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).

JANUARY 2017

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PROJECT SUMMARY

LOCATION: Crenshaw Blvd at Exposition to Green Line DESIGN/CONSULTANT: Mott MacDonald					Line	CONSTRUCTION MANAGEMENT CONSULTANT: Stantec CONTRACTORS: Walsh-Shea Corridor Constructors (Alignment) and Hensel Phelps / Herzog (Southwestern Yard)									
PROJECT PHOTO: Started siding special trackwork						WORK COMPLETED PAST	MONTH:								
						 o Continued mining of north b o Continued concrete placem o Continued interior walls at B o Continued exterior walls at Le o Continued lower walls at Le o Continued street work at Pa o Continued excavation and o o Continued erection of false o Continued construction of M o Commenced siding special o Continued SWY undergrour o Continued SWY main shop 	ent for south Expo Structur MLK Jr. Stat simert Park S ark Mesa at-g concrete plac Green Line su work for con Alanchester b trackwork in nd utilitites (s	bound tun re. ion. itation. grade area. cement at U uperstructu struction of ridge supe Segment E storm drain,	nel invert. IG#3 and UG#4. re. I-405 bridge. rstructure. 31. sewer lines).						
EXPENDITURE STATUS (\$ In Millions)						SCHEDULE ASSESSMENT									
(+	CU	RRENT	EXF	PENDED	PERCENT	MAJOR SCHEDULE	PRIOR	CURRENT							
ACTIVITIES		JDGET		NOUNT	EXPENDED	ACTIVITIES	PLAN	PLAN	VARIANCE WEEKS						
						Environmental									
DESIGN	\$	136.7	\$	126.5	92.6%	FEIS/FEIR	Sep-11	Sep-11	Complete						
						Record of Decision	Dec-11	Dec-11	Complete						
RIGHT-OF-WAY	\$	127.4	\$	121.6	95.4%	Design									
CONSTRUCTION	\$	1,353.1	\$	727.9	53.8%	Preliminary Engineering	Nov-11	Nov-11	Complete						
						Final Design	Sep-15		20.5 months behind						
OTHER	\$	440.8	\$	169.5	38.5%	Disht of Wou									
TOTAL	\$	2,058.0	\$	1,145.5	55.7%	Right-of-Way Full-take parcels available	Jan-15	Jan-15	Complete (base scope)						
Note: Cost expended as o		-	•	,	/0	Part-take and TCE parcels	Sep-15	Apr-16	Complete (base scope)						
Hole. Ousi expended as (Jan	. 21, 201				Part-take and TCE parcels Sep-15 Apr-16 Complete (base coope)									
AREAS OF CONCERN						D-B Notice to Proceed	Sep-13	Son-12	Complete						
			1		11 - La - a - L										
o Timely submission of ren review by City of Los Ange		ng WSCC	's des	sign subm	ittals and	*D-B Substantial Complete	May-19	,	3.5 weeks behind						
o Ability of north bound TB	M to r		ductio	n rate for	ecast in	**Revenue Service Date	Oct-19	Oct-19	3.5 weeks behind						
design-builder's Completio o Substantial heavy rains i remaining at-grade excava Southwestern Yard constru	n Jan tion a uction	uary impa long the site also	alignn impa	nent critic cted.		*Agreement approved for co Contractor's Substantial Con		•							
o Design-builer's ability to	mitiga	ate sched	ule de	elays.		** Revenue Service Date inc	ludes no sch	edule cont	ingency.						
	F	PLAN	ACO	QUIRED	REMAINING	CRITICAL ACTIVITIES / 3 MONTH LOOK AHEAD									
ROW ACQUISITION						 o Complete Green Line superstructure. o Continue ballast wall construction at 96th Street. o Continue trackwork installation in Segment B1. 					o Continue ballast wall construction at 96th Street.				
ROW ACQUISITION		37		36	1	o Continue ballast wall const o Continue trackwork installa	ation in Segm	ient B1.							
		37 27		36 26	1	o Continue ballast wall const	ation in Segm ide area strea excavation a nel mining.	ent B1. et work. and concret	e work.						
FULL TAKES						o Continue ballast wall const o Continue trackwork installa o Continue Park Mesa at-gra o Continue UG#3 and UG#4 o Complete north bound tunr	ation in Segm ide area strea excavation a nel mining.	ent B1. et work. and concret	e work.						

PROJECT OVERVIEW

Contract Closeout

Contract C0990 - The advanced utility relocations contract with Metro Builders and Engineers Group, LTD was substantially completed on August 21, 2014. The Metro Board authorized a final settlement in March 2016 on all remaining issues. A final payment was issued to the contractor in April 2016. *The contract is closed out*.

Contract C0992 – The concrete ties contract with Rocla Concrete Tie Inc., was substantially completed on August 15, 2014. The contractor was paid in full and the contract was closed out.

Contract C0992A – The running rail and bumping posts contract with LB Foster Rail Technology Corp was substantially completed on May 8, 2015. The contractor was paid in full and the contract was closed out.

Design- Build Contract C0988 (Alignment) – The design-builder, Walsh-Shea Corridor Constructors (WSCC) continues remaining base final design and change work. Construction efforts by the design-builder continued along all major areas. *The contractor progress was impacted this month due to heavy rains.* Along the critical path, construction of 96th Street area infrastructure, work was impacted. Contractor was able to work in other areas of the project including mining the north bound tunnel, underground stations, aerial, and at-grade stations. A key component of the project was the start of special trackwork in the City of Inglewood area of the alignment.

Design- Build Contract C0991 Southwestern Yard (Division 16) – The design-builder, Hensel Phelps / Herzog JV substantially completed final design and submission of submittals required for construction on October 26, 2016 and continue reconciliation of remaining design for future expansion of main shop design, Arbor Vitae street widening and lighting design. *The contractor continues critical path work such as structural excavation and concrete placement of main shop building service and inspection pits, deep foundations and blow down pits including electrical conduits. Contractor also continued with work on underground* storm drain and sewer lines.

Right-of-Way

Metro added in January 2016, two full takes and five part-takes/TCE's required for the construction of the Project. There are now a total of 79 parcels (eight have been decertified). There are 37 full takes, 27 partial takes and 15 temporary construction easements (TCE's). *There have been 76 parcels acquired through January 2017.* Thirty-six full takes, 26 part-takes and 14 TCE's have been provided to the design-builder WSCC.

<u>Systems</u>

Metro staff initiated a study to explore possible alternative layouts to accommodate the central control functions associated with new project needs, such as Crenshaw/LAX project, within the existing ROC facility as an interim measure. Metro has determined that the best course of action is to expand the existing functional operations at the ROC to support the new five new

PROJECT OVERVIEW (Continued)

rail lines and extensions including Foothill Ext., Expo II, Crenshaw/LAX, Regional Connector and Purple Extension Projects. The existing ROC service control and closed circuit television monitoring areas are being expanded and reconfigured for each new rail line extension. The supporting facilities and electrical/communication systems are also expanded and upgraded accordingly to suit the needs of the growing Metro operations. The ROC Reconfiguration Plan will be updated to suit the central control needs of each upcoming new rail line extension. Metro will prepare a design update for the Crenshaw/LAX Project. All work for the ROC is planned to be completed concurrently with the C0988 design-builder scope work to ensure continuity of the systems effort.

Program Management

In May 2013, the 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 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 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 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 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.

The LOP budget is funded by various sources of funds which include local, state and federal funding. The TIFIA Loan is categorized under local funds as the loan is secured by a pledge of Measure R local sales tax funds. The funding percentages are as follows: local funding 79.9%, (includes Measure R TIFIA Loan), state funding 10.5% and federal funding 9.6%.

PROJECT OVERVIEW (Continued)

The project commitments thru January 2017 are \$1,897.5 million or 92.2% of the Current Budget. The project expenditures thru January 2017 are \$1,145.5 million or 55.7% of the Current Budget.

The current period expenditures are for Contract C0988 design-builders monthly construction costs and professional services costs such as construction management and administrative staffing. The expenditures to date also include the Southwestern Yard expenditures that are part of the 49% cost allocation share that the Project is responsible for paying for. The 51% cost allocation is reported within another Metro internal project number. The total costs for the Southwestern Yard project is included in the Appendix.

In December 2016, the C0988 design-builder submitted a "Completion Schedule" which was subsequently reviewed and approved by Metro on December 16, 2016. This schedule represents a re-baseline of WSCC's Contract Schedule which reflects their means and methods for completing construction and testing during the next three years with a commitment to complete on time to support Metro's planned revenue operations in the fall of 2019. The approved Completion Schedule resets WSCC's Contract Milestone #1 Substantial Completion to May 1, 2019 (pending Metro Board action on critical cost and schedule impacts agreement in January 2017).

This month the project schedule reflects a 27 calendar day delay to the design-builder's substantial completion milestone date of May 1, 2019. Since there is no schedule contingency this impacts the projected forecast date of October 2019 for commencing revenue operations. The design-builder and metro are in the process of developing and then implementing mitigation measures to eliminate the projected delay.

MANAGEMENT ISSUES

Concern No. 1: Timely future reviews of WSCC final design submittals by City of Los Angeles.

<u>Status/Action</u> There are a few remaining final design submittals that are required to be submitted by the Contractor for City of Los Angeles review. Metro will continue to take action and strictly monitor the review comments from the agencies and work with the contractor to ensure submittals are coordinated, quality checked and submitted within necessary timeline for reviews.

Concern No. 2: Design-builders construction schedule

Status/Action WSCC submitted a "Completion Schedule" which was subsequently reviewed and approved by Metro on December 16, 2016. This schedule represents a rebaseling of WSCC's Contract schedule which reflects their means and methods for completing construction and testing during the next three years with a commitment to complete on time to support Metro's planned revenue operations in the fall of 2019. The approved Completion Schedule resets WSCC's Contract Milestone #1 Substantial Completion to May 1, 2019 (pending Board action of Global Settlement Agreement in January 2017). *This month the design-builder's schedule reflects a 27 calendar day delay to the May 1, 2019 substantial completion milestone. The design-builder and Metro are in the process of developing and then implementing mitigation measures to eliminate the projected delay.*

Concern No. 3: *(Closed)* Cost and schedule impacts on the Crenshaw/LAX Transit Project to accommodate the future Airport Metro Connector Transit Station at 96th Street.

Status/Action In May 2015, the Metro Board approved Design Option 3 implementing changes required to the design-builder's design to accommodate the ultimate track configuration required for the future Airport Metro Connector Transit Station. The Metro Board approved \$7.4 million for the direct construction costs for FY17, which was required to commence construction to prevent any additional schedule delay impact to the Project. *Metro Board of Directors in January 2017 approved an action to increase the funding up to \$36.0 million for the construction and schedule delay costs for the accommodation scope of work. The scope of work associated with the accommodations is not funded by the Crenshaw/LAX Transit Project but is funded by other funding sources.*

Concern No. 4: Design-builder's ability to meet their planned tunneling productivity rate.

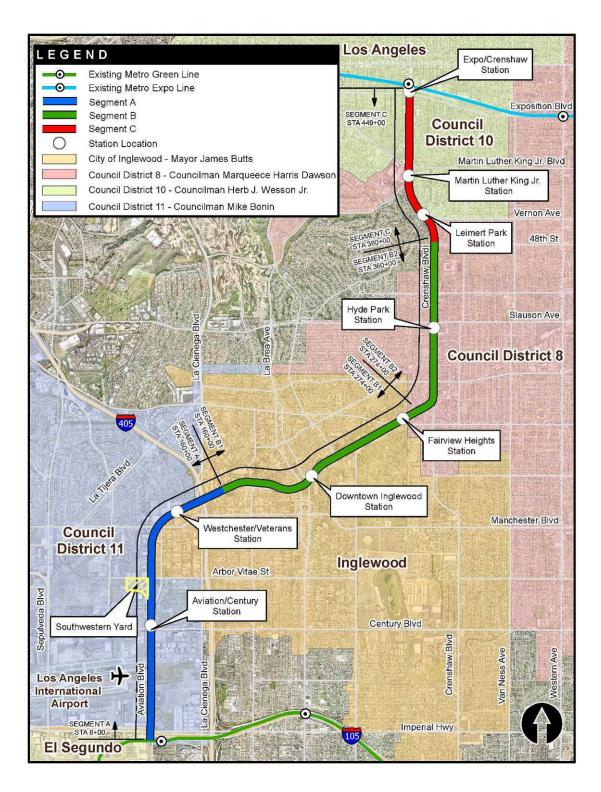
Status/Action The contractor commenced mining the north bound tunnel on November 29, 2016. Thru January 2017, WSCC has achieved an average of 62 feet per work day (three shifts). Metro anticipates that WSCC will achieve by April 10, 2017, the hole through at the Leimert Park Station.

