

Crenshaw/LAX Transit Project



Metro®

CRENSHAW/LAX TRANSIT PROJECT

MONTHLY PROJECT STATUS REPORT

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

APRIL 2017

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PROJECT SUMMARY

LOCATION: Crenshaw Blvd at Exposition to Green Line DESIGN/CONSULTANT: Mott MacDonald				CONSTRUCTION MANAGEMENT CONSULTANT: Stantec CONTRACTORS: Walsh-Shea Corridor Constructors (Alignment) and Hensel Phelps / Herzog (Southwestern Yard)			
PHOTO: Northbound TBM hole thru at Leimert Park Station 				WORK COMPLETED PAST MONTH: - o Completed northbound tunnel mining to Leimert Park Station. - o Continued invert/walkway concrete placements for southbound tunnel. - o Continued wall and concourse concrete placements at Expo, MLK Jr and Leimert Park stations. - o Continued invert concrete placements at underground structure # 4. - o Continued street and utility work at Park Mesa area. - o Continued concrete placements at underground structure #3. - o Continued concrete placements at I-405 bridge superstructure. - o Continued grade crossing work at Cedar and Eucalyptus streets. - o Continued accommodations for future 96th Street Station. - o Continued finishing work for Greenline tie-in structure. - o Continued SWY main shop pits and foundation construction. - o Continued SWY underground electrical and communication ductbanks. - o Started SWY material storage structure foundation excavation.			
EXPENDITURE STATUS (\$ In Millions)				SCHEDULE ASSESSMENT			
ACTIVITIES	4/9/2018 BUDGET	EXPENDED AMOUNT	PERCENT EXPENDED	MAJOR SCHEDULE ACTIVITIES	PRIOR PLAN	CURRENT PLAN	VARIANCE WEEKS
DESIGN	\$ 136.7	\$ 126.5	92.6%	Environmental			
				FEIS/FEIR	Sep-11	Sep-11	Complete
				Record of Decision	Dec-11	Dec-11	Complete
RIGHT-OF-WAY	\$ 127.4	\$ 122.6	96.3%	Design			
CONSTRUCTION	\$ 1,353.1	\$ 823.8	60.9%	Preliminary Engineering	Nov-11	Nov-11	Complete
				Final Design	Sep-15	Sep-17	23.6 months behind
OTHER	\$ 440.8	\$ 195.1	44.3%	Right-of-Way			
TOTAL:	\$ 2,058.0	\$ 1,268.1	61.6%	Full-take parcels available	Jan-15	Jan-15	Complete (base scope)
Note: Cost expended as of April 28, 2017.				Part-take and TCE parcels	Sep-15	Apr-16	Complete (base scope)
AREAS OF CONCERN				Construction			
o Design-builder's ability to mitigate schedule delays. o Timely submission of remaining WSCC's design submittals and review by City of Los Angeles.				D-B Notice to Proceed	Sep-13	Sep-13	Complete
				D-B Substantial Complete	May-19	May-19	On schedule
				Revenue Service Date	Oct-19	Oct-19	On schedule
				Notes on Schedule: - o Agreement approved in January 2017 by Metro Board for cost and schedule impacts revised the D-B Contractor's Substantial Completion Milestone to May 1, 2019. - o Revenue Service Date includes no schedule contingency.			
ROW ACQUISITION	PLAN	ACQUIRED	REMAINING	CRITICAL ACTIVITIES / 3 MONTH LOOK AHEAD			
FULL TAKES	37	36	1	- o Continue southbound tunnel walkway concrete placements and commence northbound tunnel invert concrete placements. - o Continue the three underground stations walls and concourse concrete placements. - o Continue Park Mesa area street and utility work. - o Continue trackwork in available alignment areas.			
PARTIAL TAKES	27	26	1				
TEMPORARY EASEMENTS	15	14	1				
TOTAL PARCELS:	79	76	3				

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 completed mining the northbound tunnel on April 6, 2017. Concreting of the southbound tunnel continued with invert and walkway placements during the month.* Trackwork installation is continuing in areas available in the Inglewood area of alignment. Concrete placement for the last remaining bridge superstructure over the I-405 freeway continued this month. All underground and above ground structures continue on schedule.

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 deep foundations, service and inspection pits, grade beams, blow down pits, truck wash pit, turntable pit, truck and car hoist pits, preparation for Main shop first slab on grade (SOG) placement and electrical conduits plus the hydraulic elevator caissons and pits. Work started on the material storage building and continued with work on underground ductbanks, drywells, oil clarifiers and fire risers, electrical and communication duct banks.*

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 April 2017.* Thirty-six full takes, 26 part-takes and 14 TCE's have been provided to the design-builder WSCC.

Systems

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.

Although there is no change to the Total LOP Current Budget there was a reallocation this month for changes to the SCC elements within the Current Budget. The reallocation was required due to the draw down to date of the SCC 90 Allocated Contingency for changes issued to the design-build contractor, additional relocations of utilities by third parties, additional legal services and special services as well as an increase in professional services for construction and project management oversight.

PROJECT OVERVIEW (Continued)

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 and state funding 91.3%, (includes Measure R TIFIA Loan), and federal funding is 8.7%.

The project commitments thru April 2017 are \$1,932.0 million or 93.9% of the Current Budget. The project expenditures thru April 2017 are \$1,268.1 million or 61.6% 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 remaining 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.

WSCC in their April 2017 schedule update shows that they are on schedule for substantial completion in May 2019.

MANAGEMENT ISSUES

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

Status/Action *The Contractor has completed the critical final design submittals for upcoming construction. The Contractor has a few remaining City of Los Angeles submittals that require the City review and approval. Metro is working closely with the contractor and its designer to review comments from the agencies and working with the Contractor to ensure that submittals are coordinated and submitted within the necessary timeline for review and that any necessary follow-up is completed to facilitate the City review. Metro meets weekly with the City and the Contractor on the submittal and project status and addresses issues raised that pertain to the submittal cycle and review.*

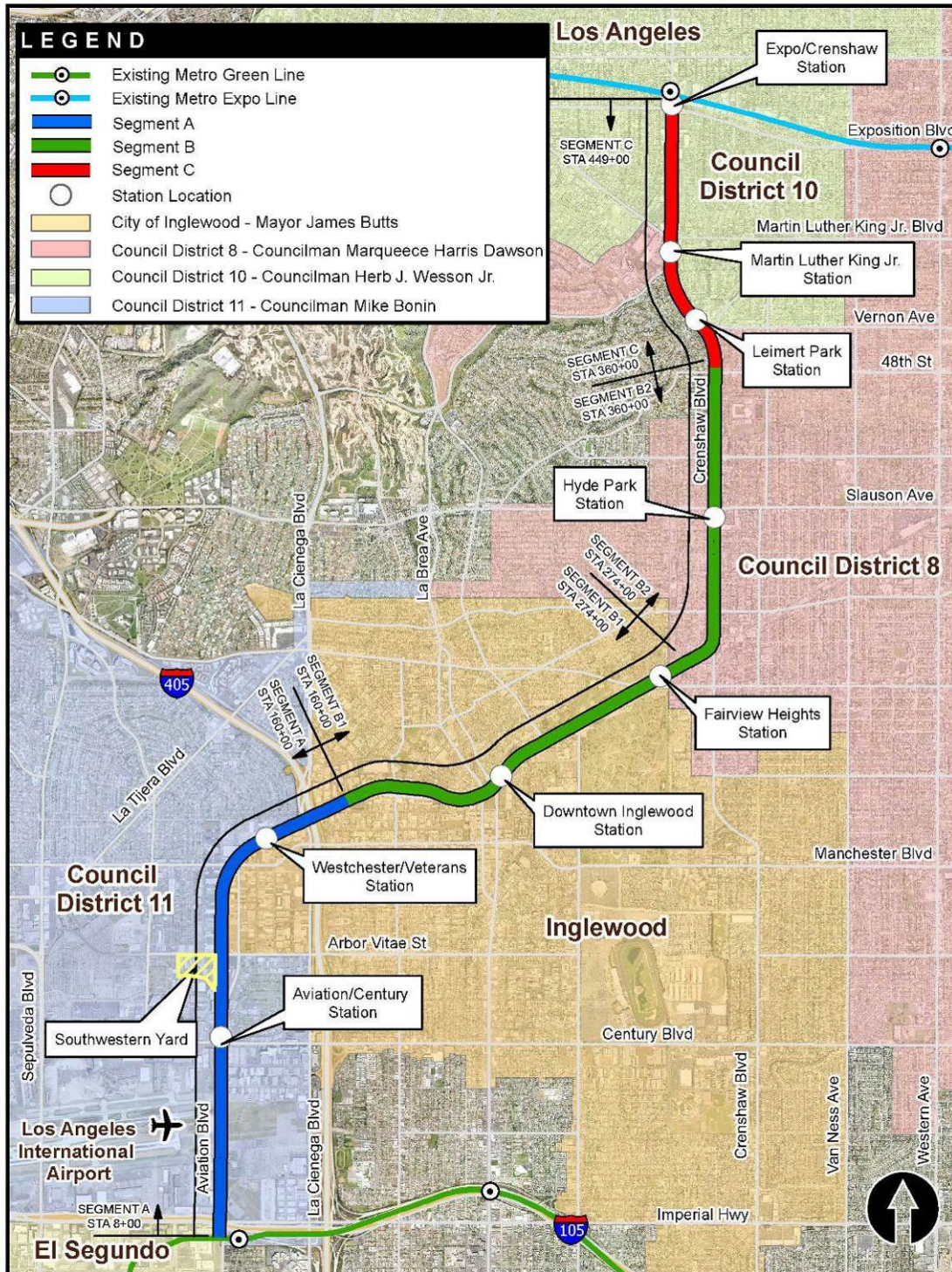
Concern No. 2: Design-builders construction schedule

Status/Action WSCC submitted a "Completion Schedule" which was subsequently reviewed and approved by Metro on December 16, 2016. This schedule represents a re-baselining 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. *WSCC through the end of April continues to be on schedule.*

Concern No. 3: Design-builder's ability to meet their planned tunneling productivity rate.
(Closed)

Status/Action The contractor commenced mining the north bound tunnel on November 29, 2016. *WSCC completed mining of the north bound tunnel on April 6, 2017. WSCC achieved 66 feet per work day (three shifts) which met their planned tunneling productivity rate.*

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.

