

Los Angeles County  
Metropolitan Transportation Authority

# Regional Connector Transit Corridor

East Los Angeles ↔ Santa Monica

Azusa ↔ Long Beach



**Metro**<sup>®</sup>

# **REGIONAL CONNECTOR TRANSIT CORRIDOR 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).

**December 2015**

## TABLE OF CONTENTS

	Page No.
Project Summary.....	1
Project Overview & Status.....	2-4
Management Issues/Opportunities.....	5-6
Project Alignment.....	7
Base Project Scope.....	8-10
Project Status	
• Project Schedule	
○ Key Milestones Six-Month Look Ahead.....	11
○ Project Summary Schedule.....	12
○ Schedule Measurements.....	13
○ Overall Construction Progress Curve Status.....	14-15
○ Major Equipment Delivery Status.....	16
○ Design-Builder’s (C0980) Long Lead Item List.....	17-20
○ Critical Path Narrative.....	21
• Project Cost	
○ Schedule Contingency Drawdown.....	22
○ Project Cost Status & Analysis.....	23-24
○ Cost Contingency Drawdown and Analysis.....	25
○ Summary of Contract Modifications.....	26
○ Disadvantaged Business Enterprise (DBE) Status.....	27
○ Project Labor Agreements Status.....	27
• Financial/Grant	
○ Financial/Grant Status.....	28
• Staffing Status	
○ Total Project Staffing.....	29
○ Metro Staff.....	30
○ Construction Management Support Services Consultant.....	30
○ Engineering Services Consultant.....	31
• Real Estate Status.....	32
• Real Estate Acquisition.....	32-33
• Quality Assurance Status.....	34
• Environmental Status.....	35
• Construction and Community Relations Status .....	36-37

## **TABLE OF CONTENTS (Cont.)**

• Creative Services Status.....	37
• Safety and Security.....	38
• Third Party Agreement and Advanced Utility Relocation Status.....	39-40
• C0980 Utility Work Status.....	41
• Peak Hour Construction Variances.....	41
• Police Commission Construction Variances.....	42
• California Public Utilities Commission (CPUC) Crossing Summary.....	42
• Chronology of Events.....	43-44
• Construction Contracts	
• Contract Status	
• Contract C0980.....	45-46
• Construction Photos.....	47-48
• Appendices	
• Cost and Budget Terminology.....	49
• List of Abbreviations and Acronym.....	50-53

**PROJECT SUMMARY**

**As of December 2015**

<b>LOCATION:</b> Downtown Los Angeles				<b>CONSTRUCTION MANAGEMENT CONSULTANT:</b> ARCADIS			
<b>DESIGN CONSULTANT:</b> Connector Partnership JV				<b>CONTRACTORS:</b> Regional Connector Constructors, Joint Venture			
TBM Pit at Mangrove Yard				<b>WORK/ACTIVITY COMPLETED PAST MONTH</b>			
				<ul style="list-style-type: none"> <li>As of Dec. 2015, DB construction is 6.1% and Final Design is 88% complete.</li> <li>Metro completed review of submittals for 100% Design Flower St. and Design Overhead Contact System, Alameda and Wye alignments, and 85% Design 2nd/Hope Station, Train Control and Communications.</li> <li>RCC completed decking for the Shoofly Bridge and TBM Pit.</li> <li>RCC completed TBM approach slabs.</li> <li>RCC installed temporary communication in preparation for Bus Bridge #1 at 1st/Alameda.</li> <li>Sprint Contractor completed fiber optic relocation on Broadway.</li> <li>RCC placed Vault 207 on Broadway.</li> <li>RCC completed 24" storm drain installation on WB 1st Street/Mangrove, including catch basins and manholes.</li> <li>RCC completed 12" water tie-in at E. 1st Street.</li> </ul>			
<b>EXPENDITURE STATUS (\$ In Millions)</b>				<b>SCHEDULE ASSESSMENT</b>			
<b>ACTIVITIES</b>	<b>CURRENT BUDGET</b>	<b>EXPENDED AMOUNT</b>	<b>PERCENT EXPENDED</b>	<b>MAJOR SCHEDULE ACTIVITIES</b>	<b>PRIOR PERIOD</b>	<b>CURRENT PLAN</b>	<b>VARIANCE WEEKS</b>
<b>DESIGN</b>	\$127.4	\$106.5	83.6%	<b>Environmental</b>			
				FEIS / FEIR	N/A	04/26/12	Complete
<b>RIGHT-OF-WAY</b>	\$110.5	\$68.6	62.1%	<b>Design</b>			
				SEIS Flower St.	N/A	12/18/15	Complete
<b>CONSTRUCTION</b>	\$1,087.6	\$247.2	22.7%	PE Notice to Proceed	N/A	01/04/11	Complete
<b>OTHER</b>	\$273.5	\$75.8	27.7%	Final Design complete	07/26/16	07/26/16	0
<b>TOTAL</b>	<b>\$1,598.9</b>	<b>\$498.1</b>	<b>31.2%</b>	Note: Based on the latest approved D/B Contractor's schedule.			
Current Budget reflects Board approved Life-of-Project Budget and includes Finance Charges. Note: Expended amount is through November 2015				<b>Right-of-Way</b>			
				All parcels available	06/01/16	06/01/16	0
<b>AREAS OF CONCERN</b>  <ul style="list-style-type: none"> <li>NEPA Law suits could potentially delay the construction of Design-Build Contract on Flower Street. MTA and FTA completed SEIS (Supplemental Environmental Impact Statement) and issued it for public comments on June 12, 2015. The Final SEIS was issued on Dec. 18, 2015.</li> <li>Advanced Utility Relocation (AUR) Contract was terminated and transferred to C0980 Contract. Schedule mitigation measures are being implemented and alternative scenarios are identified by RCC, DWP and Metro. Major street closures are being coordinated with LABOE, LADOT and CD14. Metro and RCC are coordinating with DWP on the re-design and construction issues to mitigate construction schedule at Flower, 2nd/Broadway and 1st/Central stations. Conceptual Schedule Recovery Plan has been developed and field work started at several locations.</li> </ul>				Note: ROW dates are adjusted to reflect the latest D/B Contractor's coordinated need Dates. Duco Yard need date is in August 2018.			
				<b>Construction - Design / Build Contract</b>			
				Notice to Proceed	07/07/14	07/07/14	Complete
				Construction complete	03/31/21	03/31/21*	0
				Revenue Service Date	05/29/21	05/29/21*	0
				Note: * Based on the Board Meeting in April 2015, the project is reflecting five months delay due to contract milestones AUR work transferred to C0980 Contract and recovery.			
				<b>CRITICAL ACTIVITIES / 3 MONTH LOOK AHEAD</b>			
				<ul style="list-style-type: none"> <li>Metro continues to work with RCC and FLS committee to resolve emergency ventilation design issues.</li> <li>RCC continues pile installation at the TBM Pit and 1st/Central Station.</li> <li>RCC continues work on 1st Street EB and WB Widening.</li> <li>RCC continues to install track at Mangrove.</li> <li>RCC continues demolition and earthwork for shoofly.</li> <li>RCC continues 6", 8", 12" and 16" water line construction activities at 1st/Alameda.</li> <li>RCC continues with the installation of electrical duct banks at 2nd/Hope and 2nd/Broadway Station area.</li> <li>RCC continues the 18" SD Laterals install at 2nd/Hope.</li> <li>RCC will begin implementation of Bus Bridge #1 (January 2016).</li> <li>RCC will resume pile trenching for the Wye at 1st/Alameda in various work areas.</li> <li>RCC will resume pile trenching at 2nd/Broadway.</li> <li>RCC will begin SOE Pile installing at 2nd/Hope.</li> <li>RCC will begin DWP duct bank/vault potholing at 6th/Flower.</li> </ul>			
<b>ROW ACQUISITION</b>	<b>PLAN</b>	<b>ACQUIRED</b>	<b>REMAINING</b>				
<b>PERMANENT PARCELS</b>	5	2	3				
<b>TEMPORARY PARCELS</b>	29	12	17				
<b>TOTAL PARCELS</b>	34	14	20				

## **PROJECT OVERVIEW & STATUS**

The Regional Connector Transit Corridor Project (Project) will link the current terminus of the Blue and Expo Lines at 7th/Metro Center to the Gold Line near the Little Tokyo/Arts District Station in a new underground alignment along Flower Street and Second Street in Downtown Los Angeles. The Project is scheduled to become operational in two phases: one to tie into the existing Eastside Gold Line along 1st Street; and subsequently to the existing Gold Line to Pasadena along Alameda Street toward Union Station. Revenue Service Date (RSD) is forecasted for May 2021 (FFGA planned RSD is May 2021).