MANAGEMENT ISSUES

Concern No. 5: Substantial rain in January 2017 impacted construction progress.

<u>Status/Action</u> Substantial heavy rain impacted the construction progress for the remaining at-grade excavation along the alignment. Metro and WSCC are exploring mitigation measures that can be implemented to mitigate the impact to the critical path activities.

PROJECT ALIGNMENT



PROJECT SCOPE

The Crenshaw/LAX Transit Corridor 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. The Board adopted a light rail system as the Locally Preferred Alternative (LPA) in December 2009.

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 three locations, utilities, landscaping, roadway improvements required by the project and a maintenance & storage facility (Southwestern Yard).

The scope of work for the three construction contracts and two owner-supplied equipment contracts is shown below.

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.

The project delivery method for this contract was bid-build Invitation for Bid (IFB).

Design-Build Contract C0988 Crenshaw/LAX Transit Corridor

This is the largest project contract which will complete 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, pre-qualification 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).

PROJECT SCOPE (Continued)

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. The cost of constructing the Southwestern Yard will be proportionately split among the four projects.

The project delivery method for this contract was a two-step design-build IFB approach.

Owner-Supplied Equipment - 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.

The project delivery method for this contract was bid-build IFB approach.

Owner-Supplied Equipment - 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.

The project delivery method for this contract was bid-build IFB approach.

Start Up

The commencement of pre-revenue operations will be determined by Metro Operations. The design-builder will have completed Phase I systems integration testing (SIT) and Metro will have subsequently completed and passed Phase II SIT. Metro may conduct some Phase II SIT efforts concurrently with the start of pre-revenue operations at the discretion of Metro Operations. All testing will be required to include and pass a "stress test" of maximum operational service levels to be acceptable. Pre-revenue operations includes: 1) train runs, especially those involving multiple trains, on the integrated and fully operational extension; 2) rehearsal of expected revenue operations of system interactions are tested; 4) equipment "burned-in"; and 5) training of metro personnel who will eventually operate and maintain the extension and for emergency services personnel. Activities occurring during pre-revenue operations are carried out by a designated Metro Project Rail Activation Group.

KEY MILESTONES SIX- MONTH LOOK AHEAD

		Milestone Date	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17
988-CT-1500	F/R/P OCS Foundations - UG #1	30-Jan-17	٢					
988-CT-11115	OCS Foundations - I-405 to La Brea	01-Feb-17						
988-CT-84935	F/R/P OCS Foundation - Bridge - Aviation / Century Bridge	07-Feb-17						
988-CT-84975	Bridge Emergency Walkway - Aviation / Century Bridge	10-Feb-17						
988-CT-4759	TBM Breakthru @ MLK Station - NB	10-Feb-17						
988-SCE-T1050	TPSS-01 Permanent Power Drop - SCE - Procurement of Cable and Equipment	16-Feb-17						
988-CT-13495	Baliast Wali - Rebar Walis - I-405 to La Brea	20-Feb-17		100-200 100000				
988-CT-79176	EL - OCS Foundation - Aerial Structure #1	20-Feb-17		٢				
988-MOD-3180	Deluge System at Expo Crossover	24-Feb-17		100 - 210 000 10.00				
088-MOD-2780	TPSS No.2 Upgrade from 1.5 MW to 2.0 MW	24-Feb-17		COLUMN T				
988-CT-79179	EL - Bridge Emergency Walkway - Aerial Structure #1	14-Mar-17			٢			
988-CT-9959	Ductbank - Excavate - TPSS-02	27-Mar-17						
88-CT-1171517	Frame 1: Pour Deck - I-405 Bridge	30-Mar-17						
88-CT-14400	Excavate & FRP Elevator Pit - Aviation / Century	03-Apr-17						
88-CT-4300	Excavate Foundations - TC&C #3	04-Apr-17						
88-CT-5580	TBM Breakthru @ Leimert Park Station - NB	05-Apr-17				٢		
991-PR-01380	Fab/Deliver Structural Steel	13-Apr-17				Δ		
88-CT-1168553	Erect Structural Steel Canopy (Platform & Pavillion) - Downtown Inglewood Station	14-Apr-17				٢		
88-CT-14500	Construct Escalator Foundations - Aviation / Century	17-Apr-17				٢		
88-CT-10519	Ductbank - Excavate - TPSS-03	04-May-17						
88-CT-1170033	Excavate for TC&C #9 Room - Hyde Park Station	05-May-17					٢	
88-CT-86095	Post-Tension - I-405 Bridge	17-May-17						
88-CT-19100	OCS Foundations - Manchester to I-405	22-May-17						
88-CT-23000	Pour Foundations & Slab - TPSS-01	01-Jun-17						
88-CT-1168713	Art Work Installation - Downtown Inglewood Station (Porcelain Enamel Steel)	05-Jun-17						
88-CT-7429	OCS Grounding - Cable - Manchester to I-405	06-Jun-17						
88-CT-46577	Ballast Wall - F/R/P Footings - 54th to 48th	13-Jun-17						
88-CT-97658	Form Concourse Column 7 (CL 15-22) - Expo	27-Jun-17						
MTA Staff	MTA Board Action 🚔 Walsh Shea Corridor Constructors 🛆	Hensel Phelps	"A" followin	g date is actua	land complet	ied		

Data Date: 01-28-17 Crenshaw-WBS Summary (MPSR) 09-04-12 A 01-11-17A 11-25-19 01-21-16A 08-15-14 A 05-08-15 A 05-28-19 01-28-17 09-10-13 A 10-17-18 05-28-19 01-28-19 12-18-12 A 06-29-15 A 05-28-19 01-28-17 05-28-19 03-28-19 12-26-18 05-03-17 01-28-19 01-28-19 11-25-19 03-07-19 10-31-17 12-17-18 07-28-17 11-25-19 11-25-19 11-19-09 A 04-01-11 A 06-23-09 A 10-20-10 A 06-03-13 A 10-15-13A 09-24-10 A 07-10-13 A 09-10-13 A 09-03-13 A 09-03-13 A 02-10-14 A 07-01-14 A 07-08-14 A 08-18-14 A 10-20-10 A 06-29-15 A 10-20-10 A 06-29-15 A A 60-23-09 A 06-23-09 A 01-01-12 A 12-22-11 A 06-23-09 A 01-31-12 A 08-29-14 A 06-10-14 A 04-04-19 08-28-17 Crenshaw/LAX Transit Corridor - Master Schedule January 2011 Contract C0991 Southwestern Yard and Paint Body Shop Contract C0992 Concrete Ties and Assembly Items Crensham/LAX Transit Corridor - Master Schedule January 2017 Contract C0992A Running Rail & Bumping Post Contract C0990 Advanced Utility Relocation Construction & Installation - 8600003 ion - 865512 Project #865512 Crenshaw/LAX Contract C0988 Crenshaw/LAX Project Planning & Developmen Milestones & Key Dates **Design Build Procureme** Preliminary Engineerin, Design & Engineering Construction & Insta General Requiremen **Design Build Procur** Program Elements Guideway & Tack **Flight of Way** Procurement Right of Way Final Design lestone Tunneling Start Up Sitework Systems Stations Testing

PROJECT SUMMARY SCHEDULE

Crenshaw/LAX Transit Project

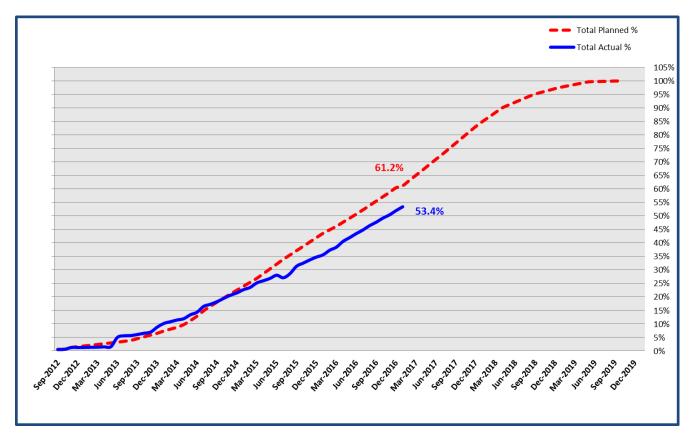
Monthly Project Status Report

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Remaining Work + Millestone Remaining Work - Summary

SCHED		130KEI	VIENIS
		Change	
		from	
	_	Last	
	Status	Period	Comment
Current Revenue Service:	10/30/2019	0	
Forecast Revenue Service:	11/25/2019	-27	Delay due to heavy rain. Mitigation measures being developed.
TIFIA Revenue Service:	10/30/2019	0	
Final Design Progress:			
Contract C0988	98.0%	0.1%	Behind Schedule
Contract C0990	100%	None	Design Completed
Contract C0991	76.6%	1.4%	On Schedule
Contract C0992	100%	None	Design Completed
Contract C0992A	100%	None	Design Completed
Construction Contracts Progress:			
Contract C0988	51.7%	4.6%	Revised Milestones - On Schedule
Contract C0990	100%	None	Substantially Completed
Contract C0991	4.9%	1.0%	On Schedule
Contract C0992	100%	None	Substantially Completed
Contract C0992A	100%	None	Substantially Completed

SCHEDULE MEASUREMENTS



OVERALL CONSTRUCTION PROGRESS CURVE STATUS

The actual overall construction progress is 53.4% versus a planned progress of 61.2% through January 2017. The progress curves represent a composite percentage for the physical progress of work performed to complete the project's construction contracts, including, but not limited to the alignment design-build (C0988), advance utility relocation (C0990), Southwestern Yard design-build (C0991), and two equipment procurement contracts-concrete ties (C0992) and running rail (C0992A).

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

The progress curve was revised this period to include revised forecast for the alignment design-builder and to also include the Southwestern Yard design-builder progress effort.

MAJOR EQUIPMENT DELIVERY STATUS

Tunnel Boring Machine

WSCC, the design-builder for Contract C0988, will procure the tunnel boring machine (TBM) and equipment. Following are the major milestone dates for TBM:

	Baseline	Dec-16	Jan-17	Monthly Variance
Submit Final Design Details for TBM	01/03/14	04/01/15A	04/01/15A	
Fabricate & Deliver TBM	09/22/14	11/21/14A	11/21/14A	
Procure & Deliver TBM Rolling Stock & Accessories	06/23/14	03/02/15A	03/02/15A	
TBM SB Tunnel Launch at Expo	04/28/15	04/27/16A	04/27/16A	
TBM SB Break through at Leimert Park	09/17/15	10/17/16	10/20/16A	
TBM NB Tunnel Launch at Expo	10/29/15	12/06/16	11/29/16A	
TBM NB Break through at Leimert Park	03/21/16	04/05/17	04/05/17	

Light Rail Vehicles

The Board approved exercising Option 1 of Contract P3010 with Kinki Sharyo International 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.

Mobilization of Option 1 will commence after completion of the initial order. The delivery date of the first option 1 cars is under review.

Ticket Vending Machines

Procurement of the ticket vending machines will commence after the design-builder completes final design and the total requirements for the project are known. Initiated change notice to the existing TVM contractor in December with a planned notice to proceed by August 2017.

Concrete Ties and Assembly Items

All 19,936 concrete ties have been delivered to the job.

Running Rail & Bumping Post

All required running rail & bumping post have been delivered to the job site.

