Crenshaw/LAX Transit Project



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).

APRIL 2019

TABLE OF CONTENTS

	Page No.
Project Overview	1-5
Executive Summary	6-9
Project Update	
Project Schedule	
 Project Summary Schedule 	10
 Progress Summary 	11
 Planned vs. Actual Progress 	11
 Key Milestones Six-Month Look Ahead 	12
 Major Equipment Delivery Status 	13
o Critical Path	14
 Project Schedule Contingency Drawdown 	15
 Risk Management Narrative 	16
Project Cost	
 Project Cost Status & Analysis 	17-18
 Cost Contingency Drawdown and Analysis 	19
 Summary of Contract Modifications 	20
Disadvantaged Business Enterprise (DBE)	21-22
Project Labor Agreement	23-24
Financial/Grant	25
Project Staffing	26-27
Real Estate	28
Quality Assurance	28
Environmental	28
Construction and Community Relations	29
Creative Services	29
Safety and Security	30
Appendices	
Chronology of Events	31-32
Project Cost Status – Southwestern Yard	33-34

PROJECT OVERVIEW

Project Background

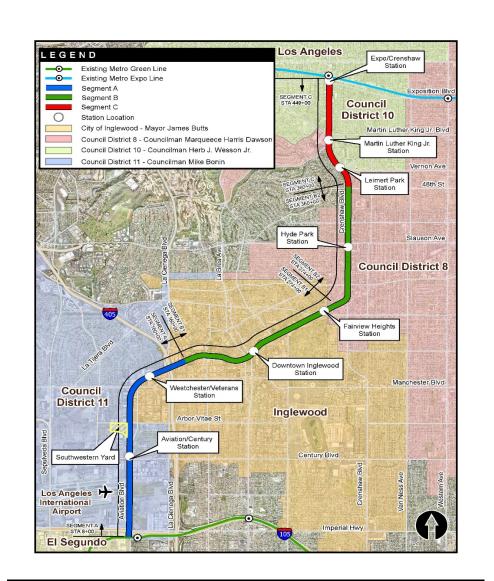
The Crenshaw/LAX Transit Project is a north/south corridor that serves the cities of Los Angeles, Inglewood, Hawthorne and El Segundo as well as portions of unincorporated Los Angeles County. The alignment extends 8.5 miles, from the intersection of Crenshaw and Exposition boulevards to a connection 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 atgrade 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 will be 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 have to be 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 are 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, grade separations including flyover structures, cut and cover trenching, tunneling and three park-n-ride facilities. The scope of work will include 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 a 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 will construct the Southwestern Yard which will consolidate 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.

<u>Contract C0992 Crenshaw/LAX Concrete Ties and Assembly Items</u> 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 first Option 1 P3010 car was delivered in May 2017. The final P3010 car (22nd car) 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 software validation tests will need to be performed prior to implementation on the P3010s.

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.

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.

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.

Project Schedule and Budget:

The Revenue Service Date (RSD) is forecast for summer 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.

<u>Construction and Community Relations:</u> 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 will need to coordinate the systems interface design, construction, testing, and commissioning while the Agency maintains revenue service on the operating lines.

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.

EXECUTIVE SUMMARY

As of the end of April 2019, the Project achieved 92% 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.

Design Status

<u>Design - Build Contract C0988 (Mainline Contractor)</u> – Walsh-Shea Corridor Constructors (WSCC) final design is complete except for designs required for changes. WSCC continues design and engineering in support of construction.

Design - Build Contract C0991 Southwestern Yard Contractor (Division 16) -Hensel Phelps/Herzog JV (HPH) has substantially completed final design. HPH continues design and engineering in support of Contract closeout.

Construction Status

<u>Mainline Contractor -</u> WSCC continues construction along all areas of the alignment. The four at-grade stations structure concrete placements are substantially completed and finish work continues for these stations. The aerial station structure concrete placement is substantially complete. The three underground stations remain at various levels of completion with emphasis on work inside the stations and entrance structures. All six bridge superstructures are substantially complete and continuing with finishes, systems installations and testing.

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. WSCC and Metro continue to coordinate with DWP and SCE for power energization and other utilities (water, gas, phone) at various locations.

Construction continues within the roadway section through Park Mesa Heights.

<u>Southwestern Yard (Division 16)</u> – HPH has achieved Substantial Completion as of January 30, 2019 and temporary certification of occupancy was issued on February 15, 2019. The contractor continues working on final punch list items required for completion of the contract. Metro continues the closeout process for this contract.

Cost and Schedule Summary

Metro issued in August 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 on April 1, 2019, submitted a schedule update for the January 2019 period of performance. This update indicated the contractor has forecast an improvement of five days for achieving the Substantial Completion date. No schedule updates by WSCC have been submitted for December 2018, February 2019 or March 2019 periods of performance. Metro is accessing the affect of delays on the Project's schedule critical path.