The alignment will extend underground from the 7th Street/Metro Center Station under Flower Street to 2nd Street. It will then proceed east underneath the 2nd Street tunnel to just west of Central Avenue where the alignment will veer northeast under privately-held property, Japanese Village Plaza. At 1<sup>st</sup> Street and Central, the tracks continue underground heading northeast under 1<sup>st</sup> and Alameda Streets. A junction (“Wye”) will be constructed underground beneath the 1st and Alameda intersection. To the north and east of the junction, trains will rise to the surface through two new portals to connect to the Metro Gold Line heading north to Pasadena and east to Atlantic Boulevard. One portal will be located northeast of the Little Tokyo/Arts District Station and tracks. This portal will rise to the north within the City of LA DWP Maintenance Yard and connect to the existing LRT bridge over the US-101 freeway, allowing a connection to the Metro Gold Line to Pasadena. The portal will be connected to the 1st and Alameda junction by a new cut and cover box structure crossing beneath Temple Street and the parcel on the northeast corner of 1st and Alameda Streets, running immediately east of the existing Little Tokyo/Arts District Station and tracks. The second portal will be located within 1st Street between Alameda and Vignes Streets. Tracks will rise to the east within this second portal and connect at-grade to the existing Metro Gold Line tracks toward Atlantic Boulevard.

### **Major Contract Procurement**

The Board authorized to solicit a major Design/Build (D/B) contract, C0980, in August 2011. Metro staff recommended to award contract C0980 to the Regional Connector Constructors, a joint venture of Skanska USA Civil West California District, Inc. and Traylor Brothers, Inc. and Metro Board authorized award of the contract on April 24, 2014 in the amount of \$927,226,995; Notice to Proceed (NTP) to Design Builder, Regional Connector Constructors, issued July 7, 2014. Solicitation of an Advanced Utility Relocations Contract, C0981R, completed February 2014 after Metro’s Procurement team awarded the contract to Pulice Construction, Inc. in January 2014 and issued NTP on February 18, 2014. Contract C0981R was terminated for convenience on April 14, 2015 and remaining AUR work has been transferred to C0980, D/B contractor.

## **PROJECT OVERVIEW & STATUS (Cont.)**

### **Construction**

*The bus bridging work will begin on January 8, 2016 and will last 72 days. The Little Tokyo Station will be demolished and currently, shoofly tracks and OCS foundation are being constructed in Mangrove Yard. Decking for TBM pit is completed and approach slab for TBM has been constructed. Pile trenching at 1<sup>st</sup>/Central is on-going. Grouting work is planned to begin in January. Instrumentation is being installed at various locations including JVP, 2<sup>nd</sup>/Broadway, Flower Street, and 2<sup>nd</sup>/Hope Station. Street widening work is on-going on 1<sup>st</sup> Street (both east and west bound). Pile trenching is continuing at 2<sup>nd</sup>/Broadway and SOE pile excavation is on-going at 2<sup>nd</sup>/Hope.*

### **Systems**

The existing functional operations at the Rail Operations Center (ROC) necessitate an expansion to accommodate the central control functions associated with five new rail lines and extensions including the Regional Connector Transit Corridor Project. Design for the ROC Reconfiguration Project was completed to reconfigure the second floor to prepare for Expo II and Foothill Rail Line extensions, and the design will be further updated and reissued with each successive integration of the following rail line extensions including Crenshaw/LAX, Regional Connector and Purple Line.

### **Light Rail Vehicle**

Four Light Rail Vehicles (LRVs) for the Project will be procured and delivered by Kinkisharyo International, LLC under Contract P3010. The base contract includes 235 LRVs and options which will add up to 157 LRVs to the total. The four LRVs for the Regional Connector Project are currently in Option 2 of the P3010 Contract. Manufacturer continued performing qualification and post shipment tests on prototype cars 1 and 2 at LACMTA's Green Line shop.

### **Program Management**

*The current budget was established in the December 2015 session of the Metro Board. The Board revised Life-of-Project (LOP) budget of \$1,558,956 for the RCTC Project No. 860228 and maintained the LOP budget of \$39,991,168 for RCTC Project No. 861228 for Concurrent Non-FFGA Project activities. The current project cost has been revised to \$1.598 billion dollars.*

Funding for the project comes from a variety of sources to include Federal New Starts, TIFIA Loan, State repayment of capital project loan, State Proposition 1B, State proposition 1A (High Speed Rail), local agency and lease revenues, and from the Congestion Mitigation and Air Quality improvement program. The bulk of the funding - 47% - comes from Federal New Starts.

## **PROJECT OVERVIEW & STATUS (Cont.)**

*The project commitments through December 2015 increased by \$4.19 million to \$1.291 billion or 82.81% of the Current Budget. The increase is due to RCC modifications, community relations and additional environmental/planning. Project expenditures through November 2015 are \$475.45 million or 30.5% of the current budget. The expenditures to date are for Engineering Management and continuation of Construction Management Support Services, third party utility relocation work, agency administration, advanced utility relocation construction (C0981R), design build contract (C0980), right-of-way, various Master Cooperative Agreements and other professional services.*

*The project master schedule reflects a forecast of May 2021 for Revenue Service, which will be executed in two phases. Phase I Revenue Service Date to Eastside is in February 2021 and phase II Revenue Service Date to Pasadena is in May 2021.*

*A Risk Register during the PE phase was developed for the project and was updated quarterly during the early phases of the project to reflect new A more comprehensive risk register was developed and is reviewed and updated based on joined review by Metro, CPJV, CMSS, RCC and FTA/PMOC on a monthly basis for the current phase of the project. Risk Management reporting will continue to be on a quarterly basis. Metro is targeting a refresh assessment in spring 2016.*

## MANAGEMENT ISSUES / OPPORTUNITIES

**Concern No. 1:** NEPA Law suits potentially delay the construction.

**Status/Action** The NEPA trial concluded on Feb. 24, 2014. In an order issued on May 29, 2014, Judge Kronstadt concluded the FEIS did not sufficiently discuss alternative tunneling methods. *MTA and FTA completed SEIS (Supplemental Environmental Impact Statement) and issued it for public comments on June 12, 2015. After FTA's review, the Final SEIS was issued on December 18, 2015.* No impact is anticipated.

**Concern No. 2:** *Utility relocations have been delayed, impacting RCC's schedule.*

**Status/Action** *Metro and RCC are collaborating on a schedule recovery plan which includes significant re-sequencing of work and additional measures to complete the project by the FFGA Revenue Service Date of May 29, 2021.* Elements of this recovery plan are dependent upon obtaining various street closures for station and guideway construction and are being closely managed.

**Concern No.3:** Late submittals and City approvals of traffic control plans and shoring designs may impact critical path work at 1<sup>st</sup>/Central, 2<sup>nd</sup>/Hope, 2<sup>nd</sup>/Broadway Stations, and Flower Street TBM retrieval shaft.

**Status/Action** Metro is working with RCC, LADOT and BOE to actively manage submission, quality review and approvals of required plans.

**Opportunity No. 1:** Metro has exercised C0980 Project Option 12 which includes elements of design required for a Super Fast Growth Rate/Arson Fire. Metro Fire Life Safety (FLS) revised the criteria to include Medium Growth Rate Fire.

**Status/Action** RCC will identify the physical elements required for the Medium Growth Rate Fire compared to the previous Super Fast Growth Rate/Arson Fire. Metro will pursue equitable adjustment to the Contract for elements associated with Super Fast Growth Rate/Arson Fire not required in C0980 Contractor's design (Potential Cost Reduction).

