# **Crenshaw/LAX Transit Project**



## **CRENSHAW/LAX TRANSIT PROJECT**

QUARTERLY 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).

**MARCH 2014** 

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## **PROJECT SUMMARY**

LOCATION: Crenshaw E DESIGN/CONSULTANT:	Hatch Mott M	acDonald		CONSTRUCTION MANAGEMENT CONSULTANT: Stantec CONTRACTOR: Walsh-Shea Corridor Constructors (WSCC)							
PROJECT PHOTO: Poth	oling for utilitie	s on Crenshav	v Blvd.	WORK COMPLETED PAST MONTH:							
				o WSCC continued exploratory utility potholing. o WSCC continued geotechnical instrumentation. o WSCC continued demolition of buildings. o WSCC continued rail and tie removal. o WSCC commenced noise wall construction at the Crenshaw/Expo Station Area. o Metro continued real estate acquisitions. o Metro Builders continued street sewer relocations and continued LADWP water line pipe sleeves installation. o LADWP continued water line relocations at north end.							
EXPENDITURE STATUS (\$ In Millions)				SCHEDULE ASSESSME	NT						
	CURRENT	EXPENDED	PERCENT	MAJOR SCHEDULE	PRIOR	CURRENT					
ACTIVITIES	BUDGET	AMOUNT	EXPENDED	ACTIVITIES	PLAN	PLAN	VARIANCE WEEKS				
				Environmental							
DESIGN	\$ 136.7	\$ 56.7	41.5%	FEIS/FEIR	Sep-11	Sep-11	Complete				
				Record of Decision	Dec-11	Dec-11	Complete				
RIGHT-OF-WAY	\$ 127.4	\$ 97.6	76.6%	Design		•					
CONSTRUCTION	\$ 1,353.1	\$ 149.9	11.1%	Preliminary Engineering	Nov-11	Nov-11	Complete				
				Final Design	Sep-15	Sep-15	0				
OTHER	\$ 440.8	\$ 71.0	16.1%	Right-of-Way							
TOTAL	\$ 2,058.0	\$ 375.2	18.2%	All parcels available	Aug-14	Dec-14	16 weeks behind				
Note: cost as of March 28	, 2014.			Construction			I				
AREAS OF CONCERN				D-B Notice to Proceed	Sep-13	Sep-13	Complete				
o Right-of-way acquisition f	orecast dates	trending later th	nan planned	D-B Substantial Complete	Sep-18	Sep-18	·				
o CPUC approval of grade-	separation cro	ssings applicat	tions.	Revenue Service Date	Oct-19	Oct-19	0				
o Timely future reviews of V City of Inglewood, Caltrans. o Third party relocations pri o Execution of Agreement v	, FAA and Los or to design-b	Angeles World uilder's constru	d Airports.				1				
ROW ACQUISITION	PLAN	ACQUIRED	REMAINING	CRITICAL ACTIVITIES / 3	MONTH LOC	OK AHEAD					
				o Metro continue turnin	g over real e	state prop	erties to WSCC.				
FULL TAKES	35	27	8	o WSCC submit 60% a	lesign packa	ge.					
				o WSCC commence ex	cavation sup	oport at Ci	renshaw/Expo station.				
	27	1	26	o WSCC commence de	emolition of e	xisting bri	dge at Century Blvd				
PARTIAL TAKES		ı									
PARTIAL TAKES				o WSCC contiues geotechnical instrumentation and monitoring.							
PARTIAL TAKES  TEMPORARY EASEMENTS	12	0	12	o WSCC contlues geot o Metro Builders compl			· ·				

#### **PROJECT OVERVIEW**

#### **Major Contract Procurement**

Metro is pursuing moving up the solicitation of Contract C0991, Southwestern Yard to this summer. A revised schedule is under review for the procurement of this contract and will be reported on next month.

#### Construction

**Contract C0990** - The advanced utility relocations Contractor, Metro Builders and Engineers Group, LTD (MBE) continues relocations along Crenshaw Blvd:

- At the Crenshaw cut and cover tunnel area 60<sup>th</sup> Street (north portal) relocation of a 10" VCP sewer line to clear way for the cut and cover trench is forecast to complete May 10, 2014.
- At the Crenshaw cut and cover tunnel area 67<sup>th</sup> Street (south portal) relocation of an 18" VCP sewer line to clear way for the cut and cover trench is forecast to complete May 15, 2014.
- The LADWP (Water) scope of work for lowering and encasing four water crossings on Crenshaw Blvd, three 8" steel water lines and one 12" steel water line, to clear the way for a cut and cover trench, are forecast to be complete May 10, 2014.

MBE has lost another 30 days this month and has not been able to mitigate schedule delays. Metro's assessment is that the projected substantial completion date is June 30, 2014. The projected completion date still does not appear to impact the follow-on design-builder's (C0988) scope of work.

See the Contract C0990 Status sheet on page 43 for cost and schedule information.

**Contract C0988** – The design-builder, Walsh-Shea Corridor Constructors (WSCC) continues final design with preparation of early required contract submittals. Key design status this month:

- Continued over the shoulder reviews and task force meetings on all elements of design.
- Submittal of Design Confirmation Group 2 which includes summary of design advancements made to date for guideway and trackwork, utilities, roadway work, overhead catenary, and ductbank project elements.
- Tunnel TBM specification and tunnel liner segment specifications were received and are under review. A factory acceptance testing is preliminary scheduled in Germany at the factory site in June 2014.

Initial construction efforts continue along the three major areas or segments:

Segment A – (South end, stationing 7+50 to 130+00)

- Potholing has been completed.
- SWPPP silt fence installed.
- Clearing and grubbing in the BNSF bridge area near Century and aviation.

## **PROJECT OVERVIEW (Continued)**

Segment B – (Stationing 130+00 to 365+00)

- Potholing continues.
- Geotechnical borings have been completed.
- Rail and tie removal continues.
- CCTV existing storm drain and sewer lines started.

Segment C – (North end, Stationing 365+00 to 449+00)

- Crenshaw/Exposition Station area
  - o Potholing continues.
  - Geotechnical boring continues.
  - o Noise wall installation continues.
- Crenshaw/MLK Station area
  - o Potholing continues.
  - Geotechnical boring is complete.
- Crenshaw/Vernon Station area
  - o Potholing continues.
  - o Geotechnical boring is complete.

See Contract C0988 Status sheet on page 42 for cost and schedule information.

#### Right-of-Way

There are a total of 74 parcels; one more parcel was added in October 2013 which was originally an encroachment. There are 35 full takes, 27 partial takes and 12 temporary construction easements (TCE's). There have been 28 parcels acquired through March 2014. Twenty-five full takes and one temporary construction easement have been turned over to WSCC. Two additional full takes have been acquired and will be turned over to WSCC by June 2014.

#### **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 interim course of action is to expand the existing functional operations at the ROC under a Phase 1 approach to support five new rail lines and extensions including the Crenshaw/LAX Project. The existing ROC will be expanded and will reconfigure the existing ROC service control and closed circuit television monitoring areas to increase overall space requirements by approximately 22 percent. A full build-out of a combined BOC/ROC is also being planned under a Phase 2 approach on land to be acquired by Metro as a separate Capital Improvement Project near Division 20. Final design of the ROC Reconfiguration Plan was completed and issued for review on February 28, 2014. The initial ROC reconfiguration effort will be for Exposition Phase II and Foothill Gold Line Projects. Crenshaw/LAX Transit Project ROC reconfiguration will be initiated in June 2017 and completed by February 2019.

### **PROJECT OVERVIEW (Continued)**

#### **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 City of Los Angeles. Metro needs to secure a legally binding 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.

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 current budget includes the 49% cost allocation share that the Project is responsible for paying for the design and construction of the Southwestern Yard. This amount is \$139.4 million of the \$285.2 million forecast cost for the Southwestern Yard. The \$139.4 million is allocated in the various SCC categories.

The amount of funding available for the Crenshaw/LAX Transit Corridor Project, excluding the Southwestern Yard \$139.4 million allocation and Environmental/Planning budget of \$26.0 million is \$1,892.6 million.

The LOP budget is funded by various sources of funds which include local, state and federal funding. The TIFIA Loan is categorized under local funds as the loan is secured by a pledge of Measure R local sales tax funds. The federal percentages are as follows; local funding 79.9%, state funding 14.0% and federal funding 6.1%.

The project commitments thru March 2014 are \$1,616.7 million or 78.6% of the Current Budget. The project expenditures thru March 2014 are \$375.2 million or 18.2% of the Current Budget. The expenditures to date are for previous environmental/planning and preliminary engineering efforts as well as final design and construction costs. 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 project master schedule continues to reflect a forecast of October 2019 for Revenue Service which includes the additional two station options, Leimert Park Station and Hindry Station. This Baseline Revenue Service Date reflects the award of the design-build contract and ratification of a board motion to execute the bid options in the RFP conditioned upon amendment to the TIFIA loan agreement and execution of an agreement with the City of Los Angeles.

The project schedule contingency remains the same this period at 8.7 months.

## **PROJECT OVERVIEW (Continued)**

A Risk Assessment Workshop was held on December 11<sup>th</sup> and 12<sup>th</sup> for the purpose of conducting a risk assessment of the project at a key stage of the project; after issuance of the notice to proceed to the design-builder. This was the third of five planned risk assessment workshops. The results from the workshop are included in the Risk and Contingency Management Plan that was updated and issued on February 28, 2014. The Plan includes as attachments the updated Risk Register that was issued on February 13, 2014 and an update of Metro's Master Schedule.