The critical path of the Project remains completing construction activities, then communications 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. A summary graphic of the critical path is found later in this report.

	Original Contract Date/Duration	Time Extension (CD)	Current Contract Schedule	Forecast (Metro PMS Contractor)	Variance CD (Trending)
NTP	09/10/13				
Substantial Completion	09/08/18	459	12/11/19	1/31/20	51 days

WSCC Schedule Metrics – Mainline Contractor

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 12.9% of the contract value with a potential to increase to 13.5%. For HPH, the changes represent 1.1% of the contract value with a potential to increase to 1.2% There have been 97 claims submitted by WSCC and one notice of intent to claim by HPH on the Project. Detailed cost and budget information is provided later in this report.

Key Management Concerns

No. 1: WSCC Construction Schedule Progress

Status/Action

Metro is evaluating a potential 2020 date for revenue service based on the revised WSCC Contract Substantial Completion Milestone date of December 11, 2019. The contractor's latest schedule submittal, January 2019, reflects a five-day progress improvement to their substantial completion date. No schedule update has been submitted for February, March or April 2019. Metro's assessment is that progress thru April 2019 is at least eight (8) weeks behind schedule.

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 additional resources, selective overtime and weekend work. Coordination of field work needs to be strengthen in all areas of construction, including electrical, finishes, systems, motor control centers/communication interface cabinets, overhead catenary systems, overhead conductor rail, traction power, distributed power, train control installation, and testing.

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

Status/Action

Metro monitors and reports on the drawdown of contingency monthly. In April 2019 there was a replenishment of \$0.8 million back to contingency which increased remaining contingency to \$16.4 million. The remaining contingency is 0.8% of total project current forecast and 7.4% of total project cost-to-go.

Metro has identified funding available in fiscal year 2019 for specific scope of work that is eligible to be reallocated to a non-Crenshaw/LAX Project local funding source. Metro initiated in July 2018 reallocating the associated expenditures to date for this specific scope of work. This allows Metro to replenish a portion of the Crenshaw/LAX Project contingency. Through the end of April 2019, there has been \$56.7 million reallocated which allows the Project to use these funds for additional contractor modifications, third party requirements and increased professional services to support a revised forecast completion schedule.

Project Construction Photos



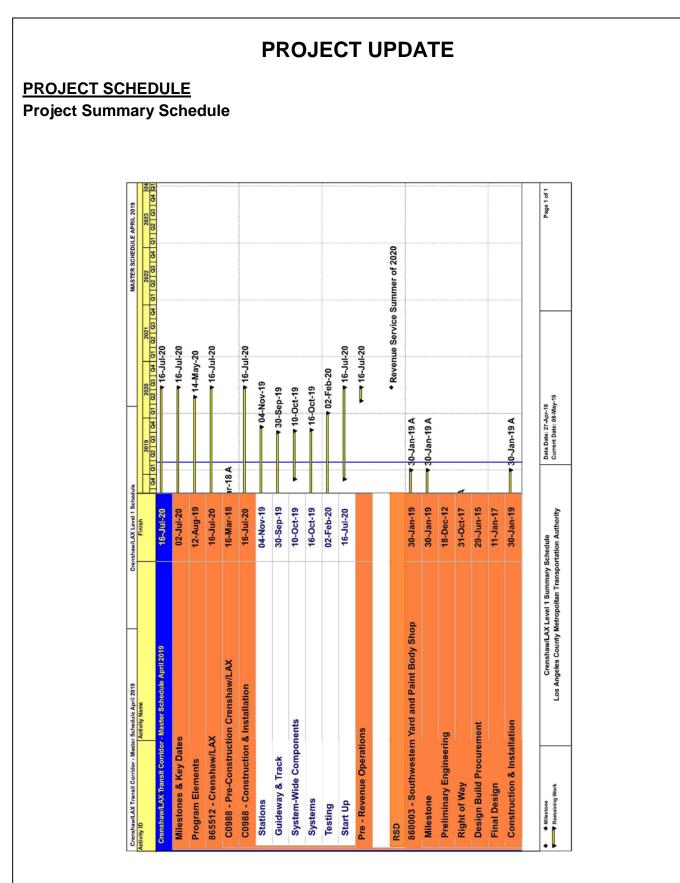
Installation of metal ceiling grid at the Leimert Park Station platform.



Installation of ceramic tile at the walls of the Martin Luther King Jr. Station entrance.