**Opportunity No. 2:** METRO/RCC is working with City Council District 14 and LADOT to secure approval for the closure/partial closure of the 2<sup>nd</sup>/Broadway intersection to facilitate construction of DWP utilities through that intersection. This full closure will last up to 7 months.

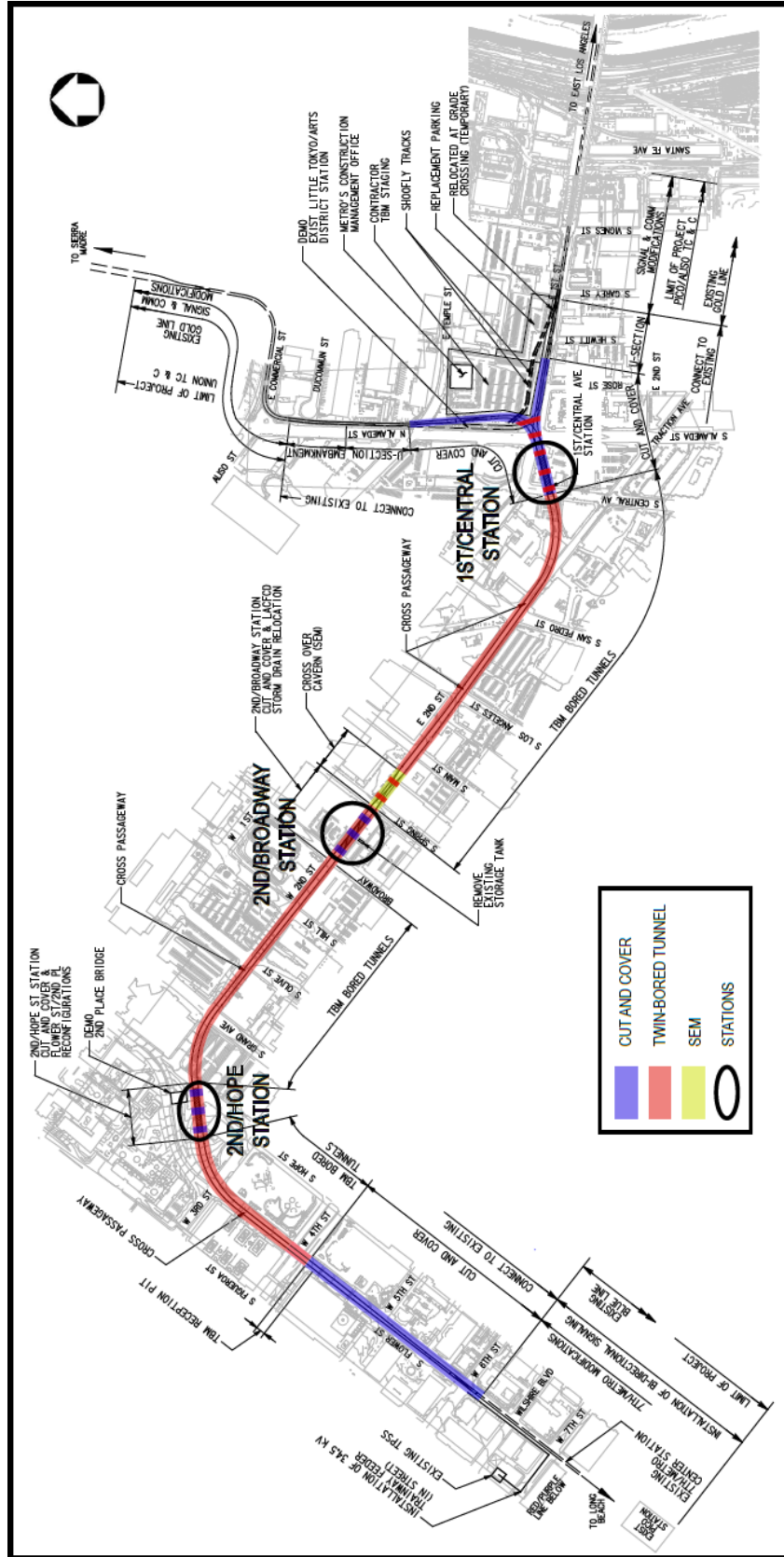
**Status/Action:** Traffic Control Plans and Traffic Management Plans submitted to LADOT for approval for full closure of 2<sup>nd</sup>/Broadway. *Review is underway and approvals are pending.* Meanwhile, utility relocation work is continuing.

## **MANAGEMENT ISSUES / OPPORTUNITIES (Cont.)**

**Opportunity No. 3:** METRO/RCC is working to modify the phasing of the waterline installation at 1<sup>st</sup>/Alameda to eliminate the necessity of having all the water line relocation work completed prior to start of the TBM operations.

**Status/Action:** *DWP has agreed to defer elements of water relocations until later in the construction sequence at 1<sup>st</sup>/Alameda. This agreement facilitates advancement of TBM operations per original recovery schedule concepts.*

# PROJECT ALIGNMENT



## **BASE PROJECT SCOPE**

### **Engineering**

*This phase consists of Preliminary Engineering (PE), Advanced PE (APE) and Final Design. During Preliminary Engineering, the Design Consultant, CPJV, was responsible for engineering, design, and development of fixed facilities, stations, guideways, tunnels, and related facilities for the Project to a level sufficient to provide the basis for final design. CPJV was also responsible for documentation necessary to support the Environmental Assessment process and the engineering and final design for advanced utility relocations.*

Alignment modifications and Value Engineering were developed during Advanced PE to accommodate environmental mitigations and further develop the design to better accommodate rail operations and reduce the cost of the Project. PE and APE were completed in March 2013.

Final design for advanced utility relocations performed by Metro and Engineering Design Consultant was completed during Advanced PE and it included DWP water and power lines as well as City of LA sewer lines. AUR final design for other utilities was performed by individual utility companies on their own.

Final Design is being performed by the D/B contractor as part of the C0980 Contract.

### **Metro Furnished Equipment**

Metro will procure Light Rail Vehicles and UFS equipment. Four Light Rail Vehicles for the Project will be procured and delivered by Kinkisharyo International, LLC under Option 2 of Contract P3010 and the vehicles would be tested and accepted at the Gold Line Yard and put in service when the line is open for Revenue Service. UFS equipment will be designed, fabricated and installed under a Metro contract.

### **Construction**

The scope of work in this phase is performed by third party utility companies and Design Build (C0980) Contract as follows:

#### **Third Party Advanced Utility Relocations**

A number of utility owners have already relocated and will continue relocating their own utilities. The utilities include fiber optic, telephone, cable television, electrical (power cable pulling and splicing), and natural gas lines, which started in late 2012 at the following locations:

- Flower Street cut-and-cover tunnel box
- 2<sup>nd</sup>/Hope Station box area
- 2<sup>nd</sup>/Broadway Station box area
- 1<sup>st</sup>/Central Station box area and Wye Structure

## **BASE PROJECT SCOPE (Cont.)**

*MCI completed splicing and removing old cable in mid-November 2015 and remaining work by Level 3 is expected to be completed by February 2016.*

### **Contract C0980 Regional Connector Design Builder**

This is the largest construction contract of the project that includes final design and construction of underground guideway, station structures; miscellaneous underground structures, trackwork, all system components including signaling, communications, traction power, overhead conductor rail, train control, communications, all electrical and mechanical equipment, and testing. The contractor will restore the site to its previous condition at the end of the project.

The design-build contractor also has to meet sensitive noise and vibration standards at Disney Music Hall and the Colburn Music School, control subsidence along the alignment, and meet various other issues for the various stakeholders along the alignment. This contract was awarded May 6, 2014 and NTP has issued July 7, 2014. *Metro has exercised several contract options as well adding the remaining Advanced Utility Relocation work (C0981R Contract) to C0980 Contract.*

### **Contract C0981R Regional Connector Advanced Utility Relocations**

Metro awarded the design-bid-build Advanced Utility Relocations Contract (Metro Contract No. C0981R) to Pulice Construction, Inc. to complete specific relocations at each of the future stations and along Flower Street in advance of the main D/B Contract C0980. The relocated utilities are long-lead construction tasks that are known to conflict with cut and cover excavations.