DESIGN-BUILDER'S (C0988) LONG LEAD ITEM LIST

Activity ID	Activity Name	Start	Finish
988-PR-3034	Fabricate & Deliver HCR / Sheet Waterproofing (X Passage) - UG #4	12-28-15 A	03-03-17
988-PRC-T0010	TPSS: Procure/Deliver DC Feeder Cable	09-28-16 A	04-13-17
988-PRC-A0010	Procure/Deliver ATC Wire & Cable -Wayside	09-23-16 A	04-20-17
988-PR-4300	Fabricate & Delivery of Special Trackwork	09-22-15 A	04-12-17
988-PRC-X5510	ATC: Procure & Deliver Crossing Equipment @ A05 "Brynhurst" (273+20)	05-27-16 A	03-24-17
988-PRC-X5410	ATC: Procure & Deliver Crossing Equipment @ A05 "West Blvd" (268+70)	05-27-16 A	03-24-17
988-PRC-X5310	ATC: Procure & Deliver Ped Crossing Equipment @ A05 " Fairview Heights" (264+00)	05-27-16 A	03-24-17
988-PRC-X5210	ATC: Procure & Deliver Crossing Equipment @ A05 "High" (256+00)	05-27-16 A	03-24-17
988-PRC-X5110	ATC: Procure & Deliver Crossing Equipment @ A05 "Centinella" (225+00)	05-27-16 A	03-24-17
988-PRC-X4510	ATC: Procure & Deliver Crossing Equipment @ A04 "lvy" (189+38)	05-27-16 A	03-24-17
988-PRC-X4410	ATC: Procure & Deliver Crossing Equipment @ A04 "Eucalyptus" (182+40)	05-27-16 A	03-24-17
988-PRC-X4310	ATC: Procure & Deliver Crossing Equipment @ A04 "Cedar" (167+10)	05-27-16 A	03-24-17
988-PRC-X4210	ATC: Procure & Deliver Crossing Equipment @ A04 "Oak" (161+00)	05-27-16 A	03-24-17
988-PRC-X4110	ATC: Procure & Deliver Crossing Equipment @ A04 "Hindry" (135+30)	05-27-16 A	03-24-17
988-PRC-X3110	ATC: Procure & Deliver Crossing Equipment @ A03 "Arbor" (93+00)	05-27-16 A	03-24-17
988-PR-4800	Fabricate Escalators	05-02-16 A	01-22-18
988-PR-4700	Fabricate & Deliver Elevators	04-04-16 A	01-09-18
988-PR-6915	Fab/Procure & Deliver Electrical Manholes, Vaults, Pads - TPSS	03-14-16 A	03-03-17
988-PRC-00070	OCS: Purchase/Deliver Conductor Bar Hardware	01-04-17 A	03-24-17
988-PRC-00060	OCS: Purchase/Deliver Hardware & Insulators	01-04-17 A	04-21-17
988-PR-6505	Fabricate & Deliver Dry Type Transformers - TPSS	01-30-17	03-24-17
988-PR-6565	Fabricate & Deliver Low Voltage Cable - Expo	01-30-17	03-24-17
988-PR-6705	Fabricate & Deliver Dry Type Transformers - Century	01-30-17	03-24-17
988-PR-6715	Fabricate & Deliver Dry Type Transformers - Vernon	01-30-17	03-24-17
988-PR-6725	Fabricate & Deliver Dry Type Transformers - MLK	01-30-17	03-24-17
988-PR-6735	Fabricate & Deliver Dry Type Transformers - Expo	01-30-17	03-24-17

988-PR-6745	Fabricate & Deliver Low Voltage Cable - MLK	01-30-17	03-24-17
988-PR-6755	Fabricate & Deliver Low Voltage Cable - Vernon	01-30-17	03-24-17
988-PR-6925	Fabricate & Deliver Panelboards - TPSS	01-30-17	03-24-17
988-PR-6955	Fabricate & Deliver Low Voltage Cable - Cut & Fill	01-30-17	03-24-17
988-PR-6965	Fab/Procure & Deliver Electrical Manholes, Vaults, Pads - Tunnel	01-30-17	04-21-17
988-PRC-T0020	TPSS: Procure/Deliver Power & Control Wire & Cable	01-30-17	05-19-17
988-PRC-00095	OCS: Purchase/Deliver Special Tooling	01-30-17	06-19-17
988-PRC-00090	OCS: Purchase/Deliver Spare Parts	01-30-17	06-19-17
988-PR-6485	Fabricate & Deliver MCC - TPSS	01-30-17	08-11-17
988-PR-6775	Fabricate & Deliver MCC - Expo	01-30-17	08-11-17
988-PR-6785	Fabricate & Deliver MCC - MLK	01-30-17	08-11-17
988-PR-6795	Fabricate & Deliver MCC - Vernon	01-30-17	08-11-17
988-PR-3300	Fabricate & Deliver Electrical Switchboards - TPSS	01-30-17	09-29-17
988-PRC-00030	OCS: Manufacture / Deliver Switches & Surge Arrestors	02-13-17	07-03-17
988-PR-6370	Fab/Procure & Deliver Station Emergency Ventilation Fans	02-18-17	12-14-17
988-PR-6875	Fabricate & Deliver Interior Light Fixtures - Expo	02-20-17	04-28-17
988-PR-6895	Fabricate & Deliver Interior Light Fixtures - MLK	02-20-17	04-28-17
988-PR-6905	Fabricate & Deliver Interior Light Fixtures - Vernon	02-20-17	04-28-17
988-PR-6975	Fabricate & Deliver Interior Light Fixtures - Tunnel	02-20-17	04-28-17
988-PR-6885	Fabricate & Deliver Exterior Light Fixtures - Hyde Park Station	02-20-17	05-26-17
988-PR-6615	Fabricate & Deliver Unit Substations - Expo	02-20-17	08-08-17
988-PR-6805	Fabricate & Deliver Unit Substations - MLK	02-20-17	08-08-17
988-PR-6815	Fabricate & Deliver Unit Substations - Vernon	02-20-17	08-08-17
988-PR-6835	Fabricate & Deliver Electrical Switchboards - Expo	02-20-17	10-27-17
988-PR-6845	Fabricate & Deliver Electrical Switchboards - MLK	02-20-17	10-27-17
988-PR-6855	Fabricate & Deliver Electrical Switchboards - Vernon	02-20-17	10-27-17
988-PRC-00020	OCS: Manufacture / Deliver Poles	02-21-17	08-24-17
988-PR-6375	Fab/Procure & Deliver Jet Fans - UG #3, UG#4	02-28-17	12-04-17
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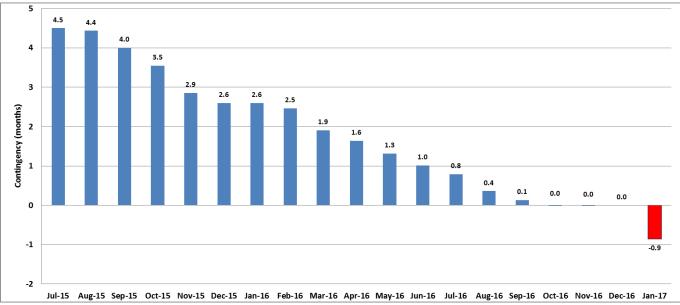
CRITICAL PATH NARRATIVE

Critical Path:

With the addition of construction activities for the accommodations to support a future LRT station at 96th Street in the approved Completion Schedule the project's critical path changed in December 2016. The critical path for the project as shown in the design-builder's Completion Schedule has shifted from the tunnel boring machine mining operations and tunnel concreting activities to the accommodations construction activities to support a future LRT station at 96th Street.

The revised critical path activities include the construction of 96th Street infrastructure, all ballasted walls and operator relief platform in Segment A, trackwork, systems work, and automatic train control (ATC) field acceptance testing at train control and communication (TC&C) room No. 3. The ATC field acceptance testing then continues for Segments B and C. The critical path continues with design-builder's systems integration testing, phase 1, leading to the design-builder's substantial completion milestone.

The critical path continues with Metro's systems integration testing, phase 2 and Metro's prerevenue operations. The critical path completes with the commencement of revenue operations.



PROJECT SCHEDULE CONTINGENCY DRAWDOWN

PROJECT SCHEDULE CONTINGENCY DRAWDOWN ANALYSIS

The project schedule contingency drawdown is based on the revenue service date of October 30, 2019.

Metro received and approved a revised baseline schedule (Completion Schedule) from the C0988 design-builder in December 2016. With the extension of time for the design-builders Substantial Completion Milestone to May 1, 2019 and a Metro/design-builder commitment to achieving an October 30, 2019 revenue operations date, no planned schedule contingency exists in the revised baseline schedule.

Due to heavy rain in January 2017, the design-builders submitted a schedule update that forecast a 27-day delay to their substantial completion milestone date of May 1, 2019. The design-builder and Metro are in the process of developing and then implementing mitigation measures to eliminate the projected delay.

SCC		ORIGINAL	CURREN	IT BUDGET	COMMIT	COMMITMENTS EXPENDITURES		DITURES	CURRENT	CURRENT BUDGET/	
CODE	DESCRIPTION	BUDGET	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	FORECAS VARIANCI
10	GUIDEWAYS	471,335,000	•	452,500,001	-	443,119,255	13,533,534	276,010,335	-	450, 354, 375	(2,145,6
20	STATIONS	153,906,000		316,050,000	260,150	304,257,429	4,365,483	140,074,585	-	315,050,000	(1,000,0
30	SUPPORT FACILITIES SOUTHWEST YARD	66,673,000	-	73,245,544	-	71,053,330	245,410	21,484,053	-	71,164,000	(2,081,5
40	SITEWORK\SPECIAL CONDITIONS	235,576,000	-	348,565,999	146,759	376,459,371	4,034,200	274,784,850	(703,458)	385,992,640	37,426,6
50	SYSTEMS	125,132,000	-	169,311,000	93,000	152,772,828	1,084,989	15,541,449	-	169,436,000	125,0
	CONSTRUCTION SUBTOTAL (10-50)	1,052,622,000	-	1,359,672,544	499,909	1,347,662,213	23,263,616	727,895,273	(703,458)	1,391,997,015	32,324,4
60	RIGHT-OF-WAY	132,294,000	-	127,400,000		123,422,228	3,453	121,577,008	-	127,490,000	90,000.
70	LRT VEHICLES	87,780,000	-	82,100,000		82,050,901	-	7,218,655	-	83,571,544	1,471,5
80	PROFESSIONAL SERVICES	273,147,000	-	300,093,178	1,063,087	318,778,646	3,286,914	263,294,136	1,713,333	359, 157, 116	59,063,9
	SUBTOTAL (10-80)	1,545,843,000	-	1,869,265,722	1,562,996	1,871,913,988	26,553,983	1,119,985,072	1,009,875	1,962,215,675	92,949,9
90	UNALLOCATED CONTINGENCY	177,157,000	-	162,734,278	-	-	-	-	(1,009,875)	69,784,325	(92,949,9
	TOTAL PROJECT 865512 (10-100)	1,723,000,000	-	2,032,000,000	1,562,996	1,871,913,988	26,553,983	1,119,985,072	-	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	-	20,023,237	-	20,023,237	-	20,473,850	
TOTAL	PROJECTS 405512 & 465512 (ENV / PLAN'G)	26,000,000	-	26,000,000	-	25,549,388	-	25,549,388	-	26,000,000	
	TOTAL PROJECTS 405512, 465512 & 865512	1,749,000,000	-	2,058,000,000	1,562,996	1,897,463,376	26,553,983	1,145,534,460	-	2,058,000,000	

PROJECT COST STATUS

PROJECT COST ANALYSIS

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) budget of \$1,749 million for the Crenshaw/LAX Transit Project.

Current Budget:

There have been two increases in the LOP to date:

- The Board in December 2012 approved an increase of \$13.9 million for a new LOP 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 during May 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 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

PROJECT COST ANALYSIS (Continued)

\$150.2 million out of a new total of \$307.2 million adopted by the Board. 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 adopted budget for Southwestern Yard Project is included this month in the appendix section of this report.

The amount of funding available for the Crenshaw/LAX Transit Project, excluding the Southwestern Yard Project \$150.2 million 49% allocation and Environmental/Planning budget of \$26.0 million, has been revised to \$1,881.8 million.