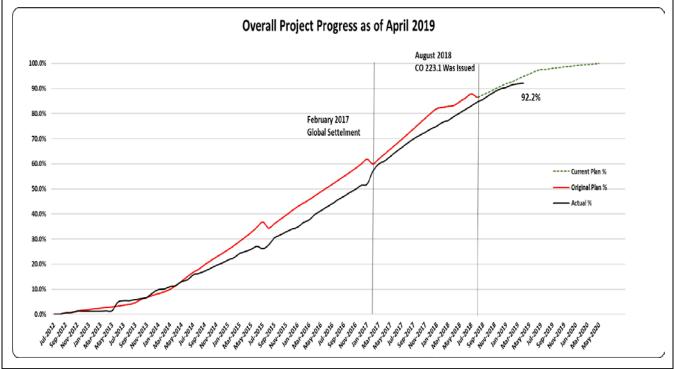
Construction of the ramp and entrance to Emergency Exit 2 south for Martin Luther King Jr. Station.



Progress Summary

	Status	Change from Last Period	Comment
Current Revenue Service:	10/30/2019	0	
Forecast Revenue Service:	-	0	Revenue Service Summer of 2020
TIFIA Revenue Service:	10/30/2019	0	
Final Design Progress:			
Contract C0988	99.7%	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	87.6%	1.7%	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



	Milestone	I					
	Date	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19
Install HVAC - Zone 4B - TPSS Fan	05/01/19	\bigcirc					
Field Acceptance Testing & Start-up @ TPSS-02	05/01/19	\bigcirc					
TPSS-01 Permanent Pow er Drop - SCE - Install Equipment, Cable, Energize & Monitor	05/01/19	\bigcirc					
Install Fire Rated Cable - CO 176 - Zone 8A - N.AUX (MLK)	05/01/19	\bigcirc					
Fabricate & Deliver Elevators - UG Stations	05/01/19	\bigcirc					
Fabricate & Deliver Elevators - Aviation/Century	05/01/19	\bigcirc					
Fab/Procure & Deliver Gas Fans - UG #1	05/03/19	\bigcirc					
Fab/Procure & Deliver Jet Fans - UG #3, UG#4	05/30/19	\bigcirc					
Fabricate & Deliver - UG1 H2S Jet Fans	06/06/19		\bigcirc				
Fab/Procure & Deliver Station Emergency Ventilation Fans	06/10/19		\bigcirc				
OCS Vehicle Required for Pre-Energization Tests PRE-SIT 1B	07/11/19			\bigcirc			
Installation Ventilation Equipment - UG #3	08/09/19				\bigcirc		
Aux Pow er at 104th St - Permanent Pow er Drop - LADWP - Install Equipment, Cable, Energize & Monitor	08/22/19				\bigcirc		
Local Field Acceptance Test - Elevators MLK	09/17/19					\bigcirc	
MTA Staff MTA Board Action MTA Board Action Other Agencies C0991 D/B Contractor A" follow ing date is actual and completed	Adminis	ederal Trans tration) Consultant	sit 🗸	۰ ۲	Company D/B Contra	actor	

