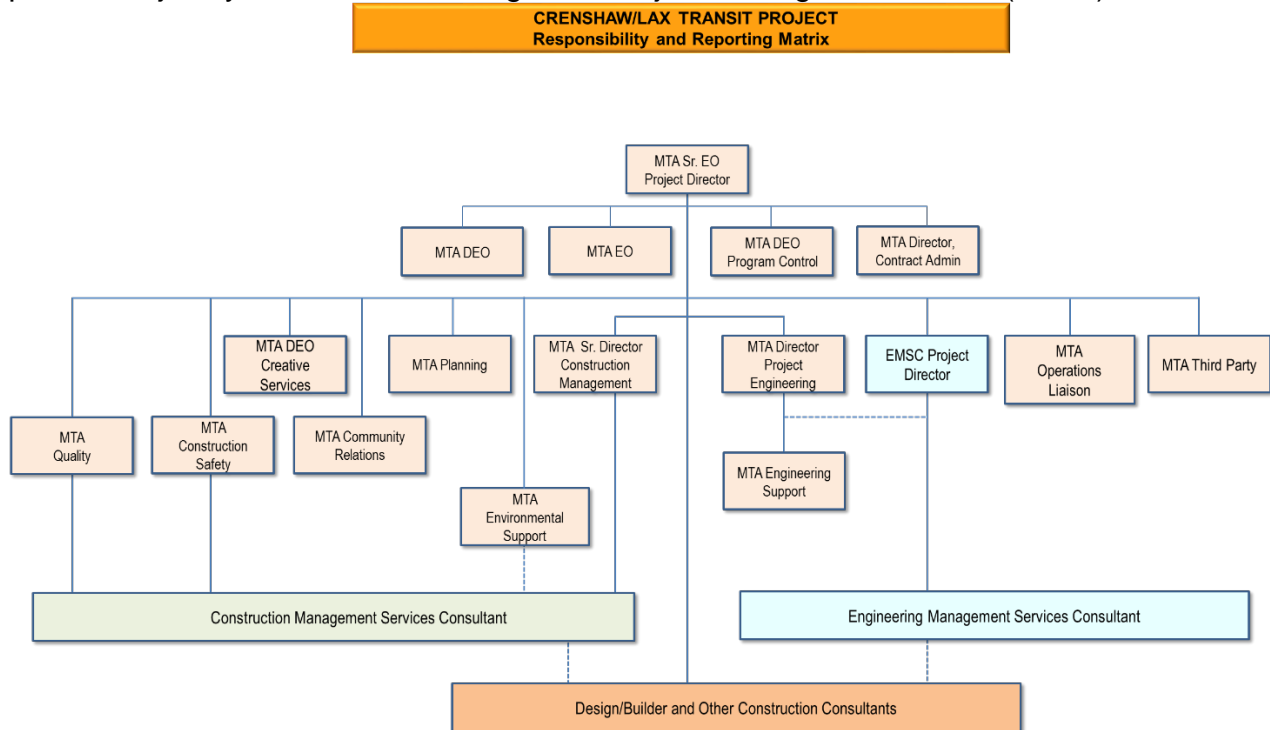
FINANCIAL/GRANT

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 - CMAQ	68.2	104.0	54.0	104.0	100%	54.0	52%	54.0	52%
FEDERAL - SECTION 5309 BUS CAPT	8.6	8.6	8.6	8.6	100%	8.6	100%	8.6	100%
FEDERAL - REGIONAL STP	20.0	99.9	99.9	99.9	100%	91.2	91%	91.2	91%
FEDERAL - ALTERNATIVE ANALYSIS	1.2	1.2	1.2	1.2	100%	1.2	100%	1.2	100%
FEDERAL - TIGER II	0.0	13.9	13.9	13.9	100%	13.9	100%	13.9	100%
STATE REGIONAL IMPROVEMENT PROG	36.5	36.6	36.6	36.6	100%	36.6	72%	36.6	72%
STATE PPM	0.178	0.178	0.178	0.178	100%	0.178	100%	0.178	100%
STATE PROP 1B PTMISEA	201.2	129.0	129.0	129.0	100%	129.0	100%	129.0	100%
STATE PROP 1 B LOCAL PARTNER PROG	0.0	49.5	49.5	49.5	100%	49.5	100%	49.5	100%
MEASURE R - TIFIA LOAN	545.9	545.9	545.9	545.9	100%	545.9	100%	545.9	100%
MEASURE R	661.1	529.3	529.3	519.3	100%	466.4	85%	448.3	85%
CITY CONTRIBUTION	52.4	101.7	101.7	95.3	85%	43.6	44%	40.7	44%
GENERAL FUNDS	0.0	54.3	54.3	54.3	100%	54.3	100%	54.3	100%
PROP C 25% HIGHWAY	148.9	379.1	379.1	377.7	100%	377.7	90%	348.1	90%
PROP C 40% DISCRETIONARY	0.0	0.0	0.0	0.0	0%	0.0	0%	0.0	0%
PROP A 35% RAIL CAPITAL	4.8	4.9	4.9	4.9	100%	4.9	100%	4.9	100%
TOTAL	1,749.0	2,058.0	2,008.0	2,040.2	99.0%	1,876.9	91.2%	1,826.3	88.0%

NOTE: Expenditures are cumulative through October 31, 2019
 Original Budget based on Board approved October 2011 Funding/Expenditure Plan
 Expenditures exclude \$6.6 Million for State Board of Equalization decision to tax LRT vehicle deliveries since August 2016.
 Metro is appealing decision but paid taxes to not include late fees.
 Expenditures exclude \$5.5 Million for various right-of-way and professional services cost being reallocated to other funding.

