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).

TABLE OF CONTENTS

| | Page No |
|---|---------|
| Project Summary | 1 |
| Project Overview & Status | 2-5 |
| Management Issues | 6-7 |
| Project Alignment | 8 |
| Project Scope | 9-10 |
| Project Status | |
| Project Schedule | |
| Key Milestones Six-Month Look Ahead | 11 |
| o Project Summary Schedule | 12 |
| o Schedule Measurements | 13 |
| Overall Construction Progress Curve | 14 |
| Major Equipment Delivery | 15 |
| o Design-Builder's (C0988) Long Lead Item List | 16 |
| o Critical Path Narrative | 17 |
| o Project Schedule Contingency Drawdown | 18 |
| o Project Schedule Contingency Drawdown Analysis | 18 |
| Project Cost | |
| o Project Cost | 19 |
| o Project Cost Analysis | 19-21 |
| o Project Contingency Drawdown | 22 |
| o Project Contingency Drawdown Analysis | 22-23 |
| o Disadvantaged Business Enterprise (DBE) | 24 |
| o Project Labor Agreements (PLA) Status | 24 |
| o Summary of Contract Modifications | 25-26 |
| Financial/Grant | |
| o Financial/Grant | 27 |
| o Status of Funds Anticipated | 28 |
| Staffing | |
| o Total Project Staffing | 29 |
| o Metro Staffing | 30 |
| o Construction Management Support Services Consultant | 30 |

TABLE OF CONTENTS (Continued)

| | Page No. |
|--|----------|
| o Engineering Services Consultant | 31 |
| Real Estate | 32 |
| Quality Assurance | 33 |
| Environmental | 34 |
| Construction Relations | 35 |
| Systemwide Design and Art Program | 35 |
| Safety and Security | 36 |
| Third Party Agreement and Advanced Utility Relocation | 37 |
| Peak Hour and Nighttime Construction Variances | 38 |
| California Public Utilities Commission (CPUC) Crossing Summary | 39 |
| Chronology of Events | 40-42 |
| Construction Contracts | |
| o Contract C0988 | 43 |
| o Contract C0990 | 44 |
| o Contract C0991 | 45 |
| o Contract C0992 | 46 |
| o Contract C0992A | 47 |
| Construction Photographs | 48-55 |
| Appendices | |
| Cost and Budget Terminology | 56 |
| List of Acronyms | 57-62 |

PROJECT SUMMARY

| 1 NOSEOT GOMMANT | | | | | | | | | |
|---|--|---|---|---|--|---|-------------------|--|--|
| LOCATION: Crenshaw I DESIGN/CONSULTANT: | = | Line | CONSTRUCTION MANAGE CONTRACTOR: Walsh-Sh | | | | | | |
| PROJECT PHOTO: MLK | Station deckir | ng operations | | WORK COMPLETED PAST | MONTH: | | | | |
| | | Name of the second | o WSCC continued final desig o WSCC continued pile instal o WSCC commence abutmer o WSCC continued pile instal o WSCC commenced and co o WSCC continued utility sup Station. o Metro continued real estate temporary construction easer o Metro opened proposer's bi C0991. o WSCC continues installatio | lation for UGint piles at Cerlation at Verrmpleted street port in place acquisitions ments. | ntury Station on Station Station Station et decking a under stree with focus n 16: South | on Bridge. at MLK Station. et decking at Expo on partial-takes and | | | |
| EXPENDITURE STATUS (\$ In Millions) | | | | SCHEDULE ASSESSMENT | • | | | | |
| (* | CURRENT | EXPENDED | PERCENT | MAJOR SCHEDULE | PRIOR | CURRENT | | | |
| ACTIVITIES | BUDGET | AMOUNT | EXPENDED | ACTIVITIES | PLAN | PLAN | VARIANCE WEEKS | | |
| 7.01111120 | DODOLI | 7111100111 | EXI ENDED | Environmental | 1 27 (14 | 1 27 (14 | VARIATION VILLICO | | |
| DESIGN | \$ 136.7 | \$ 102.8 | 75.2% | | Sep-11 | Sen-11 | Complete | | |
| DESIGN | ф 130. <i>1</i> | φ 102.o | 75.2% | Record of Decision | Dec-11 | • | Complete | | |
| DICUT OF MAY | ф 407.4 | e 400.0 | 0.4.007 | | Dec-11 | Dec-11 | Complete | | |
| RIGHT-OF-WAY | \$ 127.4 | \$ 108.0 | 84.8% | | | | | | |
| CONSTRUCTION | \$ 1,353.1 | \$ 307.1 | 22.7% | Design Preliminary Engineering | Nov-11 | Nov 11 | Complete | | |
| CONSTRUCTION | φ 1,303.1 | φ 307.1 | 22.170 | , , , | | | | | |
| | | | 00.050/ | Final Design | Sep-15 | Sep-15 | On Schedule | | |
| OTHER | \$ 440.8 | \$ 98.1 | 22.25% | | | | | | |
| TOTAL | \$ 2,058.0 | \$ 616.0 | 29.9% | Right-of-Way | Aug-14 | lan 15 | Complete | | |
| Note: cost expended as o | | \$ 616.0 | 29.9% | Full-take parcels available Part-take and TCE parcels | Sep-15 | | On schedule | | |
| Note: cost expended as o | i Maion 2013. | | | | Э с р-13 | 0ep-10 | On scriedule | | |
| | | | | Construction | | | | | |
| AREAS OF CONCERN | | | | D-B Notice to Proceed | Sep-13 | Sep-13 | Complete | | |
| o Timely reviews of WSCO Angeles, City of Inglewood | | | of Los | D-B Substantial Complete | Oct-18 | | 3.6 months behind | | |
| o Third party relocations p | | | uction . | Revenue Service Date | Oct-19 | Oct-19 | On schedule* | | |
| o Mitigation of design-build o LAWA's work windows for o New proposed 96th stree o Hobas sewer pipe supportion o Execution of Agreement | or design-build et station cost/ ort from deck b | er near LAX. schedule impa eams at Expo | | The D-B Substantial Complete prior plan was modified by a 35 day concurrent delay contract modification in March 2015. | | | | | |
| o Contractor schedule does not accurately forecast its work efforts | | | | *Note: Current Revenue Service | Date includes a | a reduction in | n contingency. | | |
| ROW ACQUISITION | PLAN | ACQUIRED | REMAINING | CRITICAL ACTIVITIES / 3 N | ONTH LOO | K AHEAD | | | |
| FULL TAKES | 35 | 35 | 0 | o WSCC complete utility support in place and commence excavation beyond depth of 21 feet at Expo Station. o WSCC commence utility support and excavation at MLK Station o WSCC complete pile installation and decking operation at Vernon | | | | | |
| PARTIAL TAKES | 27 | 9 | 18 | Station. o WSCC complete pile install o WSCC commence Park Me | | | | | |
| TEMPORARY EASEMENTS | 12 | 6 | 6 | o WSCC commence falsewo o Metro award Division 16: S | | | | | |
| TOTAL PARCELS | 74 | 50 | 24 | | | | | | |

PROJECT OVERVIEW

Major Contract Procurement

Metro advertised the Southwestern Yard (Division 16) design-build contract on August 29, 2014. For this two-step procurement, both Step One Technical Bid and Step Two Price Bid were received on January 22, 2015. The price bids were opened on March 25, 2015. Metro is evaluating the price bids. The award is scheduled for May 2015 with subsequent notice-to-proceed to follow in June 2015.

Construction

Contract C0990 - The advanced utility relocations contractor, Metro Builders and Engineers Group, LTD was substantially completed on August 21, 2014. Contract is now in close-out phase. Metro continues to meet with the contractor to resolve outstanding issues including resolution of claims that have been submitted by contractor.

Design- Build Contract C0988 – The design-builder, Walsh-Shea Corridor Constructors (WSCC) continues final design with preparation of required contract submittals. The designer is completing design for the most critical items that support the commencement of construction in the various areas of the project. Status of major components of design is as follows:

- Support of Excavation the invert plug has been approved as noted for Expo Station.
 Partial excavation to 25 feet has been approved for MLK Station. The Vernon Station is under review. Underground Guideway No. 3 submittal is anticipated to be submitted in April.
- Stations Aviation/Century is at the 85% phase (Request for Construction). Hindry is at 100% phase.
- Bridge Submittals 111th and Manchester Early Foundation AFC are under review by Metro. La Brea was Approved As Noted for construction.
- Guideway Design Segment A, B1, B2 and C will be submitted in April and May.
- Systems Design Traction Power Approved for Procurement.

Construction efforts by the design-builder continued along the three major areas or segments:

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

- Continued piling for underground guideway No. 1.
- A total of 10 of 16 columns have been installed for Century/Aviation Bridge. Anticipate false work to commence in April 2015.
- Commenced piles for CIDH piles at Green Line Bridge.

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

- Completed crushing concrete at recycling facility at the La Brea Station and facility was demobilized.
- Pile driving work for bridge abutment west of La Brea will commence in April 2015.

PROJECT OVERVIEW (Continued)

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

- Crenshaw/Exposition Station area
 - Excavation of top 21 feet is nearing completion and started tier 1 bracing.
 - Removal of contaminated soil in the top 21 feet is completed near northwest section of excavation site.
- Crenshaw/MLK Station area
 - o Commenced and completed deck beam installation. Initiated utility support in place under street decking.
- Crenshaw/Vernon Station area
 - o Commenced east piles installation.

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 50 parcels acquired through March 2015. Thirty-five full takes and 15 part takes/ temporary construction easements have been provided to design-builder WSCC.

Metro has acquired all full takes required for the construction of the Project. Focus now is on completing the acquisition of part-takes and entering into agreements for temporary construction easements that are required for the Project. As the design-builder continues design, they have identified some additional TCE's and partial takes that may be required. Metro will work with the design-builder regarding any additional parcel acquisitions that may be required. These additional parcels may be required for street restoration or other non-critical scope of work.

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 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 2014.

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 funding percentages are as follows: local funding 79.9%, state funding 8.8% and federal funding 11.3%.

The project commitments thru March 2015 are \$1,674.9 million or 81.4% of the Current Budget. The project expenditures thru March 2015 are \$616.0 million or 30.0% of the Current Budget. The current period expenditures are for design-builders monthly design and construction costs as well as right-of-way and professional services costs. The expenditures to date also include the Southwestern Yard expenditures that are part of the 49% cost allocation share (\$139.4 million) that the Project is responsible for paying for.