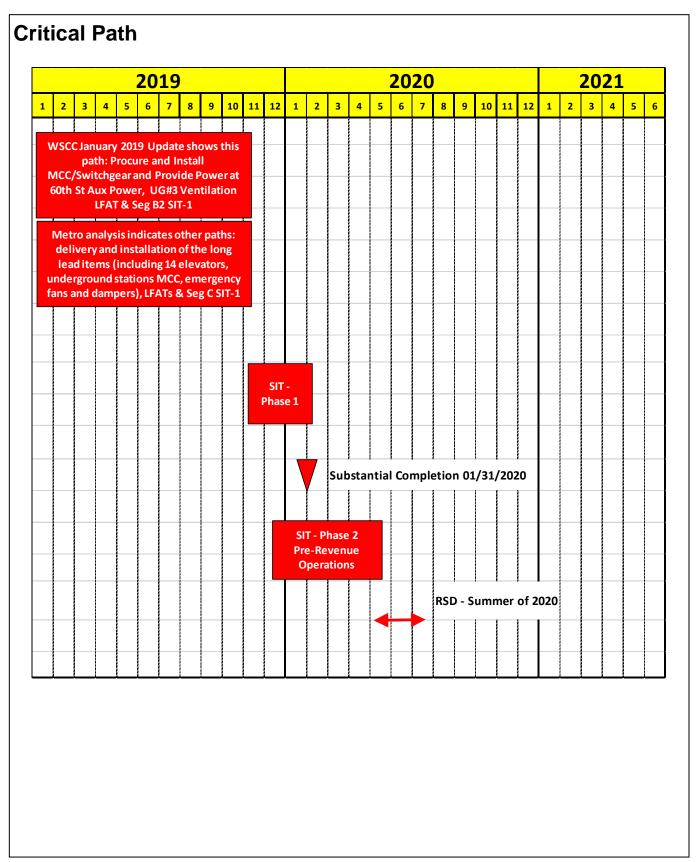
Major Equipment Delivery

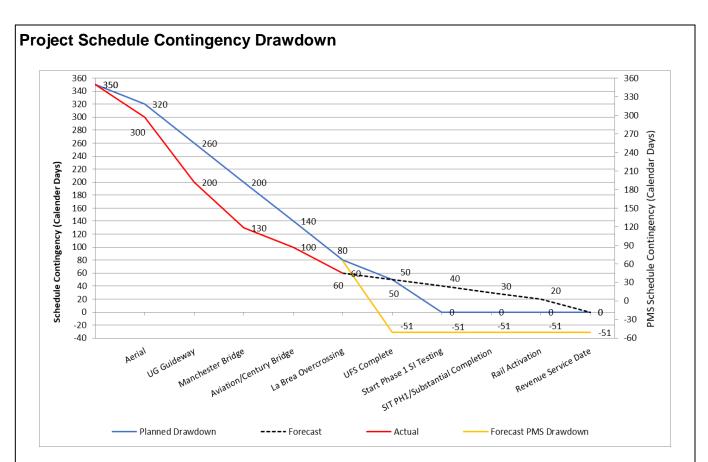
Metro Supplied Equipment

Equipment	Initial Procurement	Scheduled Delivery	Scheduled Installation
LRT Vehicles	(NTP) 08/20/2012	Option 1 9/1/2017	N/A
Ticket Vending Machines	01/30/2018	02/28/2019 (Warehoused)	11/12/2019

Design - Builder Equipment Delivery Requirements

Activity Name	Early Finish	Need Date
Procure & Deliver UPS & Batteries - TC&C #3 Century	30-Nov-18 A	18-Feb-19 A
Fab/Procure & Deliver Jet Fans - UG #3, UG#4	02-Apr-19 A	26-Apr-19 A
Fabricate & Deliver Elevators - UG Stations	29-Apr-19	30-May-19
Fabricate & Deliver Elevators - Aviation/Century	29-Apr-19	30-May-19
Fab/Procure & Deliver Gas Fans - UG #1	29-Apr-19	14-Jun-19
Fab/Procure & Deliver Station Emergency Ventilation Fans	29-Apr-19	10-Jun-19





Metro issued in August 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 January 2019. They reported they are behind schedule. Metro assessment is that WSCC is behind schedule by at least 51 calendar days.

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

April 2019

Risk Management Narrative

Summary of Risks

Within this reporting no risks were closed, and no new risks were identified. There are a total of thirty-five (35) risks to be managed in the next reporting period.

Of the thirty-five (35) risks, seven (7) are scored as high, ten (10) as medium and eighteen (18) as low.

<u>Top 7 Risks</u>

The table below shows the top 7 project risks:

Risk ID	SCC	Risk Description	Risk Rating
369	50	Continued delay of fire rated conduit/cable installation. WSCC is falling behind in completing work as scheduled and potential cost and claim.	25
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	40	Extended Overhead or productivity loss claims exposure not covered by cost impacts in individual risks.	18
362	30	Schedule activities that are critical to completion.	16
355	50	Issues with long lead delivery or improper planning for integration, testing and startup of Communication systems.	12
277	50	SCADA interface between ROC & field installations could impact Metro's SIT2. Workforce issue to perform testing.	11
354	50	Issues with energization of traction power. DWP and Edison Issues	11

Newly Identified Risks

• No new risks were added to the risk register.

Closed Risks

• No risks that were closed in this period.

Risk Score Changes

• No risks score was changed in this period.