The scope of this work includes the following relocations: LADWP water lines, LADWP power lines, and City of Los Angeles sewer lines. Metro assisted the contractor in obtaining exemptions as necessary for the City of LA nighttime work as well as for Peak Hour work hours.

Contract C0981R was terminated for convenience on April 14, 2015 and all remaining work is transferred to C0980 Contract. Contract C0981R is currently in closeout and final payment processed.

### **Contract MCO70 – Construction Management Support Services**

Metro awarded the contract for Construction Management Support Services to ARCADIS, Inc. ARCADIS Project Manager and other staff are co-located with Metro at an integrated project management office located at the Mangrove site. *CMSS's (Arcadis) FY16 contract modification was included in July 2015 Board Report and was approved by Metro Board. Board report is prepared for January 2016 for a contract modification for funding of services through FY 2017.*

## **BASE PROJECT SCOPE (Cont.)**

### **Contract E0119 – Preliminary Engineering And Design Support Services During Construction**

Metro awarded this contract to a joint venture (CPJV) between AECOM, Inc. and Parsons Brinkerhoff. CPJV provided preliminary engineering services to support the EIR/EIS, prepared project definition documents for Contract C0980, and prepared the final design documents for Contract C0981. CPJV is currently performing design support during construction (DSDC) for the C0980 contract. CPJV's FY16 contract modifications are included in July 2015 Board Report.

## KEY MILESTONES SIX- MONTH LOOK AHEAD

	Milestone Date	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16
Metro Board approved the project LOP increase	12/03/15	M					
Start Sprint Relocation on Broadway	12/07/15	▽					
Start DWP Power line relocation at 2nd St and Spring St	12/09/15	△					
Start Gold Line Bus Bridge#1 (Shoofly Tie In)	01/09/16		◻				
1st/Central Station Package - 100% Design Submittal	01/15/16		◻				
Traffic Control Plan approved by LADOT for SOE work at 2nd/Hope Station	01/16/16		△				
Traffic Control Plan approved by LADOT for Utility & SOE work at 2nd/Broadway	01/23/16		△				
Traffic Control Plan approved by LADOT for SOE work at Flower Street	01/30/16		△				
DU03A SEM/Crossover - 100% Design Submittal	02/05/16			◻			
Civil Segment A (Flower to Hope) - 85% Design Submittal	02/05/16			◻			
2nd/Hope Station Package - 100% Design Submittal	02/12/16			◻			
DU09 OCS Package - AFC Submittal Approved	02/26/16			◆			
2nd/Broadway Station Package - 100% Design Submittal	03/02/16				◻		
1st/Central Station Package - AFC Submittal Approved	03/07/16				◆		
DU03A SEM/Crossover - AFC Submittal Approved	03/14/16				◆		
Complete Gold Line Bus Bridge#1 (Shoofly Tie In)	03/21/16				◻		
2nd/Hope Station Package - AFC Submittal Approved	04/29/16					◆	
2nd/Broadway Station Package - AFC Submittal Approved	05/30/16						◆

◆ MTA Staff

M MTA Board Action

⊠ FTA (Federal Transit Administration)

△ Other Agencies

◻ Contractors

○ Design Consultant

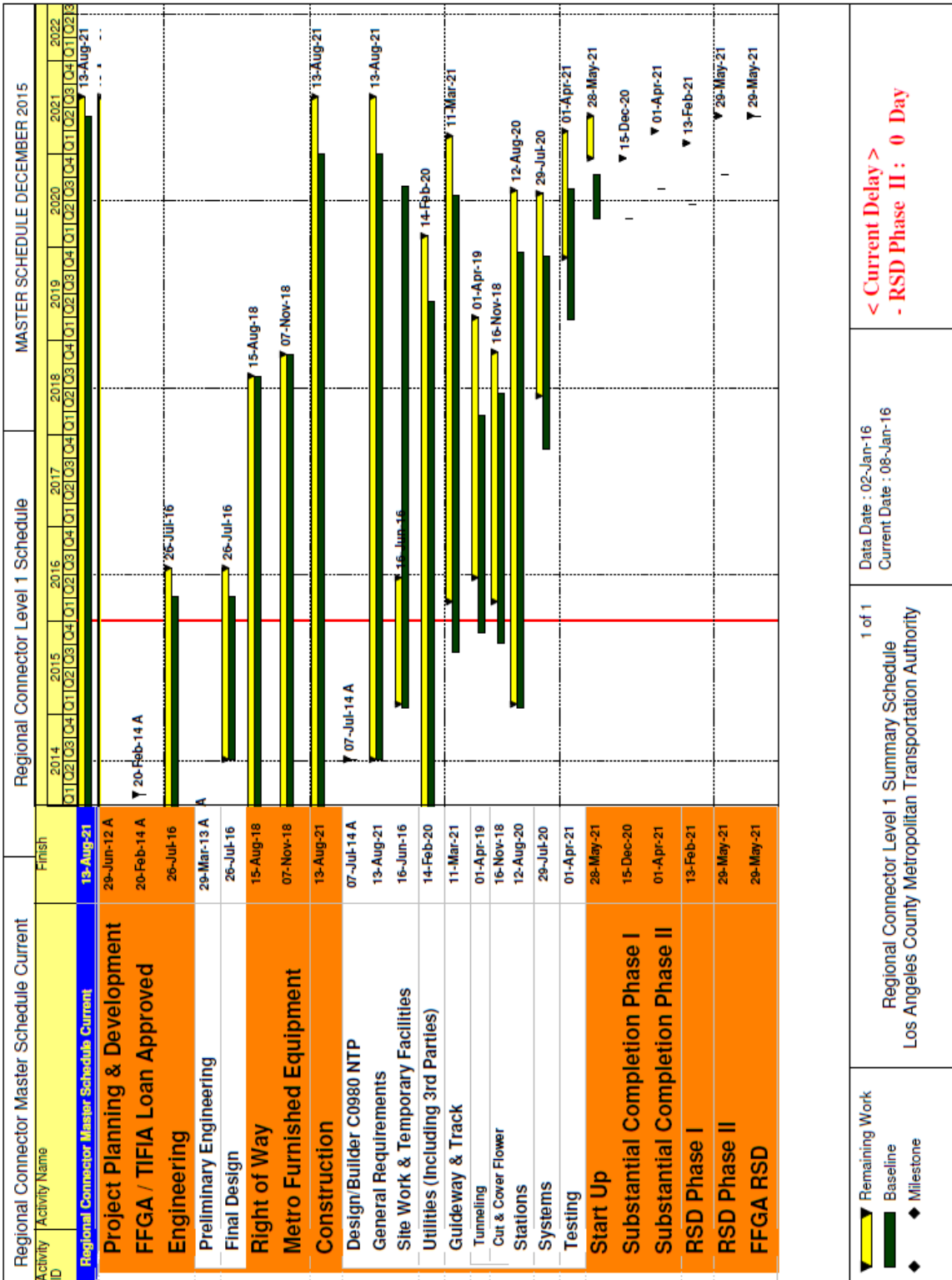
◻ C0980 D/B Contractor

"A" following date is actual and completed

\* New

▽ Utility Company

# PROJECT SUMMARY SCHEDULE



< Current Delay >  
 - RSD Phase II : 0 Day

Data Date : 02-Jan-16  
 Current Date : 08-Jan-16

1 of 1  
 Regional Connector Level 1 Summary Schedule  
 Los Angeles County Metropolitan Transportation Authority