The forecast of the available project schedule contingency was reduced this month. *This month the design-builder included in their March 2015 Schedule Update narrative a projected delay of an additional 10 calendar days.* Metro is reviewing the schedule update and does not concur with the design-builder's assessment of the potential slippage. *However, Metro this month is showing the potential delay as a reduction in the overall schedule contingency which is now a cumulative 109 calendar days.* Metro continues to meet with the design-builder to discuss the schedule and review any potential mitigation opportunities available to the design-builder to mitigate a projected schedule slippage.

PROJECT OVERVIEW (Continued)

A Risk Management Quarterly Progress Report with a status of December 2014 was issued on March 6, 2015. On a monthly basis, the project's risk manager will advise project management of the risk register items mitigation status. The next major risk workshop is planned for the fall 2015. The prerequisites for holding the workshop are: 1) Contract C0988 design-builder to have substantially complete final design, 2) Contract C0991 Southwestern Yard design-builder to have submitted and Metro approve their baseline schedule, and 3) substantial completion of real estate acquisition of part-takes and temporary construction easements.

MANAGEMENT ISSUES

Concern No. 1: Execution of 3% Local Match funding agreement with the City of Inglewood.

<u>Status/Action</u> Metro and the City of Inglewood continue to work through various issues and may have solutions to outstanding issues so an agreement can be executed in the future.

Concern No. 2: 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 50 parcels acquired through January 2015. All full takes have been acquired. Metro staff is focusing on the acquisition of the smaller real estate parcels which includes part takes, street easements, temporary construction easements and rights of entry required for construction in advance of the design-builders need date. The design-builder has also identified some additional temporary construction easements and part takes that may be required for street restoration or other non-critical scope of work. (Closed)

Concern No. 3: 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 WSCC final design submittals to ensure that timely review requirements will be met to support WSCC's current 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 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. 4: 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. Four changes have been executed with WSCC, three for design and one for construction. Metro is also working with LAWA on additional changes that may be considered by the Metro Board of Directors in the near future. The existing and any potential new changes to WSCC are not funded by the Crenshaw/LAX Transit Project but are funded by other funding sources.

MANAGEMENT ISSUES (Continued)

Concern No. 5: 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 continues to work closely with various third party agencies and have set up weekly meetings to address all known remaining utility relocation work. The emphasis is to have the relocations of utilities performed in advance of when WSCC will be performing work in the same location. LADWP at Vernon Station is anticipated to be completed earlier than projected and should not impact the design-builder's critical path. This was due to a close working relationship between Metro, WSCC and LADWP to implement a work around to decrease schedule risk.

Concern No. 6: Design-builders design submittal schedule

<u>Status/Action</u> WSCC continues to submit design submittals later than planned. WSCC is submitting submittals in advance of the construction need date but may potentially be at risk of late design submittals impacting future start of various construction activities. Metro has been working closely with WSCC and the cities to address the submittal schedule changes so as not to impact the project schedule critical path. Metro and the cities have also accelerated submittals specified as critical by WSCC to not impact construction.

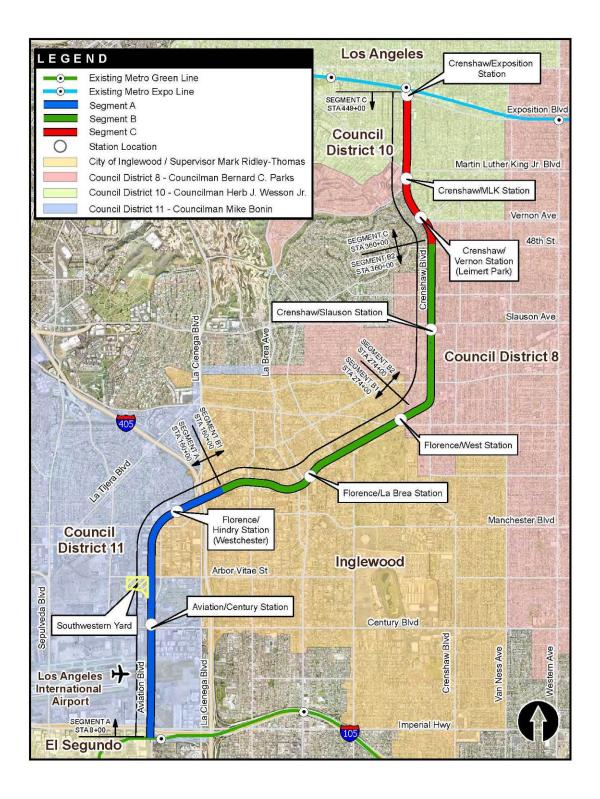
Concern No. 7: Design-builders construction schedule

The forecast of the project schedule contingency was reduced this month. The design-builder included in their March 2015 Schedule Update Narrative a projected delay of an additional 10 calendar days. Metro is reviewing the schedule update and does not concur with the design-builder's assessment of the potential slippage. Metro continues to meet with the design-builder to discuss the schedule and review any potential mitigation opportunities available to the design-builder to mitigate impact of any schedule slippages addressed in their schedule update. Metro is showing the potential delay as a reduction in the overall schedule contingency which is now a cumulative 109 calendar days.

Concern No. 8: Cost and schedule impacts on the Crenshaw/LAX Transit Project for a potential new station at 96th Street.

<u>Status/Action</u> As Metro explores the possibility of an additional new station at 96th Street staff is reviewing the potential impacts on the existing design-builder's scope of work and on the overall project cost and schedule.

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, 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).

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 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.

KEY MILESTONES SIX- MONTH LOOK AHEAD

| | Milestone | | | ı | | ı | |
|---|-------------|--------|--------|--|----------|--------|--------|
| | Date | Mar-15 | Apr-15 | May-15 | Jun-15 | Jul-15 | Aug-15 |
| Contract C0988 Start Aerial Structure #1 - Green Line | 03/03/2015A | | | | | | |
| Contract C0988 Complete Decking - MLK | 03/27/2015A | | | | | | |
| Contract C0988 Submit Final Design - Seg B | 04/06/15 | | | | | | |
| Contract C0988 Start La Brea Bridge | 04/14/15 | | | | | | |
| Contract C0988 Start Shoring - Underground Structure #3 | 04/15/15 | | | | | | |
| Contract C0988 Start Soldier Piling - U Section #4 | 04/22/15 | | | | | | |
| Contract C0988 Start Decking - Vernon | 04/25/15 | | | | | | |
| Contract C0988 Start Manchester Bridge | 05/05/15 | | | with the second | | | |
| Contract C0988 Submit Final Design - TPSS | 05/07/15 | | | MILE DE LA COMPANION DE LA COM | | | |
| Contract C0988 Start Soldier Piling - Cut & Cover #4 | 05/12/15 | | | - One | | | |
| Contract C0988 Start Fabricate Elevators & Escalators | 05/18/15 | | | | | | |
| Contract C0988 Submit Final Design - Seg C | 05/18/15 | | | | | | |
| Contract C0988 Submit Final Design - TPSS Civil | 05/27/15 | | | military. | | | |
| Contract C0988 Submit Approved for Construction - Seg B | 05/27/15 | | | | | | |
| Contract C0988 Submit Final Design - Seg A | 05/28/15 | | | | | | |
| Contract C0991 Notice of Award | 05/28/15 | | | | | | |
| Contract C0988 Start 111th Street Bridge | 06/03/15 | | | | m. C. | | |
| Contract C0988 Submit Final Design - COMM | 06/10/15 | | | | nii Cinn | | |
| Contract C0988 Complete Soldier Piling - U Section #4 | 06/22/15 | | | | | | |
| Contract C0991 Notice to Proceed | 06/29/15 | | | | • | | |
| Contract C0988 Start I-405 Bridge | 07/06/15 | | | | | | |
| Contract C0988 Start Decking - Cut & Cover #4 | 07/15/15 | | | | | | |
| Contract C0988 Submit Final Design - OCS | 07/16/15 | | | | | | |
| Contract C0988 Submit Approved for Construction - Seg C | 07/27/15 | | | | | | |
| Contract C0988 Submit Approved for Construction - TPSS | 08/12/15 | | | | | | |
| Contract C0988 Complete Excavation - MLK | 08/20/15 | | | | | | |
| Contract C0988 Start Excavationg - Cut & Cover #3 | 08/24/15 | | | | | | |
| Contract C0988 Start Excavationg - U Section #4 | 08/24/15 | | | | | | |
| Contract C0988 Submit Approved for Construction - COMM | 08/26/15 | | | | | | |
| Contract C0988 Complete Excavation - Expo | 08/27/15 | | | | | | |
| Contract C0988 Submit Approved for Construction - Segment A | 08/28/15 | | | | | | |