Current Forecast:

The total project current forecast is \$2,058 million. Within the SCC codes there was a reallocation of forecast for SCC-30 shifting final design cost for the Southwestern Yard and design-builder cost-to-SCC-80 per FTA guidelines.

Commitments:

The commitments are cumulative through January 27, 2017. The total commitments increased by \$1.6 million this period primarily due to the following:

- SCC-20 (Stations, Stops, Terminals, Intermodal) has increased by \$0.3 million due to executed modifications associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-40 (Sitework and Special Conditions) has increased by \$0.1 million due to executed modifications associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-50 (Systems) has increased \$0.1 million for costs associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor
- SCC-80 (Professional Services) has increased of \$1.1 million due to executed modifications associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor, legal services, tunnel advisory panel services and environmental consultant services. The total commitment of \$318.8 million includes \$20.0 million for the Southwestern Yard 49% allocation.

The \$1,897.5 million in commitments to date represents 92.2% of the current budget.

Expenditures:

The expenditures are cumulative through January 27, 2017. The total expenditures increased by \$26.6 million this period due to the following:

- SCC-10 (Guideways) has increased by \$13.5 million for costs associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-20 (Stations, Stops, Terminals, Intermodal) has increased by \$4.4 million for costs associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-30 (Southwestern Yard) has increased by \$0.3 million for costs associated with the design-build Contract C0991 Division 16: Southwestern Yard (Design/Build).

PROJECT COST ANALYSIS (Continued)

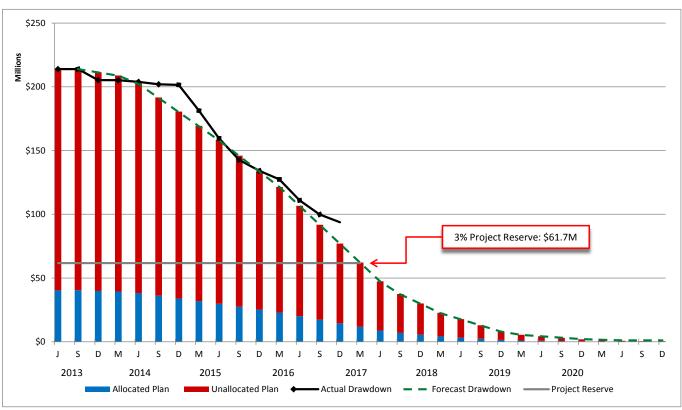
- SCC-40 (Sitework and Special Conditions) has increased by \$4.0 million for costs associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor and Metro Art Program.
- SCC-50 (Systems) has increased \$1.1 million for costs associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-80 (Professional Services) has increased by \$3.3 million for costs associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor, Engineering and Design Contract E0117, Contract C0991 Division 16: Southwestern Yard (Design/Build), Metro project administration, IPMO field office lease and utilities, construction management support services, legal services, third party coordination by Los Angeles City Departments, environmental consultant services, miscellaneous specialty services and labor compliance monitoring services. The total expenditure of \$263.3 million includes \$13.1 million for the Southwestern Yard 49% allocation.

The \$1,145.5 million in expenditures to date represents 55.7% of the 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 TRA	NSIT PROJE	CT FUNDE	D SCOPE OF	WORK						
DESCRIPTION		CURREN	NT BUDGET COMMITMENT		TMENTS	EXPEN	DITURES	CURRENT		FORECAST
BESCHI HON		PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	VARIANCE
405556 SYSTEMWIDE TRANSIT PLANNING		-	139,236	-	139,236	-	139,236	-	139,236	-
210090/93 FARE GATE PROJECT		-	2,482,746	-	2,482,746	-	172,746	-	2,482,746	-
210152 CRENSHAW/LAX BUS TRANSFER I	ACILITY	-	2,200,000	-	-	-	-	-	2,200,000	-
460303 AIRPORT METRO CONNECTOR		-	3,763,844	-	3,763,844	-	2,182,405	-	3,763,844	-
500013 C/LAX LAWA SCOPE OF WORK		-	1,575,362	-	531,125	-	408,712	-	1,575,362	-
	TOTAL	-	10,161,188	-	6,916,950	-	2,903,100	-	10,161,188	-



PROJECT COST CONTINGENCY DRAWDOWN

Through 27-Jan-2017

PROJECT COST CONTINGENCY DRAWDOWN ANALYSIS

The project current budget of \$2,058,000,000 includes an "unallocated contingency" amount of \$173,500,000 which is included as a separate Standard Cost Category (SCC) element. Also included within the current budget is an "allocated contingency" of \$40,366,792 which is allocated, where applicable, to specific contracts within each SCC element. The allocated contingency is not broken out separately in the current budget, as this amount covers anticipated but unknown contract modifications issued by Metro. The total project cost contingency is \$213,866,792 or 10.4%.

Included in the project contingency drawdown is a 3% project reserve line. 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.

The project contingency drawdown curve is based on an October 2019 revenue service date.

PROJECT CONTINGENCY DRAWDOWN ANALYSIS (Continued)

There has been a cumulative drawdown of \$121,624,879 or 56.9% for both allocated and unallocated contingency through January 2017.

- The unallocated contingency decreased by \$1,009,875 for executed modifications for the design-build contract C0988 Crenshaw/LAX Transit Corridor, professional services contract PS2879 with HILL INTERNATIONAL, INC., contract PS12251 with BCA WATSON RICE LLP and environmental services contract EN078 with AECOM TECHNICAL SERVICES, INC.
- The allocated contingency decreased by \$511,618 due to executed modifications for design-build contract C0988 Crenshaw/LAX Transit Corridor.

PROJECT COST CONTINGENCY (through 27-Jan-2017) UNITS IN DOLLARS											
	Original				Remaining						
	Contingency	Previous	Current	To-Date	Contingency						
	(Budget)	Period	Period		(Forecast)						
Unallocated Contingency	173,500,000	(102,705,800)	(1,009,875)	(103,715,675)	69,784,325						
Allocated Contingency	40,366,792	(17,397,579)	(511,618)	(17,909,197)	22,457,595						
Total Contingency	213,866,792	(120,103,379)	(1,521,493)	(121,624,871)	92,241,921						

DISADVANTAGED BUSINESS ENTERPRISE (DBE) STATUS

Contract C0988 Crenshaw/LAX Transit Corridor Design-Build

(Reported Data as of January, 2017)

- DBE Goal Design 20.00%
- Current DBE Commitment \$22,828,902 (20.00%)
- Current DBE Participation \$26,893,551 (26.15%)
- Twenty-one (21) Design subcontractors have been identified to-date
- DBE Goal Construction 20.00%
 DBE Commitment \$239,237,446 (20.00%)
 Current DBE Commitment \$219,472,361 (18.35%)
 Current DBE Participation \$155,399,043 (26.04%)
- One Hundred Forty-Eight (148) Construction subcontractors have been identified to-date.

PROJECT LABOR AGREEMENTS (PLA) STATUS

Contract C0988 Crenshaw/LAX Transit Corridor Design-Build

(Reported Data as of January, 2017)

Targeted Worker Goal –	40.00%
Targeted Worker Current Participation -	58.60%
Apprentice Worker Goal -	20.00%
Apprentice Worker Current Participation -	20.71%
Disadvantaged Worker Goal -	10.00%
Disadvantaged Worker Current Participation	12.79%

DISADVANTAGED BUSINESS ENTERPRISE (DBE) STATUS

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(Reported Data as of December, 2016)

- DBE Goal Design 20.00%
- Current DBE Commitment \$2,383,718 (20.93%)
- Current DBE Participation \$1,457,680 (18.10%)
- Six (6) Design subcontractors have been identified to-date

• DB	E Goal – Construction	16.00%	
• DB	E Commitment	\$25,181,760	(16.00%)
• Cui	rrent DBE Commitment	\$12,677,781	(8.06%)
• Cui	rrent DBE Participation	\$ 2,111,907	(10.77%)

• Fourteen (14) Construction subcontractors have been identified to-date.

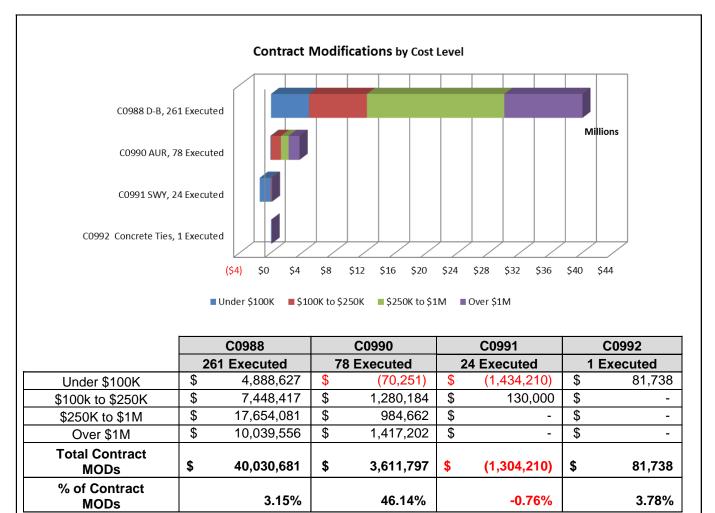
PROJECT LABOR AGREEMENTS (PLA) STATUS

Contract C0991 Division 16: Southwestern Yard Design-Build

(Reported Data as of December 15, 2016 for January 2017 Report)

- Targeted Worker Goal 40.00%
- Targeted Worker Current Participation 49.82%
- Apprentice Worker Goal 20.00%
- Apprentice Worker Current Participation 21.33%
- Disadvantaged Worker Goal 10.00%
- Disadvantaged Worker Current Participation 9.12%





Two hundred and sixty one (261) changes with a total value of \$40.03 million have been executed since award of Contract C0988. There are an additional thirty four (34) changes with a total value of \$4.45 million pending the administrative approval process.

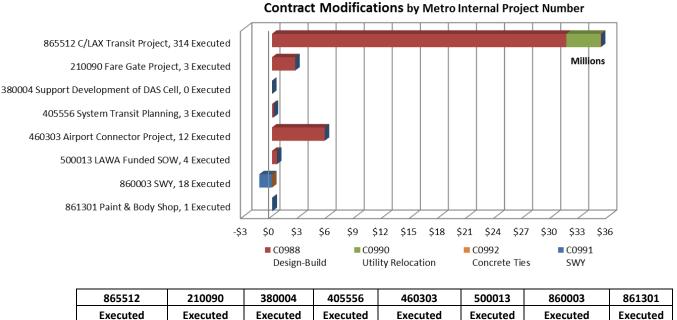
Seventy-eight (78) changes with a total value of \$3.61 million have been executed for completed Contract C0990.

Twenty four (24) changes with a total value of \$1.30 million credits have been executed since award of Contract C0991. There are an additional ten (10) changes with a total value of \$1.70 million pending the administrative approval process.

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

SUMMARY OF CONTRACT MODIFICATIONS



	865512	210090	380004	405556	460303	500013	860003	861301
	Executed	Executed	Executed	Executed	Executed	Executed	Executed	Executed
C0988 - QTY	239	3	0	3	12	4	0	0
C0998 - \$	\$ 31,207,340	\$ 2,482,746	\$-	\$ 175,495	\$ 5,633,884	\$ 531,216	\$-	\$-
C0990 - QTY	78	0	0	0	0	0	0	0
C0990 - \$	\$ 3,611,797	\$-	\$-	\$-	\$	\$-	\$-	\$-
C0991 - QTY	0	0	0	0	0	0	21	3
C0991 - \$	\$-	\$-	\$-	\$-	\$-	\$ -	\$ (1,371,606)	\$ 67,396
C0992 - QTY	1	0	0	0	0	0	0	0
C0992 - \$	\$ 81,738	\$-	\$-	\$-	\$.	\$-	\$-	\$-
Total - QTY	318	3	0	3	12	4	21	3
Total - \$	\$ 34,900,875	\$ 2,482,746	\$-	\$ 175,495	\$ 5,633,884	\$ 531,216	\$ (1,371,606)	\$ 67,396

Three hundred and eighteen (318) changes with a total value of \$34.90 million have been executed for Project 865512 Crenshaw/LAX Transit Project. There are an additional thirty two (32) changes with a total value of \$3.71 million pending the administrative approval process.