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	DESCRIPTION	ORIGINAL		IT BUDGET	COMM	IITMENTS	EXPEN	DITURES	CURRENT	FORECAST	CURRENT BUDGET/
CODE	DESCRIPTION	BUDGET	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	FORECAST VARIANCE
10	GUIDEWAYS	471,335,000	-	450,354,375	(6,963,666)	446,665,801	(4,648,587)	431,742,391	(6,963,666)	446,668,821	(3,685,554)
20	STATIONS, STOPS, TERMINALS, INTERMODAL	153,906,000	-	315,050,000	435,334	310,284,580	4,782,170	260,589,848	435,334	310,284,580	(4,765,420)
30	SUPPORT FACILITIES (SOUTHWEST YARD)	66,673,000	-	71,164,000	106,497	67,338,361	161,799	65,363,834	(1,500,000)	68,134,000	(3,030,000)
40	SITEWORK\SPECIAL CONDITIONS	235,576,000	-	395,798,361	(53,483)	401,183,186	719,094	348,424,442	53,015	407,841,194	12,042,833
50	SYSTEMS	125,132,000	-	169,436,000	323,425	170,981,221	701,710	115,331,093	321,807	174,831,167	5,395,167
	CONSTRUCTION SUBTOTAL (10-50)	1,052,622,000	-	1,401,802,736	(6,151,892)	1,396,453,150	1,716,186	1,221,451,608	(7,653,511)	1,407,759,762	5,957,026
60	RIGHT-OF-WAY	132,294,000	-	127,490,000	518,240	131,961,447	502,465	131,778,354	518,240	131,977,205	4,487,205
70	VEHICLES / BUSES	87,780,000		83,571,544		82,158,061	-	78,832,400		83,571,544	(0)
80	PROFESSIONAL SERVICES	273,147,000	-	368,734,466	1,904,764	384,031,822	2,061,482	352,337,092	6,344,872	392,292,167	23,557,702
	SUBTOTAL (10-80)	1,545,843,000	-	1,981,598,746	(3,728,889)	1,994,604,480	4,280,132	1,784,399,454	(790,400)	2,015,600,679	34,001,933
90	UNALLOCATED CONTINGENCY	177,157,000	-	50,401,254	-	-	-	-	790,400	16,399,321	(34,001,933)
	TOTAL PROJECT 865512 (10-100)	1,723,000,000	-	2,032,000,000	(3,728,889)	1,994,604,480	4,280,132	1,784,399,454		2,032,000,000	0
	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	-
TO.	TAL PROJECTS 405512 & 465512 (ENV / PLAN'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	(3,728,889)	2,020,153,511	4,280,132	1,809,948,485	-	2,058,000,000	0

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:
 - o 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 \$3.7 million this period to \$2,020.2 million which represents 98.2% of the current budget. The total decrease is related to design-build Contract C0988 Crenshaw/LAX Transit Corridor, real estate relocation, professional services and unencumbering cancelled purchase orders. The total commitments include \$147.5 million for the Southwestern Yard 49% allocation.

Expenditures:

Expenditures increased by \$8.6 million this period to \$1,805.7 million which represents 87.7% of the current budget. The increase is for costs associated with design-build Contract C0988 Crenshaw/LAX Transit Corridor, Contract C0991 Division 16: Southwestern Yard, real estate relocation and professional services. The cumulative expenditures to date include \$144.0 million for the Southwestern Yard 49% allocation.

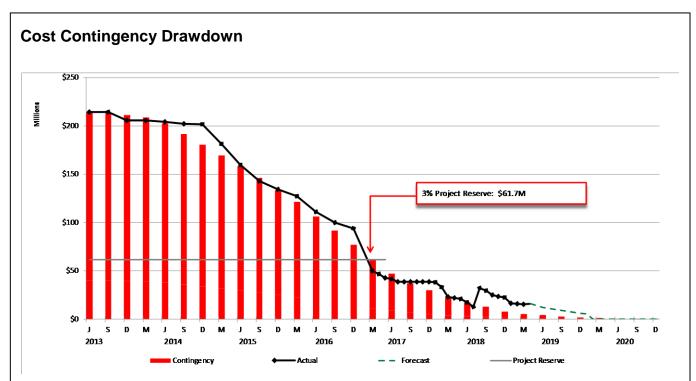
Current Forecast:

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
DESCRIPTION	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	VARIANCE
405556 SYSTEMWIDE TRANSIT PLANNING	-	320,035	-	320,035	-	320,035	-	320,035	-
210090/93 FARE GATE PROJECT	-	2,566,226	-	2,566,226	540,078	2,081,126	-	2,566,226	-
210152 CRENSHAW/LAX BUS TRANSFER FACILITY	-	2,200,000	-	2,200,000	-	403,334	-	2,200,000	-
460303 AIRPORT METRO CONNECTOR	-	37,914,465	-	37,047,674	62,500	36,935,066	-	37,914,465	-
500013 C/LAX LAWA SCOPE OF WORK	-	1,575,362	-	1,114,613	-	545,439	-	1,575,362	-
405522 HIGHWAY PLANNING	-	1,935,000	-	1,935,000	26,500	719,503	-	1,935,000	-
TOTAL	-	46,511,088	-	45,183,548	629,078	41,004,503	-	46,511,088	-