MTA Board Action

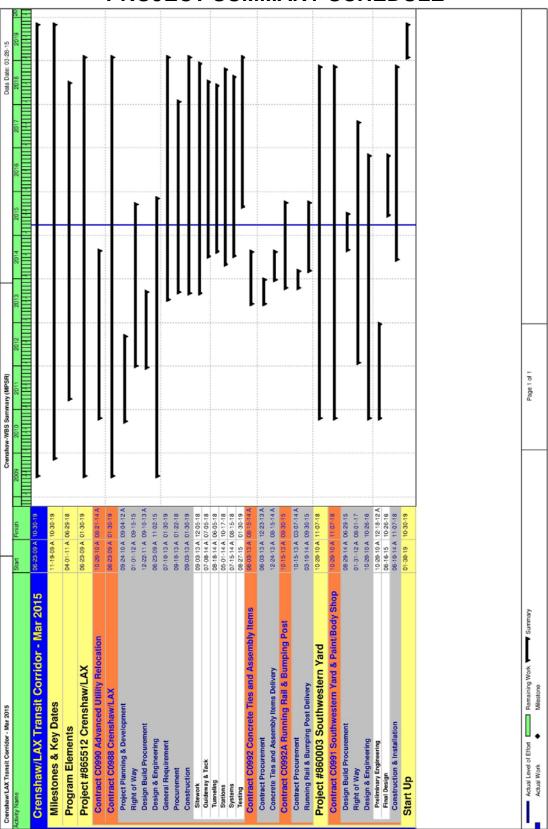
Walsh Shea Corridor

Other

Contractors

[&]quot;A" following date is actual and completed

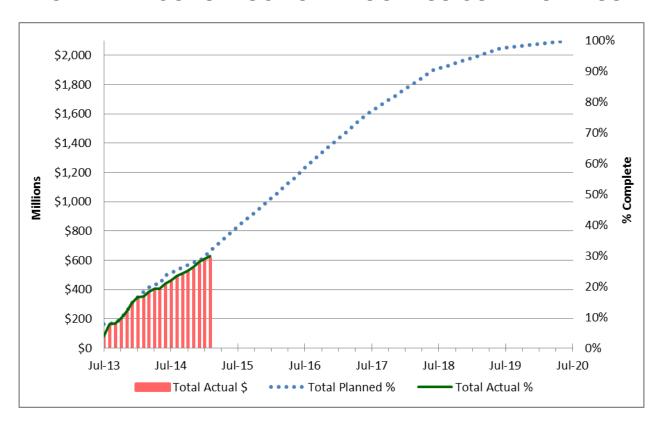
PROJECT SUMMARY SCHEDULE



SCHEDULE MEASUREMENTS

| | | Change | |
|---|------------|-----------|--------------------|
| | | from Last | |
| | Status | Period | Comment |
| Current Revenue Service: | 10/30/2019 | None | |
| Forecast Revenue Service: | 10/30/2019 | None | |
| TIFIA Revenue Service: | 10/30/2019 | None | |
| | | | |
| Final Design Progress: | | | |
| Contract C0988 | 87.3% | 2.1% | Behind 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 |
| | | | |
| Construction Contracts Progress: | | | |
| Contract C0988 | 14.2% | 1.9% | Behind Schedule |
| 0 4 4 00000 | 4000/ | 201 | Substantially |
| Contract C0990 | 100% | 0% | Completed |
| Contract C0991 | 0% | - | Bids Under Review |
| | | | Substantially |
| Contract C0992 | 100% | 0% | Completed |
| Contract C0992A | 93% | 0% | On Schedule |
| | | | |
| Cumulative To Date Progress: | 31.1% | 3.7% | |

OVERALL CONSTRUCTION PROGRESS CURVE STATUS



The above planned progress curve is based on planned expenditures by the design-build contractor in the C0988 baseline schedule and planned expenditures projected by all other Crenshaw/LAX contracts. The actual are overall project expenditures cumulative through March 27, 2015.

The cumulative overall project expenditures by March 2015 is \$616 million, which is 30.0% of the total project adopted budget of \$2,058 million, while the planned overall project progress by March 2015 is 31.5%.

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 procurement:

| | Baseline | Feb-15 | Mar-15 | Monthly Variance |
|---|----------|-----------|-----------|---------------------|
| Submit Final Design Details for TBM | 01/03/14 | 03/03/15 | 03/31/15 | -28 |
| Fabricate & Deliver TBM | 09/22/14 | 11/21/14A | 11/21/14A | 0 |
| Procure & Deliver TBM Rolling Stock & Accessories | 06/23/14 | 05/01/15 | 03/02/15A | 60 |
| TBM SB Tunnel Launch at Expo | 04/28/15 | 12/14/15 | 01/05/16 | -22 |
| TBM SB Break through at Vernon | 09/17/15 | 05/04/16 | 05/17/16 | -13 |
| TBM NB Tunnel Launch at Expo | 10/29/15 | 06/17/16 | 07/07/16 | -20 |
| TBM NB Break through at Vernon | 03/21/16 | 11/04/16 | 11/17/16 | -13 |

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

All required concrete ties have been delivered to the job site.

Running Rail & Bumping Post

The delivery of the equipment is as follows:

- SDI 115RE SS Rail Delivery 7/16/2014 (Completed)
- Evraz 115RE HH Rail Delivery 8/11/2014 (Completed)
- Bumping Post Delivery 9/30/2015

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

| Item | Initiate | Submittal | Delivery | Installation |
|--|------------------------|------------|-------------------------|--------------|
| | Procurement | Needed By | | Date |
| Tunnel Boring Machine | Executed | Complete | Completed | 9/1/2015 |
| Stations- Elevators | Executed | 3/25/2015 | Pits 10/5/15 | Pits 10/5/15 |
| Stations- Escalators | Selected | 5/22/2015 | 7/1/2016 | 10/5/2016 |
| Track- Special Trackwork | Selected | 3/21/2015 | 10/26/2015 | 11/12/2015 |
| Track- Restraining Rail and Grade Crossing Ties | 4/13/2015 | 5/1/2015 | 2/10/2016 | 4/1/2016 |
| TPSS- Substation 1 | 4/8/2015 | 5/23/2015 | 4/2/2016 | 6/1/2016 |
| TPSS- Substation 2 | 6/8/2015 | 7/23/2015 | 6/2/2016 | 8/1/2016 |
| TPSS- Substation 3 | 8/10/2015 | 9/24/2015 | 8/4/2016 | 10/3/2016 |
| TPSS- Substation 5 | 10/8/2015 | 11/22/2015 | 10/2/2016 | 12/1/2016 |
| TPSS- Substation 6 | 1/7/2016 | 2/21/2016 | 1/1/2017 | 3/2/2017 |
| TPSS-Substation 7 | 3/7/2016 | 4/21/2016 | 3/2/2017 | 5/1/2017 |
| TPSS- Substation 8 | 1/7/2016 | 2/21/2016 | 1/1/2017 | 3/2/2017 |
| TPSS- Substation 9 | 12/9/2016 | 1/23/2016 | 12/3/2016 | 2/1/2017 |
| Train Houses | 3/1/2015 | 5/30/2015 | 3/27/2017 | 5/1/2017 |
| OCS Poles | 3/1/2015 | 5/30/2015 | 6/27/2016 | 8/1/2016 |
| Traffic Signal Poles | 3/15/2015 | 4/15/2015 | 8/1/2015 | 6/1/2015 |
| LED Lighting Figures | 3/15/2015 | 4/15/2015 | 8/1/2015 | 3/1/2016 |
| Jet Fan- UG3 | 5/5/2016 | 4/7/2016 | 12/31/2016 | 3/1/2017 |
| Jet Fan- UG4 | 11/5/2016 | 1/4/2017 | 7/3/2017 | 9/1/2017 |
| Artwork- Century | 1/6/2016 | 3/6/2016 | 9/2/2016 | 11/1/2016 |
| Artwork- Hindry | 1/6/2016 | 3/6/2016 | 9/2/2016 | 11/1/2016 |
| Artwork- La Brea | 11/6/2015 | 1/5/2016 | 7/3/2016 | 9/1/2016 |
| Artwork- West | 4/7/2016 | 6/6/2016 | 12/3/2016 | 2/1/2017 |
| Artwork- Slauson | 10/5/2016 | 12/4/2016 | 6/2/2017 | 8/1/2017 |
| Artwork-Vernon Concourse | 2/4/2017 | 4/5/2017 | 10/2/2017 | 12/1/2017 |
| Artwork- Vernon Plaza | 10/5/2016 | 12/4/2016 | 6/2/2017 | 8/1/2017 |
| Artwork- MLK Concourse | 2/4/2017 | 4/5/2017 | 10/2/2017 | 12/1/2017 |
| Artwork- MLK Plaza | 4/7/2017 | 6/6/2017 | 12/3/2017 | 2/1/2018 |
| Artwork- Expo Concourse | 7/5/2017 | 9/3/2017 | 3/2/2018 | 5/1/2018 |
| Artwork- Expo Plaza | 7/5/2017 | 9/3/2017 | 3/2/2018 | 5/1/2018 |
| TVM- Century | N/A | 7/5/2015 | 1/1/2016 | 3/1/2016 |
| TVM- Hindry | N/A | 4/5/2016 | 10/2/2016 | 12/1/2016 |
| TVM- La Brea | N/A | 9/3/2016 | 3/2/2017 | 5/1/2017 |
| TVM- West | N/A | 7/4/2016 | 12/31/2016 | 3/1/2017 |
| TVM-Slauson | N/A | 11/3/2016 | 5/2/2017 | 7/1/2017 |
| TVM- Vernon | N/A | 2/3/2017 | 8/2/2017 | 10/1/2017 |
| TVM- MLK | N/A | 3/6/2017 | 9/2/2017 | 11/1/2017 |
| TVM- Expo | N/A | 5/6/2017 | 11/2/2017 | 1/1/2018 |
| Trees and Landscaping- La Brea | 8/6/2015 2/4/2017 | 10/5/2015 | 4/2/2016 10/2/2017 | 6/1/2016 |
| Irrigation and Landscape Planting- MLK | | 4/5/2017 | | 12/1/2017 |
| Landscape- West Park and Ride | 8/6/2015 | 10/5/2015 | 4/2/2016 | 6/1/2016 |
| Traffic Signal Controllers- Market and Florence | 9/3/2014 | 11/2/2014 | 5/1/2015 | 6/30/2015 |
| Traffic Signal Controllers - Locust Bus Bay and Florence | 9/10/2014 3/11/2015 | 11/9/2014 | 5/8/2015 | 7/7/2015 |
| Traffic Signal Controllers- 111th and Aviation | | 5/10/2015 | 11/6/2015 | 1/5/2016 |
| Traffic Signal Controllers- Imperial and Aviation | 11/26/2015 | 1/25/2015 | 7/23/2016 12/13/2015 | 9/21/2016 |
| Traffic Signal Controllers- Florence and High | 4/17/2015 | 6/16/2015 | | 2/11/2016 |
| Traffic Signal Controllers- Centinela and Florence | 5/8/2015 | 7/7/2015 | 1/3/2016 | 3/3/2016 |
| Traffic Signal Controllers- West and 71st | 5/8/2015 | 7/7/2015 | 1/3/2016 | 3/3/2016 |
| Traffic Signal Controllers- Hindry and Florence | 1/1/2016 | 3/1/2016 | 8/28/2016 | 10/27/2016 |
| Traffic Signal Controllers- La Brea and Florence | 2/6/2016 | 4/6/2016 | 10/3/2016 | 12/2/2016 |
| Traffic Signal Controllers - 104th and Aviation | 9/30/2015 | 11/29/2015 | 5/27/2016 | 7/26/2016 |
| Traffic Signal Controllers- Oak and Florence | 3/5/2015 | 5/4/2015 | 10/31/2015 | 12/30/2015 |
| Traffic Signal Controllers- Cedar and Florence | 3/5/2015 | 5/4/2015 | 10/31/2015 | 12/30/2015 |
| Traffic Signal Controllers- Eucalyptus and Florence | 3/5/2015 | 5/4/2015 | 10/31/2015 | 12/30/2015 |
| Traffic Signal Controllers- Ivy Florence and Cable | 3/5/2015 | 5/4/2015 | 10/31/2015 | 12/30/2015 |
| Traffic Signal Controllers-Century and Aviation | 3/5/2015 | 5/4/2015 | 10/31/2015 | 12/30/2015 |
| Traffic Signal Controllers- La Cienega and Florence | 8/1/2016 | 5/4/2015 | 10/31/2015 | 12/30/2015 |
| SF6 Gas Insulated Switches * Metro top/bottom | 3/13/2015 | 6/1/2015 | 8/2/2016 | 10/1/2016 |

CRITICAL PATH NARRATIVE

Critical Path:

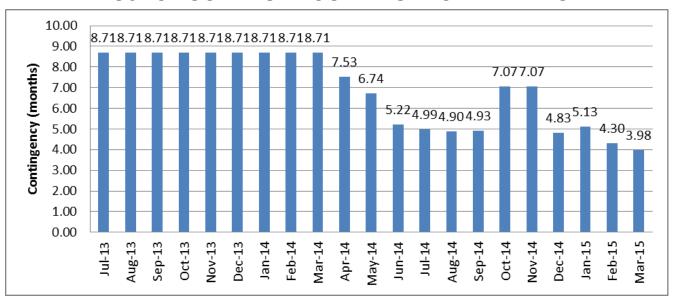
The longest path to project substantial completion begins with final design of the Design/Build Contract #C0988 Crenshaw/LAX Transit Corridor.