On a monthly basis, the project's risk manager will advise project management of the risk register items mitigation status. An update of the Project's risk register will be issued on July 18, 2014.

#### **MANAGEMENT ISSUES**

**Concern No. 1:** Complete Construction Safety Phasing Plan (CSPP) for design-builder scope of work near LAX and receive FAA approval.

<u>Status/Action</u> A CSPP has been previously completed and submitted and approved by FAA for the Advanced Utility Relocation Contractor. Now a CSPP has to be submitted by the design-builder for their scope of work and get FAA approval before work can commence in the LAX area. The design-builder held an introductory meeting with FAA on November 19, 2013, to discuss access, height restrictions and site restrictions. *The design-builder has met with and will continue to meet with the FAA prior to submitting a draft CSPP.* 

**Concern No. 2:** Metro has submitted five applications to the California Public Utilities Commission (CPUC) for approval of grade crossing improvements.

**Status/Action** Metro completed and submitted all formal applications (packages 1 thru 5). The CPUC approved Package No. 5 on February 27, 2014. It is anticipated that the CPUC will approve Packages No. 2 and No. 3 on April 10, 2014. See page 38 for more detail.

There have been protests on two of the five applications (packages 1 and 4). The Crenshaw Subway Coalition Park-Mesa grade crossing issue remains open. The CPUC Administrative Law Judge has not issued a decision. It is anticipated that the CPUC will act on Packages No. 1 and No. 4 in May 2014.

**Concern No. 3:** Execution of Local Match Agreements for 3 percent project funding is required with the City of Inglewood.

<u>Status/Action</u> Metro and the City of Inglewood have worked through various issues over the last few months and may have a solution to outstanding issues so an agreement can be executed in the near future.

#### **MANAGEMENT ISSUES**

**Concern No. 4:** Execution of Grant Agreement with City of Los Angeles for \$55.0 Million.

<u>Status/Action</u> The Agreement that will provide for the City of Los Angeles 3% contribution for the Crenshaw/LAX was rescheduled and placed on the agenda for Metro's Finance, Budget and Audit Committee in April 2014.

**Concern No. 5**: Right-of-way acquisition forecast dates are trending later than planned.

<u>Status/Action</u> Metro continues to turn over parcels to the design-builder as they are acquired. There have been 28 parcels acquired through March 2014. Twenty-five full takes and one temporary construction easement have been turned over to WSCC. Two additional full takes have been acquired and will be turned over to WSCC by June 2014. However, some parcels are being delivered later than originally scheduled to WSCC. Metro and the design-builder are working together to refine the turnover dates to ensure there is no impact to the design-builder's construction schedule. In addition, Metro is maintaining additional consultant staff to support existing Metro staff in appraisal reviews, making offers, relocations and any coordination efforts required.

**Concern No. 6:** Variance to nighttime working hours.

<u>Status/Action</u> Variances to nighttime working hours on all five construction segments had been approved by the Los Angeles Police Commission. See page 35 for map of variance segments. Variances have to be renewed every six months.

The variance to nighttime working hours for Segments A, B, C and E have been renewed thru June 3, 2014. Metro has been meeting with Council District 8 and has been successful in restoring variances from Council District 8 for the Advance Utility Relocations Contractor C0990.

The variance for Segment D for the design-builder remains suspended until WSCC completes work plan for construction within this area and presents to Council District 8 and the LAPD Noise Commission.

**Concern No. 7:** Timely future reviews of WSCC final design submittals by City of Los Angeles, City of Inglewood, Caltrans, FAA and Los Angeles World Airports.

<u>Status/Action</u> Metro is coordinating with all third party agencies in advance of the first submittals by WSCC to ensure that timely review requirements will be met to support WSCC's baseline schedule submittal dates. The final design submittals will be submitted for review by third parties according to the most critical submittals to ensure the third party agencies are reviewing the most important designs first. Also, along with the concern above is the potential for third party agencies review comments

#### **MANAGEMENT ISSUES**

leading to potential change requests outside of the original design signed off by the agencies during the preliminary engineering phase of the project. Metro will take action and strictly monitor the review comments from the agencies.

**Concern No. 8:** Additional scope of work for the design-builder to accommodate the Los Angeles World Airports (LAWA) Specific Plan Amendment Study (SPAS).

Status/Action The scope of work is for Metro to undertake a parallel design effort and construct changes in the vicinity of the Aviation/Century Station to accommodate elements of the SPAS. The Crenshaw/LAX Transit Project obtained Metro Board authorization to Proceed in December 2013 with the required future design or construction effort. Three changes were executed with WSCC for only the parallel design effort required. Three construction changes are planned for execution with WSCC in the near future.

**Concern No. 9:** Special Permitting Process (SPP).

<u>Status/Action</u> Requires City of Los Angeles to approve SPP for Crenshaw/LAX Project which exempts project from certain restrictions. Application was approved by the City Council on January 6, 2014. *However, Metro is still working out details of the SPP with the City of Los Angeles*.

**Concern No. 10:** Relocations of utilities by outside third parties required to be performed in advance of the main Crenshaw/LAX Design Build Contractor's work.

<u>Status/Action</u> Metro is working closely with various third party agencies to have relocations of utilities performed in accordance with the design-builder's baseline schedule.

**Concern No. 11:** Drawdown of project contingency.

<u>Status/Action</u> Metro in December 2013 forecast a potential drawdown of unallocated contingency in the amount of \$8.6 million for third party utility relocation work. This contingency drawdown is earlier than was anticipated for this stage of the project. Metro has commenced review of third parties scope of works and will carefully review all invoices as they are received.

Concern No. 12: Timing of the solicitation for Contract C0991 Southwestern Yard.

**Status/Action** Metro is pursuing moving up the solicitation of Contract C0991 Southwestern Yard to this summer. A revised schedule is under review.

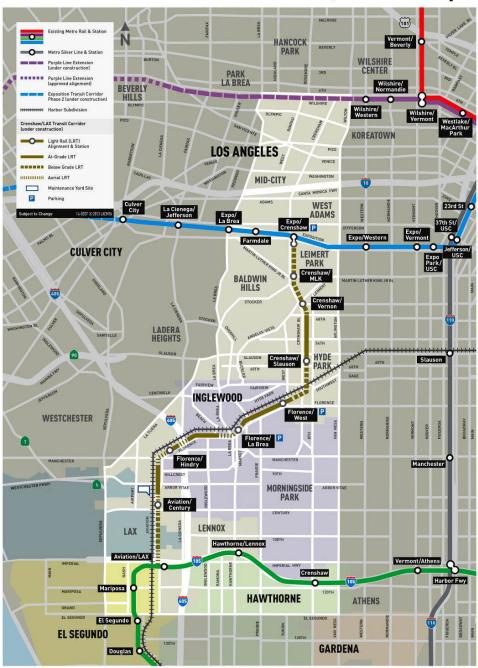
## **MANAGEMENT ISSUES (Continued)**

Concern No. 13: Design-builders design submittal schedule

<u>Status/Action</u> WSCC is falling behind on meeting interim design milestones but are maintaining the Contract milestones. Due to this trend, Metro has requested a recovery plan on how WSCC will get back on schedule so as not to impact planned construction activities.

### **PROJECT ALIGNMENT**

## Crenshaw/LAX Transit Project





#### **BASE 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, prequalification of qualified proposers followed by release of a RFP soliciting technical and price proposals with an option at Metro's discretion for best and final offers (BAFO).

## **BASE 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 is a one-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

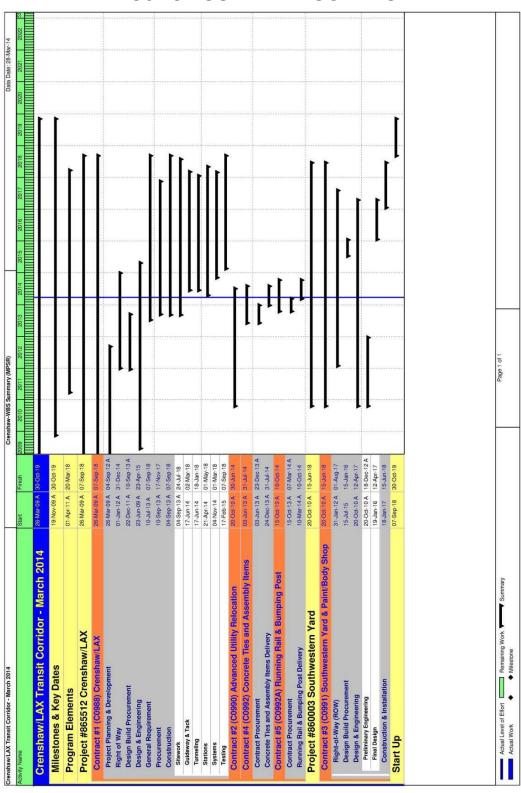
Metro added a contract for rebidding the procurement of running rail and bumping posts for the Design-Build Contract C0988 Crenshaw/LAX Transit Corridor Contractor.