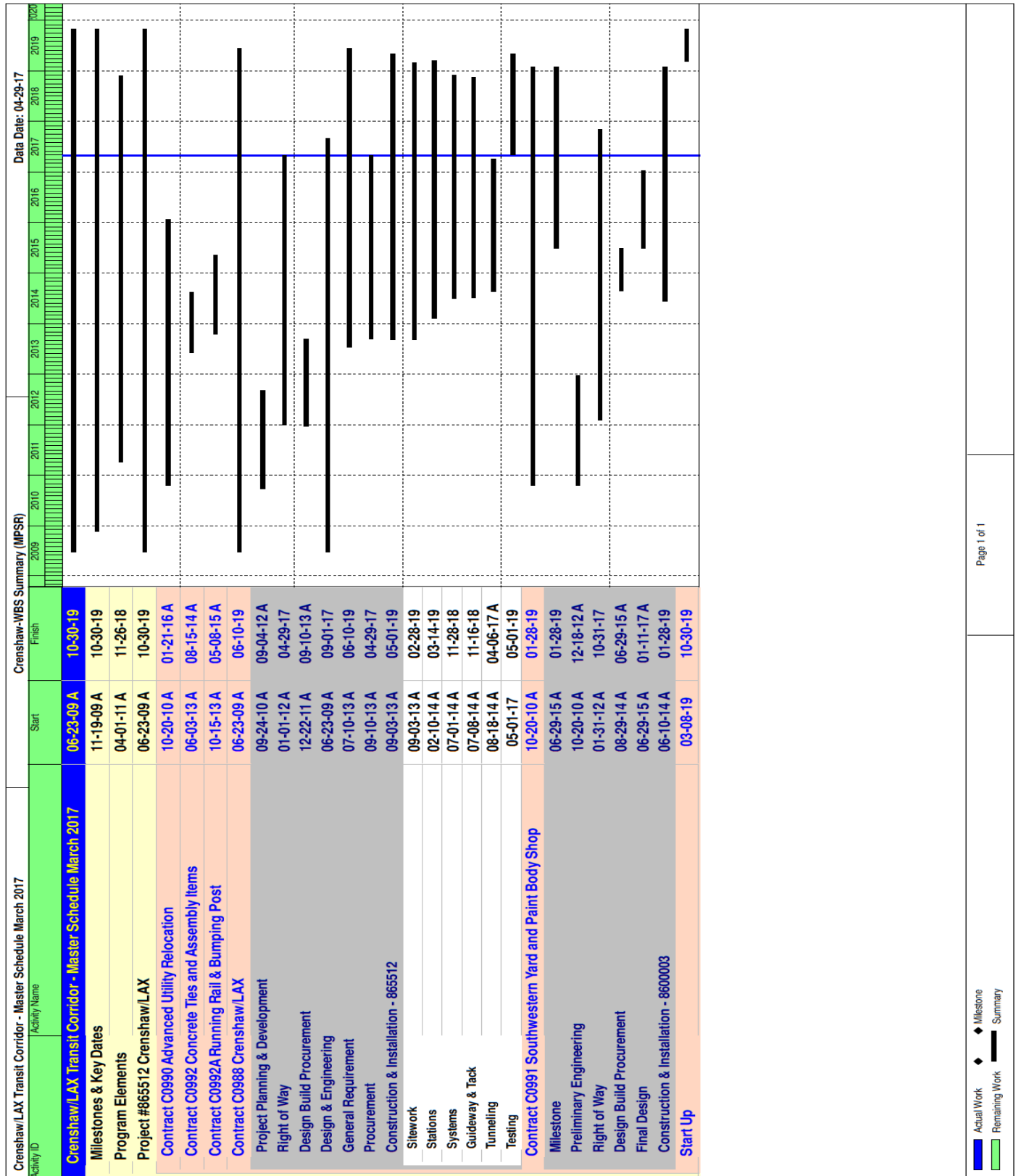
Start Up

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 scenarios; 3) as well as abnormal and emergency scenarios in which random combinations 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

Activity ID	Activity Name	Milestone Date	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17
988-CT-5580	TBM Breakthru @ Leimert Park Station - NB	06-Apr-17 A						
988-CT-1500	F/R/P OCS Foundations - UG #1	01-May-17						
988-CT-41579	Turnover to Track - STA 225+00 to 274+25 At Grade (Centinela to Brynhurst)	01-May-17						
988-CT-84935	F/R/P OCS Foundation - Bridge - Aviation / Century Bridge	01-May-17						
988-CT-13495	Ballast Wall - Rebar Walls - I-405 to La Brea	02-May-17						
988-CT-1172020	F/R/P Invert Slab - Section 9 - STA 312+32 to 312+80 - UG # 3	03-May-17						
988-CT-84975	Bridge Emergency Walkway - Aviation / Century Bridge	12-May-17						
988-CT-79176	EL - OCS Foundation - Aerial Structure #1	12-May-17						
988-CT-1169663	Excavate Stair & Ramp Footings - SB Platform - Westchester/Veterans Station	12-May-17						
988-CT-1171737	Spans 3&4: Pour Deck - I-405 Bridge	12-May-17						
988-SCE-T1050	TPSS-01 Permanent Power Drop - SCE - Procurement of Cable and Equipmen	18-May-17						
988-MOD-3180	Deluge System at Expo Crossover	26-May-17						
988-MOD-2780	TPSS No.2 Upgrade from 1.5 MW to 2.0 MW	26-May-17						
991-PR-01380	Fab/Deliver Structural Steel	29-May-17						
988-CT-19115	Construct Tunnel Drainage & Utilities - U Section #4	30-May-17						
988-CT-86095	Post-Tension - I-405 Bridge	06-Jun-17						
991-CON-LAWA	Start Construction of LAWA-APM	07-Jun-17						
988-CT-5870	Exc/Lag/Brace Phase 2 Entrance Structure to Concourse Level - Leimert Park Station	28-Jun-17						
988-CT-50800	Construct TC&C #3 Walls (Services Building Room) - Aviation / Century	10-Jul-17						
988-CT-54100	Demo IPMO - SW-0001 - SW Yard	28-Jul-17						
988-CT-69105	Pour Concourse Slab - Sequence 4 - MLK	18-Aug-17						
988-CT-23700	Turnover to Track - 111th St Bridge	29-Aug-17						
988-IFC-TCC02	I-Face: TC&C Room Ready for systems @ A02 Aviation/Century TC&C #3	12-Sep-17						
988-CT-36200	Turnover to Track (Manchester Bridge -STA 118+70 to 121+31) - Manchester Bridge	13-Sep-17						
988-CT-89148	Escalator Finishes - Aviation / Century	13-Sep-17						
988-CT-9189	Backup Power (TPSS) - TPSS-04	18-Sep-17						
988-SCE-T1170	TPSS-03 Permanent Power Drop - SCE - Utility Install Infrastructure and conduit	20-Sep-17						
988-CT-5659	Ductbank - Manhole / Vault / Pad / Pull Box - TPSS-07/ Aux. Power (Future)	25-Sep-17						
 MTA Staff  MTA Board Action  Walsh Shea Corridor Constructors  Hensel Phelps / Herzog "A" following date is actual and completed								

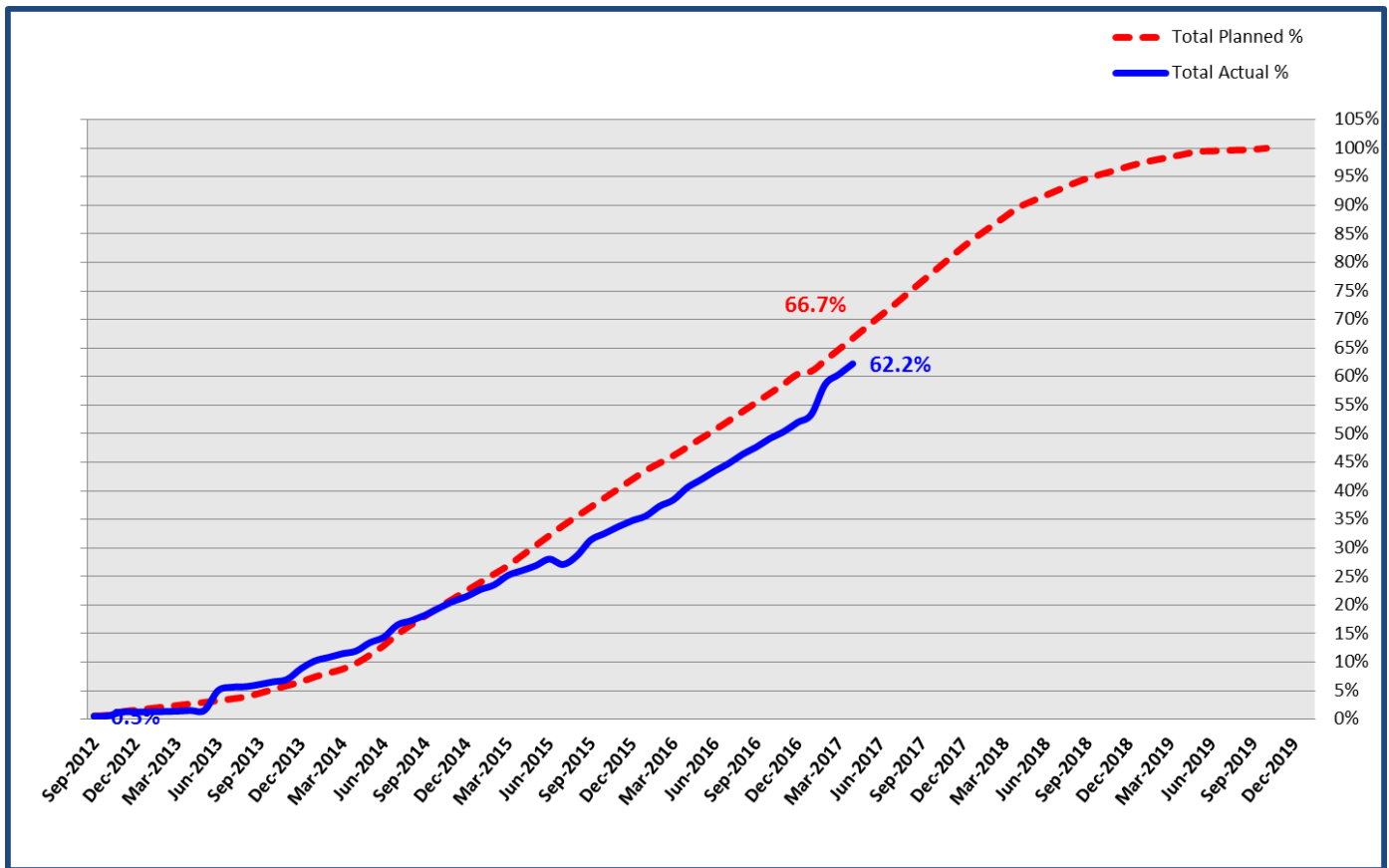
PROJECT SUMMARY SCHEDULE



SCHEDULE MEASUREMENTS

	Status	Change from Last Period	Comment
Current Revenue Service:	10/30/2019	0	
Forecast Revenue Service:	10/30/2019	0	On schedule.
TIFIA Revenue Service:	10/30/2019	0	
Final Design Progress:			
Contract C0988	98.2%	0.1%	Behind Schedule
Contract C0990	100%	None	Design Completed
Contract C0991	80.1%	2.6%	On Schedule
Contract C0992	100%	None	Design Completed
Contract C0992A	100%	None	Design Completed
Construction Contracts Progress:			
Contract C0988	57.1%	1.5%	On Schedule
Contract C0990	100%	None	Substantially Completed
Contract C0991	8.2%	2.7%	On Schedule
Contract C0992	100%	None	Substantially Completed
Contract C0992A	100%	None	Substantially Completed

OVERALL CONSTRUCTION PROGRESS CURVE STATUS



The actual overall construction progress is 62.2% versus a planned progress of 66.7% through April 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 includes forecast for the alignment design-builder and includes 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	Mar-17	Apr-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	10/20/16A	10/20/16A	
TBM NB Tunnel Launch at Expo	10/29/15	11/29/16A	11/29/16A	
TBM NB Break through at Leimert Park	03/21/16	04/04/17	04/06/17A	-2

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 planned to commence in April 2017 and complete by November 2017.

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

Area	Activity ID	Activity Name	Start	Need Date
Site/Civil	988-PR-6915	Fab/Procure & Deliver Electrical Manholes, Vaults, Pads - TPSS	03-14-16 A	07-11-17
Site/Civil	988-PR-6375	Fab/Procure & Deliver Jet Fans - UG #3, UG#4	05-22-17	01-30-18
Site/Civil	988-PR-7035	P/S R/A Shop Drawings, Fabricate & Deliver Street Light Poles Seg B	03-09-16 A	03-27-18
Stations	988-PR-7235	Fabricate & Deliver Structural Steel Canopy for Downtown Inglewood Station	01-10-17 A	11-19-17
Stations	988-PR-30531	Fabricate & Deliver Structural Steel Canopy for Fairview Heights Station	02-06-17 A	12-13-17
Stations	988-PR-30521	Fabricate & Deliver Structural Steel Canopy for Westchester/Veterans Station	01-26-17 A	01-14-18
Stations	988-PR-30611	Fabricate & Deliver Metal Railings - Fairview Heights Station	04-29-17	03-06-18
Trackwork	988-PR-4300	Fabricate & Delivery of Special Trackwork	09-22-15 A	06-04-17
Trackwork	988-PR-30731	P/S R/A Shop Dwgs Restraining Rail 132 lbs & Fasteners for Green Line	11-16-16 A	08-21-17
Trackwork	988-PR-7085	Procure Restraining Rail 132 lbs & Fasteners for Green Line	05-04-17	11-29-17
Traction Power	988-PR-6705	Fabricate & Deliver Dry Type Transformers - Century	02-04-17 A	07-31-17
Traction Power	988-PR-6555	Fabricate & Deliver Medium Voltage Cable	04-03-17 A	09-04-17
Traction Power	988-PR-6955	Fabricate & Deliver Low Voltage Cable - Cut & Fill	04-03-17 A	09-11-17
Traction Power	988-PR-6765	Fabricate & Deliver Low Voltage Cable (Project Wide)	05-01-17	09-25-17
Traction Power	988-PRC-T0600	Mfgr/Assemble/Wire Substation - TPSS-06	05-01-17	10-12-17
Traction Power	988-PRC-T0500	Mfgr/Assemble/Wire Substation - TPSS-05	05-22-17	11-02-17
Traction Power	988-PRC-T0100	Mfgr/Assemble/Wire Substation - TPSS-01	06-13-17	11-24-17
Traction Power	988-PR-6505	Fabricate & Deliver Dry Type Transformers - TPSS	02-16-17 A	02-01-18
Traction Power	988-PR-3300	Fabricate & Deliver Electrical Switchboards - TPSS	02-16-17 A	02-01-18