The most critical and longest path starts with the Expo Station support of excavation (SOE) and decking, excavation & invert construction; TBM mining operation; cross passage excavation, tunnel invert and walkway construction; track and system installation, while the MLK station SOE and decking, excavation & invert construction, OCS/Traction power and Train Control/Communication System installation follow closely as the secondary 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.

The current critical path indicates Milestone 1 - Contract Substantial Completion date is Jan 30, 2019, which is 144 calendar days behind the original contract. A 35 calendar day contract extension for a concurrent delay was executed in Mar 2015, which reduces the days behind to 109 calendar days for the current contract.

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. The change of LOP Contingency is due to design-builder reforecast of their substantial completion milestone.

PROJECT COST STATUS

COST REPORT BY ELEMENT PERIOD: MARCH 2015 UNITS IN DOLLARS

| OIVII | 3 IN DULLARS | | | | | | | | | | |
|-------|---|---------------|--------|---------------|---------|---------------|------------|-------------|--------------|---------------|--------------|
| SCO | DESCRIPTION | ORIGINAL | CURREN | T BUDGET | COMMI | TMENTS | EXPEND | DITURES | CURRENT | FORECAST | FORECAST |
| COD | E DESCRIPTION | BUDGET | PERIOD | TO DATE | PERIOD | TO DATE | PERIOD | TO DATE | PERIOD | TO DATE | VARIANCE |
| 10 | GUIDEWAYS | 471,335,000 | - | 452,500,001 | 7,357 | 442,904,895 | 5,980,183 | 50,492,086 | | 450,354,375 | (2,145,626) |
| 20 | STATIONS | 153,906,000 | - | 316,050,000 | | 301,441,907 | 3,161,307 | 63,171,819 | | 315,050,000 | (1,000,000) |
| 30 | SOUTHWESTERN YARD | 66,673,000 | - | 66,673,000 | - | 6,549,923 | - | | | 66,673,000 | |
| 40 | SITEWORK\SPECIAL CONDITIONS | 235,576,000 | - | 348,565,999 | 26,524 | 344,044,322 | 3,966,098 | 193,241,154 | 4,705,913 | 361,476,912 | 12,910,913 |
| 50 | SYSTEMS | 125,132,000 | - | 169,311,000 | 114,425 | 150,342,667 | 4,000 | 187,055 | - | 169,436,000 | 125,000 |
| 10-5 | CONSTRUCTION | 1,052,622,000 | - | 1,353,100,000 | 148,306 | 1,245,283,713 | 13,111,589 | 307,092,114 | 4,705,913 | 1,362,990,287 | 9,890,287 |
| 60 | RIGHT-OF-WAY | 132,294,000 | - | 127,400,000 | 21,364 | 113,814,684 | 2,376,229 | 108,027,440 | - | 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 | 348,967 | 208,172,469 | 4,014,841 | 163,878,956 | 12,435,470 | 311,806,096 | 15,906,096 |
| 90 | UNALLOCATED CONTINGENCY | 177,157,000 | | 173,500,000 | 1 | | - | | (17,141,383) | 147,703,617 | (25,796,383) |
| | 865512 & 860003 - SUBTOTAL | 1,723,000,000 | | 2,032,000,000 | 518,636 | 1,649,321,767 | 19,502,659 | 590,450,931 | - | 2,032,000,000 | (0) |
| | ENVIRONMENTAL/PLANNING-405512 | 5,526,150 | - | 5,526,150 | - | 5,526,150 | - | 5,526,150 | - | 5,526,150 | |
| | ENVIRONMENTAL/PLANNING-465512 | 20,473,850 | | 20,473,850 | • | 20,023,237 | | 20,023,237 | - | 20,473,850 | |
| | 405512 & 465512 - SUBTOTAL | 26,000,000 | - | 26,000,000 | - | 25,549,388 | - | 25,549,387 | - | 26,000,000 | - |
| | 405512, 465512, 865512 & 860003 - TOTAL | 1,749,000,000 | - | 2,058,000,000 | 518,636 | 1,674,871,155 | 19,502,659 | 616,000,318 | - | 2,058,000,000 | - |

NOTE: EXPENDITURES ARE CUMULATIVE THROUGH 28-MARCH-2015.

SCC-30 budget of \$66,673,000 for the Southwestern Yard includes fundings for SCC-30, SCC-40, SCC-50, and SCC-80 Final Design scope of work.

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.

PROJECT COST ANALYSIS (Continued)

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

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 28, 2015. The total commitments increased by \$0.5 million this period primarily due to the following:

- SCC-40 (Sitework and Special Conditions) has increased by \$0.1 million due to executed modifications associated with design-build Contract C0988 Crenshaw/LAX Transit Corridor. The total commitment of \$344.1 includes \$6.5 million for the Southwestern Yard.
- SCC-50 (Systems) has increased by \$0.1 million due to executed modifications associated with design-build Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-80 (Professional Services) has increased of \$0.3 due to executed modifications associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor and costs related to miscellaneous specialty services and community relations. The total commitment of \$208.2 million includes \$6.3 million for the Southwestern Yard.

The \$1,674.9 million in commitments to date represents 81.4% of the current budget.

Expenditures:

The expenditures are cumulative through March 28, 2015. The total expenditures increased by \$19.5 million this period due to the following:

- SCC-10 (Guideways) has increased by \$6.0 million for costs associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-20 (Stations, Stops, Terminals, Intermodal) has increased by \$3.1 million for costs associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-40 (Sitework and Special Conditions) has increased by \$4.0 million for costs associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor and third party scope of work with QWEST and Los Angeles Department of Water & Power.
- SCC-60 (Right-of-Way) has increased by \$2.4 million for costs associated with real estate appraisal and acquisition. The total expenditure of \$108.0 million includes \$53.3 million for the Southwestern Yard.
- SCC-80 (Professional Services) has increased by \$4.0 million for costs associated with design-build Contract C0988 Crenshaw/LAX Transit Corridor, Metro project administration, IPMO field office lease and utilities, construction management support services, legal services, permit fees, tunnel advisory panel services, third party coordination services by Los Angeles County, project management support, printing services, material lab testing services, miscellaneous specialty services and environmental consultant services. The total expenditure of \$163.9 million includes \$3.0 million for the Southwestern Yard.

PROJECT COST ANALYSIS (Continued)

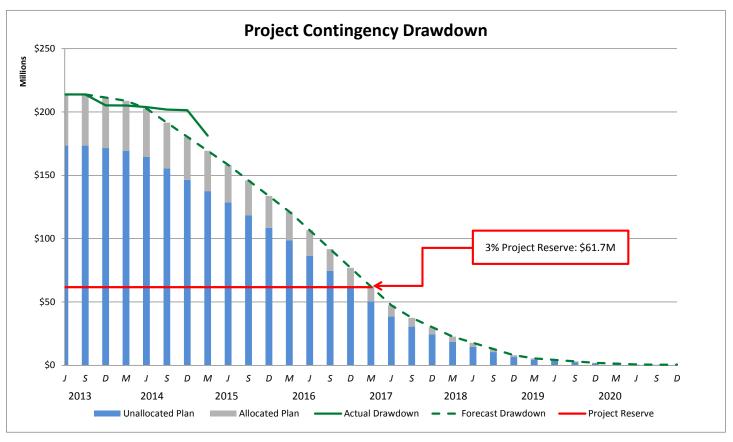
The \$616.0 million in expenditures to date represents 30.0% of the current budget.

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 design-builder (Contract C0988).

| C0988 NON-CRENSHAW/LAX TRANSIT PROJECT FUNDED SCOPE OF WORK | | | | | | | | | | |
|---|-----------|--------|-----------|--------|-----------|--------|---------|---------|-----------|----------|
| DESCRIPTION | ORIGINAL | CURREN | T BUDGET | COMMI | TMENTS | EXPEN | DITURES | CURRENT | FORECAST | FORECAST |
| DESCRIPTION | BUDGET | PERIOD | TO DATE | PERIOD | TO DATE | PERIOD | TO DATE | PERIOD | TO DATE | VARIANCE |
| 210090 FARE GATE PROJECT | 2,310,000 | - | 2,549,000 | - | 2,482,746 | - | 233,025 | - | 2,549,000 | 239,000 |
| 460303 AIRPORT METRO CONNECTOR | 366,400 | - | 366,400 | - | 366,400 | - | 366,400 | - | 366,400 | - |
| 500013 C/LAX LAWA SCOPE OF WORK | 1,575,362 | - | 1,575,362 | - | 531,125 | - | 228,387 | - | 1,575,362 | - |
| TOTAL | 4 251 762 | _ | 4 490 762 | - | 3 380 271 | - | 827 812 | - | 4 490 762 | 239 000 |

PROJECT CONTINGENCY DRAWDOWN



Through 28-Mar-2015

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.