Three (3) changes with a value of \$2.48 million have been executed for Project 210090 Fare Gate Project. There is an additional one (1) change with a total value of \$0.39 million pending the administrative approval process.

No changes have been executed for Project 380004 Support Development of DAS Cell Project. There is an additional one (1) change with a total value of \$0.35 million pending the administrative approval process.

Three (3) changes with a value of \$0.18 million have been executed for Project 405556 System Transit Planning.

Twelve (12) changes with a value of \$5.63 million have been executed for Project 460303 Airport Metro Connector Project.

Four (4) changes with a total value of \$0.53 million have been executed for Project 500013 Crenshaw/LAX LAWA Statement of Work. There is an additional one (1) change with a total value of \$1.30 million pending the administrative approval process.

SUMMARY OF CONTRACT MODIFICATIONS (Continued)

Twenty one (21) changes with a value of \$1.37 million credit have been executed for Project 860003 Southwestern Yard. There are an additional nine (9) changes with a total value of \$0.40 million pending the administrative approval process.

Three (3) changes with a value of \$67,396 has been executed for Project 861301 Southwestern Yard Paint and Body Shop.

FINANCIAL/GRANT STATUS

\$ in millions									
	(A) ORIGINAL	(B) TOTAL	(C) TOTAL	(D) COMMITM	(D/B) IENTS	(E) EXPENDI	(E/B) TURES	(F) BILLED to	(F/B) FUNDING
SOURCE	BUDGET	FUNDS ANTICIPATED	FUNDS AVAILABLE	\$	%	\$	%	\$	SOURCE %
FEDERAL - CMAQ	68.2	54.0	54.0	54.0	100%	54.0	100%	54.0	100%
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	102.2	73.7	102.2	100%	61.6	60%	41.7	41%
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	2.2	36.6	100%	2.2	6%	2.2	6%
STATE PPM	0.178	0.178	0.178	0.178	100%	0.178	100%	0.178	100%
STATE PROP 1B PTMISEA	201.2	128.6	128.6	128.6	100%	128.6	100%	128.6	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	446.7	529.3	100%	250.0	47%	248.7	47%
OTHER FUNDS*	52.4	187.5	19.0	28.5	15%	19.0	10%	19.0	10%
PROP C 25% HIGHWAY	148.9	350.2	6.0	348.6	100%	6.0	2%	3.7	2%
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	50.4	50.4	50.4	0%	4.9	0%	4.9	10%
TOTAL	1,749.0	2,058.0	1,399.9	1,897.5	92.2%	1,145.5	55.7%	1,122.1	54.5%

NOTE: Expenditures are cumulative through January 31, 2017.

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

Total Funds Anticipated based on August 2016 Funding Plan

* Other funds include: Local Agency Funds (\$107.470), CNG Tax Credit (\$54.000) and 3rd Party Lease Contingency (\$26.000)

STATUS OF FUNDS ANTICIPATED

FEDERAL – CMAQ: Metro submitted to FTA in October 2013 a draft grant application of \$30M for review. FTA has reviewed the application and allowed Metro to formally submit the grant application in July 2014. Grant was approved in December 2014. Funds are available for drawdown. Metro submitted to FTA in January 2015 a grant application of \$24M for approval. Grant was approved on September 23, 2015. Funds are available for drawdown.

FEDERAL – RSTP: FTA approved a grant of \$45M in May 2014 to fund the project rail cars. Funds are available for drawdown. Metro submitted to FTA in October 2013 a draft grant application of \$28.2M for review. FTA has reviewed the application and allowed Metro to formally submit the grant application in July 2014. Grant was approved in December 2014. Funds are available for drawdown.

STATE PROP 1B – PTMISEA: An allocation request for \$12M was approved in May 2012 and funds are available for drawdown. In March 2013, allocation requests of \$11.4M and \$98.9M were submitted to Caltrans. The \$11.4M allocation request was approved in June 2013. Funds are available for drawdown. The \$98.9M allocation request was approved on February 6, 2014. Funds are available for drawdown. A new allocation request of \$6.170M was submitted in June 2014 to Caltrans for approval. The allocation request was approved on February 4, 2015. Funds are available for drawdown.

STATE PROP 1B LP: An allocation request of \$49.5M was submitted in April 2013 and approved in July 2013. The allocation request was executed by Caltrans in December 2013. Funds are available for drawdown.

MEASURE R – TIFIA LOAN (Transportation Infrastructure Finance & Innovation Act): Application for a loan of \$545.9M was submitted to the US Department of Transportation (DOT) in November 2011. Loan agreement was executed on September 12, 2012.

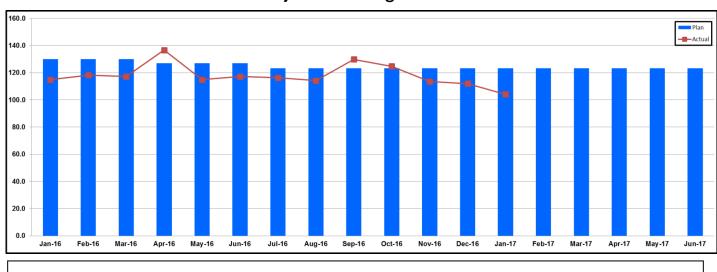
MEASURE R: \$446.7M has been allocated to the project through FY2017. Funds are available for drawdown.

OTHER FUNDS: City of LA: Based on the funding agreement between Metro and the City of LA. \$19M is available for drawdown through FY2017.

PROP C 25% HIGHWAY: \$3.8M has been allocated to the project based on the June 2014 TIFIA Financial Model Funding Plan. Funds are available for drawdown.

PROP A 35% RAIL CAPITAL: \$4.8M has been allocated to the project based on the June 2014 TIFIA Financial Model.

STAFFING STATUS



Total Project Staffing – FTES

Notes:

- 1. FTE = Full Time Equivalent
- 2. Staffing levels include the Southwestern Yard Project.
- 3. Actual staffing levels are cumulative through January 2017.

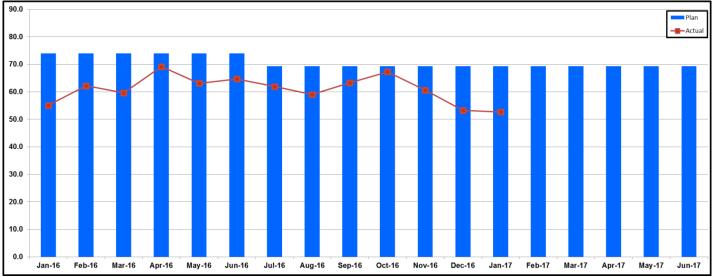
TOTAL PROJECT STAFFING

The overall FY17 Total Project Staffing Plan averages 123.3 Full Time Equivalent (FTEs) per month consisting of 69.3 for Metro Agency staff, 47.0 for Construction Management Support Services Consultant and 7.0 for Design and Engineering Support Services Consulting staff.

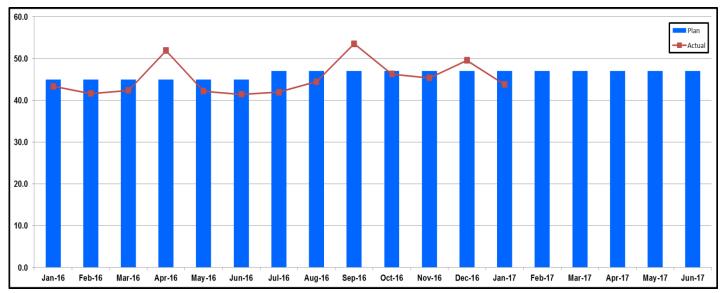
For January 2017, total project staffing were 104.2 FTEs for the month consisting of 52.7 FTEs for Metro's project administration staff, 43.8 FTEs for Construction Management Support Services Consultant and 7.7 FTEs for Design and Engineering Support Services Consulting staff.

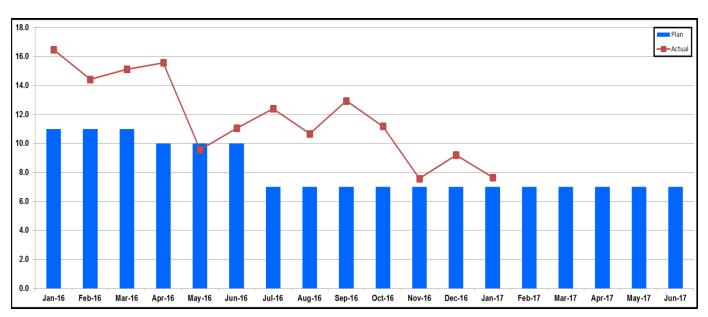
The next three charts show actual staffing versus planned staffing for the three major project participants.

STAFFING STATUS (Continued) METRO STAFFING – FTES



CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONSULTANT – FTES





STAFFING STATUS (Continued) ENGINEERING SERVICES CONSULTANT – FTES

						100			
Contract No.	Number of Parcels	Certified	Decertified	Appraisals Complete	Offers Made	Agreements Signed	Condemnations Filed	Relocations Complete	Parcels Available to WSCC
C0988 C/LAX Transit Corrido	r (D-B):								
Crenshaw Subdivision									
Full Takes	12	12		12	12	7	5	12	12
Part Takes (PT or SE)	10	9	1	9	9	3	6		9
TCE	10	9	1	10	10	1	8		9
Subtotal Parcels	32	30	2	31	31	11	19	12	30
Crenshaw Subdivision Addit	ional Parcels:						•		
Full Takes									
Part Takes	1	1		1	1	1			
TCE									
Subtotal Parcels:	1	1		1	1	1			
Total Crenshaw Parcels	33	31	2	32	32	12	19	12	30
Harbor Subdivision									
Full Takes	15	15		15	15	8	7	12	15
Part Takes (PT or SE)	18	16	2	18	17	7	10		15
TCE	3	2	1	2	2		2		2
Subtotal Parcels	36	33	3	35	34	15	19	12	32
Harbor Subdivision Addition	al Parcels:								
Full Takes	3	2	1	1				1	1
Part Takes	4	2	2	2	2	2			2
TCE	3	3		3	3	3			3
Subtotal Parcels:	10	7	3	6	5	5		1	6
Total Harbor Subdivision Parcels	46	40	6	41	39	20	19	13	38
Total CR/HS Parcels:	79	71	8	73	71	32	38	25	68
Southwestern Yard									
Full Takes	8	8		8	8	4	4	7	8
Part Takes									
TCE									
Subtotal Parcels:	8	8		8	8	4	4	7	8
Total SW Parcels:	8	8		8	8	4	4	7	8
Total Project Parcels	87	79	8	81	79	36	42	32	76

REAL ESTATE STATUS

• All parcels necessary to construct the guideway have been turned over to the Contractor.

- Work requiring the remaining parcels is not on the critical path and will be used to construct ADA, sidewalk, and other civil improvements.
- Efforts continue to closeout court cases on the various condemned properties.

QUALITY ASSURANCE STATUS

C0988 Crenshaw/LAX Transit Corridor Design-Build Contract

- Attended weekly Quality Staff Meetings with City of Los Angeles, Los Angeles Bureau of Contract Administration, HNTB, and WSCC Lead Quality personnel.
- WSCC Quality issued three (3) Nonconformance Reports (NCR's) during this month.
- WSCC Quality closed three (3) NCR's during this month.
- WSCC Quality conducted a training session on Mitigation of Traffic (MOT), refresher training on SharePoint database and a training session for new employees.
- HNTB Design Quality Control reviewed sixteen (16) NDC's, two (2) RFC's, six (6) AFC's and one (1) design package.
- Metro Independent Testing Lab (ITL) conducted soil split sampling for verification testing of material for use on Mechanically Stabilized Earth (MSE) Walls and tested and provided test results on MSE Backfill and was provided #8 flash welded tie samples by Metro for ultimate splice testing.
- Metro Quality participated in Readiness Review meetings for City of Inglewood Water Line Installation, Ballasted Trackwork and Special Trackwork Construction and Direct Fixation Bottom Up/Top Down Construction.