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Traction Power	988-PR-6485	Fabricate & Deliver MCC - TPSS	02-16-17 A	02-05-18
Traction Power	988-PR-6545	Fabricate & Deliver TPSS Generator	05-09-17	02-05-18
Traction Power	988-PR-6925	Fabricate & Deliver Panelboards - TPSS	02-16-17 A	02-21-18
Traction Power	988-PR-6525	Fabricate & Deliver Loose Starters - Stations	06-05-17	03-22-18
Traction Power	988-PR-6495	Fabricate & Deliver Panelboards - Underground Stations	02-16-17 A	03-22-18
Overhead Contact System	988-PRC-O0020	OCS: Manufacture / Deliver Poles	02-17-17 A	11-29-17
Train Control/Comm. Equip. Supply	988-PRC-A2110	ATC: Factory Acceptance Test @ Century TC&C #3 (43+50 to 85+90)	03-30-17 A	09-26-17
Train Control/Comm. Equip. Supply	988-PRC-A3100	ATC: Manufacture Bungalow @ Arbor (85+90 to 130+00)	03-01-17 A	09-29-17
Train Control/Comm. Equip. Supply	988-PRC-A2120	ATC: Develop Factory Acceptance Test Report @ Century TC&C #3 (43+50 to 85+90)	05-22-17	10-17-17
Train Control/Comm. Equip. Supply	988-PRC-A3110	ATC: Factory Acceptance Test @ Arbor (85+90 to 130+00)	05-25-17	10-27-17
Train Control/Comm. Equip. Supply	988-PRC-A2130	ATC: Pack & Ship Train Control Racks @ Century TC&C #3 (43+50 to 85+90)	06-13-17	10-31-17
Train Control/Comm. Equip. Supply	988-PRC-A3120	ATC: Develop Factory Acceptance Test Report @ Arbor (85+90 to 130+00)	06-23-17	11-17-17
Train Control/Comm. Equip. Supply	988-PRC-C0050	Mfgr/Test/Ship Complete Comm Racks - MGL TCCB & ROC	05-15-17	11-24-17
Train Control/Comm. Equip. Supply	988-PRC-A2500	ATC: Submit Location Verification Summary & Fat Report @ Century TC&C #3 (43+50 to 85+90)	06-13-17	11-29-17
Train Control/Comm. Equip. Supply	988-PRC-A6100	ATC: Manufacture Bungalow @ Hyde Park TC&C #9 (294+20 to 364+40)	04-17-17 A	12-28-17
Segment A - Green Line Terminus to Hindry	988-PR-01724019	Canopy Steel Spine Frame - Material/Fabrication (Store Off Site) - Westchester/ Veterans Station	01-30-17 A	03-06-18

Crenshaw/LAX Transit Project
Monthly Project Status Report

April 2017

Segment A - Green Line Terminus to Hindry	988-PR-01724029	Catwalk and Tiedowns - Material/Fabrication (Store Off Site) - Westchester/ Veterans Station	05-15-17	03-06-18
Segment A - Green Line Terminus to Hindry	988-PR-11724069	Elevators - Material/Fabrication (Store Off Site) - Century Station	05-17-17	03-15-18
Segment B: Mid-Corridor Hindry to Station 365+92	988-PR-00724109	Canopy Steel Spine Frame - Material/Fabrication (Store Off Site) - Downtown Inglewood Station	01-23-17 A	11-17-17
Segment B: Mid-Corridor Hindry to Station 365+93	988-PR-11724089	Catwalk and Tiedowns - Material/Fabrication (Store Off Site) - Downtown Inglewood Station	01-23-17 A	11-17-17

CRITICAL PATH NARRATIVE

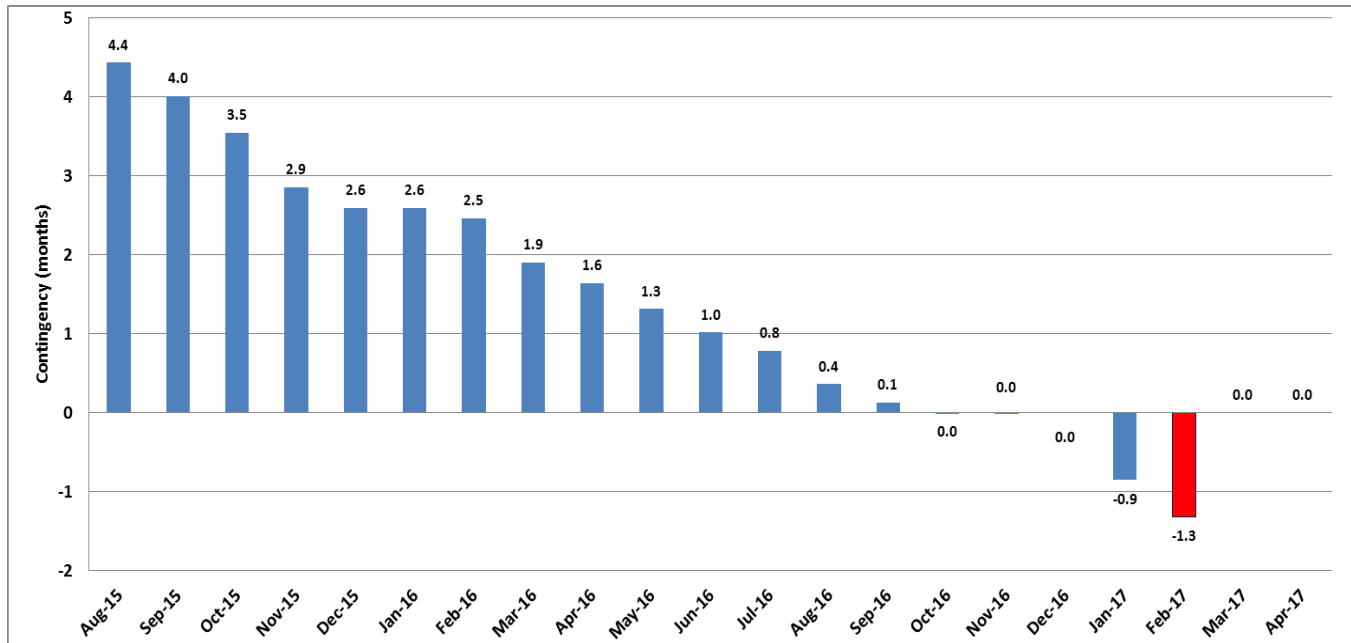
Critical Path:

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 pre-revenue 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.

There is no draw down of contingency this month.

PROJECT COST STATUS

SCC CODE	DESCRIPTION	ORIGINAL BUDGET	CURRENT BUDGET		COMMITMENTS		EXPENDITURES		CURRENT FORECAST		CURRENT BUDGET/ FORECAST VARIANCE
			PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	
10	GUIDEWAYS	471,335,000	(2,145,626)	450,354,375	180,387	450,140,387	11,647,828	318,135,479	180,587	450,534,962	180,587
20	STATIONS	153,906,000	(1,000,000)	315,050,000	(1,796,646)	313,253,354	1,211,960	155,593,336	(1,796,646)	313,253,354	(1,796,646)
30	SUPPORT FACILITIES SOUTHWEST YARD	66,673,000	(2,081,544)	71,164,000	-	71,053,330	217,140	23,665,756	-	71,164,000	-
40	SITEWORK/SPECIAL CONDITIONS	235,576,000	47,232,362	395,798,361	4,253,864	391,492,551	4,330,730	296,981,078	4,253,864	400,052,225	4,253,864
50	SYSTEMS	125,132,000	125,000	169,436,000	104,366	154,786,576	4,669,537	29,450,194	104,166	169,540,166	104,166
CONSTRUCTION SUBTOTAL (10-50)		1,052,622,000	42,130,192	1,401,802,736	2,741,971	1,380,726,198	22,077,194	823,825,844	2,741,971	1,404,544,707	2,741,971
60	RIGHT-OF-WAY	132,294,000	90,000	127,490,000	8,200	123,452,224	949,390	122,638,467	-	127,490,000	-
70	LRT VEHICLES	87,780,000	1,471,544	83,571,544	-	82,050,901	1,918,846	21,250,928	-	83,571,544	-
80	PROFESSIONAL SERVICES	273,147,000	68,641,288	368,734,466	783,220	320,296,065	3,722,245	274,835,127	559,035	369,603,851	869,385
SUBTOTAL (10-80)		1,545,843,000	112,333,024	1,981,598,746	3,533,391	1,906,525,388	28,667,674	1,242,550,365	3,301,006	1,985,210,102	3,611,356
90	UNALLOCATED CONTINGENCY	177,157,000	(112,333,024)	50,401,254	-	-	-	-	(3,301,006)	46,789,898	(3,611,356)
TOTAL PROJECT 865512 (10-100)		1,723,000,000	(0)	2,032,000,000	3,533,391	1,906,525,388	28,667,674	1,242,550,365	-	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	(0)	2,058,000,000	3,533,391	1,932,074,775	28,667,674	1,268,099,753	-	2,058,000,000	-

NOTE: EXPENDITURES ARE CUMULATIVE THROUGH 28-APR-2017.

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:
 - 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.

Although there is no change to the Total LOP Current Budget there was a reallocation this month for changes to the SCC elements within the Current Budget. The reallocation was required due to the draw down to date of the SCC 90 Allocated Contingency for changes issued to the design-build contractor, additional relocations of utilities by third parties, additional legal services and special services as well as an increase in professional services for construction and project management oversight.

Current Forecast:

The total project current forecast is \$2,058 million. However, there was a reallocation of forecast within the SCC-10 (Guideways), SCC-20 (Stations), SCC-40 (Sitework and Special Conditions), SCC-50 (Systems), SCC-80 (Professional Services) and a corresponding reduction to SCC-90 (Unallocated Contingency) per FTA Guidelines.

Commitments:

The commitments are cumulative through April 28, 2017. The total commitments increased by \$3.5 million this period primarily due to the following:

- SCC-10 (Guideways) has increased by \$0.2 million for executed modifications associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-20 (Stations, Stops, Terminals, Intermodal) has decreased by \$1.8 million for de-commitments of design-build Contract C0988 Crenshaw/LAX Transit Corridor Purchase Order funds to be transferred to the La Brea/Florence Bus Transfer Facility Project 210152 funds.
- SCC-40 (Sitework and Special Conditions) has increased by \$4.2 million for executed modifications associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-50 (Systems) has increased \$0.1 million for executed modifications with the design-build Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-80 (Professional Services) has increased of \$0.8 million due to executed modifications associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor, legal services and labor compliance monitoring services. The total commitment of \$320.3 million includes \$20.0 million for the Southwestern Yard 49% allocation.

The \$1,932.0 million in commitments to date represents 93.9% of the current budget.

PROJECT COST ANALYSIS (Continued)

Expenditures:

The expenditures are cumulative through April 28, 2017. The total expenditures increased by \$28.6 million this period due to the following:

- SCC-10 (Guideways) has increased by \$11.7 million for costs associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-20 (Stations, Stops, Terminals, Intermodal) has increased by \$1.2 million for costs associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-30 (Southwestern Yard) has increased by \$0.2 million for costs associated with the design-build Contract C0991 Division 16: Southwestern Yard (Design/Build).
- SCC-40 (Sitework and Special Conditions) has increased by \$4.3 million for costs associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor, third party utility relocation with Los Angeles Department of Water and Power, The Gas Company and Qwest.
- SCC-50 (Systems) has increased \$4.7 million for costs associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-60 (Right-of-Way) has increased by \$0.9 for costs associated with real estate acquisition. The total expenditure of \$122.6 million includes \$53.4 million for the Southwestern Yard 49% allocation.
- SCC-70 (Vehicles) has increased by \$1.9 for costs associated with exercising Option 1 of the P3010 Contract with KINKISHARYO INTERNATIONAL, LLC. to procure 22 light rail vehicles.
- SCC-80 (Professional Services) has increased by \$3.7 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, miscellaneous specialty services, labor compliance monitoring and environmental consultant services. The total expenditure of \$274.8 million includes \$14.2 million for the Southwestern Yard 49% allocation.