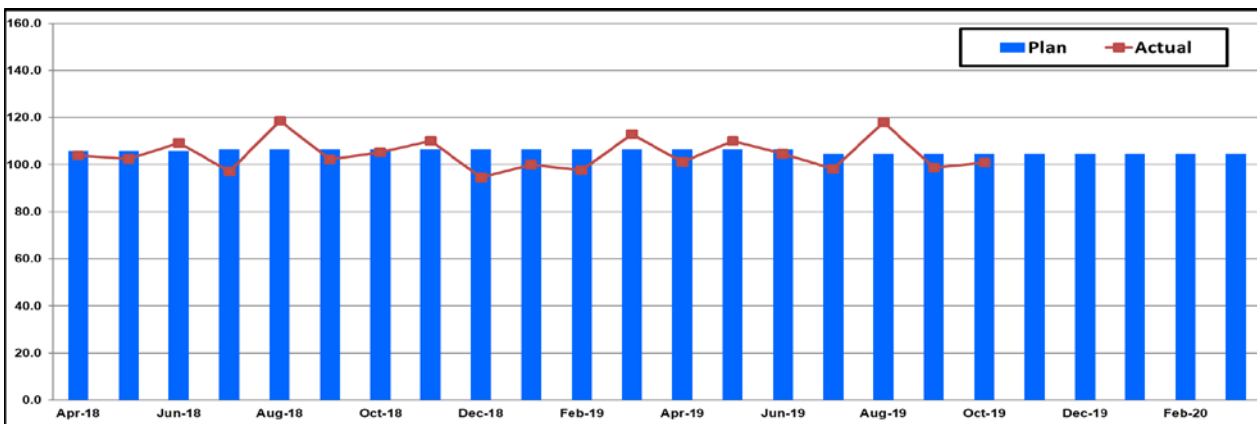
PROJECT ORGANIZATION AND STAFFING

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

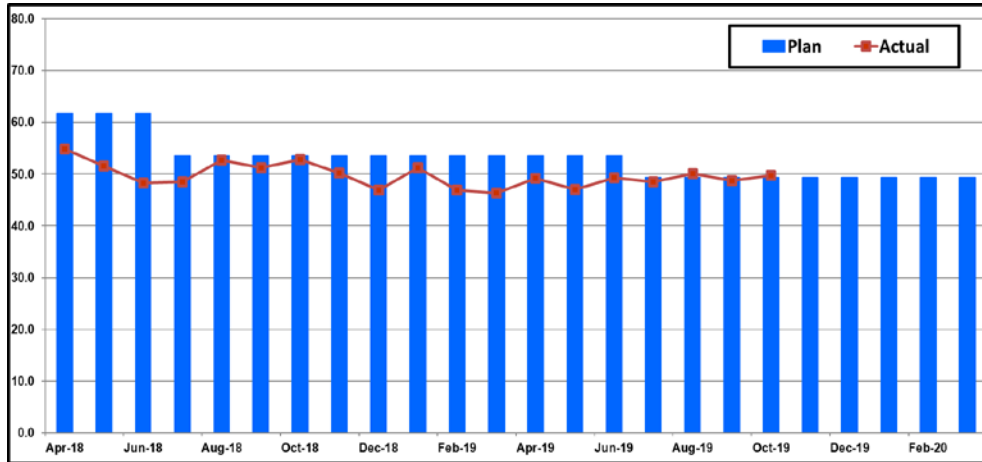


The overall FY19 Total Project Staffing Plan averages 104.5 Full Time Equivalent (FTEs) per month consisting of 49.4 for Metro Agency staff, 46.1 for Construction Management Support Services Consultant and 9.0 for Design and Engineering Support Services Consulting staff.

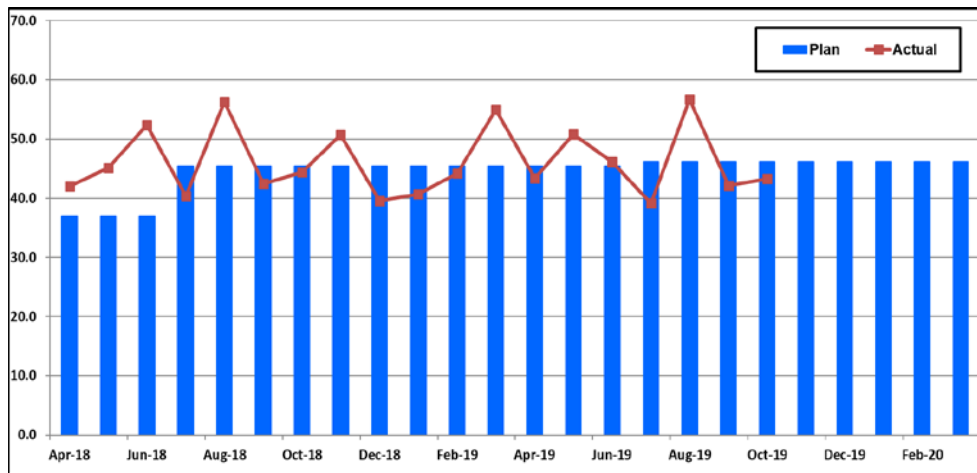
For October 2019, total project staffing were 100.9 FTEs for the month consisting of 49.8 FTEs for Metro’s project administration staff, 43.3 FTEs for Construction Management Support Services Consultant and 7.9 FTEs for Design and Engineering Support Services Consulting staff.