ENVIRONMENTAL STATUS

C0988 Crenshaw/LAX Transit Corridor Design Build

- Reviewed and commented on the following Contractor Submittals:
 - Weekly Noise and Vibration Monitoring Data for station and alignment construction
 - o Green Construction Policy Monthly Report
 - o Sustainability Plan Monthly Reports
 - o Weekly Storm Water Pollution Prevent Plan (SWPPP) inspection reports
 - Weekly Fugitive Dust Inspection Reports
 - Various Construction Work Plans and Submittals
 - Quarterly Noise Control Plan updates
 - Waste Management Plan
- Conducted Contractor Cultural Awareness Training.
- Coordinated cultural monitoring (Archaeological, Paleontological and Native American Monitoring).
- Prepared 4th Quarter 2016 Mitigation Measures Status Report.
- Coordinated removal of contaminated soil encountered near Eucalyptus Avenue and Florence Blvd.
- Conducted Green Construction Policy implementation audit.

CONSTRUCTION RELATIONS STATUS

- Working closely with Metro Environmental to ensure proper noise mitigation measures are being taken in the Hyde Park community (UG3).
- Met with LADOT to explore restriping options in Park Mesa Heights.
- Working with Media Relations to plan an event to celebrate the completion of tunneling.
- Conducted outreach on the 21-day closures of sidewalk and on-street parking in Park Mesa Heights.
- Planning a community meeting with residents of La Colina Avenue in Inglewood to discuss landscaping and fencing plans.

SYSTEMWIDE DESIGN AND ART PROGRAM STATUS

- Continued to review and respond to submittals.
- Worked with artists to refine designs for submission to fabricators.
- Facilitated coordination between artists and fabrication firms.

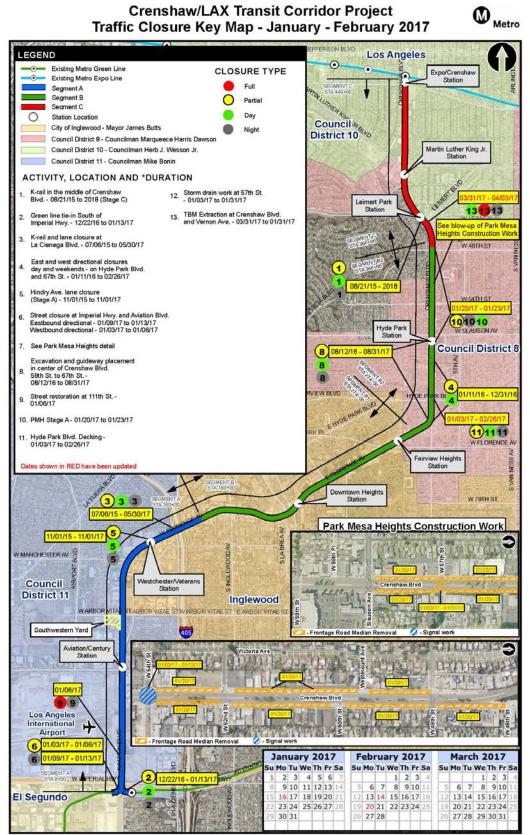
SAFETY & SECURITY STATUS

- Participated in weekly progress meetings with WSCC's Management and Construction Management Team to discuss safety/security/quality related issues and the six-week construction schedule.
- Participated in WSCC's weekly Safety Tool-Box Meetings and Executive Safety and Security Committee Meeting.
- Monitored construction activities on a daily basis including weekends to ensure compliance with contract specifications.
- Participated in WSCC's Readiness Review for Ballasted Trackwork and Special Trackwork construction.
- Monitored TBM, tunnel cross-passage #3 and underground stations construction activities.
- Reviewed safety submittals for the cross passage phase 1 and at-grade crossings.
- Contract C0990 Metro Builders Advanced Utility Relocation completed 369,287 manhours and four recordable incidents. This contract is closed out.
- Contract C0991 Hensel Phelps Project-to-Date completed 25,744 work hours with zero recordable incidents. They completed 879 work hours for the month of January with zero recordable incidents.
- Contract C0988 (WSCC) completed 128,457 work hours with zero recordable incidents and four first aid cases for the month of January 2017. Total Project-to-Date work hours are 3,695,898 and a total of forty-six recordable incidents. The project Recordable Rate is 2.4. The Bureau of Labor Statistics (BLS) average recordable rate per 200,000 work-hours is 2.8.

Third Party	Type of Agreement	Forecast Execution Date	Required Need Date	Status/ Comments
City of Los Angeles	Amendment to Master Cooperative Agreement	N/A	N/A	Parties will work under 2003 MCA.
City of Inglewood	Master Cooperative Agreement	8/16	N/A	Executed Letter of Agreement April 2012. Metro working on outstanding issues.
Los Angeles Department of Water and Power	Amendment to Memorandum of Understanding	N/A	N/A	Metro and LADWP will work under 2002 Utility Cooperative Agreement which remains in effect.
Los Angeles County Public Works	Letter of Agreement	4/11	3/12	Executed
Caltrans	Amendment	8/11	3/12	Executed
Private Utilities	LOA, MOU or UCA	5/11 to 5 / 13	N/A	Metro is working with affected third party utilities under work orders unless license agreements dictate relocation by utility company. No additional agreements required.

CPUC CROSSING SUMMARY STATUS

- The CPUC has approved all packages.
- LACMTA filed a response on March 25, 2016 in response to a petition that was filed by a community member, Chandra V. Mosley, to modify the CPUC Decision that approved seven at-grade crossings on Crenshaw Blvd, located from 48th St. to 59th St.
- Metro attended the Prehearing regarding the petition on May 24, 2016.
- The scoping document (Ruling) was issued on July 1, 2016 by the Administrative Law Judge Scoping which set forth the procedural schedule and address the scope of the proceeding.
- Metro filed a brief on August 5, 2016 and a Reply Brief on August 15, 2016.
- Administrative Law Judge is reviewing the submitted Briefs and will issue a Proposed Decision.



Updated: 01/05/2017

Note: Traffic closure dates and durations are subjected to change

CHRONOLOGY OF EVENTS

2003	Major Investment Study
April 2007	Board authorized the CEO to award Contract PS 4330-1968 to complete environmental clearance and conceptual engineering.
December 2009	Board adopted the LRT Alternative as the Locally preferred Alternative and received and filed the Crenshaw Transit Corridor DEIS/DEIR.
December 2009	Board authorized the CEO to award Contract No. EO117 for Phase I, Advanced Conceptual Engineering.
September 2010	Board authorized the CEO to exercise option with Contract No. EO117 for Phase II Preliminary Engineering.
April 2011	Board adopted the Arbor Vitae/Bellanca (Site 14) LPA for the Maintenance Facility Site
July 2011	Board approved Southwestern Yard cost allocation.
September 2011	Board approved Project Definition and certified Final Environmental Impact Report
October 2011	Board approved the Life-of-Project Budget of \$1.749 billion.
December 15, 2011	CTC reviewed the FEIS/FEIR and adopted the required resolution for future funding consideration.
December 23, 2011	Request for Qualifications for Contract C0988 C/LAX Transit Corridor was released to Industry.
December 30, 2011	Received Record of Decision from FTA.
February 10, 2012	Released Invitation for Bid for Contract C0990 Crenshaw/LAX Advanced Utility Relocations.
March 12, 2012	Received Statement of Qualifications for Contract C0988 C/LAX Transit Corridor.

CHRONOLOGY OF EVENTS (Continued)

May 16, 2012	Notification of pre-qualified proposers 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.
June 22, 2012	Released Request for Proposals for Contract C0988 C/LAX Transit Corridor.
August 24, 2012	Received approval from the Surface Transportation Board regarding BNSF Railway Company abandonment along five-mile Crenshaw Segment of the Harbor Branch ROW.
September 4, 2012	Preparation of a FONSI for Supplemental Environmental Assessment to the FEIS was approved by FTA.
September 28, 2012	Completed abandonment process with BNSF.
September 28, 2012	TIFIA and TIGER II Grants approved.
December 6, 2012	Received proposals for Contract C0988 C/LAX Transit Corridor.
February 22, 2013	Issued Amendment No. 8 requesting Best and Final Offers (BAFO) for Contract C0988 C/LAX Transit Corridor.
March 15, 2013	Received BAFO's for Contract C0988 C/LA Transit Corridor.
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.
July 10, 2013	Issued notice of award to Walsh-Shea Corridor Constructors, Contract C0988 Crenshaw/LAX Transit Corridor.

CHRONOLOGY OF EVENTS (Continued)

August 1, 2013	United States Department of Transportation approves Metro's request to increase the Crenshaw/LAX Project Budget to \$2,058 million.
August 8, 2013	Issued notice of execution of the contract was issued to Walsh-Shea Corridor Constructors, Contract C0988 Crenshaw/LAX Transit Corridor.
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.
July 25, 2014	Century Crunch" – weekend demolition of the defunct Century railroad bridge at the intersection of Century Blvd. and Aviation.
August 21, 2014	Substantial Completion issued for Advanced Utility Relocations Contract C0990.
August 29, 2014	Released Invitation for Bid for Contract C0991 Crenshaw/LAX Southwestern Yard (Division 16) Maintenance Facility.
September 19, 2014	CPUC has approved all five (5) grade crossing applications and no further actions are required.
January 22, 2015	Received Technical and Price Bids for the Southwestern Yard (Division 16) Maintenance Facility.
March 25, 2015	Opened Price Bids for the Southwestern Yard (Division 16) Maintenance Facility.

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.
July 23, 2015	The Board approved the Official and Operational Names of the eight stations.
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).
October 20,2016	The southbound tunnel boring machine completed mining with the hole thru at Leimert Park Station.

CONTRACT C0988 STATUS

Crenshaw/LAX Transit Corridor

CM Consultant: Stantec	lott (HM)				Contract No.: C0988	And And
Contractor: - Walsh Shea Corri	dor Const	tructors (WSCC)		Status as of January 28, 2017	- STREE
Progress/Work Completed: Construction Continued north bound tunnel min Continue south bound invert conc Continued excavation and lagging Continued Excavation and lagging Continued Excavation and lagging Continued Excavation and lagging Continued CS foundation constr Continued work at the Pedestrian Continued erection of I-405 Bridge Continued construction of the plat Continued waterproofing and U-W Continued construction of the Cut Continued construction of Green I	reting. g at UG #4. g and decki last Wall in ruction in se Underpass e Falsework form deck a /alls at UG & Cover W	Seg B1. egment B1. s. at La Brea s #1 'alls & Root	Station		 Areas of Concern: Design-builder's ability to mitigate sche Timely submittal of WSCC's design sub Los Angeles. 	
					Cost Assessment:	
 Schedule Assessment: Design-builder forecast a delay of 27 The contractor's critical path was imposubstantial completion milestone. Metro has requested a mitigation plate 	pacted and t	hey are fore	-		 The current construction contract cost for and is within the Board authorized budget The Contractor submitted their 41st paym approved amount of \$20,317,922.10 *Please note that not all executed modificati in the Contractor current payment application 	t. ient application in the ons may have been included
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 Design-builder forecast a delay of 27 The contractor's critical path was imposubstantial completion milestone. Metro has requested a mitigation plation plation has requested a mitigation plation. Metro has requested a mitigation plation plation. Date of Award: Date of Award: Notice to Proceed: Original Substantial Completion I Current Substantial Completion I Current Substantial Completion I Elapsed Time from NTP: Milestones Milestone 1 - Contract Substantial Completion Milestone 2 - UFS Completion Milestone 3 - Commence SIT Phase I Milestone 5 - Const./Turnover Parcels SW-0101, 0102, 0103 Milestone 5 - Const./Turnover Parcels SW-0002, 0003, 0004, 0104 	Duration: Duration: Duration: Original Contract 09/08/18 03/09/18	08/01/13 09/10/13 09/10/13 1824 2059 1236 Current Contract 05/01/19 11/01/18 02/01/19	60.0% Forecast 05/28/19 09/19/18 02/28/19	Calendar Day Variance -27 43 -27	 and is within the Board authorized budget The Contractor submitted their 41st paymapproved amount of \$20,317,922.10 *Please note that not all executed modification in the Contractor current payment application Cost Summary: Award Value: Executed Modifications: Approved Change Orders: Current Contract Value (1 + 2 + 3): Incurred Cost: 	t. nent application in the ons may have been included in. \$ In millions 1,272.63 31.35 8.68 1,312.66 818.10 MPLETE 01/28/17 98.0%
Design-builder forecast a delay of 27 The contractor's critical path was imposubstantial completion milestone. Metro has requested a mitigation pla Schedule Summary: Date of Award: Notice to Proceed: Original Substantial Completion I Current Substantial Completion I Current Substantial Completion I Elapsed Time from NTP: Milestones Milestone 1 - Contract Substantial Completion Milestone 2 - UFS Completion Milestone 3 - Commence SIT Phase I Milestone 4 - Const./Turnover Parcels SW-0101, 0102, 0103 Milestone 5 - Const./Turnover Parcels	Duration: Duration: Duration: Original Contract 09/08/18 03/09/18 06/09/18	08/01/13 09/10/13 09/10/13 1824 2059 1236 Current Contract 05/01/19 11/01/18 02/01/19 03/04/16	60.0% Forecast 05/28/19 09/19/18 02/28/19 05/01/16A	Calendar Day Variance -27 43 -27 -58	 and is within the Board authorized budget The Contractor submitted their 41st paymapproved amount of \$20,317,922.10 *Please note that not all executed modification in the Contractor current payment application Cost Summary: Award Value: Executed Modifications: Approved Change Orders: Current Contract Value (1 + 2 + 3): Incurred Cost: 	t. hent application in the ons may have been included n. \$ In millions 1,272.63 31.35 8.68 1,312.66 818.10 MPLETE 01/28/17 \$ 0.0% \$ 0.0% 100.0% \$ 0.0% 100.0%