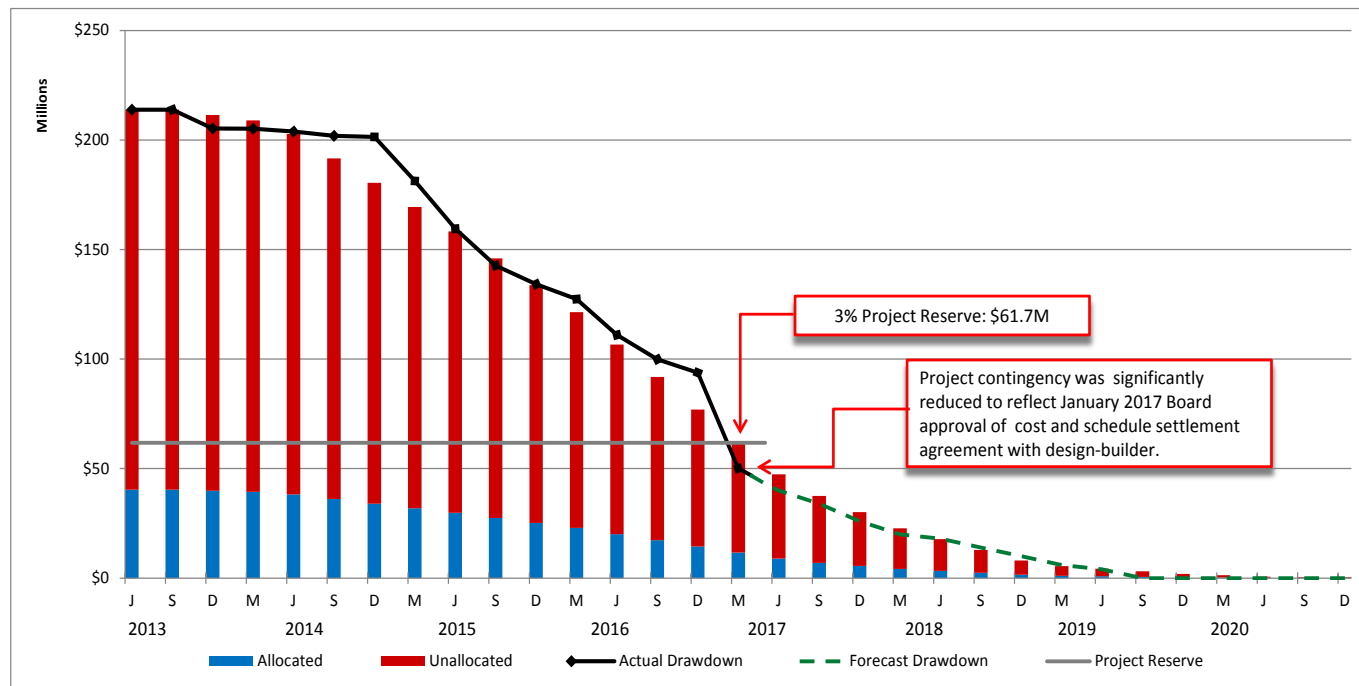
The \$1,268.1 million in expenditures to date represents 61.6% of the current budget.

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 TRANSIT PROJECT FUNDED SCOPE OF WORK										
DESCRIPTION	CURRENT BUDGET		COMMITMENTS		EXPENDITURES		CURRENT FORECAST		FORECAST	
	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	VARIANCE	
405556 SYSTEMWIDE TRANSIT PLANNING	36,259	175,495	36,259	175,495	36,259	175,495	36,259	175,495	-	-
210090/93 FARE GATE PROJECT	-	2,482,746	-	2,482,746	-	172,746	-	2,482,746	-	-
210152 CRENSHAW/LAX BUS TRANSFER FACILITY	-	2,200,000	-	2,200,000	395,287	395,287	-	2,200,000	-	-
460303 AIRPORT METRO CONNECTOR	8,550,621	37,914,465	8,550,621	37,914,465	150,621	27,933,026	8,550,621	37,914,465	-	-
500013 C/LAX LAWA SCOPE OF WORK	-	1,575,362	-	531,125	-	421,358	-	1,575,362	-	-
TOTAL	8,586,880	44,348,068	8,586,880	43,303,830	582,167	29,097,912	8,586,880	44,348,068	-	-

PROJECT COST CONTINGENCY DRAWDOWN



Through 28-Apr-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.

In February 2017, the project contingency drawdown curve went below the 3% project reserve level and the Board was notified.

The project contingency drawdown curve is based on an October 2019 revenue service date. In February 2017, the forecast drawdown curve was revised.

PROJECT CONTINGENCY DRAWDOWN ANALYSIS (Continued)

There has been a cumulative drawdown of \$167,076,894 or 78.1% for both allocated and unallocated contingency through April 2017.

- The unallocated contingency decreased by \$3,301,006 for executed modifications for design-build contract C0988 Crenshaw/LAX Transit Corridor, community relations services, environmental consultant services, third party scope of work with Los Angeles Department of Water and Power and The Gas Company.

There is no allocated contingency remaining as of February 2017 month-end reporting.

PROJECT COST CONTINGENCY (through 28-Apr-2017)					
UNITS IN DOLLARS					
	Original Contingency (Budget)	Previous Period	Current Period	To-Date	Remaining Contingency (Forecast)
Unallocated Contingency	173,500,000	(123,409,097)	(3,301,006)	(126,710,103)	46,789,898
Allocated Contingency	40,366,792	(40,366,792)	-	(40,366,792)	0
Total Contingency	213,866,792	(163,775,889)	(3,301,006)	(167,076,894)	46,789,898

DISADVANTAGED BUSINESS ENTERPRISE (DBE) STATUS

Contract C0988 Crenshaw/LAX Transit Corridor Design-Build

(Reported Data as of April 2017)

- DBE Goal (Design)** – A numerically expressed percentage of funds apportioned to Design Contracts and is calculated based upon the relative availability of DBE firms as compared to all firms in the relevant geographic market area. **20.00%**
- Current DBE Commitment** – Total DBE Committed Dollars divided by Total Contract Value for Design or Construction. **\$23,005,641 (20.00%)**
- Current DBE Participation** – Total amount paid to date to DBEs divided by the amount paid to date to Prime. **\$27,327,642 (26.45%)**

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

- DBE Goal (Construction)** - A numerically expressed percentage of funds apportioned to Construction Contracts and is calculated based upon the relative availability of DBE firms as compared to all firms in the relevant geographic market area. **20.00%**
- DBE Commitment** - Contract commitment divided by current contract value for Construction. **\$251,067,446 (20.00%)**
- Current DBE Commitment** - Actual commitments as Construction work is awarded. **\$224,337,231 (17.90%)**
- Current DBE Participation** - Total amount paid to date to DBEs divided by the amount paid to date to Prime **\$167,653,718 (23.36%)**

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 March 2017)

- **Targeted Worker Goal** – Construction work to be performed by residents from Economically Disadvantaged Area of LA County **40.00%**
- **Targeted Worker Current Attainment** **59.00%**
- **Apprentice Worker Goal** – Construction work to be performed by Apprentices **20.00%**
- **Apprentice Worker Current Attainment** **21.18%**
- **Disadvantaged Worker Goal** – Construction work to be performed by Disadvantaged Workers whose primary place of residence is within LA County **10.00%**
- **Disadvantaged Worker Current Attainment** **12.40%**

DISADVANTAGED BUSINESS ENTERPRISE (DBE) STATUS

Contract C0991 Division 16: Southwestern Yard Design-Build

(Reported Data as of April 2017)

- DBE Goal (Design)** – A numerically expressed percentage of funds apportioned to Design Contracts and is calculated based upon the relative availability of DBE firms as compared to all firms in the relevant geographic market area. **20.00%**
- Current DBE Commitment** – Total DBE Committed Dollars divided by Total Contract Value for Design or Construction. **\$2,383,718 (20.93%)**
- Current DBE Participation** – Total amount paid to date to DBEs divided by the amount paid to date to Prime. **\$1,525,935 (18.40%)**

Nine (9) Design subcontractors have been identified to-date

- DBE Goal (Construction)** - A numerically expressed percentage of funds apportioned to Construction Contracts and is calculated based upon the relative availability of DBE firms as compared to all firms in the relevant geographic market area. **16.00%**
- DBE Commitment** - Contract commitment divided by current contract value for Construction. **\$27,806,897 (16.00%)**
- Current DBE Commitment** - Actual commitments as Construction work is awarded **\$16,862,500 (9.70%)**
- Current DBE Participation** - Total amount paid to date to DBEs divided by the amount paid to date to **\$2,936,858 (13.67%)**

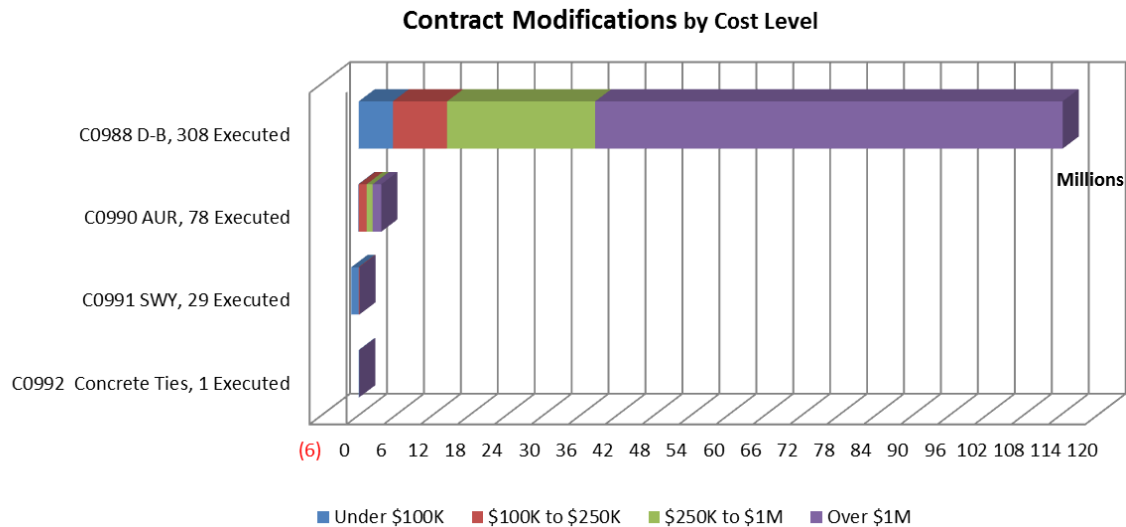
Thirty-six (36) Construction subcontractors have been identified to-date.

PROJECT LABOR AGREEMENTS (PLA) STATUS

Contract C0991 Division 16: Southwestern Yard Design-Build (Reported Data as of March 2017)

- **Targeted Worker Goal** – Construction work to be performed by residents from Economically Disadvantaged Area of LA County **40.00%**
- **Targeted Worker Current Attainment** **50.51%**
- **Apprentice Worker Goal** – Construction work to be performed by Apprentices **20.00%**
- **Apprentice Worker Current Attainment** **22.16%**
- **Disadvantaged Worker Goal** – Construction work to be performed by Disadvantaged Workers whose primary place of residence is within LA County **10.00%**
- **Disadvantaged Worker Current Attainment** **12.74%**

SUMMARY OF CONTRACT MODIFICATIONS



	C0988	C0990	C0991	C0992
	308 Executed	78 Executed	29 Executed	1 Executed
Under \$100K	\$ 5,543,424.66	(\$ 70,250.91)	(\$ 1,177,029.31)	\$ 81,738.00
\$100k to \$250K	\$ 8,819,121.05	\$ 1,280,183.74	\$ 130,000.00	\$ 0.00
\$250K to \$1M	\$ 24,047,828.58	\$ 984,662.39	\$ 0.00	\$ 0.00
Over \$1M	\$ 75,939,555.57	\$ 1,417,201.61	\$ 0.00	\$ 0.00
Total Contract MODs	\$ 114,349,929.86	\$ 3,611,796.83	(\$ 1,047,029.31)	\$ 81,738.00
% of Contract MODs	8.99%	46.14%	-0.61%	3.78%

Three hundred and eight (308) changes with a total value of \$114.50 million have been executed since award of Contract C0988. There are an additional thirty four (34) changes with a total value of \$1.09 million pending the administrative approval process.