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

## **KEY MILESTONES SIX- MONTH LOOK AHEAD**

	Milestone Date	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14		
Contract C0992A Running Rail NTP	3/7/2014A	M							
Contract C0988 Design Confirmation Group 2 Submittal	3/7/2014A	Min Conta							
Contract C0988 Complete Utility Pothiling - LAWA	3/11/2014A	NAMES OF SAME							
Contract C0988 Complete Utility Pothiling - City of Inglewood	3/28/2014A	<u> </u>							
Contract C0988 Submit TBM Final Design Details	04/25/14								
Contract C0988 Complete Utility Pothiling - City of LA	04/29/14								
Contract C0988 Interim Design Submits to Metro	06/04/14								
Contract C0988 Start Piling Operation at Crenshaw/Expo	06/05/14				<b>Day</b>				
Contract C0988 Start Demo & Excavation at Vernon	06/23/14				MIN DIVIN				
Contract C0992A SDI 115RE SS Rail Delivery	06/16/14								
Contract C0990 Substantial Completion	06/30/14								
Contract C0992A Evraz115RE HH Rail Delivery	07/31/14								
Contract C0992 Concrete Ties Delivery	07/31/14								
Contract C0988 Demo Existing W. Century Blvd. Railroad Bridge	8/15/2014*								
◆ MTA Staff MTA Board Action	FTA (Federal								
Other Agencies Contractors	Walsh S	Shea Corridor	Constructor	S					
"A" following date is actual and completed	★ New Date								

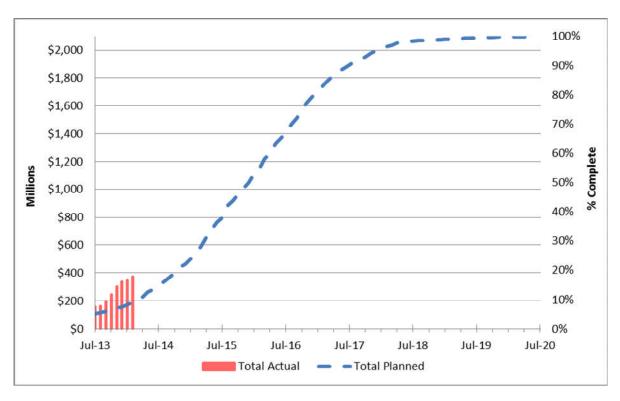
## **PROJECT SUMMARY SCHEDULE**



#### **SCHEDULE MEASUREMENTS**

Current Revenue Service:	Status 10/30/2019	Change from Last Period None	Comment
Forecast Revenue Service:	10/30/2019	None	
TIFIA Revenue Service:	10/30/2019	None	
Final Design Progress:			
Contract C0988	35%	1%	On Schedule
Contract C0990	100%	None	Design Completed
Contract C0991	-	-	P.E Completed only
Contract C0992	100%	None	Design Completed
Contract C0992A	100%	None	Design Completed
<b>Construction Contracts Progress:</b>			
Contract C0988	0%	0%	On Schedule
Contract C0990	88%	1%	Behind Schedule
Contract C0991	0%	-	Not yet advertised
Contract C0992	0%	-	On Schedule
Contract C0992A	0%	-	NTP issued 03/07/2014
Cumulative To Date Progress:	14.1%		

#### **OVERALL CONSTRUCTION PROGRESS CURVE STATUS**



The above progress curve is based on planned expenditures by the design-build contractor in the C0988 baseline schedule and actual program expenditures which incorporated progress projected by the design-build contractor in their March 2014 schedule update.

The cumulative overall final design and construction progress remains same as last month of 14.1%.

Contract overall progress for C0990 is 86%. This contractor continues to be behind schedule. See Contract C0990 Status sheet, page 43, for more information.

Cumulative final design progress to date for C0988 is 35%, while construction progress reporting started this month and is less than 1% to date. See Contract C0988 Status sheet, page 42, for more information.

#### **MAJOR EQUIPMENT DELIVERY STATUS**

#### **Tunnel Boring Machine**

WSCC, the design-builder for Contract C0988, will procure the tunnel boring machine and equipment. A purchase order for the equipment has been released by the design-builder.

Following are the major milestone dates for TBM procurement:

- Place Purchase Order for EPBM 10/31/2013
- Submit Final Design Details for TBM 4/25/2014
- Fabricate & Deliver EPBM 10/3/2014
- Procure & Deliver TBM Rolling Stock & Accessories 12/31/2014

#### **Light Rail Vehicles**

The Board approved exercising Option 1 of Contract P3010 with Kinkisharyo International to provide light rail vehicles (LRV) for the Crenshaw/LAX project. By exercising this option prior to August 20, 2013, the Project avoided price escalation costs. The total number of vehicles in the option is 28 which include 20 LRVs for the Crenshaw/LAX project and two additional cars for spares.

The first six pilot cars for the initial order of cars (non-option) are planned to be delivered on July 2015; then four cars will be delivered every month starting from Aug 2015 with the last group of cars to be delivered on Jan 2017.

Mobilization of Option 1 will commence after completion of the initial order. First delivery of Option 1 cars will be February 2017 and the last of the cars in September 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.

#### **Concrete Ties and Assembly Items**

Procurement of the concrete ties contract was awarded and Notice to Proceed was issued in December 23, 2013. The contractually bound to deliver on or before July 2014.

#### **Running Rail & Bumping Post**

- Contract Award 1/23/2014
- NTP 3/7/2014
- Rail Submittal 4/18/2014
- SDI 115RE SS Rail Delivery 6/16/2014
- Evraz 115RE HH Rail Delivery 7/31/2014
- Bumping Post Delivery 10/10/2014

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

Item	Delivery	Needed by
Traffic Signal Poles	3/12/2015	3/16/2015
Street Light Poles	3/12/2015	3/16/2015
Tunnel Ventilation Fans	7/6/2015	1/12/2017
Jet Fans (Cut & Cover)	12/21/2015	10/6/2017
Structural Steel - Canopies	8/7/2015	3/21/2017
Laminated Tempered Canopy	5/7/2015	5/31/2016
Station - Elevators	1/19/2016	1/5/2017
Station - Escalators	1/19/2016	3/15/2016
Track - Special Trackwork	1/29/2016	2/1/2016
Track - Restraining Rail and Grade Crossing Ties	5/15/2015	9/18/2015
Unit Substations - Expo	6/26/2015	10/24/2017
Unit Substations - MLK	6/26/2015	4/13/2017
Unit Substations - Vernon	6/26/2015	2/7/2017
TPSS - Substation 1	9/21/2015	6/20/2016
TPSS - Substation 2	12/1/2015	10/18/2016
TPSS - Substation 3	2/11/2016	1/9/2017
TPSS - Substation 5	4/21/2016	4/25/2016
TPSS - Substation 6	7/1/2016	7/5/2016
TPSS - Substation 8	9/13/2016	9/14/2016
TPSS - Substation 9	11/22/2016	5/2/2017
TPSS - Substation 10	2/3/2017	6/26/2017
Equip. & Components for CCTV/Fire Alarm/Radio/Telephone	4/23/2015	5/15/2015
Equip. & Components for CTS/ROC	5/7/2015	5/8/2015
Equip. & Components for ETS	6/5/2015	10/17/2016
Equip. & Components for Gas Detection	6/5/2015	4/18/2017
Equip. & Components for Intrusion Detection	4/23/2015	5/15/2015
Equip. & Components for PA/VMS	6/5/2015	6/22/2015
Equip. & Components for Portal Surveillance	4/23/2015	5/15/2015
Equip. & Components for SCADA	5/7/2015	5/15/2015
Equip. & Components for Seismic Detection	6/5/2015	6/22/2015
Equip. & Components for UPS & Batteries	7/10/2015	10/24/2016
OCS Poles	9/22/2015	9/13/2016

#### **CRITICAL PATH NARRATIVE**

#### **Critical Path:**

The longest path to project substantial completion begins with final design of the Design/Build Contract #C0988 Crenshaw/LAX Transit Corridor.

The critical path moves through final design and the procurement of the tunnel boring machines (TBMs). The TBM is a long lead item and as packages of final design are approved for construction, work will commence on the alignment construction activities prior to the TBMs arrival, assembly and testing.

The most critical and longest path for construction currently runs through the Expo Station Traffic Control Plan, Shoring, Excavation & Mud Slab; TBM Mining; Expo Station Concrete thru Systems / MEP, Finishes, Road Restorations, while underground structure #3 shoring, cut and cover follow closely as the near critical path.

Critical work concludes with phase I systems integration testing by the C0988 contractor, phase 2 systems integration testing by MTA and then pre-revenue operations.