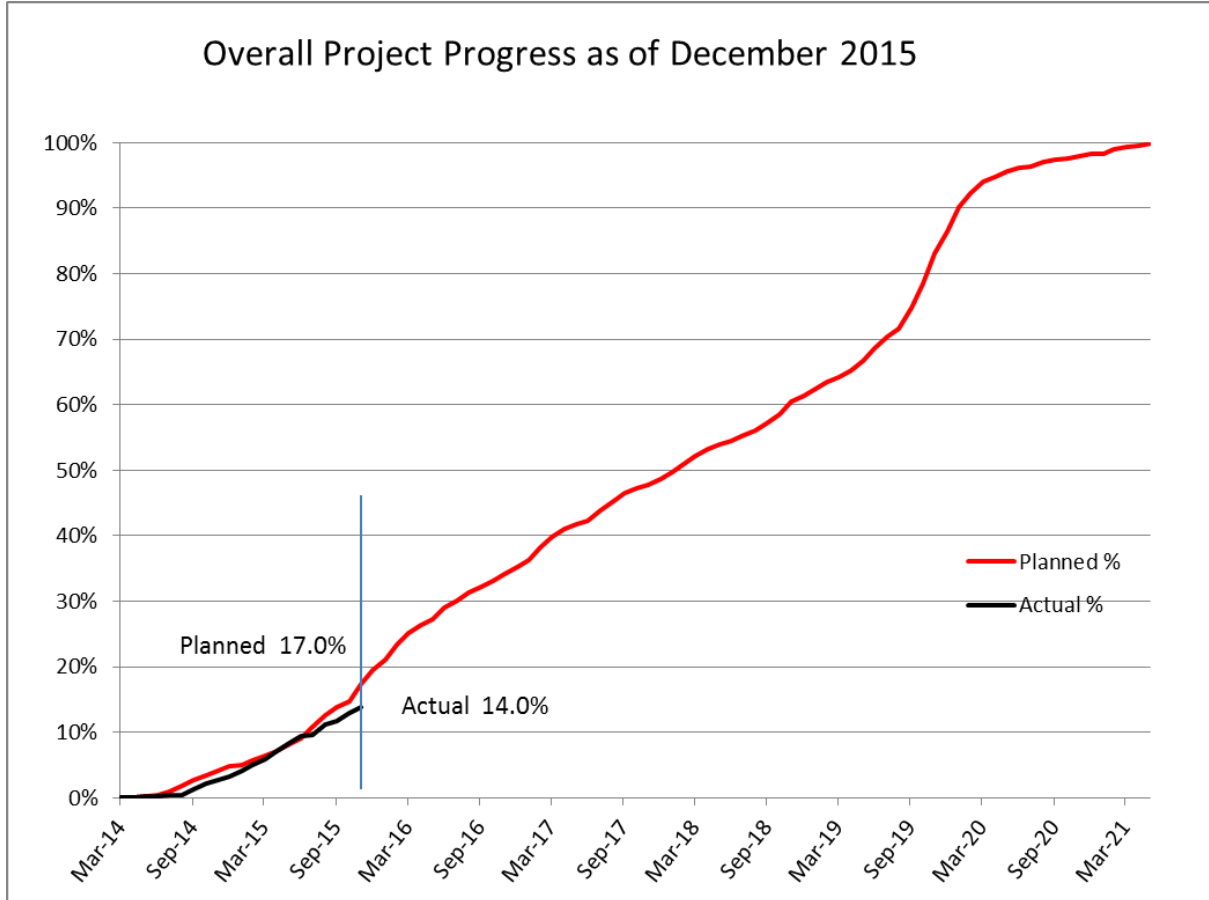
Remaining Work  
 Baseline  
 Milestone

**SCHEDULE MEASUREMENTS**

	Status	Change from Last	Comment
Forecast Revenue Service	5/29/2021	0 CD	Schedule Recovery Measures and Acceleration plans are being developed
TIFIA Revenue Service	5/29/2021	None	
FFGA Revenue Service	5/29/2021	None	
<b>Final Design Progress :</b>			
Contract C0980	88.0%	3.8%	4 months Behind
<b>Construction Contracts Progress :</b>			
Contract C0981R	100%		Termination for Convenience (4/14/2015). Contract in closeout
Contract C0980	6.1%	0.7%	5 months behind (Compared to the Contract Substantial Completion)

**Note:** Method of Construction Progress Measurement has been modified to reflect current methodology, excluding all General Requirements, Construction Mobilization, Design Mobilization, Final Design and Provisional Sum (Schedule C) including executed Modifications and change orders.

**OVERALL PROJECT PROGRESS CURVE STATUS**



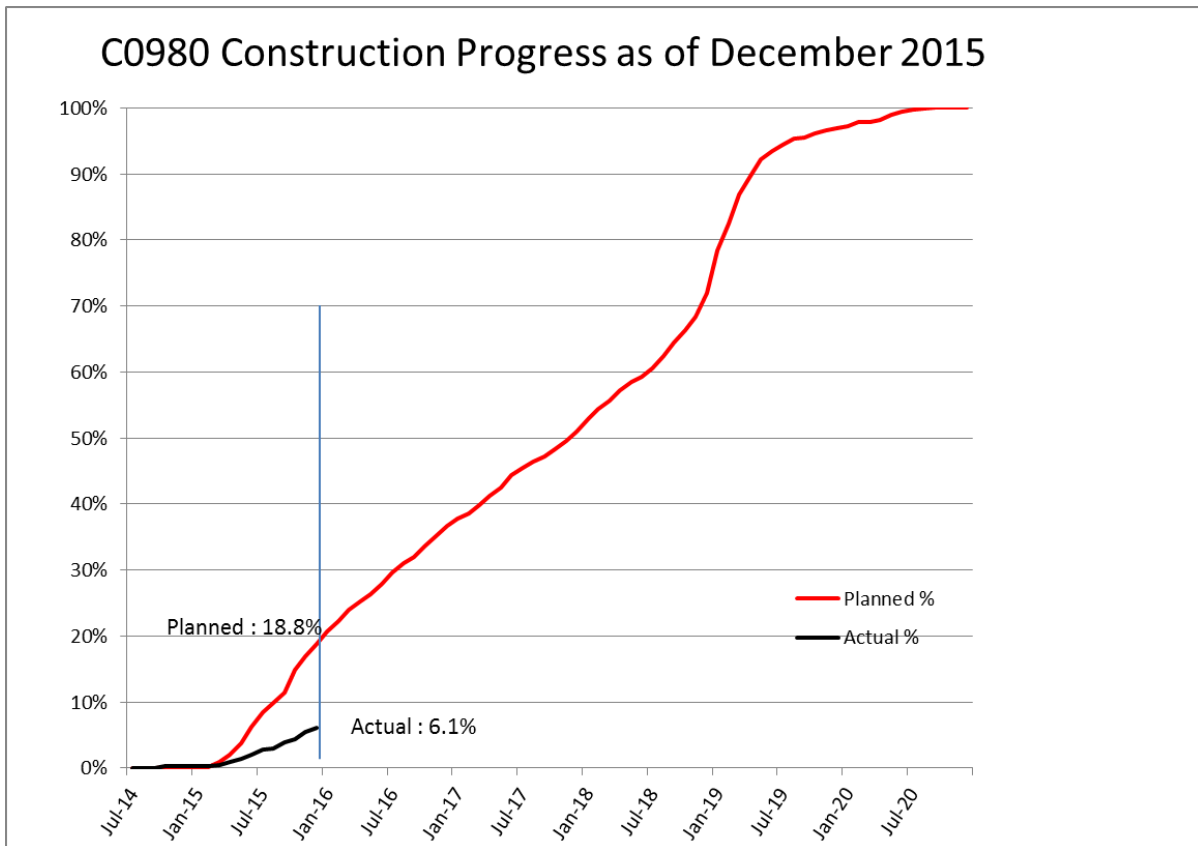
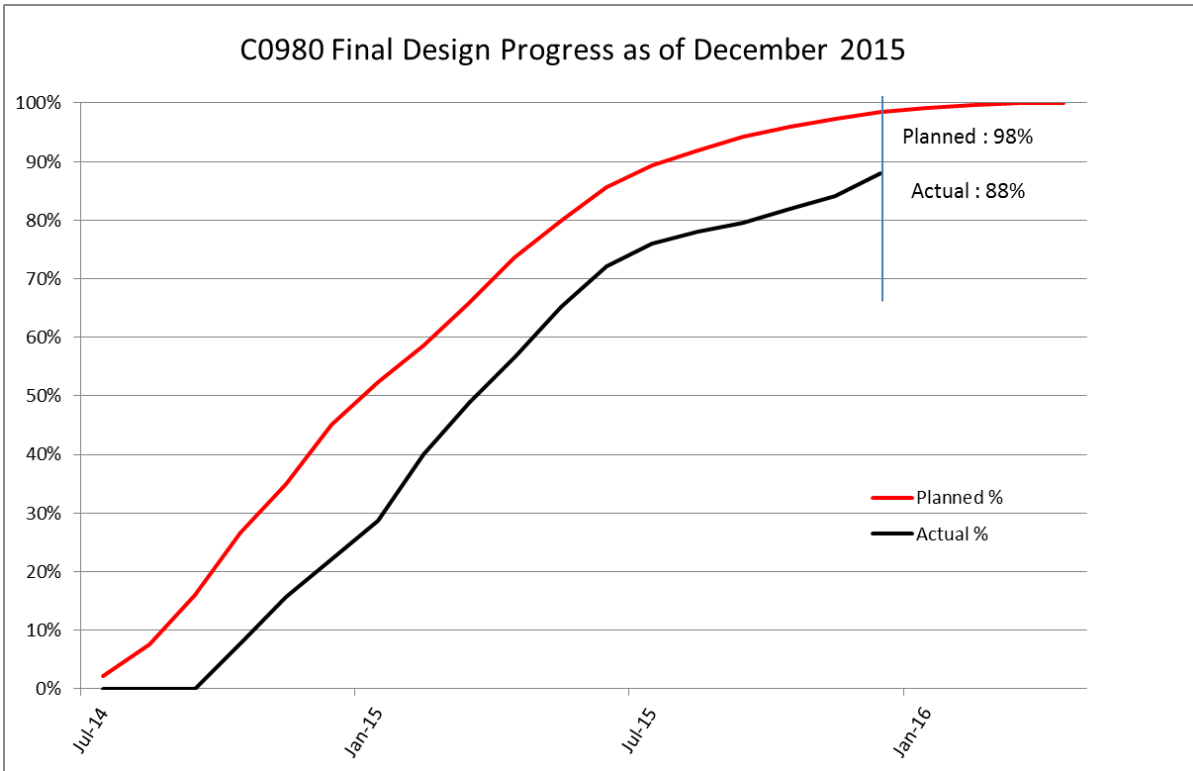
The above progress curve is based on planned expenditures of C0980 (Design-Build and C0981 (AUR) Baseline Schedule and actual expenditures.