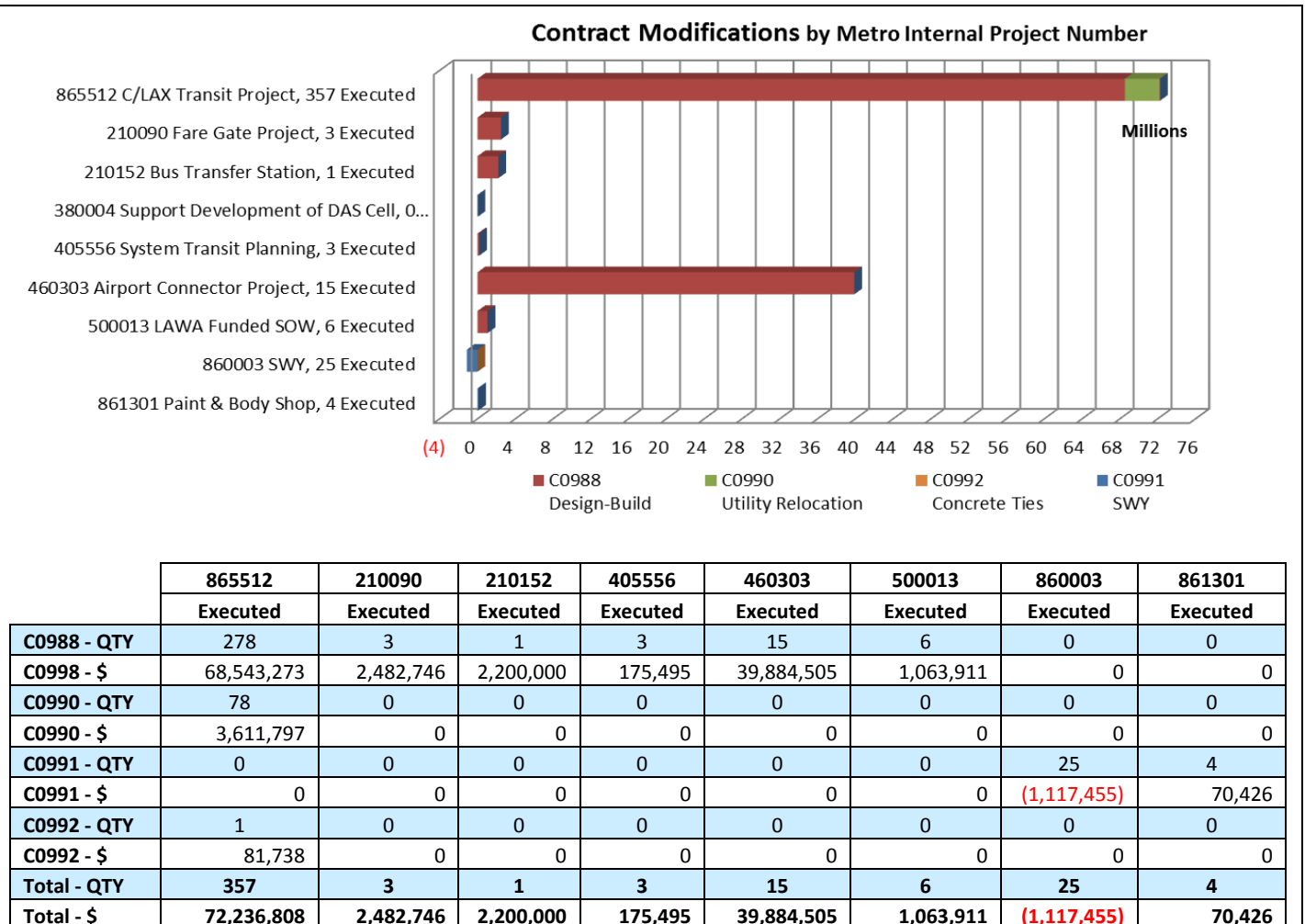
Seventy-eight (78) changes with a total value of \$3.61 million have been executed for completed Contract C0990.

Twenty nine (29) changes with a total value of \$1.05 million credits have been executed since award of Contract C0991. There are an additional eight (8) changes with a total value of \$2.59 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



Three hundred fifty seven (357) changes with a total value of \$72.24 million have been executed for Project 865512 Crenshaw/LAX Transit Project. There are an additional thirty (30) changes with a total value of \$0.26 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. One (1) change with a value of \$2.20 million has been executed for Project 210152 Bus Transfer Station Project.

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

Fifteen (15) changes with a value of \$39.88 million have been executed for Project 460303 Airport Metro Connector Project. There are an additional three (3) changes with a total value of \$3.43 million pending the administrative approval process.

Six (6) changes with a total value of \$1.06 million have been executed for Project 500013 Crenshaw/LAX LAWA Statement of Work.

Twenty five (25) changes with a value of \$1.12 million credit have been executed for Project 860003 Southwestern Yard.

Four (4) changes with a value of \$70,426 have been executed for Project 861301 Southwestern Yard Paint and Body Shop.

FINANCIAL/GRANT STATUS

\$ in millions

SOURCE	(A) ORIGINAL BUDGET	(B) TOTAL FUNDS ANTICIPATED	(C) TOTAL FUNDS AVAILABLE	(D) (D/B) COMMITMENTS		(E) (E/B) EXPENDITURES		(F) (F/B) BILLED to FUNDING 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%	46.6	46%
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%	128.9	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%	372.3	70%	362.4	68%
OTHER FUNDS*	52.4	187.5	19.0	61.6	33%	19.0	10%	19.0	10%
PROP C 25% HIGHWAY	148.9	350.2	6.0	349.8	100%	6.0	2%	3.7	1%
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	10%	4.9	10%
TOTAL	1,749.0	2,058.0	1,400.1	1,932.1	93.9%	1,268.1	61.6%	1,240.892	54.5%

NOTE: Expenditures are cumulative through April 28, 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.

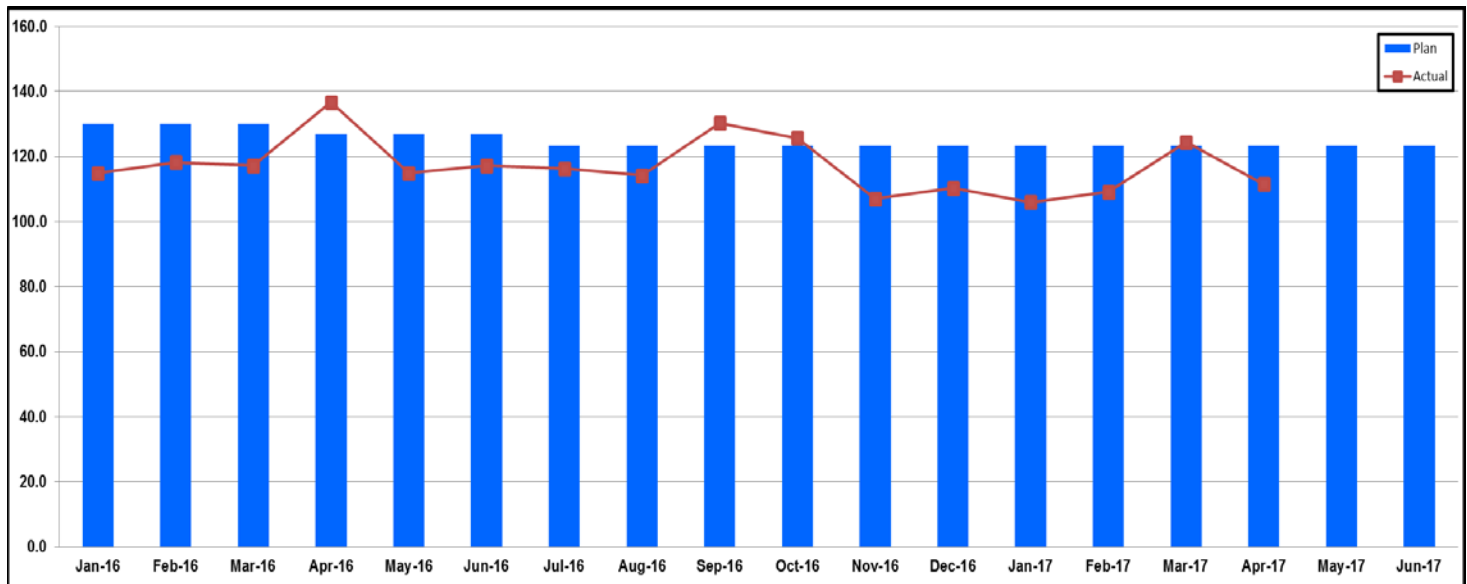
OTHER FUNDS: City of LA: Based on the funding agreement between Metro and the City of LA. \$19M is available for drawdown through FY2017.

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. *No Proposition A 35% Rail Capital funds are allocated for fiscal 2017.*

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 April 2017.

TOTAL PROJECT STAFFING

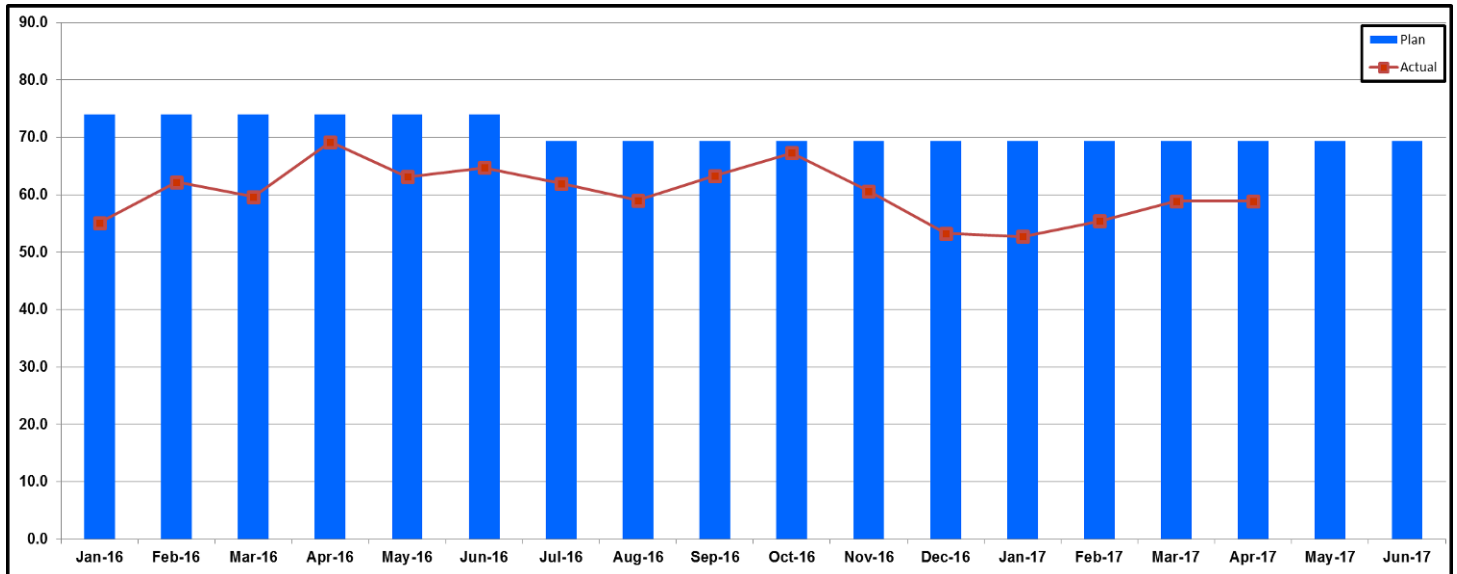
The overall FY17 Total Project Staffing Plan averages 123.3 Full Time Equivalent (FTEs) per month consisting of 69.3 for Metro Agency staff, 47.0 for Construction Management Support Services Consultant and 7.0 for Design and Engineering Support Services Consulting staff.

For April 2017, total project staffing were 111.7 FTEs for the month consisting of 58.9 FTEs for Metro's project administration staff, 42.4 FTEs for Construction Management Support Services Consultant and 10.5 FTEs for Design and Engineering Support Services Consulting staff.