•

#### **PROJECT COST STATUS**

SCC	DESCRIPTION	ORIGINAL	IAL CURRENT BUDGET		COMMI	TMENTS	EXPENDITURES		CURRENT FORECAST		FORECAST
CODE	DESCRIPTION	BUDGET	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	VARIANCE
10	GUIDEWAYS	471,335,000	-	452,500,001	-	442,238,848	-	16,000,000	-	452,500,001	-
20	STATIONS	153,906,000	-	316,050,000	-	300,550,000	406,239	2,130,028	-	316,050,000	-
30	SOUTHWESTERN YARD	66,673,000	-	66,673,000	-	-	-	-	-	66,673,000	-
40	SITEWORK\SPECIAL CONDITIONS	235,576,000	-	348,565,999	766,440	332,796,936	17,781,820	131,728,946	(0)	357,220,999	8,655,000
50	SYSTEMS	125,132,000	-	169,311,000	-	149,821,000	-	-	-	169,311,000	-
10-50	CONSTRUCTION	1,052,622,000		1,353,100,000	766,440	1,225,406,784	18,188,059	149,858,974	(0)	1,361,755,000	8,655,000
60	RIGHT-OF-WAY	132,294,000	-	127,400,000	-	113,528,223	3,000,344	97,600,435	(0)	127,400,000	-
70	LRT VEHICLES	87,780,000	-	82,100,000	-	82,050,901	-	11,452,422	-	82,100,000	-
80	PROFESSIONAL SERVICES	273,147,000	-	295,900,000	600,117	169,674,789	7,136,823	90,728,797	-	295,900,000	-
90	UNALLOCATED CONTINGENCY	177,157,000	•	173,500,000	-	•	-	•	-	164,845,000	(8,655,000
	865512 & 860003 - SUBTOTAL	1,723,000,000		2,032,000,000	1,366,557	1,590,660,697	28,325,226	349,640,628	(0)	2,032,000,000	-
	ENVIRONMENTAL/PLANNING-405512	5,526,150	-	5,526,150	1,292	5,526,150	1,292	5,526,150	1,292	5,526,150	-
	ENVIRONMENTAL/PLANNING-465512	20,473,850		20,473,850	(1,292)	20,473,850	(1)	20,023,237	(1,292)	20,473,850	-
	405512 & 465512 - SUBTOTAL	26,000,000	-	26,000,000	0	26,000,000	1,291	25,549,388	0	26,000,000	-
	405512, 465512, 865512 & 860003 - TOTAL	1,749,000,000	-	2,058,000,000	1,366,557	1,616,660,697	28,326,517	375,190,015	(0)	2,058,000,000	-

NOTE: EXPENDITURES ARE CUMULATIVE THROUGH 29-MAR-2014

#### PROJECT COST ANALYSIS

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

#### **Original Budget:**

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

#### **Current Budget:**

There have been two increases in the LOP to date:

- The Board in December 2012 approved an increase of \$13.9 million for a new LOP total of \$1,762.9 million. The Unallocated Contingency Standard Cost Category (SCC) 90 budget line item was increased by the \$13.9 million for a new total of \$191.1 million.
- The Board in June 2013 approved an increase of \$295.1 million for a new LOP total of \$2,058.0 million. The total increase was based on two actions:
  - o Increase LOP base project scope in the amount of \$160.1 million, and
  - o 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 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 \$139.4 million of the \$285.2 million total project forecast cost for the Southwestern Yard. The \$139.4 million is spread among the SCC categories 30, 40, 60, 80 and 90 in the Cost Report by Element table above.

The amount of funding available for the Crenshaw/I AX Transit Project excluding the

### PROJECT COST ANALYSIS (Continued)

#### **Current Forecast:**

The total project current forecast is \$2,058 million. There is no current forecast variance with the current budget.

#### **Commitments:**

The commitments are cumulative through March 29, 2014. The total commitments increased by \$1.4 million this period primarily due to the following:

- SCC-40 (Sitework and Special Conditions) has increased by \$0.8 million for executed modifications associated with design-build Contract C0988 Crenshaw/LAX Transit Corridor, the Advanced Utility Relocations Contract C0990 and third party scope of work with California-American Water Company.
- SCC-80 (Professional Services) has increased by \$0.6 million for legal services, third party scope of work with the City of Inglewood, material lab testing services and environmental consultant services. The total commitment of \$169.7 million includes \$2.4 million for the Southwestern Yard.

The \$1,616.7 million in commitments to date represents 78.6% of the current budget.

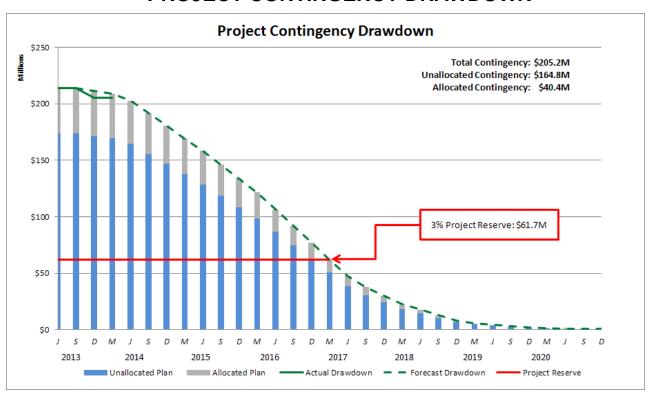
#### **Expenditures:**

The expenditures are cumulative through March 29, 2014. The total expenditures increased by \$28.3 million this period due to the following:

- SCC-20 (Stations) has increased by \$0.4 million for cost associated with design-build Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-40 (Sitework and Special Conditions) has increased by \$17.8 million for costs associated with design-build Contract C0988 Crenshaw/LAX Transit Corridor and the Advanced Utility Relocations Contract C0990.
- SCC-60 (Right-of-Way) has increased by \$3.0 million for cost associated with real estate appraisal, acquisition and relocation. The total expenditure of \$97.6 million includes \$53.3 million for the Southwestern Yard which has been capped at this funding level
- SCC-80 (Professional Services) has increased by \$7.1 million for costs associated with design-build Contract C0988 Crenshaw/LAX Transit Corridor, Engineering and Design Contract E0117, Metro project administration, IPMO field office lease and utilities, construction management support services, legal services, community relations and environmental consultant services. The total expenditure of \$90.7 million includes \$0.7 million for the Southwestern Yard.

The \$375.2 million in expenditures to date represents 18.2% of the current budget.

#### PROJECT CONTINGENCY DRAWDOWN



#### PROJECT 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 was adopted by the Metro Board of Directors in September 2012.

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

#### **Current Period Contingency Drawdown Status:**

There was no unallocated drawdown this period. There was \$56,891 drawdown from allocated contingency. The cumulative drawdown is \$8,711,891.

#### **Cumulative Contingency Status:**

The cumulative contingency is \$205,154,901 or 10.0%.

#### **DISADVANTAGED BUSINESS ENTERPRISE (DBE) STATUS**

#### Contract C0988 Crenshaw/LAX Transit Corridor Design-Build

• DBE Goal – Design 20.40%

Current DBE Commitment \$18,145,000 (20.64%)

Current DBE Participation \$ 2,808,809 (10.43%)

Sixteen (16) DBE Design subcontractors have been identified to-date

• DBE Goal – Construction 20%

Current DBE Commitment \$103,709,720 (8.89%)

Current DBE Participation \$ 1,359,804 (1.04%)

• Twenty-seven (27) DBE subcontractors have been identified to-date.

#### PROJECT LABOR AGREEMENTS (PLA) STATUS

#### Contract C0988 Crenshaw/LAX Transit Corridor Design-Build

(Reporting Data as of February 28, 2014)

Targeted Worker Goal –
 40.00%

Targeted Worker Current Participation - 71.90%

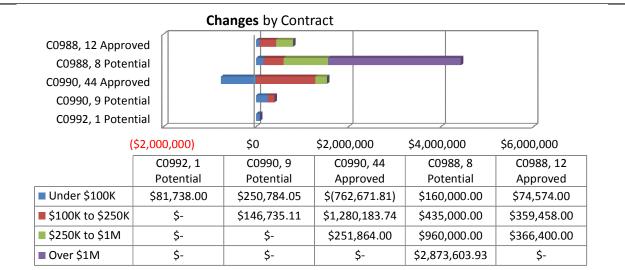
• Apprentice Worker Goal - 20.00%

Apprentice Worker Current Participation - 11.60%

Disadvantaged Worker Goal - 10.00%

Disadvantaged Worker Current Participation 21.32%

#### **SUMMARY OF CHANGES**

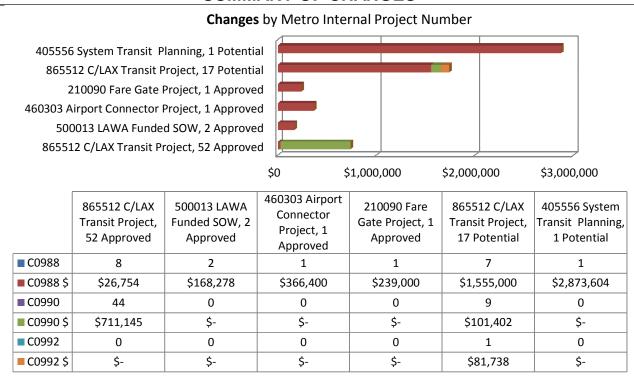


Twelve changes with a total value of 0.8 million have been executed since execution of Contract C0988. The project team has identified and is evaluating an additional eight potential changes to the contract with a potential total value of \$4.4 million.

Forty-four changes with a total value of 0.8 million have been executed since execution of Contract C0990. The project team has identified and is evaluating an additional nine potential changes with a potential total value of \$0.4 million.

The project team has identified and is evaluating an additional potential change to the contract C0992 with a potential value of \$81,738.

#### **SUMMARY OF CHANGES**



Fifty-two changes with a total value of 0.7 million have been executed and seventeen potential changes have been identified with a potential total value of \$1.7 million for Project 865512 Crenshaw/LAX Transit Project.

One change with a value of 0.2 million has been executed for Project 210090 Fare Gate Project. Two changes with a total value of 0.2 million have been executed for Project 500013 Crenshaw/LAX LAWA Statement of Work. One change with a value of 0.4 million has been executed for Project 460303 Airport Connector Project. One potential change with a value of \$2.9 million has been identified for Project 405556 Systemwide Transit Planning (Station Mock-up scope of work).