*The cumulative overall project progress for C0980 & C0981R Contract is 14%.*

Contract C0981R was terminated for convenience on April 14<sup>th</sup>, 2015, and is going through final payment and closeout.

Final Design for C0980 commenced upon MTA issuing NTP on July 7, 2014. *Cumulative final design progress is 88% and the cumulative construction progress is 6.1%.*

**Note:** Method of Overall Project Progress Measurement has been modified to reflect current methodology, excluding all General Requirements, Construction Mobilization, Design Mobilization and Provisional Sum (Schedule C) including executed Modifications and change orders.



## **MAJOR EQUIPMENT DELIVERY STATUS**

### **Tunnel Boring Machine**

RCC, the design-builder for C0980, will design and procure the tunnel boring machine (TBM) and equipment.

Following are key dates for TBM design and procurement:

<b>Activity Name</b>	<b>Early Finish</b>	<b>Need Date</b>
LACMTA ACCEPTED TBM GENERAL ARRANGEMENT DRAWINGS	08/29/14 A *	9/3/2015
TBM DESIGN	02/12/15A *	7/23/2015
EXCECUTED TBM PURCHASE ORDER - PAYMENT 1	04/27/15A *	10/16/2015
EXCECUTED TBM PURCHASE ORDER - PAYMENT 2	05/29/15A *	12/1/2015
EXCECUTED TBM PURCHASE ORDER - PAYMENT 3	06/29/15A *	1/14/2016
EXCECUTED TBM PURCHASE ORDER - PAYMENT 4	07/31/15A *	2/26/2016
FAB/DELIV PRECAST TUNNEL LINER MOLDS	7/30/15A *	7/8/2016
TBM REBUILD	12/24/2015	2/26/2016
VERIFIED ASSEMBLY / TEST OF TBM AT FABRICATION SHOP	1/18/2016	3/18/2016
FAB/DELIV TBM MACHINE TO SITE	2/17/2016	4/19/2016
VERIFIED TBM SHIPPED TO SITE	2/18/2016	4/20/2016

\* A: the date is actual and completed

*Note: Metro team will be at the TBM retrofit site for review and testing from 1/13/16 to 1/15/16.*

### **Light Rail Vehicles**

Four Light Rail Vehicles (LRVs) for the Project will be procured and delivered by Kinkisharyo International, LLC under Contract P3010. The base contract includes 235 LRVs and options which will add up to 157 LRVs to the total. The four LRVs for the Regional Connector Project are currently in Option 2 of the P3010 Contract. LRV design and design reviews as well as manufacturing of the prototype vehicles continued this period. Manufacturer continued performing qualification and post shipment tests on prototype cars 1 and 2 at LACMTA's Green Line shop.

### **UFS (Universal Fare System) & TVM (Ticket Vending Machines)**

Procurement of UFS and TVM will commence after the design-builder completes the final design. Metro (TAP) is coordinating with RCC for installation and testing schedule.

**DESIGN-BUILDER'S (C0980) LONG LEAD ITEM LIST**

<b>Activity Name</b>	<b>Early Finish</b>	<b>Need Date</b>
PROCURE ARBORIST SUBCONTRACTOR	1-Aug-15	24-Apr-15
PROCURE MOT DESIGNER	1-Aug-15	16-Mar-15
PROCURE FENCE SUBCONTRACTOR	1-Aug-15	1-Jun-15
PROCURE SAWCUT SUBCONTRACTOR	1-Aug-15	6-Feb-15
PROCURE HAUL SUBCONTRACTOR	1-Aug-15	19-Mar-15
PROCURE READY MIX SUPPLIER - POTHOLING	1-Aug-15	6-Feb-15
PROCURE WELD SUBCONTRACTOR	1-Aug-15	3-Jun-15
PROCURE READY MIX SUPPLIER - STRUCTURAL CONC.	1-Aug-15	21-Dec-15
PROCURE PRE/POST CONSTRUCTION SURVEY SUBCONTRACTOR	1-Aug-15	14-Apr-15
PROCURE DESIGN (TOPOGRAPHIC) SURVEY SUBCONTRACTOR	1-Aug-15	3-Mar-15
PROCURE SWEEPER TRUCK PURCHASE ORDER	1-Aug-15	6-Feb-15
PROCURE PORTABLE TOILET PURCHASE ORDER	1-Aug-15	6-Feb-15
PROCURE ROLL-OFF DUMPSTER PURCHASE ORDER	1-Aug-15	6-Feb-15
PROCURE NOISE BARRIER PURCHASE ORDER	1-Aug-15	7-Jul-15
PROCURE ENVIRONMENTAL CONSULTANT	1-Aug-15	6-Feb-15
PROCURE NOISE & VIBRATION CONSULTANT	1-Aug-15	6-Feb-15
PROCURE GEOTECHNICAL INSTRUMENTATION SUBCONTRACTOR	1-Aug-15	18-Jun-15
PROCURE CLEARING SUBCONTRACTOR	1-Aug-15	17-Jun-15
PROCURE BUILDING PROTECTION GROUTING SUBCONTRACTOR	1-Aug-15	18-Sep-15
PROCURE NOISE BARRIER SUBCONTRACTOR	1-Aug-15	7-Jul-15
PROCURE ROADSIDE SIGNS SUBCONTRACTOR	1-Aug-15	6-Feb-15
PROCURE BIOLOGIST SUBCONTRACTOR	1-Aug-15	24-Apr-15
PROCURE TRACK SUBCONTRACTOR - SHOOFLY	1-Aug-15	29-Jun-15
PROCURE SHORING PURCHASE ORDER	1-Aug-15	22-May-15
PROCURE H-PILE PURCHASE ORDER	1-Aug-15	3-Jun-15
PROCURE AC PURCHASE ORDER	1-Aug-15	13-Mar-15
PROCURE BASE PURCHASE ORDER	1-Aug-15	13-Mar-15
FAB/DELIVER DECK BEAMS - MANGROVE LAUNCH PIT	1-Aug-15	3-Jun-15
FAB/DELIVER SHORING BEAMS - MANGROVE LAUNCH PIT	1-Aug-15	3-Jun-15
PROCURE TRACK - TEMP SHOOFLY	1-Aug-15	17-Dec-15
PROCURE SHORING PURCHASE ORDER - MANGROVE (deleted)	1-Aug-15	1-Mar-21
PROCURE CONCRETE PUMP (deleted)	1-Aug-15	1-Mar-21
EXECUTE PURCHASE ORDER - RAIL CAR TRANSPORTER - MOD #00011.1	1-Aug-15	13-Jul-15
FAB/DELIV PRECAST TUNNEL LINER MOLDS	1-Aug-15	1-Aug-15
PROCURE STEINY CONTRACT	7-Aug-15	11-Jun-15
PROCURE MASS CONTRACT	7-Aug-15	11-Jun-15
PROCURE PRECAST DECK PANEL PURCHASE ORDER	7-Aug-15	20-Aug-15
PROCURE PIPE (RCP) PURCHASE ORDER	7-Aug-15	19-Aug-15
PROCURE PIPE (WSP) PURCHASE ORDER	7-Aug-15	18-Mar-15
PROCURE PRECAST SANITARY SEWER STRUCTURE PURCHASE ORDER	14-Aug-15	25-Jun-15
PROCURE TIMBER LAGGING PURCHASE ORDER	14-Aug-15	7-Aug-15