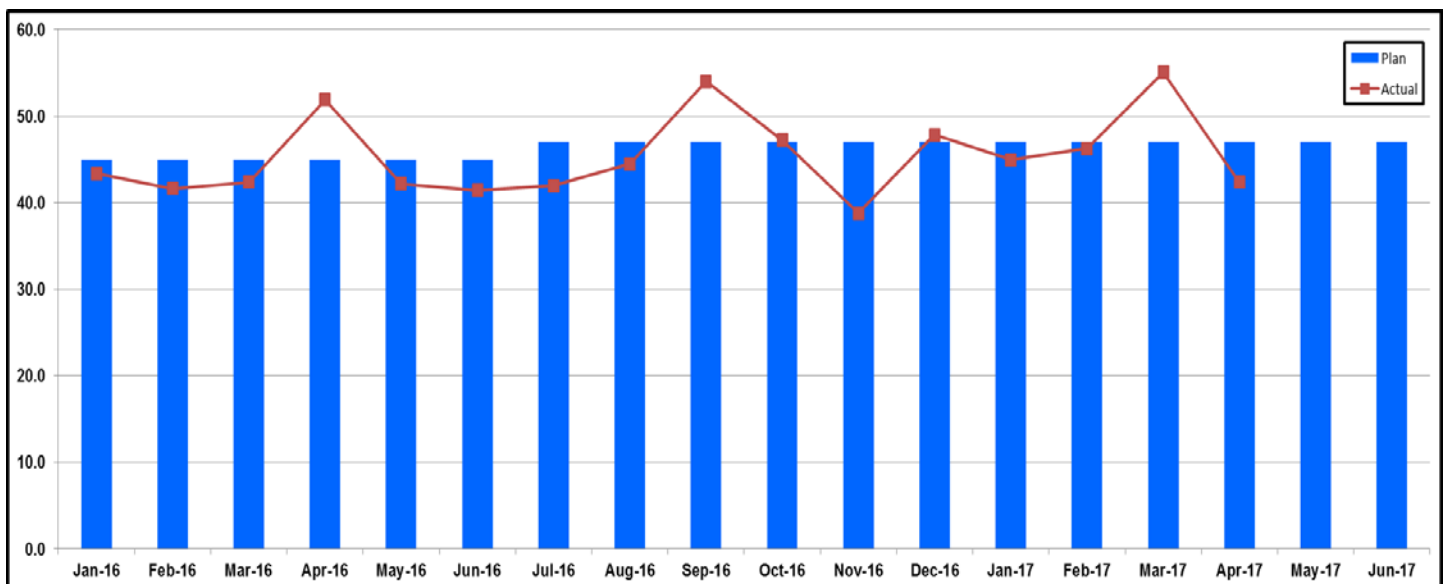
The next three charts show actual staffing versus planned staffing for the three major project participants.

STAFFING STATUS (Continued)

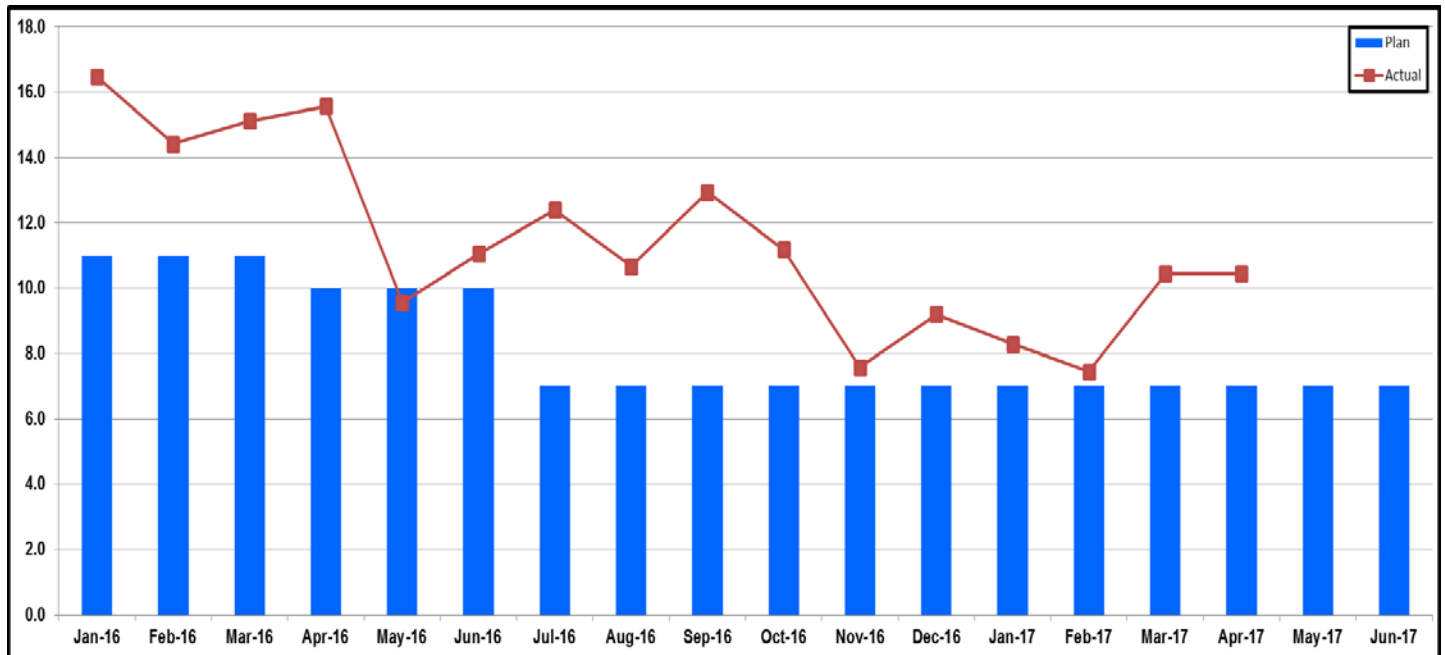
METRO STAFFING – FTES



CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONSULTANT – FTES



STAFFING STATUS (Continued)
ENGINEERING SERVICES CONSULTANT – FTES



REAL ESTATE STATUS

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 Corridor (D-B):									
<i>Crenshaw Subdivision</i>									
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
<i>Crenshaw Subdivision Additional Parcels:</i>									
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
<i>Harbor Subdivision</i>									
Full Takes	15	15		15	15	8	7	12	15
Part Takes (PT or SE)	18	16	2	18	17	8	10		15
TCE	3	2	1	2	2		2		2
Subtotal Parcels	36	33	3	35	34	16	19	12	32
<i>Harbor Subdivision Additional Parcels:</i>									
Full Takes	3	2	1	2	1			1	1
Part Takes	4	2	2	2	2	2			2
TCE	3	3		3	3	3			3
Subtotal Parcels:	10	7	3	7	6	5		1	6
Total Harbor Subdivision Parcels	46	40	6	42	40	21	19	13	38
Total CR/HS Parcels:	79	71	8	74	72	33	38	25	68
<i>Southwestern Yard</i>									
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	82	80	37	42	32	76

- 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 conducted a training session on Quality Control (QC) Paperwork and utilizing Sharepoint.*
- *HNTB Design Quality Control reviewed fourteen (14) NDC's, one (1) Design and one (1) AFC package.*
- *Metro Independent Testing Lab (ITL) conducted concrete batch plant inspection, field tested and made test specimens for structural concrete placement at MLK Station and provided a test report on corrosion condition of strap samples obtained from in-place MSE galvanized steel straps.*
- *Metro Quality participated in Readiness Review meetings for the at-grade crossing at Ivy and a Refresher Readiness Review Meeting for the at-grade crossing at Eucalyptus.*

ENVIRONMENTAL STATUS

C0988 Crenshaw/LAX Transit Corridor Design Build

- Reviewed and commented on the following Contractor Submittals:
 - o 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
 - o Weekly Fugitive Dust Inspection Reports
 - o Various Construction Work Plans and Submittals
 - o Quarterly Noise Control Plan updates
 - o Waste Management Plan
- Conducted Contractor Cultural Awareness Training.
- Coordinated cultural monitoring (Archaeological, Paleontological and Native American Monitoring).
- Conducted noise monitoring at UG3.
- Finalized the Voluntary Cleanup Agreement (VCA) with the DTSC for the former Hi-Tech Cleaners location near the intersection of Crenshaw Blvd. and Slauson Avenue.
- *Completed underground storage tank and potential contaminated soil investigation at Parcel SW-004.*

CONSTRUCTION RELATIONS STATUS

- *Working with Media Relations to design and implement a comprehensive communications program for the full directional closures of I-405 near Florence.*
- *Harriet's Retirement Ceremony was held on April 21, 2017. The event included Metro Executives, Board Members and WSCC Executives.*
- *Held a Park Mesa Heights Community Meeting on April 26, 2017 at Crenshaw Yoga and Dance.*
- *Conducting outreach to local businesses in advance of the full closure of Crenshaw Boulevard between 43rd and 48th Street.*
- The Mayor's Office and CD8 requested Metro explore a shuttle program for the Park Mesa Heights area.
- Worked closely with Bus Operations to resolve service issues in Park Mesa Heights related to construction.
- Continued to monitor the utilization of temporary construction parking lots and city-owned parking lots in the Park Mesa Heights area.

SYSTEMWIDE DESIGN AND ART PROGRAM STATUS

- *Hosted a Metro Art Presents performance by project area poets and musicians including a special invitation for a meet and greet with the artists for the Crenshaw/LAX Transit Project Community Leadership Council.*
- Delivered original artwork designs to Design Builder for fabrication by specialized fabricators.
- Continued to review and respond to submittals.
- 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, Executive Safety and Security Committee Meeting and Readiness Review Meetings.
- Monitored construction activities on a daily basis including weekends to ensure compliance with contract specifications.
- *Monitored tunnel cross passage, underground stations, I-405 Fwy super structure bridge concrete pour, pedestrian underpass, at grade crossings, utility identification and special track work construction activities along the alignment.*
- *Participated in Joint WSCC/Metro Underground Utility Awareness Meeting.*
- Contract C0990 Metro Builders Advanced Utility Relocation completed 360,287 work hours with four recordable incidents. This contract is closed out.
- *Contract C0991 Hensel Phelps Project-to-Date completed 57,844 work hours with zero recordable incidents. Hensel Phelps and their subcontractors completed 16,585 work-hours and zero incidents for the month of April 2017.*
- *Contract C0988 (WSCC) completed 167,189 work hours with eight recordable incidents for the month of April 2017. Total Project-to-Date work hours are 4,176,329 and a total of sixty-five recordable incidents. The project Recordable Rate is 3.0. The Bureau of Labor Statistics (BLS) average recordable rate per 200,000 work-hours is 2.8.*

THIRD PARTY AGREEMENT STATUS

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.