#### FINANCIAL/GRANT STATUS

\$ in millions									
	(A) ORIGINAL	(B) TOTAL	(C) TOTAL	(D) COMMITM	(D/B) ÆNTS	(E) EXPENDI	(E/B) TURES	(F) BILLED to	(F/B) FUNDING
SOURCE	BUDGET	FUNDS ANTICIPATED	FUNDS AVAILABLE	\$	%	\$	%	\$	SOURCE %
		ANIMPAILD	AVAILABLE	Ψ	70	Ψ	70	Ψ	70
FEDERAL - CMAQ	68.2	54.0	0.0	54.0	100%	0.0	0%	0.0	0%
FEDERAL - SECTION 5309 BUS CAPT	8.6	8.6	8.6	8.6	100%	7.3	86%	7.3	86%
FEDERAL-REGIONAL STP	20.0	48.2	0.0	48.2	100%	0.0	0%	0.0	0%
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%
FEDERAL REGIONAL IMPROV PROG	34.3	34.4	0.0	34.4	100%	0.0	0%	0.0	0%
STATE REGIONAL IMPROVEMENT PROG	2.2	22	2.2	2.2	100%	2.2	100%	2.2	100%

0.178

27.0

59.6

0.0

255.5

0.0

3.4

0.0

4.9

375.2

100%

13%

120%

0%

39%

0%

2%

0%

0%

18.2%

0.178 100%

59.6 120%

13%

0%

37%

0%

2%

0%

10%

27.0

0.0

242.1

0.0

3.4

0.0

4.9

361.8 17.6%

NOTE: Expenditures are cumulative through March 2014.

STATE PPM

MEASURE R

OTHER FUNDS\*

TOTAL

STATE PROP 1B PTMSEA

MEASURE R-TIFIA LOAN

PROPC25%HGHWAY

PROPC40% DISCRETIONARY

PROPA35% RAIL CAPITAL

STATE PROP 1 BLOCAL PARTNER PROG

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

Total Funds Anticipated based on Board approved June 2013 Revised Funding

0.178

201.2

0.0

545.9

661.1

52.4

148.9

0.0

4.8

1,749.0

0.178

201.2

49.5

545.9

661.1

187.5

189.6

10.2

50.4

2,058.0

0.178

122.3

49.5

545.9

347.1

0.0

3.8

0.0

4.9

1,099.6

0.178

201.2

49.5

545.9

649.1

0.0

3.4

0.0

4.9

1,616.7

100%

100%

100%

100%

100%

0%

2%

0%

0%

78.6%

<sup>\*</sup> Other funds include: Local Agency Funds (\$107.473), CNG Tax Oredit (\$54.000) and 3rd Party Lesse Contingency (\$26.000)

#### STATUS OF FUNDS ANTICIPATED

**FEDERAL – CMAQ:** Metro submitted to FTA in October 2013 a draft grant application of \$30M for review. Metro submitted a formal submittal in November 2013 for review and approval. *FTA has not yet responded to our submittal.* 

**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.

**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 \$545.9 M was submitted to the US Department of Transportation (DOT) in November 2011. Loan agreement was executed on September 12, 2012. The current financial plan is to drawdown funds not prior than FY16.

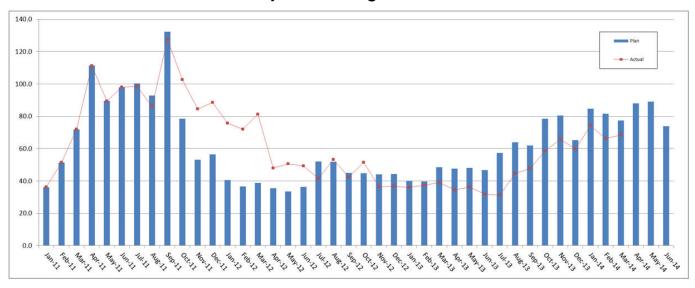
**MEASURE R:** \$53.4M has been allocated to the project based on the January 2012 Funding Plan. Funds are available for drawdown. An additional \$293.7M for FY13 has been allocated to the project based on the proposed May 2012 Measure R Extension Long Range Plan.

**PROP C 25% HIGHWAY:** \$3.8M has been allocated to the project based on the January 2012 Funding Plan. Funds are available for drawdown.

**PROP A 35% RAIL CAPITAL:** Based on November 2011 Long Range Transportation Plan, \$4.8 M of Proposition A 35% Rail Capital was allocated in FY2012 for the project.

#### **STAFFING STATUS**

## Total Project Staffing - FTES



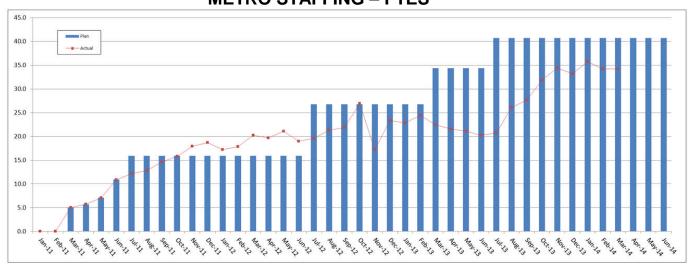
#### Notes:

- 1. FTE = Full Time Equivalent
- 2. Staffing levels are for project 865512 only.
- 3. Actual staffing levels are cumulative through March 2014.

#### **TOTAL PROJECT STAFFING**

For March 2014, there were a total of 34.2 FTE's for MTA's Project Administration staff and 34.2 FTE's for consulting staff. The total project staffing was 68.4 FTE's for March 2014. The overall FY14 Total Project Staffing plan averages 75.1 FTE's per month.

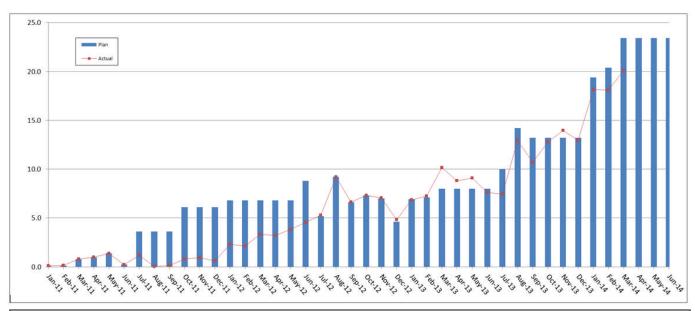
# STAFFING STATUS (Continued) METRO STAFFING – FTES



#### Notes:

- 1. FTE = Full Time Equivalent
- 2. Staffing levels are for project 865512 only.
- 3. Actual staffing levels are cumulative through March 2014.

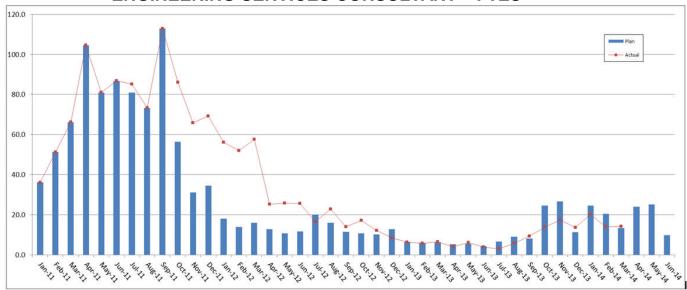
## CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONSULTANT – FTES



#### Notes:

- 1. FTE = Full Time Equivalent
- 2. Staffing levels are for project 865512 only.
- 3. Actual staffing levels are cumulative through March 2014.

# STAFFING STATUS (Continued) ENGINEERING SERVICES CONSULTANT – FTES



#### Notes:

- 1. FTE = Full Time Equivalent
- 2. Staffing levels are for project 865512 only.
- 3. Actual staffing levels are cumulative through March 2014.

#### **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 Co	rridor (D-B):								
Crenshaw Subdivision							T		
Full Takes	12	12		12	12	5	4	8	8
Part Takes (PT or SE)	10	9	1	9	9	1			1
TCE	10	10		10	10				
Subtotal Parcels	32	31	1	31	31	6	4	8	9
Relocations	15							2	
Harbor Subdivision									
Full Takes	14	14		14	14	6	7	11	12
Part Takes (PT or SE)	19	18	1	18	17	2			
TCE	3	2	1	2	2				
Subtotal Parcels	36	34	2	34	33	8	7	11	12
Relocations	34							5	
Total CR/HS Parcels:	68	65	3	65	64	14	11	19	21
Southwestern Yard									
Full Takes	8	8		8	8	3	5	4	5
Part Takes	0								
TCE	0								
Subtotal Parcels:	8	8	0	8	8	3	5	4	5
Relocations	4							0	
Total SW Parcels:									
C0990 C/LAX Advance L	Itility Reloca	tions:							
Total Parcels:	0								
Total Project Parcels	76	*73	3	73	72	17	16	23	26

- 74 acquisitions: \*73 planned for in the environmental report plus1 full take for the Harbor Subdivision that was not certified.
- 73 appraisals completed.
- 72 offers made to property owners: 1 part take offer in Harbor Subdivision pending.
- 28 parcels acquired: 25 full takes provided to WSCC; 1 part take provided to WSCC; 2 full take acquired but not available for WSCC use until June 2014.

#### **QUALITY ASSURANCE STATUS**

#### C0988 Crenshaw/LAX Transit Corridor Design-Build Contract

- Reviewed and commented on the design confirmation packages 1 and 2.
- Reviewed the electronic quality records for the design confirmation packages 1 and 2.
- Reviewed the proposed revisions to the Design Quality Manual.
- Approved the replacement Design Quality Manager.
- Participated in a "Blue Beam" documents review presentation given by HNTB to better understand the interface quality reviews.