**DESIGN-BUILDER'S (C0980) LONG LEAD ITEM LIST (Cont.)**

<b>Activity Name</b>	<b>Early Finish</b>	<b>Need Date</b>
FAB/DELIVER - RAIL CAR TRANSPORTER - MOD #00011.1	21-Aug-15	19-Nov-15
PROCURE TRACK SUBCONTRACTOR - PERMANENT	28-Aug-15	26-Jun-15
TRAINING - RAIL CAR TRANSPORTER - MOD #00011.1	28-Aug-15	30-Nov-15
PROCURE HAZARDOUS HAULING SUBCONTRACTOR	4-Sep-15	9-Sep-15
FAB/DELIVER PIPE STRUTS - 1ST/CENTRAL	11-Sep-15	9-Aug-15
FAB/DELIVER PIPE STRUTS - MANGROVE LAUNCH PIT	11-Sep-15	13-Jan-16
FAB/DELIVER WALES - 1ST/CENTRAL	11-Sep-15	9-Aug-15
FAB/DELIVER WALES - MANGROVE LAUNCH PIT	11-Sep-15	13-Jan-16
FAB/DELIVER SHORING BEAMS - 1ST/CENTRAL	19-Sep-15	12-Jul-15
FAB/DELIVER SHORING BEAMS - 2ND/BROADWAY	19-Sep-15	26-Jul-15
FAB/DELIVER SHORING BEAMS - 2ND/HOPE	19-Sep-15	3-Nov-15
FAB/DELIVER SHORING BEAMS - FLOWER ST	19-Sep-15	25-Oct-15
FAB/DELIVER DECK PANELS - 1ST/CENTRAL	26-Sep-15	9-Oct-15
FAB/DELIVER WALES & STRUTS - 1ST/CENTRAL STA - MOD 00018	2-Oct-15	2-Oct-15
FAB/DELIVER DECK BEAMS - 1ST/CENTRAL	4-Oct-15	23-Aug-15
FAB/DELIVER DECK BEAMS - 2ND/BROADWAY	4-Oct-15	23-Aug-15
PROCURE PLUMBING SUBCONTRACTOR	9-Oct-15	14-Jan-16
PROCURE STRIPE SUBCONTRACTOR	12-Oct-15	2-Jul-15
FAB/DELIVER PIPE STRUTS - 2ND/BROADWAY	23-Oct-15	16-Oct-15
FAB/DELIVER WALES - 2ND/BROADWAY	23-Oct-15	16-Oct-15
PROCURE CAULKING & SEALANTS SUBCONTRACTOR	26-Oct-15	8-Feb-19
PROCURE PIPE (DIP) PURCHASE ORDER	26-Oct-15	10-Jun-15
PROCURE PIPE (PVC) PURCHASE ORDER	26-Oct-15	25-Jun-15
PROCURE PIPE (VCP) PURCHASE ORDER	26-Oct-15	25-Jun-15
FAB/DELIV OCS POLES / EQUIPMENT - SHOOFLY	26-Oct-15	21-Dec-15
FAB/DELIV TRAIN CONTROL CABLE - SHOOFLY	26-Oct-15	11-Dec-15
FAB/DELIV TRAIN CONTROL EQUIPMENT - SHOOFLY	26-Oct-15	24-Dec-15
PROCURE CIP SD STRUCTURE SUBCONTRACTOR	29-Oct-15	15-Dec-15
PROCURE PRECAST COMM STRUCTURE PURCHASE ORDER	5-Nov-15	9-Jan-19
PROCURE RAIL SUBCONTRACTOR	9-Nov-15	17-Dec-15
PROCURE CATHODIC PROTECTION SUBCONTRACTOR	18-Nov-15	18-Dec-15
PROCURE REBAR SUBCONTRACTOR	23-Nov-15	5-Jan-16
PROCURE HDPE LINER SUBCONTRACTOR	23-Nov-15	18-Dec-15
PROCURE PLATE PURCHASE ORDER	23-Nov-15	21-Aug-15
PROCURE PRECAST ELEC STRUCTURE PURCHASE ORDER	23-Nov-15	14-Nov-18
PROCURE TIE-BACK SUBCONTRACTOR	2-Dec-15	9-Feb-16
FAB/DELIVER PIPE STRUTS - FLOWER ST	4-Dec-15	29-Dec-15
FAB/DELIVER WALES - FLOWER ST	4-Dec-15	29-Dec-15
FAB/DELIVER DECK BEAMS - 2ND/HOPE	8-Dec-15	2-Jan-16
FAB/DELIVER DECK BEAMS - FLOWER ST	8-Dec-15	2-Jan-16
PROCURE REBAR - FLOWER ST C/C	6-Jan-16	5-Dec-17