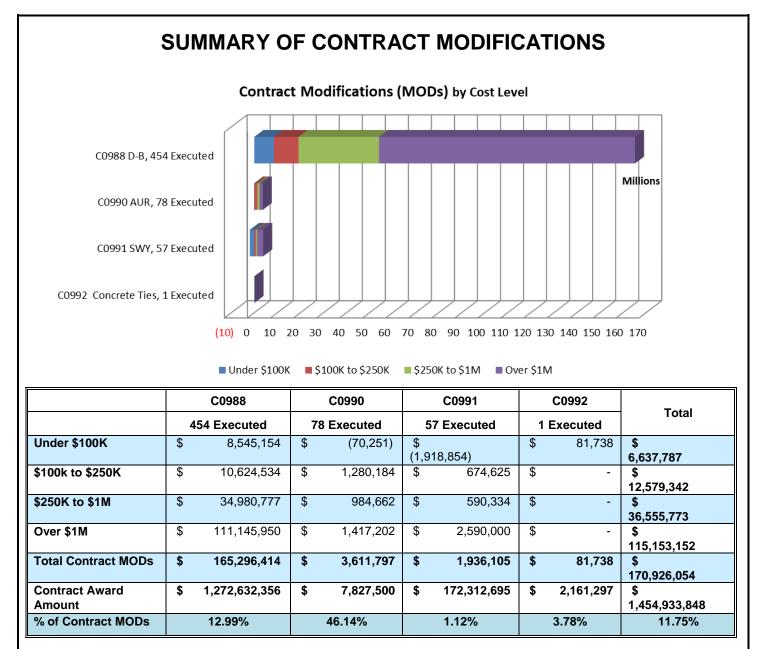
Cost Contingency Drawdown Analysis

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 \$790,400 back to contingency. The remaining total project contingency (allocated and unallocated) is \$16,399,320.

PROJECT COST CONTINGENCY (through 26-Apr-2019) UNITS IN DOLLARS								
	Original Contingency	Previous Period	Current Period	To-Date	Remaining Contingency			
					(Forecast)			
Unallocated Contingency	173,500,000	(157,891,080)	790,400	(157,100,680)	16,399,320			
Allocated Contingency	40,366,792	(40,366,792)	-	(40,366,792)	-			
Total Contingency	213,866,792	(198,257,872)	790,400	(197,467,472)	16,399,320			



Four hundred and fifty-four (454) changes with a total value of \$165.30 million have been executed since award of Contract C0988. There are an additional thirty (30) changes with a total credit value of \$0.98 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-seven (57) changes with a total value of \$1.94 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 March 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.	\$25,078,875	(20.00%)
•	Current DBE Participation – Total amount paid to date to DBEs divided by the amount paid to date to Prime.	\$29,332,024	(23.97%)
	Twenty-Six (26) Design subcontractors have	ve been identified to-c	late
•	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	\$257,764,345	(20.00%)
٠	Current DBE Commitment - Actual commitments as Construction work is awarded	\$277,168,594	(21.51%)
•	Current DBE Participation - Total amount paid to date to DBEs divided by the amount paid to date to Prime	\$287,587,767	(26.11%)
	304 Construction subcontractors have been	identified to-date.	

DISADVANTAGED BUSINESS ENTER	PRISE (DE	BE)
Contract C0991 Division 16: Southwestern Yard (Reported Data as of February 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. 	\$2,438,163	(20.84%)
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.	\$25,930,836	(16.00%)
Current DBE Commitment - Actual commitments as Construction work is awarded	\$32,533,831	(20.07%)
• Current DBE Participation - Total amount paid to date to DBEs divided by the amount paid to date to Prime	\$25,888,572	(17.84%)
Ninety-six (96) Construction subcontractors have been identi	fied to-date	

PROJECT LABOR AGREEMENTS (PLA)

Contract C0988 Crenshaw/LAX Transit Corridor Design-Build

(Reported Data as of March 2019)

•	Targeted Worker Goal – Construction work to be performed by residents from Economically Disadvantaged Area of LA County	40.00%
•	Targeted Worker Current Attainment	60.25%
•	Apprentice Worker Goal – Construction work to be performed by Apprentices	20.00%
•	Apprentice Worker Current Attainment	23.37%
•	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	12.12%

(Reported Data as of March 2019)	<u>Build</u>
Targeted Worker Goal – Construction work to be performed by residents from Economically Disadvantaged Area of LA County County	40.00%
Targeted Worker Current Attainment	49.46%
Apprentice Worker Goal – Construction work to be performed by Apprentices	20.00%
Apprentice Worker Current Attainment	29.93%
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	10.27%