CONTRACT C0990 STATUS

Crenshaw/LAX Advanced Utility Relocations

PE Design Contractor: Ha CM Consultant: Stantec	atch Mott (H	HM)			Contract No.: C0990
Contractor: - Metro Build	ers and En	gineers G	iroup LTD		Status: Completed
Progress/Work Complete - The construction was substa - Board authorized in March a - Contract is closed out.	d: antially comp settlement	leted on Au with the co	ıgust 21, 20 [.] ntractor.	14	Areas of Concern:
Schedule Assessment: - Metro granted substantial co 2014, which is 276 calender of - The settlement with the cont	lays behind.			ıst 21,	Cost Assessment: - The final contract is \$11,316,140.00 and has been completely paid to contractor. * A modification in process for credit of unused provisional sums in the amount of \$123,156.85.
Schedule Summary: 1. Date of Award:		05/30/12			Cost Summary: \$ In millions 1. Award Value: 7.83
2. Notice to Proceed:		07/17/12			2. Executed Modifications:* 3.49
3. Original Substantial Comp					3. Approved Change Orders: -
4. Current Substantial Comp	letion Durati				4. Current Contract Value (1 + 2 + 3): 11.32
5. Elapsed Time from NTP:		753			5. Incurred Cost: 11.32
Milestones	Original Contract	Current Contract	Forecast	Calendar Day Variance	PERCENT COMPLETE from 7/17/12 to 8/21/14
Milestone 1 - Contract Substantial Completion	07/17/13	11/18/13	08/21/14A	-276	Design 0%
					Construction Total Incurred Cost 0% 20% 40% 60% 80% 100%
					Percent Complete Progress Construction physical percent complete excludes mobilization and general requirements

CONTRACT C0991 STATUS

Southwestern Yard

PE Design Contractor: Hatch CM Consultant: Stantec Contractor: - Hensel Phelps /	. ,			Contract No.: C0991 Status as of January 28, 2017	
Progress/Work Completed: • Continued main shop pits and fr • Performed rain/flooding clean u • Bellanca revocable permit for se	oundation construction p on site.		nned.	 Areas of Concern: 8" water line (Asbestos) under Bellar Shop foundations construction and r Design is finalized and field work scl February 2017. DWP power relocation started in Jan complete in February 2017. 	needs to be relocated. heduled to start in
 Schedule Assessment: MOD #02 was executed extend as shown on the schedule miles: MOD #06 was also executed to measurement. C0991 contract critical path run facility to milestone 2 and 3. Interface coordination between managed proactively to address cost and Schedule. Risk Register for SWY was exp Crenshaw/LAX project risk proc Assessment, no delay to the miles Metro is working on potential each 	stone section below. adjust the contract rass s through constructio HPH, WSCC, City, 3 s and to minimize any anded as part of the of tess. lestones is expected.	ain days allov n for the main rd Parties are / impact on th overall	vance n shop e being ne project	Cost Assessment: • The current construction contract cc \$171,008,485.09 is within the Board • The Contractor submitted their 18th approved amount of \$1,716,489.38 *Please note that not all executed mod included in the Contractor current payn	l authorized budget. payment application in the lifications may have been
Schedule Summary:				Cost Summary:	\$ In millions
1. Date of Award:	28-May-1	5		1. Award Value:	172.31
2. Notice to Proceed:	29-Jun-15			2. Executed Modifications:	(1.33)
3. Original Substantial Completion				3. Approved Change Orders:	0.03
					0.05
 Current Substantial Completion 	Duration: 1,311			 Current Contract Value (1 + 2 + 3): 	
°	Duration: 1,311 579	44.2%			
 Current Substantial Completion Elapsed Time from NTP: Milestones 			Calendar Day Variance	 Current Contract Value (1 + 2 + 3): 	171.01 30.74 MPLETE
4. Current Substantial Completion 5. Elapsed Time from NTP: Milestones MS#1 Yard and Main Shop Design	579 Original Current	Forecast	Day	 Current Contract Value (1 + 2 + 3): Incurred Cost (thru January 2017): PERCENT COLUMNATION	171.01 30.74 MPLETE p 01/28/17
 Current Substantial Completion Elapsed Time from NTP: Milestones 	579 Original Current Contract Contract	Forecast 26-Oct-16	Day Variance	 4. Current Contract Value (1 + 2 + 3): 5. Incurred Cost (thru January 2017): PERCENT COL from 06/29/15 to 	171.01 30.74 MPLETE
4. Current Substantial Completion 5. Elapsed Time from NTP: <u>Milestones</u> MS#1 Yard and Main Shop Design Completion MS#2 Main Shop Communication	Original Contract 26-Oct-16 26-Oct-16	Forecast 5 26-Oct-16 3 6-Apr-18	Day Variance 0	 Current Contract Value (1 + 2 + 3): Incurred Cost (thru January 2017): PERCENT COL from 06/29/15 to	171.01 30.74 MPLETE p 01/28/17
4. Current Substantial Completion 5. Elapsed Time from NTP: Milestones MS#1 Yard and Main Shop Design Completion MS#2 Main Shop Communication Room Completion MS#3 Main Shop Substantial	Original Current Contract Contract 26-Oct-16 26-Oct-16 15-Jan-18 16-Apr-18	Forecast 26-Oct-16 3 6-Apr-18 3 30-Jul-18	Day Variance 0 10	 4. Current Contract Value (1 + 2 + 3): 5. Incurred Cost (thru January 2017): PERCENT COL from 06/29/15 to 	171.01 30.74 MPLETE p 01/28/17
4. Current Substantial Completion 5. Elapsed Time from NTP: Milestones MS#1 Yard and Main Shop Design Completion MS#2 Main Shop Communication Room Completion MS#3 Main Shop Substantial Completion MS#4 Southwestern Yard Substantial	Original Contract Current Contract 26-Oct-16 26-Oct-16 15-Jan-18 16-Apr-18 30-Apr-18 30-Jul-18	Forecast 26-Oct-16 3 6-Apr-18 3 30-Jul-18	Day Variance 0 10 0	 4. Current Contract Value (1 + 2 + 3): 5. Incurred Cost (thru January 2017): PERCENT COL from 06/29/15 to Design Construction Total Incurred Cost 	171.01 30.74 MPLETE p 01/28/17
4. Current Substantial Completion 5. Elapsed Time from NTP: Milestones MS#1 Yard and Main Shop Design Completion MS#2 Main Shop Communication Room Completion MS#3 Main Shop Substantial Completion MS#4 Southwestern Yard Substantial	Original Contract Current Contract 26-Oct-16 26-Oct-16 15-Jan-18 16-Apr-18 30-Apr-18 30-Jul-18	Forecast 26-Oct-16 3 6-Apr-18 3 30-Jul-18	Day Variance 0 10 0	 4. Current Contract Value (1 + 2 + 3): 5. Incurred Cost (thru January 2017): PERCENT COL from 06/29/15 to Design Construction Total Incurred Cost 	171.01 30.74 MPLETE 0 01/28/17 76.6% 0.0% 80.0% 100.0%
4. Current Substantial Completion 5. Elapsed Time from NTP: Milestones MS#1 Yard and Main Shop Design Completion MS#2 Main Shop Communication Room Completion MS#3 Main Shop Substantial Completion MS#4 Southwestern Yard Substantial	Original Contract Current Contract 26-Oct-16 26-Oct-16 15-Jan-18 16-Apr-18 30-Apr-18 30-Jul-18	Forecast 26-Oct-16 3 6-Apr-18 3 30-Jul-18	Day Variance 0 10 0	 4. Current Contract Value (1 + 2 + 3): 5. Incurred Cost (thru January 2017): PERCENT COL from 06/29/15 to Design Construction Total Incurred Cost 0.0% 20.0% 40.0% 6 	171.01 30.74 MPLETE 0 01/28/17 76.6% 0.0% 80.0% 100.0% te Progress

CONTRACT C0992 STATUS

Concrete Ties

PE Design Contractor: Hatch CM Consultant: Stantec Contractor: Rocla Concrete)			Contract No.: C0992	
Contractor: Rocia Concrete Progress/Work Completed: - All 19,936 concrete ties have be (Contract C0988). - Contract is closed out.		onsite by t	the design-b	uilder	Status: Completed Areas of Concern:	
Schedule Assessment: All concrete ties were delivered to) job site by /	August 15,	2014.		Cost Assessment: The final contract cost is \$2.25 million and has to contractor.	been completely paid
Schedule Summary:					Cost Summary: \$ In m	illions
1. Date of Award:			12/10/13		1. Award Value:	2.16
2. Notice to Proceed:			12/23/13		2. Executed Modifications:	0.09
3. Original Substantial Completion	on Duration:		220		3. Approved Change Orders:	
4. Current Substantial Completio			235		4. Current Contract Value (1 + 2 + 3):	2.25
5. Elapsed Time from NTP:			235		5. Incurred Cost:	2.25
Milestones	Original Contract	Current Contract	Forecast	Calendar Day Variance	PERCENT COMPLETE from 12/23/2013 to 8/15/14	
Milestone 1 - Contract Substantial Completion	07/31/14	08/15/14	08/15/14A	0	Delivered	100%
				0		
				0	Shipped	100%
				0	Total Incurred Cost	100%
				0	0% 50%	100%
				0	Percent Complete Progress	
					Construction physical percent comple mobilization and general requirements	