PROJECT CONTINGENCY DRAWDOWN ANALYSIS (Continued)

There has been a cumulative drawdown of \$32,566,703 or 15.3% of the contingency included in the Current Budget through March 2015. The cumulative to date contingency drawdown is reported quarterly with the next drawdown to be reported through June 2015. The drawdown of allocated contingency for additional costs associated with the design-builder's (Contract C0988) executed modifications is tracked monthly but is reported quarterly in this report. The cumulative drawdown of contingency is shown in the table below:

| PROJECT CONTINGENCY DRAWDOWN (through 28-Mar-2015) | | | | | | | | | | |
|--|-------------|------------------|--------------|--------------|-------------|--|--|--|--|--|
| | Original | Drawdown | Drawdown | Drawdown | Remaining | | | | | |
| | Contingency | previous quarter | this quarter | To-Date | Contingency | | | | | |
| Unallocated Contingency | 173,500,000 | (8,655,000) | (17,141,383) | (25,796,383) | 147,703,617 | | | | | |
| Allocated Contingency | 40,366,792 | (3,794,039) | (2,976,282) | (6,770,321) | 33,596,471 | | | | | |
| Total Contingency | 213,866,792 | (12,449,039) | (20,117,665) | (32,566,704) | 181,300,088 | | | | | |

DISADVANTAGED BUSINESS ENTERPRISE (DBE) STATUS

Contract C0988 Crenshaw/LAX Transit Corridor Design-Build

DBE Goal – Design 23.82%

Current DBE Commitment \$20,232,929 (22.34%)

Current DBE Participation \$15,217,968 (19.98%)

• Twenty (20) Design subcontractors have been identified to-date

DBE Goal – Construction 20%

• Current DBE Commitment \$236,116,671 (20%)

Current DBE Participation \$28,858,337 (12.60%)

• Forty Seven (47) Construction subcontractors have been identified to-date.

PROJECT LABOR AGREEMENTS (PLA) STATUS

Contract C0988 Crenshaw/LAX Transit Corridor Design-Build

(Reporting Data as of February 14, 2015)

Targeted Worker Goal –
 40.00%

• Targeted Worker Current Participation - 59.30%

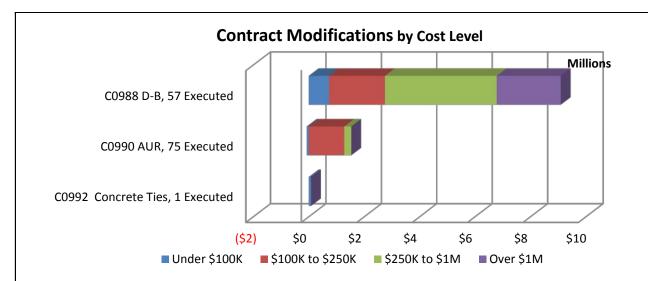
• Apprentice Worker Goal - 20.00%

Apprentice Worker Current Participation - 13.74%

• Disadvantaged Worker Goal - 10.00%

Disadvantaged Worker Current Participation 11.26%

SUMMARY OF CONTRACT MODIFICATIONS



| | C0988 | | C0988 C0990 | | | C0992 |
|------------------|-------------|-----------|-------------|------------|----|----------|
| | 57 Executed | | 75 | 5 Executed | 1 | Executed |
| Under \$100K | \$ | 730,322 | \$ | (70,251) | \$ | 81,738 |
| \$100k to \$250K | \$ | 2,016,784 | \$ | 1,280,184 | \$ | - |
| \$250K to \$1M | \$ | 4,035,736 | \$ | 251,864 | \$ | - |
| Over \$1M | \$ | 2,310,000 | \$ | 1 | \$ | - |
| Total | \$ | 9,092,842 | \$ | 1,461,797 | \$ | 81,738 |
| % of Contract | | 0.71% | | 18.68% | | 3.78% |

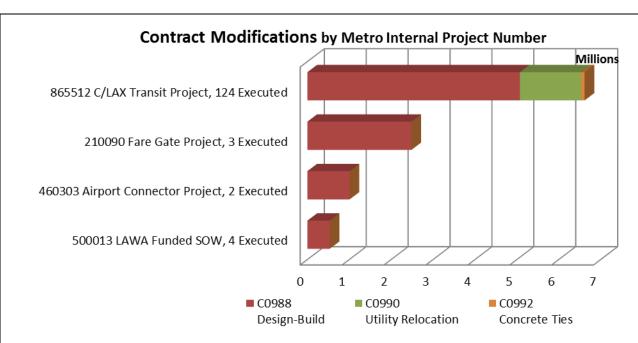
Percent of Contract equals the total Change value divided by the Contract Award amount

Fifty-seven (57) changes with a total value of 9.09 million have been executed since execution of Contract C0988. There are an additional nine (9) changes with a total value of 0.74 million that are pending the administrative approval process.

Seventy-five (75) changes with a total value of 1.46 million have been executed since execution of Contract C0990.

One change with a value of \$81,738 has also been executed since execution of Contract C0992.

SUMMARY OF CONTRACT MODIFICATIONS



| | 865512 | 210090 | 460303 | 500013 |
|----------|-----------|-----------|-------------|----------|
| | Executed | Executed | Executed | Executed |
| C0988 | 48 | 3 | 2 | 4 |
| | \$ | \$ | | \$ |
| C0998 \$ | 5,071,102 | 2,482,746 | \$1,007,778 | 531,216 |
| C0990 | 75 | 0 | 0 | 0 |
| | \$ | | | |
| C0990 \$ | 1,461,797 | \$ - | \$ - | \$ - |
| C0992 | 1 | 0 | 0 | 0 |
| C0992 \$ | \$ 81,738 | \$ - | \$ - | \$ - |
| Total | 124 | 3 | 2 | 4 |
| | \$ | \$ | | \$ |
| Total \$ | 6,614,637 | 2,482,746 | \$1,007,778 | 531,216 |

One hundred and twenty four (124) changes with a total value of \$6.61 million have been executed for Project 865512 Crenshaw/LAX Transit Project. There are an additional eight (8) changes with a total value of 0.64 million that are pending the administrative approval process.

Three (3) changes with a value of 2.48 million have been executed for Project 210090 Fare Gate Project.

Two (2) changes with a value of 1.00 million have been executed for Project 460303 Airport Connector Project. There is an additional one (1) change with a total value of 0.10 million that is pending the administrative approval process.

Four (4) changes with a total value of 0.53 million have been executed for Project 500013 Crenshaw/LAX LAWA Statement of Work.

FINANCIAL/GRANT STATUS

| • | | • | | |
|---|----|---|-------|---|
| 8 | in | mil | lions | ١ |

| \$ in millions SOURCE | (A) (B) ORIGINAL TOTAL BUDGET FUNDS | | (C) TOTAL FUNDS | (D) (D/B) COMMITMENTS | | (E) (E/B) EXPENDITURES | | (F) (F/B) BILLED to FUNDING SOURCE | |
|-----------------------------------|-------------------------------------|-------------|-----------------------|--------------------------|-------|---------------------------|-------|------------------------------------|-------|
| | | ANTICIPATED | AVAILABLE | \$ | % | \$ | % | \$ | % |
| FEDERAL - CMAQ | 68.2 | 54.0 | 30.0 | 54.0 | 100% | 30.0 | 56% | 30.0 | 56% |
| FEDERAL - SECTION 5309 BUS CAPT | 8.6 | 8.6 | 8.6 | 8.6 | 100% | 8.0 | 93% | 8.0 | 93% |
| FEDERAL - REGIONAL STP | 20.0 | 120.9 | 73.7 | 73.7 | 61% | 36.6 | 30% | 36.6 | 30% |
| 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 | 2.2 | 2.2 | 2.2 | 100% | 2.2 | 100% | 2.2 | 100% |
| STATE PPM | 0.178 | 0.178 | 0.178 | 0.178 | 100% | 0.178 | 100% | 0.178 | 100% |
| STATE PROP 1B PTMISEA | 201.2 | 128.6 | 128.6 | 128.6 | 100% | 128.6 | 100% | 128.6 | 100% |
| STATE PROP 1 B LOCAL PARTNER PROG | 0.0 | 49.5 | 49.5 | 49.5 | 100% | 49.5 | 100% | 49.5 | 100% |
| MEASURE R - TIFIA LOAN | 545.9 | 545.9 | 545.9 | 545.9 | 100% | 0.0 | 0% | 0.0 | 0% |
| MEASURE R | 661.1 | 661.1 | 377.5 | 661.1 | 100% | 337.4 | 51% | 307.7 | 47% |
| OTHER FUNDS* | 52.4 | 187.5 | 0.0 | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% |
| PROP C 25% HIGHWAY | 148.9 | 189.5 | 3.6 | 51.2 | 27% | 3.6 | 2% | 3.6 | 2% |
| PROP C 40% DISCRETIONARY | 0.0 | 10.2 | 0.0 | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% |
| PROP A 35% RAIL CAPITAL | 4.8 | 50.4 | 4.9 | 50.4 | 0% | 4.9 | 0% | 4.9 | 10% |
| TOTAL | 1,749.0 | 2,058.0 | 1,239.7 | 1,674.9 | 81.4% | 616.0 | 30.0% | 586.2 | 28.5% |

NOTE: Expenditures are cumulative through March 2015.

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

Total Funds Anticipated based on Board approved June 2013 Revised Funding

^{*} 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.

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 \$545.9 M was submitted to the US Department of Transportation (DOT) in November 2011. Loan agreement was executed on September 12, 2012. The first disbursement of \$337.4M is planned for June 1, 2015.

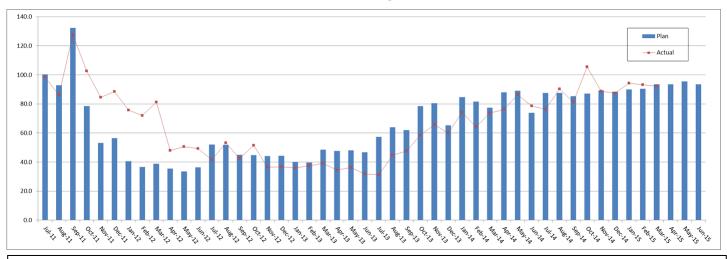
MEASURE R: \$377.4M has been allocated to the project through FY2015. Funds are available for drawdown.

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

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

STAFFING STATUS

Total Project Staffing - FTES



Notes:

- 1. FTE = Full Time Equivalent
- 2. Staffing levels are for project 865512 only.
 3. Actual staffing levels are cumulative through March 2015.

TOTAL PROJECT STAFFING

For February 2015, there were a total of 45.3 FTE's for MTA's Project Administration staff and 47 FTE's for consulting staff. The total project staffing was 92.3 FTE's for March 2015. The overall FY15 Total Project Staffing Plan averages 90.1 FTE's per month.