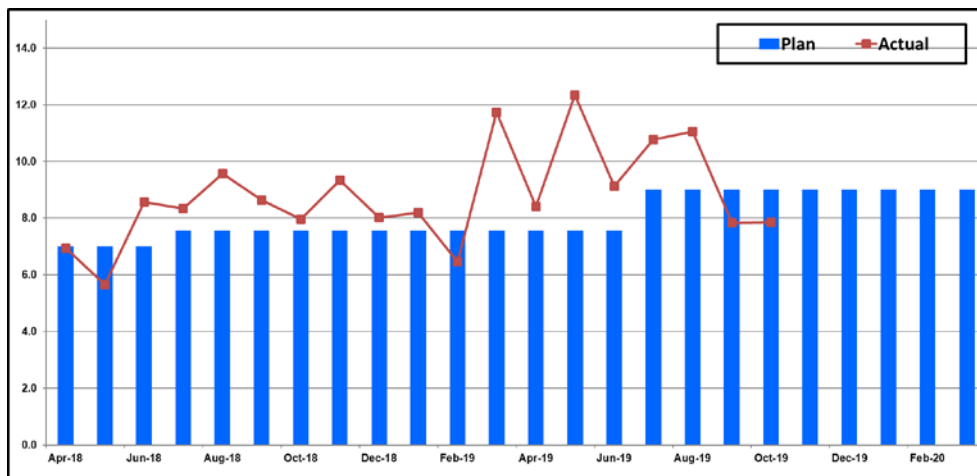
Metro Staff



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

- Metro is working on extending some temporary construction easements due to revised construction schedule.

QUALITY ASSURANCE

C0988 Crenshaw/LAX Transit Corridor Design Build

- *WSCC issued six Non-Conformance Reports (NCR'S) during the month.*
- *Metro Quality conducted Quality Audit Opening Meeting for the 2019 Annual Audit.*
- *Attended weekly Quality Team Meetings with WSCC Lead Quality personnel and City of Los Angeles Bureau of Contract Administration (ConAd).*
- *Participated in Readiness Review Meeting for Art Panel Installations at Underground Stations.*
- *Participated in Project Progress Meeting and Internal Project Review Meeting.*
- *No Inspections scheduled for Metro's Independent Testing Lab (ITL).*

ENVIRONMENTAL

C0988 Crenshaw/LAX Transit Corridor Design Build

- *Noise and vibration spot checks continue to be conducted weekly at multiple sensitive locations and at locations of new activities along the project alignment.*
- *SWPPP inspections of all project areas are conducted weekly by WSCC and spot checks by Metro to observe site conditions and report on performance of stormwater protection Best Management Practices and overall housekeeping.*
- *Conducted an EMS and Environmental Compliance Progress Meeting on 10/9/19.*
- *Metro observed 2 nighttime noise exceedances. WSCC was informed of the exceedances and additional noise barriers were subsequently deployed.*
- *Fugitive dust is a larger focus for inspections due to the warmer months. No violations were reported or witnessed.*

CONSTRUCTION RELATIONS

- Continued working with WSCC to minimize the impacts of lane and street closures along the Crenshaw/LAX alignment.
- Circulated public notice for project construction activities. The notices are distributed via-email, social media networks and hand delivered to key stakeholders.
- Continued coordination with WSCC to mitigate impacts to businesses and residents along the Crenshaw/LAX alignment.
- Ongoing coordination with WCSS and Metro Bus Operations to plan for bus detour routes to accommodate lane reductions and closures.
- Continued outreach to stakeholders in the LAX area regarding ongoing construction activities.
- Continued face to face outreach to key stakeholders and community organizations along the alignment.
- *Ongoing planning for Community Construction Update Meetings and presentations to key stakeholder groups.*

CREATIVE SERVICES

- *Completed fabrication inspections of porcelain enamel steel artwork panels for Westchester/Veterans Station.*
- *Reviewed and provided comments on Contractor Workplan for installation of porcelain enamel steel art panels at underground stations*
- *Reviewed and provided comments on Revised Shop Drawing Submittals for Station Signage for the following Underground Stations: Expo/Crenshaw and MLK*
- *Reviewed and provided comments on Revised Shop Drawing Submittal for the Grand Pylon signs.*