FINANCIAL/GRANT

\$ in millions

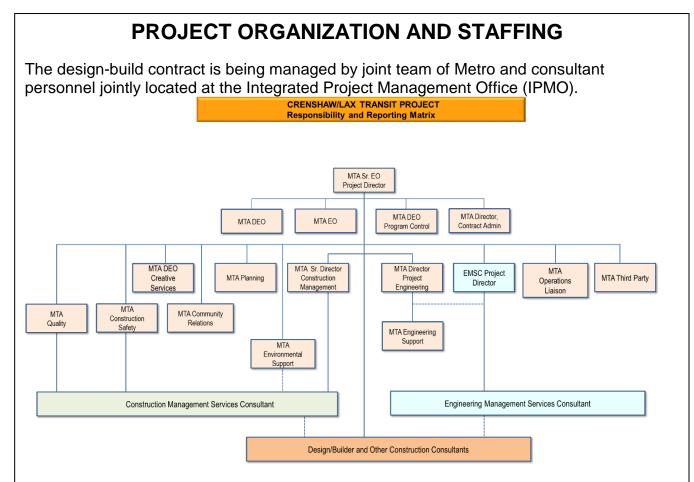
SOURCE	(A) ORIGINAL BUDGET	(B) TOTAL FUNDS ANTICIPATED	(C) TOTAL FUNDS AVAILABLE	(D) COMMITM \$	(D/B) IENTS %	(E) EXPENDI \$	(E/B) TURES %	(F) BILLED to \$	(F/B) FUNDING SOURCE %
FEDERAL - CMAQ	68.2	104.0	54.0	104.0	100%	54.0	52%	54.0	52%
FEDERAL - SECTION 5309 BUS CAPT	8.6	8.6	8.6	8.6	100%	8.6	100%	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	9.1	36.6	100%	26.3	72%	26.3	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	529.3	100%	450.4	85%	450.4	85%
CITY CONTRIBUTION	52.4	101.7	40.0	67.6	66%	44.3	44%	44.3	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	429.1	375.4	100%	336.4	89%	334.8	88%
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	1,968.8	2,020.2	98.0%	1,809.9	88.0%	1,808.4	88.0%

NOTE: Expenditures are cumulative through April 30, 2019

Original Budget based on Board approved October 2011 Funding/Expenditure Plan

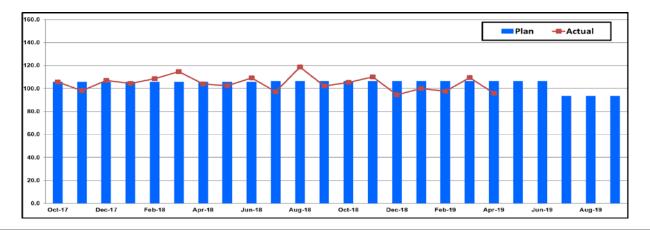
Expenditures exclude \$6.6 Million for State Board of Equalization decision to tax LRT vehicle deliveries since August 2016.

Metro is appealing decision but paid taxes to not include late fees.

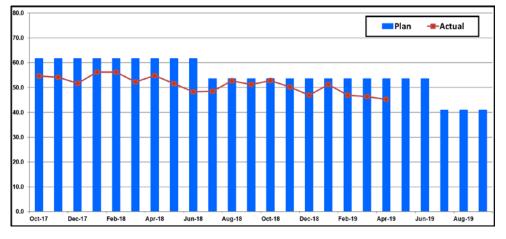


The overall FY19 Total Project Staffing Plan averages 106.5 Full Time Equivalent (FTEs) per month consisting of 53.5 for Metro Agency staff, 45.5 for Construction Management Support Services Consultant and 7.6 for Design and Engineering Support Services Consulting staff.

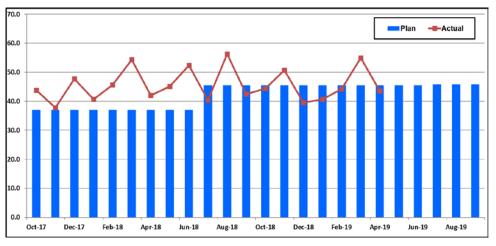
For April 2019, total project staffing were 95.8 FTEs for the month consisting of 45.3 FTEs for Metro's project administration staff, 43.6 FTEs for Construction Management Support Services Consultant and 6.9 FTEs for Design and Engineering Support Services Consulting staff.



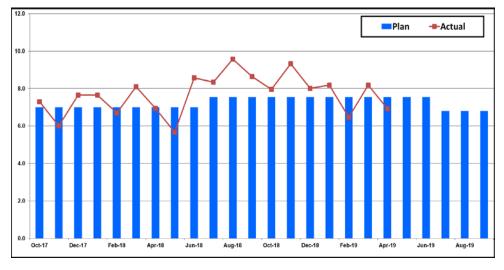
Metro Staff



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.
- Work requiring the last remaining parcel does not fall under WSCC's scope of work and will be constructed under a separate contract. Relocations for this parcel should be complete by end of April 2019.