#### C0988 Crenshaw/LAX Transit Corridor Construction Quality

- Quality travels the project alignment daily to identify work-in-progress and to assess the presence of WSCC QC, test laboratory use, progress and problems encountered.
- WSCC Daily Inspection Reports are reviewed for every day in the report period. Issues
  of concern are coordinated to resolution with WSCC.
- Reviewed Construction Work Plans and Construction Fencing Plans (CFP) and provided comments for Capri Mall and MLK Station setup areas.
- Participated in the Readiness Review Meetings for Clear and Grub project wide and BNSF pole and wire removal.
- Reviewed and approved new Assistant Project Quality Manager.

#### **ENVIRONMENTAL STATUS**

#### C0988 Crenshaw/LAX Transit Corridor Design Build

- Coordinated additional hazardous waste surveys at the La Brea Station, south portal parcel and north portal parcel.
- Coordinated noise monitoring for utilities pot-holing and track demolition.
- Attended weekly progress meeting, task force meetings and various over the shoulder submittal meetings with Contractor.
- Coordinated demolition of existing railroad facilities along Metro ROW.
- Coordinated Archaeological Monitoring.
- Coordinated Biological Monitoring for nesting bird surveys.
- Assisted WSCC with tree removal process with the City of Los Angeles.
- Reviewed the following Contractor Submittals:
  - Soil Management Plan.
  - Noise Monitoring Plan.
  - Sound Wall Design for Expo Station.
  - Sanitary Sewer Spill Prevention Plan.
  - Weekly Biological Nesting Bird Survey Reports.
  - Weekly Storm Water Pollution Prevention Plan (SWPPP) inspection reports, Rain Event Action Plans (REAPs), and Storm Water Quality Sampling Reports.
  - Weekly Fugitive Dust Inspection Reports.
  - Weekly Noise Monitoring Reports.
  - Various Construction Work Plans.

#### **C0990 Advanced Utilities Contract**

- Coordinated noise monitoring for nighttime advanced utility work.
- Coordinated Archaeological Monitoring and Storm Water Pollution Prevention Plan (SWPPP) Inspections.

## **CONSTRUCTION RELATIONS STATUS**

- Participated in project and introduction meeting with LAPD Commission and Walsh-Shea Corridor Constructors.
- Participated in weekly planning meeting with Capri owner (Baldwin Hills/Crenshaw Mall) regarding interim right-of-entry activities and Stage A construction work.
- Participated in project briefing with Metro Board Director Jackie Dupont-Walker and Mayor's office staff and alignment tour with Supervisor Mark Ridley Thomas.
- Held project briefing with Crenshaw Chamber of Commerce to discuss underground construction work at Crenshaw/Exposition and Crenshaw/MLK Blvds.
- Held Community Meeting with business owners of Crenshaw/Exposition Blvds.
   regarding underground construction work.
- Held project briefing with West Los Angeles Church Executive Team, United Neighborhoods Neighborhood Council and St. Bernadette's Church to discuss underground work at Crenshaw/Exposition Blvds.
- Held project open house for 300 key stakeholders.
- Participated in Crenshaw Leadership Council's Safety Project Oriented Development Meeting.
- Attended Baldwin Hills Merchants Meeting regarding underground construction work at Crenshaw/MLK Blvds.
- Participated in project briefing with City of Los Angeles, Councilmember Bernard Parks.
- Conducted outreach and disseminated construction notices for three new project related work activities.
- Participated in project staff and Walsh-Shea Corridor Constructors field meeting regarding bus stop relocations near Crenshaw/Vernon Station.

## **CREATIVE SERVICES STATUS**

#### Art Program

- Responded to Artist Q&A.
- Issued survey to artists.
- Continue to support mitigation efforts.
- Hosted four Artist Workshops.
- Reviewed and commented on Design Confirmation package.
- Met with WSCC to define artwork locations.

## **SAFETY & SECURITY STATUS**

- Participated in weekly progress meetings with Construction Manager and Contractor Management to discuss safety/security related issues and construction schedules.
- IPO staff participated in Construction Safety Orientation conducted by Walsh & Shea Safety personnel.
- Monitored construction activities on a daily basis including night construction activities to ensure compliance with contract specifications.
- Reviewed contractor submittals and work plans to ensure compliance with contract specifications.
- Conducted All-hands Safety Meeting with LAPD, LA Sheriff and WSCC's site safety personnel.
- Met with Cal/OSHA Mining and Tunneling to discuss WSSC's request for Underground Reclassification.
- Metro Builders reported 4,034 work hours and no incidents. WSCC reported 58,362 work hours for the month of March 2014. Total Project-to-Date work hours are 193,349 and one recordable incident. The incident rate for the project is 1.0. The national recordable rate average is 3.8.

## 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	5/14	N/A	Executed Letter of Agreement April 2012. <i>Metro working on outstanding issues.</i>
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.

## **ADVANCED UTILITY RELOCATION STATUS**

- Relocation of DWP-Power conduits, and manholes completed at Manchester Avenue;
   Installation of cable started and cut-over has been completed.
- Advance relocation of DWP-Power conduits, manholes and conduits completed at MLK and Expo Station sites. Installation of the cable started in August 2013. Work at Crenshaw/Expo Station is complete. Work at Crenshaw/MLK Station forecast to be complete by April 2014.
- Design complete by DWP-Water for advance relocation of eleven (11) water lines along Crenshaw Boulevard. Start of construction was rescheduled due to impact of Buy America requirements. Work commenced in January 2014 and is forecast to complete by September 2014. Coordinating work activities with the design-builder so as not to impact their planned work.
- Design in progress by SCE for advance relocation of fiber crossings and pole supports along the Harbor Subdivision. Construction completion expected by July 2014.
- Design in progress by SCE for the advance relocation of power crossings and pole supports on Redondo Blvd. at High St. Construction completion expected by June 2014.

# **Crenshaw/LAX Transit Project**

Peak Hour & Nightime Construction Variances for the City of LA





## **CPUC CROSSING SUMMARY**

Application	Location	Туре	City
A1211018	Eucalytpus Avenue	Grade Crossing	Inglewood
A1211018	Centinela Avenue	Grade Crossing	Inglewood
A1211018	Pedestrian Crossing	Grade Separated (Underpass)	Inglewood
A1212030	Oak Street	Grade Crossing	Inglewood
A1212030	Cedar Avenue	Grade Crossing	Inglewood
A1212030	Ivy Avenue	Grade Crossing	Inglewood
A1212030	High Street	Grade Crossing	Inglewood
A1212029	Arbor Vitae Street	Grade Crossing	Inglewood
A1212029	Hindry Avenue	Grade Crossing	Inglewood
A1212029	Pedestrian Crossing at Florence/West station	Grade Crossing	Inglewood
A1212029	West Boulevard	Grade Crossing	Los Angeles/Inglewood
A1212029	Brynhurst Avenue	Grade Crossing	Los Angeles
A1301012	West 59th Street	Grade Crossing	Los Angeles
A1301012	Slauson Avenue	Grade Crossing	Los Angeles
A1301012	West 57th Street	Grade Crossing	Los Angeles
A1301012	West 54th Street	Grade Crossing	Los Angeles
A1301012	West 52nd Street	Grade Crossing	Los Angeles
A1301012	West 50th Street	Grade Crossing	Los Angeles
A1301012	West 48th Street	Grade Crossing	Los Angeles
711001012	West lear easet	Stade Crossing	20071190100
A1302025	Hornet Way	Grade Separation	El Segundo
A1302025	Aviation Boulevard	Grade Separation	Los Angeles
A1302025	I-105 Freeway	Grade Separation	Los Angeles
A1302025	Imperial Highway	Grade Separation	Los Angeles
A1302025	111th Street	Grade Separation	Los Angeles
A1302025	104th Street	Grade Separation	Los Angeles
A1302025	Century Boulevard	Grade Separation	Los Angeles
A1302025	Manchester Avenue	Grade Separation	Inglewood
A1302025	La Cienega Boulevard	Grade Separation	Inglewood
A1302025	I-405 Freeway	Grade Separation	Inglewood
A1302025	Hyde Park Boulevard	Grade Separation	Inglewood
A1302025	La Brea Avenue	Grade Separation	Inglewood
A1302025	Pedestrian Crossing at La Brea-Florence Station (East)	Grade Crossing	Inglewood
A1302025	Pedestrian Crossing at La Brea-Florence Station (West)	Grade Crossing	Inglewood

<sup>=</sup> Highlighted grade crossing/grade separations have been approved.

## **CPUC CROSSING SUMMARY (Continued)**

Metro filed formal grade applications to CPUC between November 16, 2012 and January 23, 2013. Protests were received on CPUC Application Packages 1 and 4; no protests were received on CPUC Application Packages 2, 3 and 5. Status by CPUC application is below:

# #A1211018 - Package 1, Centinela, Eucalyptus and Pedestrian Underpass West of Eucalyptus

**Status:** The CPUC Administrative Law Judge (ALJ) is working on the Decision with support from local CPUC staff. Metro is concurrently in discussion with City of Inglewood for resolution. CPUC has accepted the settlement agreement between Metro and Faithful Central Bible Church regarding Eucalyptus and the pedestrian underpass. The CPUC still needs to approve the pedestrian underpass and to issue a decision on the Centinela crossing. Forecast CPUC Commission Approval: May 1, 2014

## #A1212030 - Package 2, At-Grade Gated Crossings in Inglewood

**Status:** Local CPUC Rail Safety Staff is continuing to work on the reports for these uncontested crossings and is targeted to complete the reports by end of March. Forecast CPUC Commission Approval: April 10, 2014

## #A1212029 - Package 3, At-Grade Gated Crossings in Inglewood and Los Angeles

**Status:** Local CPUC Rail Safety Staff is continuing to work on the reports for these uncontested crossings and is targeted to complete the reports by end of March. Forecast CPUC Commission Approval: April 10, 2014

### #A1301012 - Package 4, Crenshaw Street-Running Crossings

**Status:** The CPUC Administrative Law Judge (ALJ) is working on the Decision with support from local CPUC staff. The CPUC Administrative Law Judge is forecast to issue a proposed Decision in March; however, this may additionally be delayed since the Decision for Centinela has not been issued. The Crenshaw Subway Coalition did not issue a Brief or Reply Brief. *Forecast CPUC Commission Approval: May 1, 2014* 

### #A1302025 - Package 5, Grade Separated Crossings

The CPUC approved Package 5 on February 27, 2014

Note: # is the CPUC action number.