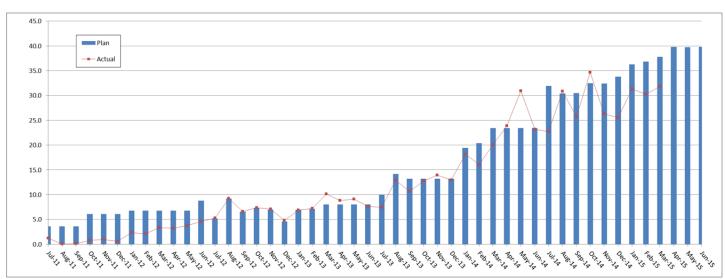
STAFFING STATUS (Continued) METRO STAFFING – FTES



Notes:

- 1. FTE = Full Time Equivalent
- 2. Staffing levels are for project 865512 only.
- 3. Actual staffing levels are cumulative through March 2015.

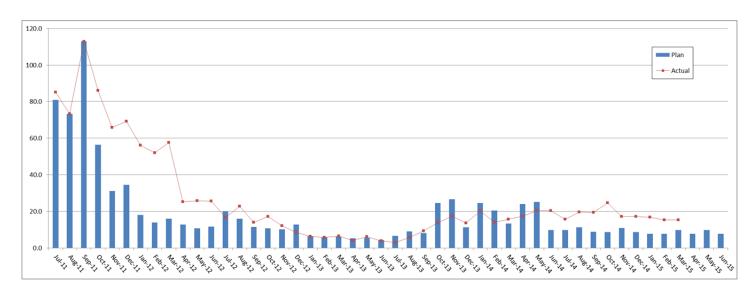
CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONSULTANT – FTES



Notes:

- 1. FTE = Full Time Equivalent
- 2. Staffing levels are for project 865512 only.
- 3. Actual staffing levels are cumulative through March 2015.

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 2015.

REAL ESTATE STATUS

| | Number | | | | | | | | Parcels |
|-----------------------|---------------|-----------|-------------|------------------------|----------------|----------------------|------------------------|-------------------------|----------------------|
| Contract No. | of Parcels | Certified | Decertified | Appraisals Complete | Offers Made | Agreements Signed | Condemnations Filed | Relocations Complete | Available to WSCC |
| C0988 C/LAX Transit C | | | Decertified | Complete | Wauc | Signed | riicu | Complete | WSCO |
| Crenshaw Subdivision | | • | | | | | | | |
| Full Takes | 12 | 12 | | 12 | 12 | 12 | 0 | 12 | 12 |
| Part Takes (PT or SE) | 10 | 9 | 1 | 9 | 9 | 3 | 5 | | 3 |
| TCE | 10 | 10 | | 10 | 10 | 4 | 5 | | 5 |
| Subtotal Parcels | 32 | 31 | 1 | 31 | 31 | 19 | 10 | 12 | 20 |
| Harbor Subdivision | | | | | | | | | |
| Full Takes | 15 | 14 | | 15 | 15 | 15 | 2 | 13 | 15 |
| Part Takes (PT or SE) | 19 | 18 | 1 | 18 | 17 | 7 | 7 | | 6 |
| TCE | 3 | 2 | 1 | 2 | 2 | | 2 | | 1 |
| Subtotal Parcels | 36 | 34 | 2 | 34 | 33 | 22 | 11 | 13 | 22 |
| Total CR/HS Parcels: | 69 | 65 | 3 | 65 | 64 | 41 | 21 | 25 | 42 |
| Southwestern Yard | | | | | | | | | |
| Full Takes | 8 | 8 | | 8 | 8 | 6 | 2 | 4 | 8 |
| Part Takes | 0 | | | | <u> </u> | | | | |
| TCE | 0 | | | | | | | | |
| Subtotal Parcels: | 8 | 8 | 0 | 8 | 8 | | 2 | 4 | 8 |
| Total SW Parcels: | 8 | 8 | 0 | 8 | 8 | 6 | 2 | 4 | 8 |
| C0990 C/LAX Advance | Utility Reloc | ations: | | | | | | | |
| Total Parcels: | 0 | | | | | | | | |
| Total Project Parcels | 77 | *73 | 3 | 74 | 74 | 48 | 23 | 29 | 50 |

- **74** acquisitions: ***73** planned for in the environmental report +**1** full take for the Harbor Subdivision that was not certified (HS-2706).
- 74 appraisals completed (including HS-2706).
- **50** parcels acquired: **35** full takes (including HS-2706) and **15** part takes/Temporary Construction Easement (TCE) provided to WSCC.
- HS-1904-1 and 1907-1 (TCEs for the underground pedestrian easement) have been obtained and will be turned over to the contractor by 3/31. The remaining TCE and part takes in these two parcels are anticipated to be turned over in early April.
- Parcels HS-2001, 2001-1 and HS-2106 are no longer required by the project and are in the process of being decertified.
- Metro has Order of Possession effective 5/1/15 for parcels CR-3201 and CR3206 at which time they will be turned over to the contractor.
- Metro has Order of Possession effective 6/1/15 for CR-3704 at which time it will be turned over to the contractor.
- 1 Parcel in Escrow (HS-1602).

Reported as of March 31, 2015

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.
- Participated in several construction Work Package Reviews and related Readiness Review Meetings.
- WSCC Quality Assurance completed one Vendor Surveillance of Precast Management, the supplier of MSE Wall Panels. There were two observations noted which will be followed up once actual panel fabrication efforts start.
- WSCC Quality Assurance began a surveillance of the Hobus Pipe replacement efforts at the EXPO site.
- Continue to use Testing Verifications by Independent Testing Laboratories for varying field activities including soil compaction testing, concrete testing, weld testing and CSM core sample testing.
- WSCC issued one Nonconformance Report (NCR) on UG-1 Soldier Pile installation issues and documented three conditions that are recorded as Potential Nonconformance Reports (PNCR's).
- MTA Quality issued five Nonconformance Reports (NCR's) on Noise Complaints, multiple Utility Strikes and Project Document Control issues.
- Approved the resume of the WSCC Lead Electrical Inspector.
- MTA Quality provided SharePoint Document Control System Training to MTA Quality personnel.

C0992 Concrete Rail Ties

• No activities this month. Rail welding of 1,000+ foot long strings will start in mid-April 2015.

ENVIRONMENTAL STATUS

C0988 Crenshaw/LAX Transit Corridor Design Build

- Reviewed and commented on the following Contractor Submittals:
 - Weekly Noise Monitoring Data for Expo Station, MLK Station, Vernon Station, La Brea Station and Century Station
 - Noise Control Plan for Concrete Recycling
 - Green Construction Plan Monthly Reports
 - Sustainability Plan Monthly Reports
 - o Weekly Storm Water Pollution Prevent Plan (SWPPP) inspection reports
 - Weekly Fugitive Dust Inspection Reports
 - Various Construction Work Plans
- Continue to document compliance with the Project Mitigation Monitoring and Reporting Plan (MMRP).
- Completed hazardous waste abatement (lead-based paint and asbestos) at parcels SW-0103 Dollar Rental Car.
- Completed supplemental sampling of lead-based paint and asbestos at Parcels SW-0101 (Avis Rental Car) and CR-3304 (Hi-Tech Cleaners).
- Reviewed Closure Report for the Underground Storage Tanks (USTs) at Parcel SW-0103.
- Reviewed soil sampling plan to determine the extent of soil contamination associated with the Underground Storage Tanks (USTs) at Parcel CR-3701.
- Encountered a third Underground Storage Tank (UST) at Parcel HS-2101.
- The cultural monitors at the Crenshaw/MLK Station identified prehistoric archaeological materials in an intact layer of dark brow-black clay,
- Coordinated the permitting and removal of Underground Storage Tanks (USTs) with the City and County of Los Angeles and the Los Angeles Fire Department.
- Coordinated with property owner's environmental consultant for parcel SW-0104 for installation of soil remediation system.
- Coordinated Archaeological, Paleontological and Native American Monitoring. State
 Historic Preservation Officer (SHPO) has approved the Cultural Resources Monitoring
 and Mitigation Plan (CRMMP) and Paleontological Monitoring and Mitigation Plan
 (PMMP).
- Delivered tree trunks to "Trees to Drums" in Leimert Park.
- Attended Contractor Weekly Progress meetings, Environmental Task-Force Meetings and various over-the-shoulder submittal meetings with Contractor.
- Attended Construction Update Meeting to answer questions concerning tree removal, parking and haul route.

CONSTRUCTION RELATIONS STATUS

- Updated local Neighborhood Councils, HOAs and Block Clubs about construction activity (Park Mesa Heights, Baldwin Hills, Fairview Heights, 4th Avenue Block Club).
- Gave alignment tours to the Black Journalist Association of Southern California and Crenshaw and Inglewood high school students.
- Met with the Leimert Park Business Improvement District (BID) on upcoming closures and business assistance efforts.
- Hosted Crenshaw area businesses at the Eat, Shop, Play community fest in Leimert Park.
- Promoted Metro business assistance efforts at Mayor Garcetti's Business Resource Fair at the Baldwin Hills Crenshaw Mall.
- Hosted a Community Construction Update Meeting (bi-monthly).
- Briefed local stakeholders: West Angeles Church, Baldwin Hills Crenshaw Mall and LAWA.
- Briefed local council offices: CD-8 and CD-10.
- Daily emails, phone calls and door-to-door outreach to businesses along the alignment for all construction activity.

SYSTEMWIDE DESIGN AND ART PROGRAM STATUS

- Responded to RFIs and submittal drawings.
- Continued to refine project artwork opportunities.
- Facilitated artist procurement process.
- Participated in Systemwide Design integration reviews and presentations.
- Continued to support visual mitigation efforts.

SIGNAGE

Responded to RFIs and submittals.