QUALITY ASSURANCE

C0988 Crenshaw/LAX Transit Corridor Design Build

- WSCC issued eleven Non-Conformance Reports (NCR'S) during the month.
- Attended weekly Quality Team Meetings with WSCC Lead Quality personnel and City of Los Angeles Bureau of Contract Administration (ConAd).
- Visited Old Castle for the OWS Vernon precast.
- Participated in Underground Structures Weekly Construction Performance and Technical Coordination Meetings.
- 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 4/1/19.

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.
- Continue to provide directional signage for businesses impacted by ongoing construction activities.
- 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.

CREATIVE SERVICES

- Facilitated artist reviews of fabrication submittals by contractor for glass and porcelain enamel steel artworks.
- Reviewed fabrication color proofs and artwork registration submitted by Design Build Contractor.
- Collected design assets for submittal to Walsh/Shea for distribution to their signage subcontractor.

SAFETY AND SECURITY

- Conducted Monthly All Hands Safety and Security Meetings with WSCC to discuss ventilation for all three station boxes and tunnels, security /vandalism and ROW protection, track allocation, Teamwork and Partnering and Access and Egress.
- Participated in Safety Briefings/Safety Huddles at EXPO, MLK and Vernon Stations.
- Contract C0991 Hensel Phelps Project to date completed 518,946 work hours with 3 recordable injuries. Hensel Phelps and their subcontractors completed 14,113 work hours and zero (0) recordable injuries for the month of January 2019.
- Hensel Phelps submitted a Notice of Substantial Completion to Metro on January 30, 2019. They continued to work on punch list items.
- Total Days Away (DART) Injury Rate: Six (6) Days Away from Work (DART) Injuries is 0.1. The National Ave is 1.7.
- Project to Date Total Days Away Rate (561 Days Away from Work) is 17.1. No National Published Rate.
- Contract C0988 (WSCC) completed 99,663 work hours with one recordable injury for the month of April 2019. Total Project to Date work hours is 8,115,217 with a total of ninety-two (92) recordable incidents. The Project Recordable Rate is 2.3. The Bureau of Labor Statistics (BLS) average recordable rate per 200,000 work hours is 2.8.

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.

SCC		ORIGINAL	CURRENT BUDGET		COMMITMENTS		EXPENDITURES		CURRENT FORECAST		FORECAST
CODE	DESCRIPTION	BUDGET	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	VARIANCE
10	GUIDEWAYS	0	0	0	0	21,997	0	21,997	0	21,997	21,99
20	STATIONS	0	0	0	0	0	0	0	0	0	(
30	SUPPORT FACILITIES (Y & S)	85,546,835	0	85,189,999	0	85,691,329	0	85,713,357	0	85,691,329	501,330
40	SITEWORK\SPECIAL CONDITIONS	35,932,000	0	38,273,000	106,497	39,809,364	160,799	36,648,432	(1,500,000)	40,605,003	2,332,003
50	SYSTEMS	25,784,616	0	32,991,000	0	34,334,342	20,451	32,413,959	0	34,334,342	1,343,342
	(10-50) CONSTRUCTION	147,263,451	0	156,453,999	106,497	159,857,032	181,250	154,797,744	(1,500,000)	160,652,671	4,198,672
60	RIGHT-OF-WAY	99,910,000	0	100,000,000	0	102,420,623	0	102,418,610	0	102,420,623	2,420,623
70	VEHICLES	0	0	0	0	0	0	0	0	0	(
80	PROFESSIONAL SERVICES	35,601,095	0	33,639,631	9,181	38,454,334	122,380	35,569,157	1,509,181	40,317,144	6,677,513
90	PROJECT CONTINGENCY	13,659,732	0	17,106,370	0	0	0	0	(9,181)	3,809,562	(13,296,808
TOTAL	-	296,434,278	0	307,200,000	115,678	300,731,989	303,630	292,785,511	(0)	307,200,000	(
C0991	PAINT & BODY SHOP PROJECT										
DESCRIPTION		ORIGINAL	CURRENT	BUDGET	COMMIT	MENTS	EXPEND	ITURES	CURRENT	FORECAST	FORECAS
		BUDGET	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	VARIANCE
86130 ⁻	1 DIV 22 PAINT & BODY SHOP	11,000,000	0	11,000,000	0	11,000,000	0	10,321,826	0	11,000,000	(

'URES ARE CUMULATIVE THROUGH APRIL 26, 2

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 April 26, 2019. The total commitments increased by \$0.12 million to \$311.73 million to date represents 97.97% of the current budget. The increase is for commitments associated with FIS adjustment to design-build contractor and professional services.

Expenditures:

The expenditures are cumulative through April 26, 2019. The total expenditures increased by \$0.30 million to \$303.11 million which represents 95.26% of the current budget. The increase is for cost associated with design-build contract C0991 Division 16: Southwestern Yard and project administration, construction management support and labor compliance.