SAFETY AND SECURITY

- Conducted Monthly All Hands Safety and Security Meetings with WSCC to discuss UG3 restoration, UG3 and UG1 Tunnel Booster Fans, ROW protection, Teamwork and Partnering, track allocation, security issues, elevators, access and egress and ventilation.
- Monitored construction activities daily including weekends to ensure compliance with contract specifications.
- *Conducted All Hands Safety Meetings on 10/31/19 to discuss incident review, UG3 TBF's and man hours/incidents.*
- Participated in WSCC daily briefings regarding lessons learned, weekly safety briefings at Expo, MLK, and Vernon Stations, progress meetings and conference calls.
- *Contract C0988 (WSCC) completed 115,627 work hours with one Recordable Days Away from work injury for the month of October 2019.*
- *Total Project to Date work hours is 8,899,420 with a total of ninety-nine (99) recordable incidents.*
- *The Project Recordable Rate is 2.22. The Bureau of Labor Statistics (BLS) average recordable rate per 200,000 work hours is 2.5.*
- *Total Days Away (DART) Injury Rate: Six (6) Days Away from Work (DART) Injuries is 0.1. The National Average is 1.7.*
- *Project to Date Total Days Away Rate (561 Days Away from Work) is 17.1. (No National Published Rate.*

CHRONOLOGY OF EVENTS

October 2011	Board approved the Life-of-Project Budget of \$1.749 billion.
December 30, 2011	Received Record of Decision from FTA.
March 12, 2012	Received Statement of Qualifications for Contract C0988 C/LAX Transit Corridor.
May 30, 2012	Awarded Contract No. C0990 C/LAX Advanced Utility Relocations to Metro Builders and Engineers Group LTD.
May 23, 2013	Board amended the Agency's FY14 Proposed Budget to include funding of \$80 million for an underground station at Leimert Park Village as part of the baseline project.
June 27, 2013	The Board awarded Contract C0988 Crenshaw/LAX Transit Corridor to Walsh-Shea Corridor Constructors.
September 10, 2013	Issued Notice to Proceed to Walsh-Shea Corridor Constructors, Contract C0988 Crenshaw/LAX Transit Project.
December 5, 2013	The Board approved Memorandum of Understanding with the Los Angeles World Airports for a parallel design and possible construction modifications near Aviation/Century Station to accommodate elements of LAWA's SPAS.
December 5, 2013	The Board awarded Contract C0992 with Rocla Concrete Tie, Inc; for the procurement of concrete ties and assembly items.
January 21, 2014	A Groundbreaking Ceremony was held at the Crenshaw/Exposition Station.
January 23, 2014	The Board awarded Contract C0992A Rail and Bumping Posts to LB Foster Rail Technologies Corp.
August 21, 2014	Substantial Completion issued for Advanced Utility Relocations Contract C0990.

CHRONOLOGY OF EVENTS (Continued)

May 28, 2015	The Board awarded Contract C0991 Division 16: Southwestern Yard to Hensel Phelps/Herzog JV. Also increased by \$22.0 million the Life of Project Budget for the Southwestern Yard Project to a new amount of \$307.2 million.
May 28, 2015	The Board approved Design Option 3 for the track alignment to accommodate the future Metro Connector Transit Station (96 th St. Station).
June 29, 2015	Issued Notice to Proceed to Hensel Phelps/Herzog JV, Contract C0991 Division 16: SouthwesternYard.
April 27, 2016	The Tunnel Boring Machine was launched and drilling from north to south of the alignment started.
May 7, 2016	Held Halfway There Community Celebration at Leimert Park marking the halfway point of the project.
May 27, 2016	Held Groundbreaking Ceremony for the Southwestern Yard (Division 16).
April 6, 2017	The northbound tunnel boring machine completed mining with the hole thru at Leimert Park Station.
June 15, 2018	Restoration of the road over the three underground stations along Crenshaw Blvd. commenced at Leimert Park Station area and the at-grade transition section.
January 30, 2019	Substantial completion was achieved by the Southwestern Yard (Division 16) Contract C0991 Contractor, Hensel/Phelps/Herzog JV.