2. Commission approvals are subject to appeal if there are adverse parties (only applies to packages #1 and #4.

# **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)**

	toriologi or Eventio (continuou)
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.
December 5, 2013  January 21, 2014	• • •
,	the procurement of concrete ties and assembly items.  A Groundbreaking Ceremony was held at the Crenshaw/Exposition
January 21, 2014	the procurement of concrete ties and assembly items.  A Groundbreaking Ceremony was held at the Crenshaw/Exposition Station.  The Board awarded Contract C0992A Rail and Bumping Posts to LB

## **CONTRACT C0988 STATUS**

### Crenshaw/LAX Transit Corridor

PE Design Contractor: Hatch Mott MacDonald (HMM)

CM Consultant: Stantec

Contractor: - Walsh Shea Corridor Constructors (WSCC)

#### Contract No.: C0988

#### Progress/Work Completed:

- Submitted Initial Visual Quality Report
- Continued development of Maintenance of Traffic Plans for Expo, MLK, and
- Continued Green Line Bridge Interim Design
- Initiated Design for COLA Storm Drain, COLA Sanitary Sewer and City of Inglewood Storm Drain and Water
- Continued coordination of third party utilities
- Continued development of the 3D model
- Submitted design Confirmation for Track/Trackway and Ductbank
- Submitted Group 2 Design Confirmation Reports to Metro
   Completed Geotechnical Fieldwork and finalizing Lab Testing
- Continued interim design on all Segments, Traction Power, Communication System
- Submitted design confirmation for OCS and Train Control and Signaling System
- Continued with the fabrication of the Tunnel Boring Machine
- Continued potholing in the Harbor Subdivision Segment A & B
- Continued potholing in the Crenshaw Subdivision Segment C
- Continued SWPP implementation Segment A, B & C
- Continued BNSF rail Removal Segment A & B
- Started Noise Wall Installation at Expo

### Status as of March 28, 2014 Areas of Concern:

#### Schedule Assessment:

Metro's assessment of the contractor's schedule update is that they are behind on meeting interim design milestones but are maintaining the Contract

Contractor's March 2014 schedule update indicated they are still on schedule in regard to Contract Milestones.

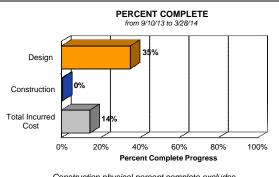
#### **Cost Assessment:**

The current construction contract cost forecast is \$1,273.19 million and is within the Board authorized budget.

The Contractor submitted their 7th payment application in the approved amount of \$16,601,752.37.

Schedule Summary:		Cost Summary:	\$ In millions	
1. Date of Award:	08/01/13	1. Award Value:	1,272.63	
2. Notice to Proceed:	09/10/13	2. Executed Modifications:	0.80	
3. Original Substantial Completion Duration:	1824	3. Approved Change Orders:		
4. Current Substantial Completion Duration:	1824	4. Current Contract Value (1 + 2 + 3):	1,273.43	
5. Elapsed Time from NTP:	199	5. Incurred Cost:	183.79	

Milestones	Original Contract	Current Contract	Forecast	Calendar Day Variance
Milestone 1 - Contract Substantial Completion	09/08/18	09/08/18	09/04/18	4
Milestone 2 - UFS Completion	03/09/18	03/09/18	03/05/18	4
Milestone 3 - Commence SIT Phase I	06/09/18	06/09/18	03/09/18	92
Milestone 4 - Const./Turnover Parcels SW-0101, 0102, 0103	12/04/15	12/04/15	11/03/15	31
Milestone 5 - Const./Turnover Parcels SW-0002, 0003, 0004, 0104	06/05/17	06/05/17	05/10/17	26
Milestone 6 - Const./Turnover Parcels SW-0001	08/01/17	08/01/17	06/28/17	34



Construction physical percent complete excludes mobilization and general requirements

### **CONTRACT C0990 STATUS**

### Crenshaw/LAX Advanced Utility Relocations

PE Design Contractor: Hatch Mott MacDonald (HMM)

**CM Consultant: Stantec** 

Contractor: - Metro Builders and Engineers Group LTD

#### Contract No.: C0990

Status as of March 28, 2014



#### Progress/Work Completed:

- The jack and bore work at 60th Street & Crenshaw was suspended and will be restarted when the OSHA permit is approved
- Work has continued on the bypass and install manholes on Crenshaw Blvd at 67th Street.
- Work has continued at Crenshaw & 48th, 50th, 54th and Slauson waterline: excavation, shoring, bedding/laying of pipe.

#### Areas of Concern:

- The requirement for a Cal OSHA permit for the jack and bore has resulted in a 4-6 week delay in the installation of the 60th Street sanitary sewer line.
- An unmarked 16" diameter oil pipeline has been discovered on the west side of Crenshaw at 48th Street. DWP is reviewing the proposed redesign of this section of the line.
- The shoring welding at the jacking pit was not in compliance with the approved welding procedure. Metro Builder is currently working on a corrective action plan to repair the shoring welding.

#### Schedule Assessment:

The forecast dates for Contract Milestones shown in the table below are based on the contractor's Mar14 Schedule Update.

Metro has granted total 124 calendar days extension as a result of lost production due to sandy soil conditions and revised installation methodology for sewer line work at 59th & Crenshaw, and traffic control and work hour restriction to 67th & Crenshaw. The contractual Substantial Completion is now 11/18/13.

The contractor has moved beyond the sandy soils location at 60th street. However, the Contractor continues to be behind the scheduled completion date due to the additional issues as noted in the area of concerns.

Metro's assessment of the contractor's forecast completion date shown in the table below (and projected current cash flow burn rates) is a potential completion of June 30, 2014.

05/30/12

#### **Cost Assessment:**

The current construction contract cost forecast is \$8.63 million and within the Board authorized budget. The forecast has increased from the previous reporting period primarily due to approved change orders.

The Contractor previously submitted their 16th Payment application in the approved amount of \$323.480.61.

Increase in costs to the construction contract award value are a result of design enhancements and change orders. Decreases are the result of scope deletions.

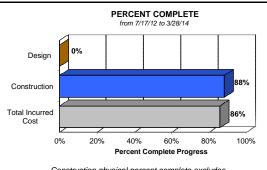
# Schedule Summary: 1 Date of Award

• • •	Date of Amara.	00/00/12
2.	Notice to Proceed:	07/17/12
3.	Original Substantial Completion Duration:	365
4.	Current Substantial Completion Duration:	468
5.	Elapsed Time from NTP:	619

### Cost Summary: \$ In millions

Cost Summary:	\$ in millions
1. Award Value:	7.83
2. Executed Modifications:	0.28
3. Approved Change Orders:	0.52
4. Current Contract Value (1 + 2 + 3):	8.63
5. Incurred Cost:	7.40

Milestones	Original Contract	Current Contract	Forecast	Calendar Day Variance
Milestone 1 - Contract Substantial Completion	07/17/13	11/18/13	06/30/14	-224



Construction physical percent complete excludes mobilization and general requirements

## **CONTRACT C0991 STATUS**

Southwestern Yard

PE Design Contractor: Hatch McCM Consultant: Stantec Contractor: - TBD  Progress/Work Completed: - PE drawing package completed De - IFB contract package on hold.		Contract No.: C0991  Status as of March 28, 2014  Areas of Concern: - None.
Schedule Assessment:		Cost Assessment:
Schedule Summary:  1. Date of Award:  2. Notice to Proceed:  3. Original Substantial Completion D  4. Current Substantial Completion D  5. Elapsed Time from NTP:		Cost Summary: \$ In millions  1. Award Value: 2. Executed Modifications: 3. Approved Change Orders: 4. Current Contract Value (1 + 2 + 3): 5. Incurred Cost:
Milestones	Original Current	Design   Design   O%   O%   O%   O%   O%   O%   O%   O
		Percent Complete Progress  Construction physical percent complete excludes mobilization and general requirements