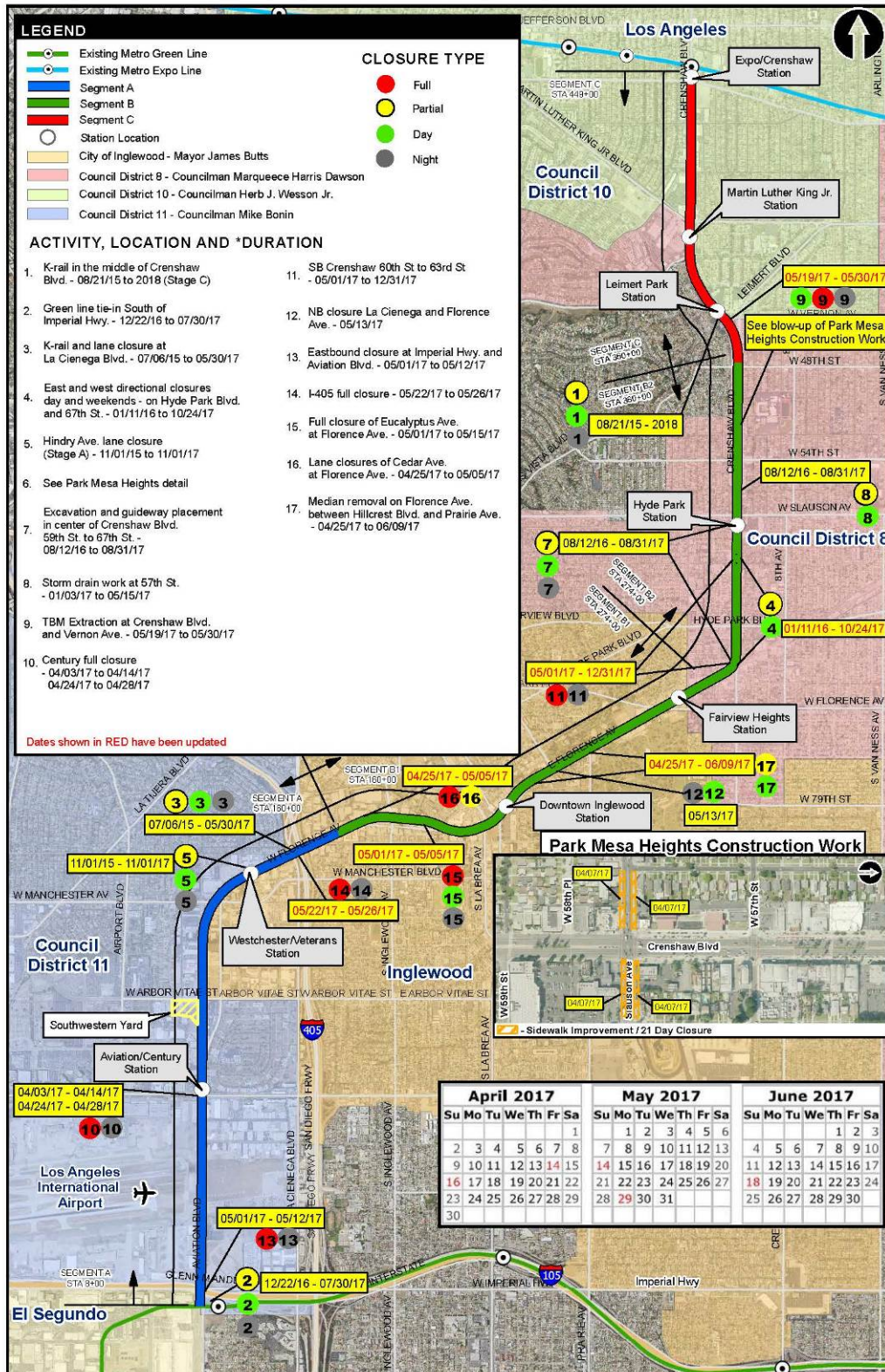
CPUC CROSSING SUMMARY STATUS

- 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.

Crenshaw/LAX Transit Project Monthly Project Status Report

April 2017

Crenshaw/LAX Transit Corridor Project Traffic Closure Key Map - April - June 2017



Updated: 04/27/2017

*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.

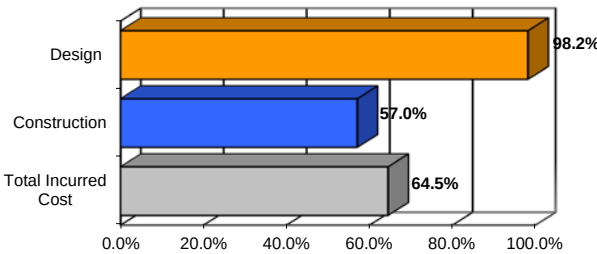
CHRONOLOGY OF EVENTS (Continued)

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.

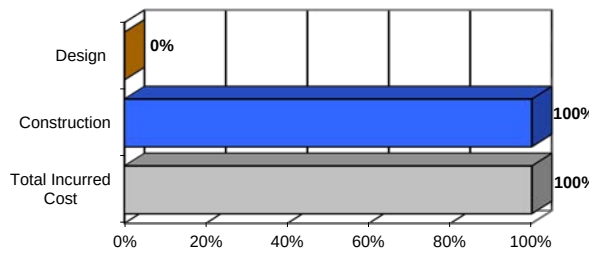
CHRONOLOGY OF EVENTS (Continued)

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.
April 6, 2017	<i>The northbound tunnel boring machine completed mining with the hole thru at Leimert Park Station.</i>

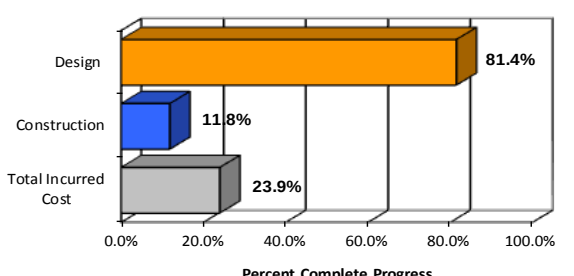
CONTRACT C0988 STATUS
Crenshaw/LAX Transit Corridor

PE Design Contractor: Hatch Mott (HM) CM Consultant: Stantec Contractor: - Walsh Shea Corridor Constructors (WSCC)				Contract No.: C0988 Status as of April 29, 2017																																											
Progress/Work Completed: Construction - Completed northbound tunnel mining to Leimert Park Station on April 6, 2017. - Commenced removal of tunnel mining equipment from site. - Continued invert/walkway concrete placements for southbound tunnel. - Continued wall and concourse concrete placements at Expo, MLK Jr and Leimert Park stations. - Continued invert concrete placements at underground structure # 4. - Continued street and utility work at Park Mesa area. - Continued concrete placements at underground structure #3. - Continued concrete placements at I-405 bridge superstructure. - Continued grade crossing work at Cedar and Eucalyptus streets. - Continued accommodations for future 96th Street Station. - Continued finishing work for Green line tie-in structure..				Areas of Concern: - Timely submittal of WSCC's design submittals and review by City of Los Angeles. - Ability of design-builder to mitigate schedule delays.																																											
Schedule Assessment: Metro and Design-Builder have agreed on a mitigation plan which has been implemented in the March 2017 schedule update.				Cost Assessment: - The current construction contract cost forecast is \$1,375,753,845.80 and is within the Board authorized budget. - The Contractor submitted their 45th payment application in the approved amount of \$25,409,280.57 * Please note that not all executed modifications may have been included in the Contractor current payment application.																																											
Schedule Summary: <table><tr><td>1. Date of Award:</td><td>08/01/13</td><td></td></tr><tr><td>2. Notice to Proceed:</td><td>09/10/13</td><td></td></tr><tr><td>3. Original Substantial Completion Duration:</td><td>1824</td><td></td></tr><tr><td>4. Current Substantial Completion Duration:</td><td>2059</td><td></td></tr><tr><td>5. Elapsed Time from NTP:</td><td>1327</td><td>64.4%</td></tr></table>				1. Date of Award:	08/01/13		2. Notice to Proceed:	09/10/13		3. Original Substantial Completion Duration:	1824		4. Current Substantial Completion Duration:	2059		5. Elapsed Time from NTP:	1327	64.4%	Cost Summary: \$ In millions <table><tr><td>1. Award Value:</td><td>1,272.63</td></tr><tr><td>2. Executed Modifications:</td><td>102.12</td></tr><tr><td>3. Approved Change Orders:</td><td>12.23</td></tr><tr><td>4. Current Contract Value (1 + 2 + 3):</td><td>1,386.98</td></tr><tr><td>5. Incurred Cost:</td><td>887.01</td></tr></table>				1. Award Value:	1,272.63	2. Executed Modifications:	102.12	3. Approved Change Orders:	12.23	4. Current Contract Value (1 + 2 + 3):	1,386.98	5. Incurred Cost:	887.01															
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<table><tr><th>Milestones</th><th>Original Contract</th><th>Current Contract</th><th>Forecast</th><th>Calendar Day Variance</th></tr><tr><td>Milestone 1 - Contract Substantial Completion</td><td>09/08/18</td><td>05/01/19</td><td>05/02/19</td><td>-1</td></tr><tr><td>Milestone 2 - UFS Completion</td><td>03/09/18</td><td>11/01/18</td><td>05/18/18</td><td>167</td></tr><tr><td>Milestone 3 - Commence SIT Phase I</td><td>06/09/18</td><td>02/01/19</td><td>02/01/19</td><td>0</td></tr><tr><td>Milestone 5 - Const./Turnover Parcels SW-0002, 0003, 0004, 0104</td><td>06/05/17</td><td>06/05/17</td><td>06/05/17</td><td>0</td></tr><tr><td>Milestone 6 - Const./Turnover Parcels SW-0001</td><td>08/01/17</td><td>08/01/17</td><td>08/01/17</td><td>0</td></tr><tr><td>Milestone 7 - Provide Access for Division 16 Southwestern Yard D-B</td><td>01/23/16</td><td>01/23/16</td><td>02/22/16A</td><td>-30</td></tr><tr><td>Milestone (10/30/19) - Revenue Service Completion</td><td>10/30/19</td><td>10/30/19</td><td>10/30/19</td><td>0</td></tr></table>				Milestones	Original Contract	Current Contract	Forecast	Calendar Day Variance	Milestone 1 - Contract Substantial Completion	09/08/18	05/01/19	05/02/19	-1	Milestone 2 - UFS Completion	03/09/18	11/01/18	05/18/18	167	Milestone 3 - Commence SIT Phase I	06/09/18	02/01/19	02/01/19	0	Milestone 5 - Const./Turnover Parcels SW-0002, 0003, 0004, 0104	06/05/17	06/05/17	06/05/17	0	Milestone 6 - Const./Turnover Parcels SW-0001	08/01/17	08/01/17	08/01/17	0	Milestone 7 - Provide Access for Division 16 Southwestern Yard D-B	01/23/16	01/23/16	02/22/16A	-30	Milestone (10/30/19) - Revenue Service Completion	10/30/19	10/30/19	10/30/19	0	PERCENT COMPLETE from 09/10/13 to 04/29/17  Construction physical percent complete excludes mobilization and general requirements			
Milestones	Original Contract	Current Contract	Forecast	Calendar Day Variance																																											
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Milestone (10/30/19) - Revenue Service Completion	10/30/19	10/30/19	10/30/19	0																																											

CONTRACT C0990 STATUS
Crenshaw/LAX Advanced Utility Relocations

PE Design Contractor: Hatch Mott (HM) CM Consultant: Stantec Contractor: - Metro Builders and Engineers Group LTD					Contract No.: C0990 Status: Completed																																																																
Progress/Work Completed: - The construction was substantially completed on August 21, 2014 - Board authorized in March a settlement with the contractor. - Contract is closed out.															Areas of Concern:																																																						
Schedule Assessment: - Metro granted substantial completion to Metro Builders on August 21, 2014, which is 276 calendar days behind. - The settlement with the contractor settled all time issues.															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 2. Notice to Proceed: 07/17/12 3. Original Substantial Completion Duration: 365 4. Current Substantial Completion Duration: 468 5. Elapsed Time from NTP: 753															Cost Summary: \$ In millions 1. Award Value: 7.83 2. Executed Modifications:* 3.49 3. Approved Change Orders: - 4. Current Contract Value (1 + 2 + 3): 11.32 5. Incurred Cost: 11.32																																																						
<table><thead><tr><th>Milestones</th><th>Original Contract</th><th>Current Contract</th><th>Forecast</th><th>Calendar Day Variance</th></tr></thead><tbody><tr><td>Milestone 1 - Contract Substantial Completion</td><td>07/17/13</td><td>11/18/13</td><td>08/21/14A</td><td>-276</td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr></tbody></table>															Milestones	Original Contract	Current Contract	Forecast	Calendar Day Variance	Milestone 1 - Contract Substantial Completion	07/17/13	11/18/13	08/21/14A	-276																															PERCENT COMPLETE from 7/17/12 to 8/21/14  Percent Complete Progress Construction physical percent complete excludes mobilization and general requirements														
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CONTRACT C0991 STATUS
Southwestern Yard