PROJECT COST STATUS – SOUTHWESTERN YARD

SCC CODE	DESCRIPTION	ORIGINAL BUDGET	CURRENT BUDGET		COMMITMENTS		EXPENDITURES		CURRENT FORECAST		FORECAST VARIANCE
			PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	
10	GUIDEWAYS	0	0	0	0	21,997	0	21,997	0	21,997	21,997
20	STATIONS	0	0	0	0	0	0	0	0	0	0
30	SUPPORT FACILITIES (Y & S)	85,546,835	0	85,189,999	0	85,694,629	0	85,364,573	0	85,694,629	504,630
40	SITWORK/SPECIAL CONDITIONS	35,932,000	0	38,273,000	0	40,009,941	72,939	37,365,911	0	40,009,941	1,736,941
50	SYSTEMS	25,784,616	0	32,991,000	0	34,372,709	140,816	33,386,855	0	34,392,804	1,401,804
	(10-50) CONSTRUCTION	147,263,451	0	156,453,999	0	160,099,276	213,755	156,139,335	0	160,119,371	3,665,372
60	RIGHT-OF-WAY	99,910,000	0	100,000,000	0	102,420,623	0	102,417,215	0	102,420,623	2,420,623
70	VEHICLES	0	0	0	0	0	0	0	0	0	0
80	PROFESSIONAL SERVICES	35,601,095	0	33,639,631	42,144	43,433,840	705,319	37,126,005	444,853	43,836,550	10,196,919
90	PROJECT CONTINGENCY	13,659,732	0	17,106,370	0	0	0	0	(444,853)	823,456	(16,282,914)
TOTAL		296,434,278	0	307,200,000	42,144	305,953,739	919,074	295,682,555	0	307,200,000	0

C0991 PAINT & BODY SHOP PROJECT											
DESCRIPTION	ORIGINAL BUDGET	CURRENT BUDGET		COMMITMENTS		EXPENDITURES		CURRENT FORECAST		FORECAST VARIANCE	
		PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE		
861301 DIV 22 PAINT & BODY SHOP	11,000,000	0	11,000,000	0	11,000,000	0	10,321,826	0	11,000,000	0	

GRAND TOTAL	307,434,278	0	318,200,000	42,144	316,953,739	919,074	306,004,381	0	318,200,000	0
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NOTE: EXPENDITURES ARE CUMULATIVE THROUGH NOVEMBER 01, 2019.

The project number 865512, 860003 and 861301 are internal to Metro and are used to differentiate between various components of the project.

Original Budget:

The Board in May 2015 established the Life-of-Project (LOP) budget of \$307.2 million for the Southwestern Yard Project.

Current Budget:

The Board in May 2015 approved an increase for the funding for the Southwestern Yard by \$22.0 million to increase the LOP budget to \$307.2 million to allow for the award of design-build Contract C0991 Southwestern Yard Project. Of the total \$307.2 million, \$150.2 million is funded in the Crenshaw/LAX Transit Project LOP budget which includes the original 49% allocation amount of \$139.4 million plus a new \$10.8 million reduction from the Crenshaw/LAX Transit Project contingency line item in the budget. There is no increase in the LOP for the Crenshaw/LAX Transit Project. The original 51% share associated with future Green Line related extensions in an amount of \$145.8 million was increased by \$11.2 million for a new total of \$157.0 million.

In addition to the \$307.2 million there is another \$11.0 million that is the budget for the paint and body shop, under another Metro internal cost project number, which funding was approved by a prior agreement for a paint and body shop to support the Green Line shops and was required for the award of the design-build Contract C0991 Southwestern Yard Project.

The grand total of the combined budget is \$318.2 million.

Current Forecast:

The current project forecast is \$318.20 million and remain the same as total current budget.

Commitments:

The commitments are cumulative through November 1, 2019. The total commitments increased by \$0.04 million to \$316.95 million to date represents 99.61% of the current budget. The increase is for commitments associated with agency FTE commitment increase.

Expenditures:

The expenditures are cumulative through November 1, 2019. The total expenditures increased by \$0.92 million to \$306.00 million which represents 96.17% of the current budget. The increase is for cost associated with design-build contract C0991 Division 16: Southwestern Yard and FIS adjustment to project administration, construction management support.