CONTRACT C0992A STATUS

Running Rail and Bumping Posts

CM Consultant: Stantec Contractor: LB Foster Rail Te	Mott (HM) chnology Cor	·р			Contract No.: C0992A Status: Completed		-
Progress/Work Completed: - All 115RE SS Blank Stick Rails h - All 115RE HH rail have been del - All Bumping Posts have been del - Contract is closed out.	ivered to job site	e.	-		Areas of Concern:		
Schedule Assessment:		l abead o	f the cohodu	1-	Cost Assessment:		
All running rails and bumping posts			n me schedu	le.	The final contract cost is \$5,2 million a to contractor.	and has been o	completely paid
					to contractor.		
Schedule Summary:			01/23/14		to contractor. Cost Summary:	and has been of a stand has been of a standard has been of a standar	
Schedule Summary: 1. Date of Award:					to contractor. Cost Summary: 1. Award Value:		s
Schedule Summary: 1. Date of Award: 2. Notice to Proceed:			01/23/14 03/07/14		to contractor. Cost Summary: 1. Award Value: 2. Executed Modifications:		s
Schedule Summary: 1. Date of Award: 2. Notice to Proceed: 3. Original Substantial Completion	n Duration:		01/23/14 03/07/14 300		to contractor. Cost Summary: Award Value: Executed Modifications: Approved Change Orders:	\$ In million	s
Schedule Summary: 1. Date of Award: 2. Notice to Proceed:	n Duration:		01/23/14 03/07/14		to contractor. Cost Summary: 1. Award Value: 2. Executed Modifications:	\$ In million	s 5.2
Schedule Summary: 1. Date of Award: 2. Notice to Proceed: 3. Original Substantial Completion 4. Current Substantial Completion 5. Elapsed Time from NTP:	n Duration: n Duration: Original	Current	01/23/14 03/07/14 300 558 448	Calendar Day	 to contractor. Cost Summary: Award Value: Executed Modifications: Approved Change Orders: Current Contract Value (1 + 2 + 3) Incurred Cost: 	\$ In million	s 5.2 5.2
Schedule Summary: 1. Date of Award: 2. Notice to Proceed: 3. Original Substantial Completion 4. Current Substantial Completion 5. Elapsed Time from NTP: <u>Milestones</u> Milestone 1 - Contract Substantial	Duration: Duration: Original Contract (Current Contract	01/23/14 03/07/14 300 558 448 Forecast	Calendar Day Variance	to contractor. Cost Summary: 1. Award Value: 2. Executed Modifications: 3. Approved Change Orders: 4. Current Contract Value (1 + 2 + 3) 5. Incurred Cost: PERCENT	\$ In million	s 5.2 5.2
Schedule Summary: 1. Date of Award: 2. Notice to Proceed: 3. Original Substantial Completion 4. Current Substantial Completion 5. Elapsed Time from NTP: Milestones	Duration: Duration: Original Contract (Current	01/23/14 03/07/14 300 558 448	Calendar Day Variance 145	to contractor. Cost Summary: Award Value: Executed Modifications: Approved Change Orders: Current Contract Value (1 + 2 + 3) Incurred Cost: PERCENT from 3/7/201	\$ In million	s 5.2 5.2
Schedule Summary: 1. Date of Award: 2. Notice to Proceed: 3. Original Substantial Completion 4. Current Substantial Completion 5. Elapsed Time from NTP: <u>Milestones</u> Milestone 1 - Contract Substantial	Duration: Duration: Original Contract (Current Contract	01/23/14 03/07/14 300 558 448 Forecast	Calendar Day Variance	to contractor. Cost Summary: 1. Award Value: 2. Executed Modifications: 3. Approved Change Orders: 4. Current Contract Value (1 + 2 + 3) 5. Incurred Cost: PERCENT	\$ In million	s 5.2 5.2 5.2 5.2
Schedule Summary: 1. Date of Award: 2. Notice to Proceed: 3. Original Substantial Completion 4. Current Substantial Completion 5. Elapsed Time from NTP: <u>Milestones</u> Milestone 1 - Contract Substantial	Duration: Duration: Original Contract (Current Contract	01/23/14 03/07/14 300 558 448 Forecast	Calendar Day Variance 145	to contractor. Cost Summary: Award Value: Executed Modifications: Approved Change Orders: Current Contract Value (1 + 2 + 3) Incurred Cost: PERCENT from 3/7/201	\$ In million	s 5.2 5.2 5.2 5.2
Schedule Summary: 1. Date of Award: 2. Notice to Proceed: 3. Original Substantial Completion 4. Current Substantial Completion 5. Elapsed Time from NTP: <u>Milestones</u> Milestone 1 - Contract Substantial	Duration: Duration: Original Contract (Current Contract	01/23/14 03/07/14 300 558 448 Forecast	Calendar Day Variance 145 0	to contractor. Cost Summary: Award Value: Executed Modifications: Approved Change Orders: Current Contract Value (1 + 2 + 3) Incurred Cost: PERCENT from 3/7/201	\$ In million	s 5.2 5.2 5.2 5.2
Schedule Summary: 1. Date of Award: 2. Notice to Proceed: 3. Original Substantial Completion 4. Current Substantial Completion 5. Elapsed Time from NTP: <u>Milestones</u> Milestone 1 - Contract Substantial	Duration: Duration: Original Contract (Current Contract	01/23/14 03/07/14 300 558 448 Forecast	Calendar Day Variance 145 0 0 0	to contractor. Cost Summary: Award Value: Executed Modifications: Approved Change Orders: Current Contract Value (1 + 2 + 3) Incurred Cost: PERCENT from 3/7/201	\$ In million	s 5.2 5.2 5.2
Schedule Summary: 1. Date of Award: 2. Notice to Proceed: 3. Original Substantial Completion 4. Current Substantial Completion 5. Elapsed Time from NTP: <u>Milestones</u> Milestones	Duration: Duration: Original Contract (Current Contract	01/23/14 03/07/14 300 558 448 Forecast	Calendar Day Variance 145 0 0	to contractor. Cost Summary: 1. Award Value: 2. Executed Modifications: 3. Approved Change Orders: 4. Current Contract Value (1 + 2 + 3) 5. Incurred Cost: PERCENT from 3/7/201- Total Incurred O% 20% 40%	\$ In million): - COMPLETE 4 to 05/29/15 60% 809	s 5.2 5.2 5.2 5.2
Schedule Summary: 1. Date of Award: 2. Notice to Proceed: 3. Original Substantial Completion 4. Current Substantial Completion 5. Elapsed Time from NTP: <u>Milestones</u> Milestones	Duration: Duration: Original Contract (Current Contract	01/23/14 03/07/14 300 558 448 Forecast	Calendar Day Variance 145 0 0 0	to contractor. Cost Summary: 1. Award Value: 2. Executed Modifications: 3. Approved Change Orders: 4. Current Contract Value (1 + 2 + 3) 5. Incurred Cost: PERCENT from 3/7/201- Total Incurred O% 20% 40%	\$ In million): - COMPLETE 4 to 05/29/15 60% 809 mplete Progress	s 5.2 5.2 5.2 5.2

CONSTRUCTION PHOTOGRAPHS



GREENLINE UNDERPASS – Frame 1: Deck concrete cure.



UG#1 -C&C Tunnel STA 45+00 to 50+00.



AVIATION/CENTURY BRIDGE – Concrete placement complete for both approach slabs at abutment 1.



WESTCHESTER STATION – Concrete placement for the northbound platform's stem walls, shear walls and engaged columns.



(AG-5) I-405 Bridge – View of AG-5 from the I-405.



(AG-6) LA BREA BRIDGE –. Crews worked on placing the Asphalt cap.



UG#3 – Installation of rebar for U-channel walls at south portal.



UG#4 – Installation of rebar for invert section I-27 at north portal.



MARTIN LUTHER KING JR. STATION – Placement of lower wall section LW-4.



TUNNELING – Preparing SB Tunnel for invert.



TUNNELING – Installation of electrical conduits and SB Tunnel Invert rebar



TUNNELING – Removing muck from TBM advance.



Bottom ballast being placed and start of ballasted special track work.

APPENDIX

PROJECT COST STATUS – SOUTHWESTERN YARD

SCC CODE	DESCRIPTION	original Budget	CURRENT BUDGET		COMMITMENTS		EXPENDITURES		CURRENT FORECAST		FORECAST
			PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	VARIANCE
10	GUIDEWAYS	0	0	0	0	0	0	0	0	0	0
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	86,532,695	614,590	1,945,420	0	86,889,531	1,699,532
40	SITEWORK\SPECIAL CONDITIONS	35,932,000	0	38,273,000	0	38,781,286	245,410	21,195,928	0	38,273,000	0
50	SYSTEMS	25,784,616	0	32,991,000	0	32,991,000	0	429,750	0	32,991,000	0
	(10-50) CONSTRUCTION	147,263,451	0	156,453,999	0	158,304,981	860,000	23,571,098	0	158,153,531	1,699,532
60	RIGHT-OF-WAY	99,910,000	0	100,000,000	0	103,450,614	267	103,362,164	0	100,000,000	(0)
70	VEHICLES	0	0	0	0	0	0	0	0	0	0
80	PROFESSIONAL SERVICES	35,601,095	0	33,639,631	(552,314)	28,524,522	395,781	20,815,108	0	31,815,199	(1,824,432)
90	PROJECT CONTINGENCY	13,659,732	0	17,106,370	0	0	0	0	0	17,231,270	124,900
TOTAL		296,434,278	0	307,200,000	(552,314)	290,280,116	1,256,048	147,748,370	0	307,200,000	(0)
C0991 PAINT & BODY SHOP PROJECT											
DESCRIPTION		ORIGINAL	CURRENT BUDGET		COMMITMENTS		EXPENDITURES		CURRENT FORECAST		FORECAST
		BUDGET	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	VARIANCE
861301 DIV 22 PAINT & BODY SHOP		11,000,000	0	11,000,000	12,329	9,355,921	12,329	2,576,797	0	11,000,000	0
GRAND TOTAL		307,434,278	0	318,200,000	(539,985)	299,636,037	1,268,377	150,325,167	0	318,200,000	(0)

PROJECT COST ANALYSIS

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 designbuild 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.

APPENDIX

PROJECT COST ANALYSIS (Continued)

Current Forecast: The forecast is under review.

Commitments:

The commitments are cumulative through January 28, 2017. Total commitments decreased by \$0.54 million for this period due to the following:

- SCC-40
 - No change for December/January.
- SCC-60
 - No change for December/January.
- SCC-80
 - Labor compliance commitment decreased by \$0.67 million and moved to 865512, other professional services such as legal, construction management and labor increased \$0.13 million for December/January.

The \$299.64 million in commitments to date represents 94.17% of the current budget.

Expenditures:

The expenditures are cumulative through January 28, 2017. The total expenditures increased by \$1.27 million for this period due to the following:

- SCC-30
 - Hensel Phelps/Herzog JV expenditure increase by \$0.61 million for December/January.
- SCC-40
 - Hensel Phelps/Herzog JV expenditure increase by \$0.25 million for December/January.
- SCC-60
 - No change for December/January.
- SCC-80
 - Hensel Phelps/Herzog JV, agency expenditure and professional services expenditure increase by \$0.41 million for December/January.

The \$150.33 million in expenditures to date represents 47.24% of the current budget.

COST AND BUDGET TERMINOLOGY

Project Cost Descriptions -							
ORIGINAL BUDGET	The Original Project Budget as established by the Metropolitar Transportation Authority (Metro) Board on October 27, 2011.						
CURRENT BUDGET	The Original Budget plus all budget amendments approved by formal Metro Board action. Also referred to as Approved Budget.						
COMMITMENTS	The total of actual contracts awarded, executed change or or amendments, approved work orders of Master Cooperat Agreements, offers accepted for purchase of real estate, a other Metro actions which have been spent or result in the obligation of specific expenditures at a future time.						
EXPENDITURES	The total dollar amount of funds expended by Metro for contractor or consultant invoices, third party invoices, staff salaries, real estate and other expenses that is reported in Metro's Financial Information System (FIS).						
CURRENT FORECAST	The best estimate of the final cost of the project when all checks have been issued and the project is closed out. Cur Forecast is composed of actual costs incurred to date, the estimate of work remaining and a current risk assessment for each budgeted cost item.						
Cost Report by Element	t Descriptions -						
CONSTRUCTION	Includes construction contracts. Cost associated with Guideways, Stations, Southwestern Yard, Sitework/Special. Conditions and Systems.						
RIGHT-OF-WAY	Includes purchase cost of parcels, easements, right-of-entry permits, escrow fees, contracted real estate appraisals and tenant relocation.						
VEHICLES	Includes the purchase of LRT vehicles and spare parts for the project.						
PROFESSIONAL SERVICES	Includes design engineering, project management assistance, construction management support services, legal counsel, agency staff costs, and other specialty consultants.						
CONTINGENCY	A fund established at the beginning of a project to provide for anticipated but unknown additional costs that may arise during the course of the project.						
PROJECT REVENUE	Includes all revenue receivable to the Metro as a direct result of project activities. This includes cost sharing construction items, insurance premium rebates, and the like.						