## **CONTRACT C0992 STATUS**

## **Concrete Ties**

PE Design Contractor: Hatch Mo CM Consultant: Stantec Contractor: Rocla Concrete Tie		nald (HMI	M)		Contract No.: C0992 Status as of March 28, 2014	The same
Progress/Work Completed: - Bids received on August 27, 2013 - Metro Board approved Contract Awa - Notice to Proceed issued on Decem - Plant Production planned to be com - Deliver on or before July 31, 2014.	ard on Dece	13			Areas of Concern: - None.	
Schedule Assessment:					Cost Assessment:	
					The current contract cost forecast is \$2,161,297.	
					No pay application was submitted by the cutoff date of March 2 2014.	8,
Schedule Summary:					Cost Summary: \$ In millions	
1. Date of Award:			12/10/13		1. Award Value: 2.1	
2. Notice to Proceed:			12/23/13	i	2. Executed Modifications:	
3. Original Substantial Completion D	uration:		220		3. Approved Change Orders:	
4. Current Substantial Completion D	uration:		220	١	4. Current Contract Value (1 + 2 + 3): - 2.1	
5. Elapsed Time from NTP:			95	i	5. Incurred Cost:	
Milestones	Original Contract	Current Contract	Forecast	Calendar Day Variance	from 12/23/2013 to 3/28/14	
Milestone 1 - Contract Substantial	07/31/14	07/31/14	07/31/14	0		
Conmpletion				0	Design 0%	
					Construction 0%	
				0	Construction 0%	
				0	Total Incurred 0%	
				0	Cost	
					0% 20% 40% 60% 80% 100%	%
				0	Percent Complete Progress	
					Construction physical percent complete excludes mobilization and general requirements	

## **CONTRACT C0992A STATUS**

Running Rail and Bumping Posts

PE Design Contractor: Hatch Mott MacDonald (HMM) CM Consultant: Stantec Contractor: LB Foster Rail Technology Corp					Contract No.: C0992A  Status as of March 28, 2014		
Progress/Work Completed: - Bids received on August 27, 2013 Contract C0992 was split into two consumer new Contract C0992A Contract C0992A was advertised on Bids were received on November 2 Metro Board approved Contract Aw Notice to Proceed issued on March	n October 1: 0, 2013. ard on Janu	5, 2013.		g posts	Areas of Concern: - None.		
Schedule Assessment:					Cost Assessment:		
					The current contract cost forecast is \$5,184,044.79		
					No pay application was submitted by the cutoff date of 2014	March 28,	
Schedule Summary:				Cost Summary: \$ In millions			
1. Date of Award: 01/23/14			ļ		5.2		
2. Notice to Proceed: 03/07/14				2. Executed Modifications:			
Original Substantial Completion Duration:     300				3. Approved Change Orders:			
4. Current Substantial Completion Duration: 300				)	4. Current Contract Value (1 + 2 + 3):	5.2	
5. Elapsed Time from NTP: 21					5. Incurred Cost:		
Milestones	Original Contract	Current Contract	Forecast	Calendar Day Variance	from 3/7/2014 to 3/28/2014		
Milestone 1 - Contract Substantial Completion	12/31/14	12/31/14	10/11/14	81	Design 0%		
				0			
				0	Construction 0%		
				0	Total Incurred 0%		
				0	Cost		
				0	0% 20% 40% 60% 80% Percent Complete Progress	100%	
					Construction physical percent complete exclude	es	
					mobilization and general requirements		

## **CONSTRUCTION PHOTOGRAPHS**



WSCC installation of I-beams for noise wall installation at Expo Station site.



Potholing on Crenshaw Boulevard near Rodeo Street.

## **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.

## LIST OF ACRONYMS

ACE Advanced Conceptual Engineering
ADR Alternative Dispute Resolution
ALJ Administrative Law Judge
AMC Airport Metro Connector
APM Automated People Mover
ATC Alternative Technical Concept
ATC Automatic Train Control

ATSAC Automated Traffic Surveillance and Control

BAFO Best and Final Offer

BID Business Improvement Development

BIM Building Information Modeling

BNSF Burlington Northern Santa Fe Railway Company

BOC Bus Operations Control

CADD Computer Aided Drafting and Design CALTRANS California Department of Transportation

CCTV Closed Circuit Television

CD Calendar Day
CD Council District

CDRL Contract Data Requirement List

CE Categorical Exemption

CEQA California Environmental Quality Act

CFR Code of Federal Regulations

CM Construction Manager

CMAQ Congestion Mitigation and Air Quality Improvement Program

CN Change Notice
CO Change Order
CPM Critical Path Method

CPUC California Public Utilities Commission

CR Camera Ready

CSPP Construction Safety Phasing Plan CTC California Transportation Commission

CUD Contract Unit Description CWP Construction Work Plan

DB Design Build DBB Design Bid Build

DBE Disadvantaged Business Enterprise DOT Department of Transportation

DRB Dispute Review Board

DWP Department of Water and Power
EEO Equal Employment Opportunity
EIR Environmental Impact Report
EIS Environmental Impact Statement
EPBM Earth Pressure Balance Machine

## LIST OF ACRONYMS (Continued)

FAA Federal Aviation Administration FAR Federal Acquisition Regulation FCBC Faith Central Bible Church

FD Final Design

FEIR Final Environmental Impact Report FEIS Final Environmental Impact Statement

FFGA Full Funding Grant Agreement

FLSR Fire Life Safety Report

FONSI Finding of No Significant Impact FRA Federal Railroad Administration

FSEIR Final Supplemental Environmental Impact Report FSEIS Final Supplemental Environmental Impact Statement

FTA Federal Transit Administration

FTE Full Time Equivalent

GBR Geotechnical Baseline Report

GDSR Geotechnical Design Summary Report

GFE Good Faith Effort
HMM Hatch Mott MacDonald
IEB Invitation for Bid

IFB Invitation for Bid

IPMO Integrated Project Management Office ITF Intermodal Transportation Facility

JV Joint Venture LA Los Angeles

LABOE Los Angeles Bureau of Engineering
LABOS Los Angeles Bureau of Sanitation
LABSL Los Angeles Bureau of Street Lighting
LACFCD Los Angeles County Flood Control District

LACMTA Los Angeles County Metropolitan Transportation Authority

LADOT Los Angeles Department of Transportation
LADPW Los Angeles Department of Public Works
LADWP Los Angeles Department of Water and Power

LAUSD Los Angeles Unified School District

LAWA Los Angeles World Airports
LAX Los Angeles International Airport
LNTP Limited Notice To Proceed

LOA Letter of Agreement
LONP Letter Of No Prejudice

LOP Life-of-Project

LPA Locally Preferred Alternative

LRT Light Rail Transit

LRTP Long Range Transportation Plan

LRV Light Rail Vehicle

## LIST OF ACRONYMS (Continued)

MBE Metro Builders and Engineers Group, Ltd

MCA Master Cooperative Agreement

MIC Microbiologically Influenced Corrosion Control System

MIS Major Investment Study
MOS Minimum Operating Segment
MOU Memorandum of Understanding
MPS Master Program Schedule
MPSR Monthly Project Status Report
MSF Maintenance & Storage Facility

N/A Not Applicable

NEPA National Environmental Protection Act NFPA National Fire Protection Association

NOD Notice of Determination

NPDES National Pollution Discharge Elimination System

NTE Not to Exceed NTP Notice To Proceed

OCC Operations Control Center
OCS Overhead Catenary System

OSHA Occupational Health and Safety Administration

OTS Over the Shoulder

PA/VMS Public Address/Visual Messaging Sign

PDQM Project Design Quality Manual

PE Preliminary Engineering

PEER Permit Engineering Evaluation Report

PIP Project Implementation Plan
PLA Project Labor Agreement

PM Project Manager

PMIP Project Management Implementation Plan PMOC Project Management Oversight Consultant

PMP Project Management Plan P&P Policies & Procedures

POD Project Oriented Discussions
PQPM Project Quality Program Manual

PR Project Report
PSR Project Study Report
QA Quality Assurance

QAR Quality Assurance Report

QC Quality Control

QPSR Quarterly Project Status Report
QTIB Qualified Transit Improvement Bonds
RAMP Real Estate Acquisition Management Plan
RCHAR Rail Crossing Hazards Analysis Report
RCMP Risk Assessment Management Plan

## LIST OF ACRONYMS (Continued)

RFC Request For Change
RFMP Rail Fleet Management Plan
RFP Request For Proposals
RFQ Request For Qualifications

RFSC Request for Special Consideration

RHA Risk Hazard Analysis

RLPE Red Light Photo Enforcement

ROC Rail Operations Center ROD Record Of Decision

ROM Rough Order of Magnitude

ROW Right-Of-Way

RPZ Runway Protection Zone RSD Revenue Service Date

RTIP Regional Transportation Improvement Program

SAV Stand Alone Validator

SCAQMD Southern California Air Quality Management District

SCADA Supervisory Control and Data Acquisition

SCC Standard Cost Category SCE Southern California Edison

SCG Southern California Gas Company

SCRRA Southern California Regional Rail Authority

SHA State Highway Account

SHPO State Historic Preservation Office

SIT System Integration Testing SOQ Statement of Qualification

SOV Schedule Of Value SOW Statement Of Work SP Special Provision

SPAS Specific Plan Amendment Study SPP Special Permitting Process

SSMP Safety and Security Management Plan

STB Surface Transportation Board

STIP State Transportation Improvement Program

STP Surface Transportation Program

STV STV Group

SWPP Storm Water Prevention Plan

TBD To Be Determined TBM Tunnel Boring Machine

TCE Temporary Construction Easement TCRP Traffic Congestion Relief Program

TIFIA Transportation Infrastructure Finance and Innovation Act
TIGER Transportation Investment Generating Economic Recovery

## **LIST OF ACRONYMS (Continued)**

TOD Transit Oriented Development TPSS Traction Power Substation

TRACS Transit Automatic Control System
TVA Threat Vulnerability Analysis
TVM Ticket Vending Machine
UFS Universal Fare System

USDOT United States Department Of Transportation

VCA Voluntary Cleanup Agreement

VE Value Engineering

WBS Work Breakdown Structure

WP Work Package

WSCC Walsh/Shea Corridor Constructor

YOE Year of Expenditure