PE Design Contractor: Hatch Mott (HM) CM Consultant: Stantec Contractor: - Hensel Phelps / Herzog JV		Contract No.: C0991 Status as of April 29, 2017																											
Progress/Work Completed: - Continued main shop pits and foundation construction. - Bellanca revocable permit for south section is progressing as planned. - NTP/MOD was issued for LAWA-CIDH piles/columns on March 1, 2017. - Major equipment and material fabrication started in March 2017and continued (Structural Steel, Turntables, Wheel Lathes and Hoists). - Main shop elevator shafts were drilled and installed. - Continued with electrical and communication duct banks, dry wells, oil clarifiers and fire risers. - Started on material storage building foundations.		Areas of Concern: 8" water line (Asbestos) under Bellanca was relocated in March 2017. - DWP power relocation completed in March 2017. - There are no major areas of concern at this time.																											
Schedule Assessment: - Interface coordination between HPH, WSCC, City, 3rd Parties are being managed proactively to address and to minimize any impact on the project cost and Schedule. - No delay to the completion milestone is expected. - HPH is using the phase 2 access to establish a re-baseline schedule to complete the SWY two months ahead of contractual. - Potential Early Completion 11/19/2018		Cost Assessment: - The current construction contract cost forecast is \$173,675,802.50 is within the Board authorized budget. - The Contractor submitted their 21st payment application in the approved amount of \$5,246,764.90 *Please note that not all executed modifications may have been included in the Contractor current payment application.																											
Schedule Summary: <table><tr><td>1. Date of Award:</td><td>28-May-15</td></tr><tr><td>2. Notice to Proceed:</td><td>29-Jun-15</td></tr><tr><td>3. Original Substantial Completion Duration:</td><td>1,220</td></tr><tr><td>4. Current Substantial Completion Duration:</td><td>1,311</td></tr><tr><td>5. Elapsed Time from NTP:</td><td>670</td><td>51.1%</td></tr></table>		1. Date of Award:	28-May-15	2. Notice to Proceed:	29-Jun-15	3. Original Substantial Completion Duration:	1,220	4. Current Substantial Completion Duration:	1,311	5. Elapsed Time from NTP:	670	51.1%	Cost Summary: <table><tr><td></td><td>\$ In millions</td></tr><tr><td>1. Award Value:</td><td>172.31</td></tr><tr><td>2. Executed Modifications:</td><td>(1.05)</td></tr><tr><td>3. Approved Change Orders:</td><td>0.00</td></tr><tr><td>4. Current Contract Value (1 + 2 + 3):</td><td>171.26</td></tr><tr><td>5. Incurred Cost (thru April 2017):</td><td>41.55</td></tr></table>				\$ In millions	1. Award Value:	172.31	2. Executed Modifications:	(1.05)	3. Approved Change Orders:	0.00	4. Current Contract Value (1 + 2 + 3):	171.26	5. Incurred Cost (thru April 2017):	41.55		
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Milestones	Original Contract	Current Contract	Forecast	Calendar Day Variance																									
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MS#2 Main Shop Communication Room Completion	15-Jan-18	16-Apr-18	11-Apr-18	5																									
MS#3 Main Shop Substantial Completion	30-Apr-18	30-Jul-18	30-Jul-18	0																									
MS#4 Southwestern Yard Substantial Completion	31-Oct-18	30-Jan-19	29-Jan-19	1																									

CONTRACT C0992 STATUS
Concrete Ties

PE Design Contractor: Hatch Mott (HM) CM Consultant: Stantec Contractor: Rocla Concrete Tie Inc.					Contract No.: C0992 Status: Completed 																																												
Progress/Work Completed: - All 19,936 concrete ties have been received onsite by the design-builder (Contract C0988). - Contract is closed out.					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 been completely paid to contractor. .																																												
Schedule Summary: 1. Date of Award: 12/10/13 2. Notice to Proceed: 12/23/13 3. Original Substantial Completion Duration: 220 4. Current Substantial Completion Duration: 235 5. Elapsed Time from NTP: 235					Cost Summary: \$ In millions 1. Award Value: 2.16 2. Executed Modifications: 0.09 3. Approved Change Orders: 4. Current Contract Value (1 + 2 + 3): -2.25 5. Incurred Cost: 2.25																																												
<table><thead><tr><th>Milestones</th><th>Original Contract</th><th>Current Contract</th><th>Forecast</th><th>Calendar Day Variance</th></tr></thead><tbody><tr><td>Milestone 1 - Contract Substantial Completion</td><td>07/31/14</td><td>08/15/14</td><td>08/15/14A</td><td>0</td></tr><tr><td></td><td></td><td></td><td></td><td>0</td></tr><tr><td></td><td></td><td></td><td></td><td>0</td></tr><tr><td></td><td></td><td></td><td></td><td>0</td></tr><tr><td></td><td></td><td></td><td></td><td>0</td></tr><tr><td></td><td></td><td></td><td></td><td>0</td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></tbody></table>					Milestones	Original Contract	Current Contract	Forecast	Calendar Day Variance	Milestone 1 - Contract Substantial Completion	07/31/14	08/15/14	08/15/14A	0					0					0					0					0					0						PERCENT COMPLETE from 12/23/2013 to 8/15/14 Delivered Shipped Total Incurred Cost 0%50%100% 100%100%100% Percent Complete Progress Construction physical percent complete excludes mobilization and general requirements				
Milestones	Original Contract	Current Contract	Forecast	Calendar Day Variance																																													
Milestone 1 - Contract Substantial Completion	07/31/14	08/15/14	08/15/14A	0																																													
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CONTRACT C0992A STATUS
Running Rail and Bumping Posts

PE Design Contractor: Hatch Mott (HM) CM Consultant: Stantec Contractor: LB Foster Rail Technology Corp					Contract No.: C0992A Status: Completed														
Progress/Work Completed: - All 115RE SS Blank Stick Rails have been delivered to the job site. - All 115RE HH rail have been delivered to job site. - All Bumping Posts have been delivered to job site on 5/8/2015. - Contract is closed out.										Areas of Concern: .									
Schedule Assessment: All running rails and bumping posts were delivered ahead of the schedule.										Cost Assessment: The final contract cost is \$5,2 million and has been completely paid to contractor.									
Schedule Summary: 1. Date of Award: 01/23/14 2. Notice to Proceed: 03/07/14 3. Original Substantial Completion Duration: 300 4. Current Substantial Completion Duration: 558 5. Elapsed Time from NTP: 448										Cost Summary: \$ In millions 1. Award Value: 5.2 2. Executed Modifications: 3. Approved Change Orders: 4. Current Contract Value (1 + 2 + 3): - 5.2 5. Incurred Cost: 5.2									

CONSTRUCTION PHOTOGRAPHS



GREENLINE UNDERPASS – Falsework removal underway at frame 1 & frame A (right).



UG#1 – Dual purposed raised emergency walkway/ductbank along the cut & cover.

CONSTRUCTION PHOTOGRAPHS (Continued)



UG1 - Sandblasting underway along the barrier wall construction joint.



4/27/2017 8:56 AM

AVIATION/CENTURY BRIDGE – Iron horse assembly in preparation for top-down construction of the 10K1 and 10k2 crossover.

CONSTRUCTION PHOTOGRAPHS (Continued)



(AG-5) I-405 BRIDGE- Crews finished lost deck construction. Subcontractor IRP continued installing deck, overhang and parapet curb reinforcement. Deck pour tentatively scheduled for May 13th. (Span 1).



EUCALYPTUS GRADE CROSSING - AC paving of the approach and departure to match the existing elevation of Centinela Ave.

CONSTRUCTION PHOTOGRAPHS (Continued)



Ballast tamping ongoing.



Special ballasted trackwork installation.

CONSTRUCTION PHOTOGRAPHS (Continued)



UG#3 – Excavating and lagging activities near Hyde Park Blvd.



UG#3 Installation of rebar and OCS foundation north of 60th St.

CONSTRUCTION PHOTOGRAPHS (Continued)



HYDE PARK STATION- Installation of formwork for TC&C room.



PARK MESA – Installation of formwork for ballast wall south of 50th St.

CONSTRUCTION PHOTOGRAPHS (Continued)



UG4 – Installation of rebar for invert section I-16.



LEIMERT PARK STATION – Installation of formwork and rebar for concourse level slab.

CONSTRUCTION PHOTOGRAPHS (Continued)



MARTIN LUTHER KING JR. STATION – Installation of formwork for interior wall section LW-28.



EXPOSITION/CRENSHAW STATION– Preparing to install waterproofing for concourse level walls.

CONSTRUCTION PHOTOGRAPHS (Continued)



TUNNELING – Installation of SB Tunnel Walkway formwork.



TUNNELING – Disassembling TBM trailing gear car #2 and preparing to hoist out of MLK Station.

APPENDIX

PROJECT COST STATUS – SOUTHWESTERN YARD

SCC CODE	DESCRIPTION	ORIGINAL BUDGET	CURRENT BUDGET		COMMITMENTS		EXPENDITURES		CURRENT FORECAST		FORECAST VARIANCE
			PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	
10	GUIDEWAYS	0	0	0	0	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	86,653,726	3,796,030	6,257,270	0	85,325,744	135,745
40	SITWORK/SPECIAL CONDITIONS	35,932,000	0	38,273,000	0	38,776,849	140,540	22,601,987	0	38,439,781	166,781
50	SYSTEMS	25,784,616	0	32,991,000	0	32,991,000	76,600	1,244,350	0	32,991,000	0
	(10-50) CONSTRUCTION	147,263,451	0	156,453,999	0	158,421,576	4,013,170	30,103,607	0	156,756,525	302,526
60	RIGHT-OF-WAY	99,910,000	0	100,000,000	(942,137)	102,509,340	(942,137)	102,418,610	0	103,362,761	3,362,761
70	VEHICLES	0	0	0	0	0	0	0	0	0	0
80	PROFESSIONAL SERVICES	35,601,095	0	33,639,631	188,457	29,394,172	641,436	22,474,837	0	33,993,670	354,039
90	PROJECT CONTINGENCY	13,659,732	0	17,106,370	0	0	0	0	0	13,087,044	(4,019,326)
TOTAL		296,434,278	0	307,200,000	(753,680)	290,325,088	3,712,469	154,997,054	0	307,200,000	(0)

C0991 PAINT & BODY SHOP PROJECT

DESCRIPTION	ORIGINAL BUDGET	CURRENT BUDGET		COMMITMENTS		EXPENDITURES		CURRENT FORECAST		FORECAST VARIANCE
		PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	
861301 DIV 22 PAINT & BODY SHOP	11,000,000	0	11,000,000	13,163	9,418,575	13,163	2,639,450	0	11,000,000	0

GRAND TOTAL	307,434,278	0	318,200,000	(740,517)	299,743,663	3,725,631	157,636,504	0	318,200,000	(0)
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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 design-build Contract C0991 Southwestern Yard Project. Of the total \$307.2 million, \$150.2 million is funded in the Crenshaw/LAX Transit Project LOP budget which includes the original 49% allocation amount of \$139.4 million plus a new \$10.8 million reduction from the Crenshaw/LAX Transit Project contingency line item in the budget. There is no increase in the LOP for the Crenshaw/LAX Transit Project. The original 51% share associated with future Green Line related extensions in an amount of \$145.8 million was increased by \$11.2 million for a new total of \$157.0 million.

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

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

APPENDIX

PROJECT COST ANALYSIS (Continued)

Current Forecast: The forecast is under review.

Commitments:

The commitments are cumulative through April 29, 2017.

Total commitments decreased by \$0.74 million for this period due to the following:

- SCC-30
 - o No change for April.
- SCC-40
 - o No change for April.
- SCC-50
 - o No change for April.
- SCC-60
 - o Right-of-Way commitments for \$0.94 million were re-allocated and transferred to appropriate project for April.
- SCC-80
 - o Professional services such as legal, construction management, and labor commitment increased by \$0.20 million for April.

The \$299.74 million in commitments to date represents 94.20% of the current budget.

Expenditures:

The expenditures are cumulative through April 29, 2017.

The total expenditures increased by \$3.73 million for this period due to the following:

- SCC-30
 - o Hensel Phelps/Herzog JV expenditure increase by \$3.80 million for April.
- SCC-40
 - o Hensel Phelps/Herzog JV expenditure increase by \$0.14 million for April.
- SCC-50
 - o Hensel Phelps/Herzog JV expenditure increase by \$0.08 million for April.
- SCC-60
 - o Right-of-Way expenditure decreased by \$0.94 million by re-allocation of charges to main project for April.
- SCC-80
 - o Hensel Phelps/Herzog JV, agency expenditure and professional services expenditure increase by \$0.65 million for April.

The \$157.64 million in expenditures to date represents 49.54% of the current budget.

COST AND BUDGET TERMINOLOGY

Project Cost Descriptions -

ORIGINAL BUDGET	The Original Project Budget as established by the Metropolitan 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 orders or amendments, approved work orders of Master Cooperative Agreements, offers accepted for purchase of real estate, and 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. Current Forecast is composed of actual costs incurred to date, the best estimate of work remaining and a current risk assessment for each budgeted cost item.

Cost Report by Element 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.