SAFETY & SECURITY STATUS

- Participated in weekly progress meetings with WSCC's Management and Construction Management Team to discuss safety/security related issues and construction schedules.
- Monitored construction activities on a daily basis including nights and weekends to ensure compliance with contract specifications.
- Conducted bi-weekly Safety Sweeps to enhance overall safety/security. Several hazards were observed and corrected immediately.
- Reviewed contractor safety submittals and construction work plans to ensure compliance with contract specifications.
- Participated in Readiness Review Meeting with WSCC/Select Electric for the horizontal directional boring for conduits at the Chris Burger's location.
- Walsh/Shea reported 83,869 work hours and one recordable incident for the month of March 2015. Total Project-to-Date work hours are 1,146,919 and eight recordable incidents. The Project Incident Rate is 1.4 The Bureau of Labor Statistics (BLS) average recordable rate per 200,000 work-hours 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 | 3/15 | 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. |

ADVANCED UTILITY RELOCATION STATUS

- Design completed by DWP-Water for advance relocation of water lines along Crenshaw Boulevard. Start of construction was rescheduled due to impact of Buy America requirements. Relocations of water lines status:
 - o Crenshaw @ 60th St. relocation in progress, is complete.
 - o Crenshaw @ 63rd St. relocation in progress, to complete by end of June 2015.
 - o Crenshaw @ 67th St. relocation in progress, to complete by May 2015.
 - o Crenshaw/Vernon Ave. to complete by end of April 2015.
 - Crenshaw @ Hyde Park St. commenced in January 2015 and is scheduled for completion by June 2015.
- SCE Power new services and relocations scheduled for completion. The work includes the relocation of underground power line to accommodate new pedestrian undercrossing at Faithful Central Bible Church property. Design is in progress.
- Tesoro Oil design in progress for 8" gas line. Construction should commence in June 2015 and complete in November 2015.

Crenshaw/LAX Transit Project Peak Hour & Nighttime Construction Variances for the City of LA

- Metro has permit variances for nighttime and early morning construction for Segments A thru E.
- All permits have to be renewed every six months from date of issuance by the Los Angeles Police Commission.



CPUC CROSSING SUMMARY

• The CPUC has approved all packages.

| 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 | | Grade Crossing | - |
| A1212030 A1212030 | Ivy Avenue High Street | Grade Crossing Grade Crossing | Inglewood |
| A1212030 | ngii siteet | 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 Appeles |
| A1301012 A1301012 | Slauson Avenue | | Los Angeles |
| | | 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 |
| 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 |
| | = Highlighted grade crossing/grade separations hav | e been approved. | |

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. |

CONTRACT C0988 STATUS

Crenshaw/LAX Transit Corridor

PE Design Contractor: Hatch Mott MacDonald (HMM)

CM Consultant: Stantec

Contractor: - Walsh Shea Corridor Constructors (WSCC)

Progress/Work Completed:

- Submitted Segment A Final Design on Aerial Guideway Structures and Stations. Continued revised Segment A Final Design on UG1 and Local
- Submitted Segment B Final Design on Guideway Package Walls and Stations. Continued Segment B Final Design on Local Street Harbor North. Submitted Segment C Readiness for Construction Design on UG
- Waterproofing and Local Streets. Continued Segment C Final Design on Guideway and UG Station Invert Slabs.
- Continued Final Design Traction Power.
- Continued Final Design Communication Systems.
- Continued Final Design OCS.
- Completed review of ATC Specifications.

Construction

- Continued potholing in the Vernon, MLK, La Brea, UG #1 & UG #3.
- Continued geotechnical monitoring at Vernon, MLK, Expo & UG#1.
- Continued with SWPPP Implementation Segments A, B & C.
- Continued installation of soldier piles at Vernon Station.
- Completed decking operation at MLK Station.
- Continued utility relocation/ support work at Expo Station Area.
- Continued excavation at Expo Station
- Continued utility protection work at MLK and Vernon Station.
- Continued column work at Century Blvd. Bridge.
- Commenced Pile driving for the Century Bridge Abutments.
- Completed excavation (5 feet depth) at UG #1.
- Continued installation of SOE Piles at UG #1.
- Commenced CIDH work at Green Line Bridge.

Contract No.: C0988

Status as of March 27, 2015



- Areas of Concern: - BOE approval process for SOE design
- Possible cobbles and boulders found during excavation at Expo and MLK station.
- Relocation of 24' LADWP water line may impact the decking operation at Vernon Station
- The work for the 69" Hobas pipe work at Expo Station required by the City may impact the schedule and delay the TBM activities.
- Contaminated materials (weathered gasoline with high levels of TPH) discovered at Expo site.
- Contractor's schedule does not accurately forecast its work efforts.

Schedule Assessment:

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

Contractor's Mar 2015 schedule update indicates Milestone 1 - Contract Substantial Completion is 144 calendar days behind the original contract. A 35 calendar day contract extension for a concurrent delay was executed which reduces the days behind to 109 calendar days for the current contract.

The current construction contract cost forecast is \$1,281.67 million and is within the Board authorized budget.

The Contractor submitted their 19th payment application in the approved amount of \$ 23,042,982.95.

*Please note that not all executed modifications may have been included in the Contractor current payment application.

\$ In millions

Schedule Summary:

| 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: | 1824 |

5. Elapsed Time from NTP: 563 Calenda Original Current

| Milestones | Contract | Contract | Forecast | Variance |
|---|----------|----------|----------|----------|
| Milestone 1 - Contract Substantial Completion | 09/08/18 | 10/13/18 | 01/30/19 | -109 |
| Milestone 2 - UFS Completion | 03/09/18 | 04/13/18 | 07/24/18 | -102 |
| Milestone 3 - Commence SIT Phase I | 06/09/18 | 07/14/18 | 11/02/18 | -111 |
| 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 | 03/07/17 | 90 |
| Milestone 6 - Const./Turnover Parcels SW-0001 | 08/01/17 | 08/01/17 | 06/28/17 | 34 |
| | | | | |

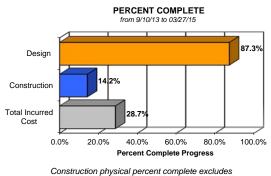
Cost Summary:

| | • | |
|----|-------------------------|----------|
| 1. | Award Value: | 1,272.63 |
| 2. | Executed Modifications: | 9.04 |

3. Approved Change Orders:

4. Current Contract Value (1 + 2 + 3): 1,281.67

Incurred Cost: 367 30



mobilization and general requirements

CONTRACT C0990 STATUS

Crenshaw/LAX Advanced Utility Relocations

| PE Design Contractor: Hatch | | | | Contract No.: C0990 | - MANA |
|--|--|------------------------------|--|---|-------------------------------|
| Contractor: - Metro Builders a | and Engineers Gro | up LTD | | Status as of March 27, 2015 | |
| Progress/Work Completed: - The construction was substantial | ly completed on Aug 2 | 21, 2014 | | Areas of Concern: | |
| Oak a hala Assassania | | | | Cost Assessment: | |
| Schedule Assessment: Metro has agreed to grant a total or result of lost production due to sar work hour restriction to 67th & Cre Metro granted substantial complet Contractor on August 21, 2014, wi | ndy soil conditions and it 59th & Crenshaw, and enshaw ion to Metro Builders, | I revised in nd traffic c | nstallation control and nced Utility | The current construction contract cost i Board authorized budget. The unpaid amount is the scope deletic remaining balance of provisional sums | on from the base contract and |
| | | | | | |
| Schedule Summary: | | | | Cost Summary: | \$ In millions |
| Date of Award: | 05/30/12 | | | 1. Award Value: | 7.83 |
| Notice to Proceed: Original Original Completion | 07/17/12 | | | Executed Modifications: | 0.97 |
| Original Substantial Completion Original Substantial Completion | | | | Approved Change Orders: A Contract Contract Value (4 - 0 - 0) | 0.49 |
| Current Substantial Completion Flanced Time from NTP: | | | | 4. Current Contract Value (1 + 2 + 3): | |
| 5. Elapsed Time from NTP: | 753 | | | 5. Incurred Cost: | 9.12 |
| Milestones | Original Current Contract Contract | Forecast | Calendar Day Variance | PERCENT C | |
| Milestone 1 - Contract Substantial | 07/17/13 11/18/13 | 08/21/14 | -276 | 0% | |
| Completion | | | | Design | |
| | | <u> </u> | - | Construction | 99% |
| | | | | Construction | |
| | | | | Total Incurred | 98% |
| | | | | Cost | |
| | | | | 0% 20% 40% Percent Com | 60% 80% 100% plete Progress |
| | | | - | Construction physical percent | |
| | | 1 | | mobilization and general requi | |

CONTRACT C0991 STATUS

Southwestern Yard

| PE Design Contractor: Hatch Mo CM Consultant: Stantec Contractor: - TBD | ott MacDo | nald (HM | M) | | Contract No.: C0991 Status as of March 27, 2015 | MAN |
|---|----------------------|---------------------|----------|-----------------------------|---|--------------------------------|
| Progress/Work Completed: - Metro advertised the Southwestern on August 29, 2014 There were five Amendments issue: #1 September 19, 2014 #2 October 24, 2014 #3 November 25, 2014 #4 December 18, 2014 #5 January 12, 2015 - Step One Technical Bid and Step To 2015 Metro continues bid evaluation period | d: wo Price Bio | | | | Areas of Concern: - None. | |
| Schedule Assessment: - Plan is to issue notice to proceed | d on June 2 | 29, 2015. | | | Cost Assessment: | |
| Schedule Summary: | | | | | Cost Summary: | \$ In millions |
| Date of Award: | | | | | Award Value: | |
| 2. Notice to Proceed: | | | | | 2. Executed Modifications: | |
| 3. Original Substantial Completion D | uration: | | | | 3. Approved Change Orders: | |
| 4. Current Substantial Completion D | uration: | | | | 4. Current Contract Value (1 + 2 + 3): | - |
| 5. Elapsed Time from NTP: | | | | | 5. Incurred Cost: | |
| Milestones | Original Contract | Current Contract | Forecast | Calendar Day Variance | PERCENT C | |
| MS#1 Yard and Main Shop Design Completion | | | | 0 | 00/ | |
| MS#2 Main Shop Communication Room Completion | | | | 0 | Design 0% | |
| MS#3 Main Shop Substantial Completion | | | | 0 | Construction 0% | |
| MS#4 Southwestern Yard Substantial Completion | | | | 0 | Total Incurred 0% | |
| | | | | | 0% 20% 40% Percent Com | 60% 80% 100% plete Progress |
| | | | | | Construction physical percent mobilization and general requi | |

CONTRACT C0992 STATUS

Concrete Ties

| PE Design Contractor: Hatch Mott MacDonald (HMM) CM Consultant: Stantec Contractor: Rocla Concrete Tie Inc. | | | | | Contract No.: C0992 Status as of March 27, 2015 | | |
|---|----------------------|---------------------|----------|-----------------------------|--|--|--|
| Progress/Work Completed: - All 19,936 concrete ties have beer (Contract C0988) Contract is in close-out pending re | | | • | | Areas of Concern: - Compliance with Buy America requirement under review by FTA. | | |
| Schedule Assessment: Metro has agreed to grant a 15 calendar day time extension as a result of limited access to the yard due to the operation of Burlington Northern Santa Fe (BNSF), which was beyond the reasonable control of RCTI. All concrete ties have been delivered to job site by August 15, 2014. | | | | | Cost Assessment: The current construction contract cost is \$2.25 million and has been completely paid to contractor. | | |
| Schedule Summary: | | | | | Cost Summary: \$ In millions | | |
| Date of Award: | | | 12/10/13 | | 1. Award Value: 2.16 | | |
| Notice to Proceed: | | | 12/23/13 | | Executed Modifications: 0.09 | | |
| Original Substantial Completion | Duration: | | 220 | | Approved Change Orders: | | |
| Current Substantial Completion | | | 235 | | 4. Current Contract Value (1 + 2 + 3): - 2.25 | | |
| Elapsed Time from NTP: | | | 235 | | 5. Incurred Cost: 2.25 | | |
| Milestones | Original Contract | Current Contract | Forecast | Calendar Day Variance | PERCENT COMPLETE from 12/23/2013 to 8/15/14 | | |
| Milestone 1 - Contract Substantial Completion | 07/31/14 | 08/15/14 | 08/15/14 | 0 | | | |
| Completion | | | | 0 | Delivered 100% | | |
| | | | | | Shipped 100% | | |
| | | | | 0 | Shipped 100 % | | |
| | | | | 0 | Total Incurred Cost 100% | | |
| | | | | 0 | 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 I CM Consultant: Stantec Contractor: LB Foster Rail Tec | | , | Contract No.: C0992A Status as of March 27, 2015 | | | | | |
|--|--------------|--------------|--|--|---|-----------------|--|--|
| Contractor: LB Foster Rail Tec Progress/Work Completed: - All 115RE SS Blank Stick Rails hat a Harve been delived to the state of the s | ave been del | ivered to th | ne job site. | | Status as of March 27, 2015 Areas of Concern: | | | |
| Schedule Assessment: All running rails have been delivered. Both Metro and LB Foster agreed to a time extension change for the delivery of the bumping post. The new delivery contract date has been changed from 12/31/2014 to 9/30/2015. | | | | | Cost Assessment: The current contract cost forecast is \$5,184,044.79. No invoice was received in March 2015. | | | |
| Schedule Summary: | | | | | Cost Summary: \$ Ir | n millions | | |
| Date of Award: | | | 01/23/14 | ļ | 1. Award Value: | 5.2 | | |
| Notice to Proceed: | | | 03/07/14 | ļ | Executed Modifications: | | | |
| Original Substantial Completion | Duration: | | 300 |) | Approved Change Orders: | | | |
| Current Substantial Completion | | | 558 | 3 | 4. Current Contract Value (1 + 2 + 3): | _ 5.2 | | |
| 5. Elapsed Time from NTP: | | | 385 | ; | 5. Incurred Cost: | 4.8 | | |
| Milestones | Original | Current | Enroport | Calendar Day | PERCENT COMI from 3/7/2014 to 03 | | | |
| Milestone 1 - Contract Substantial | 12/31/14 | O9/30/15 | Forecast 09/30/15 | Variance 0 | | | | |
| Completion | | | | 0 | Design 0% | | | |
| | | | | | Construction | 93% | | |
| | | | | 0 | 55100000011 | | | |
| | | | | 0 | Total Incurred Cost | 93% | | |
| | | | | 0 | | | | |
| | | | | 0 | 0% 20% 40% 60 Percent Complete | | | |
| | | | | | Construction physical percent con | nplete excludes | | |

CONSTRUCTION PHOTOGRAPHS



Green Line Bridge Bent 1A CIDH Safety Can Drilling.



Green Line Underpass Drilling for Isolation Casing at Bent 2A.



UG#1 Preliminary Excavation in Zone 3.

49



Century Aviation Aerial Structure Abutment 1 Excavation for Qwest Line Relocation.



MLK Decking Operations.



Vernon Piling Operation.



Soil Removal at Hobas Pipe at Exposition Station.



DWP Relocation of 24" Waterline at Vernon.



Soil Removal at Beam 32-33 at Exposition Station.



Temporary Support of Storm Drain at Exposition Station.



Soil Grading at -21 Feet Level Prior to Installation of Bracing.



Excavation for Decking at MLK.



Stock Pile of the Recycled Concrete from the old Century Bridge demolished in July, 2014.

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.

The Original Budget plus all budget amendments approved by CURRENT BUDGET

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

PROFESSIONAL

SERVICES 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

Includes design engineering, project management assistance,

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 **ADA** Americans with Disabilities Act ADR Alternative Dispute Resolution **AFC** Approved for Construction Administrative Law Judge ALJ **AMC** Airport Metro Connector **Automated People Mover** APM **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 BLS Bureau of Labor Statistics

BNSF Burlington Northern Santa Fe Railway Company

BOC Bus Operations Control

CADD Computer Aided Drafting and Design
CALTRANS California Department of Transportation
CARB California Air Resources Control Board

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

CIDH Cast in Drilled Hole

CIP Cast in Place

CLC Community Leadership Council

CM Construction Manager

CMAQ Congestion Mitigation and Air Quality Improvement Program

CMU Concrete Masonry Unit

CN Change Notice
CO Change Order
COI City of Inglewood
COLA City of Los Angles
CPM Critical Path Method

CPUC California Public Utilities Commission

CR Camera Ready

CRMMP Cultural Resources Monitoring and Mitigation Plan

CSM Cutter Soil Mixing

CSP Cost and Schedule Proposal
CSPP Construction Safety Phasing Plan

LIST OF ACRONYMS (Continued)

| СТВ | Cement Treated Base |
|-------|---|
| | |
| CTC | California Transportation Commission |
| CUD | Contract Unit Description |
| CWP | Construction Work Plan |
| DB | Design Build |
| DBB | Design Bid Build |
| DBE | Disadvantaged Business Enterprise |
| DDR | Design Deviation Report |
| DOT | Department of Transportation |
| DRB | Dispute Review Board |
| DWP | Department of Water and Power |
| E&O | Error and Omission |
| EEO | Equal Employment Opportunity |
| EIR | Environmental Impact Report |
| EIS | Environmental Impact Statement |
| ENC | Equipment Noise Certification |
| EPA | Environmental Protection Agency |
| EPBM | Earth Pressure Balance Machine |
| ESA | Environmental Site Assessment |
| FAA | Federal Aviation Administration |
| FAR | Federal Acquisition Regulation |
| FAT | Factory Acceptance Testing |
| FCBC | Faith Central Bible Church |
| FD | Final Design |
| FEIR | Final Environmental Impact Report |
| FEIS | Final Environmental Impact Statement |
| FEMA | Federal Emergency Management Agency |
| FFGA | Full Funding Grant Agreement |
| FIS | Financial Information System |
| 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 |
| GDR | Geotechnical Data Report |
| GDSR | Geotechnical Design Summary Report |
| GFE | Good Faith Effort |
| HDPE | High Density Polyethylene |
| HMM | Hatch Mott MacDonald |
| HNTB | Howard, Needles, Tammen and Bergendoff |

LIST OF ACRONYMS (Continued)

IFB Invitation for Bid

IFC Issued for Construction

IPMO Integrated Project Management Office ITF Intermodal Transportation Facility

JHA Job Hazard Analysis

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

LACO Los Angeles County

LACFCD Los Angeles County Flood Control District

LACMTA Los Angeles County Metropolitan Transportation Authority

LACSD Los Angeles Sanitation Department

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

LAFD Los Angeles Fire Department
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

MBE Metro Builders and Engineers Group, Ltd

MCA Master Cooperative Agreement

MGL Metro Green Line

MIC Microbiologically Influenced Corrosion Control System

MIS Major Investment Study

MMRP Mitigation Monitoring Reporting Plan

MOA Memorandum of Agreement
MOS Minimum Operating Segment
MOU Memorandum of Understanding
MPS Master Program Schedule
MPSR Monthly Project Status Report
MSDS Material Safety Data Sheet
MSF Maintenance & Storage Facility

LIST OF ACRONYMS (Continued)

N/A Not Applicable
NAVAIDS National Aid Systems

NEPA National Environmental Protection Act NFPA National Fire Protection Association

NNC Notice of Noncompliance 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

PID Photo Ionization Detector
PIP Project Implementation Plan
PLA Project Labor Agreement

PM Project Manager

PMIP Project Management Implementation Plan

PM Project Manager

PMIP Project Management Implementation Plan
PMMP Paleontological Monitoring and Mitigation 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

REAP Rain Event Action Plans
RFC Request For Change
RFI Request for Information
RFMP Rail Fleet Management Plan

LIST OF ACRONYMS (Continued)

| | , |
|--------|---|
| RFP | Request For Proposals |
| RFQ | Request For Qualifications |
| RHA | Risk Hazard Analysis |
| RLPE | Red Light Photo Enforcement |
| ROC | · · · · · · · · · · · · · · · · · · · |
| | Rail Operations Center Record Of Decision |
| ROD | |
| ROE | Right of Entry |
| 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 |
| SCADA | Supervisory Control and Data Acquisition |
| SCAQMD | Southern California Air Quality Management District |
| 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 |
| SOE | Support of Excavation |
| SOP | Standard Operating Procedure |
| 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 |
| SWY | Southwestern Yard (Division 16) |
| TBD | To Be Determined |
| TBM | Tunnel Boring Machine |
| TCC | Train Control/Communications |
| TCE | Temporary Construction Easement |

| Crenshaw/LAX Transit Project |
|--|
| Ouarterly Project Status Report |

March 2015

APPENDIX

LIST OF ACRONYMS (Continued)

| TCRP | Traffic Congestion Relief Program |
|-------|--|
| TIFIA | Transportation Infrastructure Finance and Innovation Act |
| TIGER | Transportation Investment Generating Economic Recovery |
| | — |

TOD Transit Oriented Development TPSS Traction Power Substation

TRACS Transit Automatic Control System

TSC Traffic Signal Conduit
TSL Temporary Street Lighting

TSM Transportation System Management

TVA Threat Vulnerability Analysis
TVM Ticket Vending Machine
UBC Uniform Building Code
UFS Universal Fare System

UG Underground UOM Unit of Measure

USDOT United States Department Of Transportation

UST Underground Storage Tank

VE Value Engineering

WBS Work Breakdown Structure

WP Work Package

WSCC Walsh/Shea Corridor Constructor

WTCP Work Traffic Control Plan

YOE Year of Expenditure