**DESIGN-BUILDER'S (C0980) LONG LEAD ITEM LIST (Cont.)**

<b>Activity Name</b>	<b>Early Finish</b>	<b>Need Date</b>
PROCURE HDPE - FLOWER ST C/C	6-Jan-16	15-Nov-17
FAB/DELIVER PIPE STRUTS - 2ND/HOPE	15-Jan-16	9-Feb-16
FAB/DELIVER WALES - 2ND/HOPE	15-Jan-16	9-Feb-16
FAB/DELIV PRECAST TUNNEL LINER SEGMENTS	27-Jan-16	21-Jun-17
PROCURE BALLASTED TRACK - NORTH ALAMEDA LEG	22-Feb-16	17-Dec-15
PROCURE MSE PANEL PURCHASE ORDER	3-Mar-16	28-Apr-20
PROCURE TUNNEL LIGHTING & VENTILATION SUBCONTRACTOR	4-Mar-16	23-Jul-18
PROCURE RAIL - JOBWIDE	23-Mar-16	19-Oct-18
PROCURE SPECIAL TRACK - JOBWIDE	23-Mar-16	4-Feb-19
PROCURE NEW 115RE RAIL - STANDARD RAIL	23-Mar-16	19-Oct-18
PROCURE NEW 115RE RAIL - HIGH STRENGTH RAIL	23-Mar-16	19-Oct-18
PROCURE PIPE SPECIALTY STORM DRAIN PIPE PURCHASE ORDER	18-Apr-16	2-Dec-19
PROCURE LANDSCAPING SUBCONTRACTOR	16-May-16	19-Mar-20
PROCURE AC SUBCONTRACTOR	2-Jun-16	5-Apr-19
FAB/DELIV GLAZING SPIDERS - ALL STATIONS	6/6/2016	6/6/2016
FAB/DELIV LIGHT FIXTURES - CENTRAL STA	6/14/2016	29-May-19
FAB/DELIV EDGE LIGHTING - CENTRAL STA	6/14/2016	11-Mar-19
FAB/DELIV LIGHT FIXTURES - BROADWAY STA	8/9/2016	18-Jun-19
FAB/DELIV EDGE LIGHTING - BROADWAY STA	8/9/2016	1-May-19
PROCURE RAIL - FLOATING SLAB MATERIALS	8/10/2016	8/10/2016
PROCURE LIGHTWEIGHT BACKFILL SUBCONTRACTOR	8/16/2016	17-Dec-18
PROCURE MILLING SUBCONTRACTOR	8/16/2016	5-Apr-19
PROCURE PCC PAVING SUBCONTRACTOR	8/16/2016	5-Apr-19
PROCURE ARCHITECTURAL PRECAST PAVER SUBCONTRACTOR	8/16/2016	18-Jun-19
PROCURE GRANITE STONEMWORK SUBCONTRACTOR	8/16/2016	12-Apr-19
PROCURE MASONRY SUBCONTRACTOR	8/16/2016	23-Nov-18
PROCURE PRECAST STRUCTURAL ELEMENTS SUBCONTRACTOR	8/16/2016	2-May-19
PROCURE ARCHITECTURAL CONCRETE PAVING SUBCONTRACTOR	8/16/2016	29-Mar-19
PROCURE DOORS & HARDWARE SUBCONTRACTOR	8/16/2016	4-Apr-19
PROCURE DRYWALL & FRAMING SUBCONTRACTOR	8/16/2016	22-Jul-19
PROCURE ELEVATORS SUBCONTRACTOR	16-Aug-16	12-Jun-17
PROCURE ESCALATORS SUBCONTRACTOR	16-Aug-16	1-Aug-17
PROCURE FIRE PROTECTION SUBCONTRACTOR	16-Aug-16	16-Jul-18
PROCURE FLOORING SUBCONTRACTOR	16-Aug-16	5-Aug-19
PROCURE GLAZING SUBCONTRACTOR	16-Aug-16	12-Apr-19
PROCURE HVAC SUBCONTRACTOR	16-Aug-16	6-Feb-19
PROCURE METAL CEILING SUBCONTRACTOR	16-Aug-16	30-May-19
PROCURE PAINT SUBCONTRACTOR	16-Aug-16	23-Apr-19
PROCURE SHEET METAL SUBCONTRACTOR	16-Aug-16	13-Jun-19
PROCURE SPRAY ON ACCOUSTICAL FINISH SUBCONTRACTOR	16-Aug-16	7-May-19
PROCURE STAINLESS STEEL SUBCONTRACTOR	16-Aug-16	3-Apr-19

**DESIGN-BUILDER'S (C0980) LONG LEAD ITEM LIST**

<b>Activity Name</b>	<b>Early Finish</b>	<b>Need Date</b>
PROCURE STATION SIGNS SUBCONTRACTOR	16-Aug-16	1-Aug-19
PROCURE STEEL (PERMANENT) SUBCONTRACTOR	16-Aug-16	20-Feb-19
PROCURE TERRAZZO SUBCONTRACTOR	16-Aug-16	1-Aug-19
PROCURE TILE SUBCONTRACTOR	16-Aug-16	19-Apr-19
PROCURE FLUID APPLIED WATERPROOFING SUBCONTRACTOR	16-Aug-16	15-Mar-19
FAB/DELIV LIGHT FIXTURES - HOPE STA	16-Aug-16	25-Apr-19
FAB/DELIV EDGE LIGHTING - HOPE STA	16-Aug-16	20-Mar-19
ELEVATOR COORDINATION DRAWINGS - 1ST/CENTRAL	4-Nov-16	31-Aug-17
ESCALATOR COORDINATION DRAWINGS - 1ST/CENTRAL	4-Nov-16	20-Oct-17
FAB/DELIV HIGH VOLTAGE DISCONNECT - 1ST & CENTRAL	9-Nov-16	12-Apr-19
FAB/DELIV 2ND/HOPE UNIT SUBSTATION AND TRANSFORMER	16-Dec-16	21-Aug-19
FAB/DELIV 2ND/BROADWAY UNIT SUBSTATION AND TRANSFORMER	16-Dec-16	23-Sep-19
ASSEMBLY OF THE TBM AND BACKUP EQUIP / INST FIRST 10 RINGS	27-Dec-16	27-Dec-16
FAB/DELIV EMERGENCY VENTILLATION FANS - CENTRAL (4)	17-Jan-17	12-Apr-19
FAB/DELIV EMERGENCY BOOSTER FANS (12)	17-Jan-17	7-Jun-19
FAB/DELIV EMERGENCY VENTILLATION FANS - BROADWAY (4)	17-Jan-17	5-Jun-19
FAB/DELIV EMERGENCY VENTILLATION FANS - HOPE (4)	17-Jan-17	12-Apr-19
ELEVATOR COORDINATION DRAWINGS - 2ND/BROADWAY	23-Jan-17	19-Nov-17
ESCALATOR COORDINATION DRAWINGS - 2ND/BROADWAY	23-Jan-17	8-Jan-18
ELEVATOR COORDINATION DRAWINGS - 2ND/HOPE	13-Apr-17	7-Feb-18
ESCALATOR COORDINATION DRAWINGS - 2ND/HOPE	13-Apr-17	29-Mar-18
FAB/DELIV TRAIN CONTROL CABLE	28-Jul-17	13-Apr-18
FAB/DELIV OCS POLES / EQUIPMENT	14-Aug-17	17-May-19
FAB/DELIV OCR FOR TUNNEL	14-Aug-17	29-May-19
FAB/DELIV ELEVATORS - 1ST/CENTRAL	4-Nov-17	1-Apr-19
FAB/DELIV ESCALATORS - 1ST/CENTRAL	4-Nov-17	15-May-19
FAB/DELIV 2ND/HOPE TPSS	5-Jan-18	31-Dec-18
FAB/DELIV ELEVATORS - 2ND/BROADWAY	23-Jan-18	5-Feb-19
FAB/DELIV ESCALATORS - 2ND/BROADWAY	23-Jan-18	22-Jan-19
FAB/DELIV ELEVATORS - 2ND/HOPE	13-Apr-18	7-Feb-19
FAB/DELIV ESCALATORS - 2ND/HOPE	13-Apr-18	29-Mar-19
FAB/DELIV TRAIN CONTROL EQUIPMENT	14-Aug-18	30-Apr-19
FAB/DELIV 2ND/BROADWAY TPSS	27-Sep-18	23-Sep-19

## **CRITICAL PATH NARRATIVE**

### **Critical Path (C0980):**

Master Schedule shows the following critical path:

*The longest path to project substantial completion runs through the final design and key submittals by C0980; excavation support system and tunnel final designs; 1st and Alameda Wye junction excavation; 1<sup>st</sup>/Central Station excavation to track level; tunnel mining; tunnel finish, wye structure at 1<sup>st</sup> and Alameda; construct guideway, track, OCS and OCR and train control; systems integration testing Phase I and II; and Pre-Revenue Operations Phase I and II.*

### **Note:**

1. *Several contract options were exercised by Metro, which are incorporated into the schedule.* Design Builder's current schedule including exercised options does not show any change to contract milestones as a result of the options.
2. Metro has issued changes to add the direct scope of all the remaining Advanced Utility Relocation (AUR) work to C0980 contract, which significantly impacted the project schedule. A Linear Recovery Schedule was prepared by RCC. A detail schedule incorporating the AUR work and mitigation/recovery measures is being prepared by RCC to be submitted by mid-January 2016 to maintain the FFGA Revenue Service Date (RSD) of May 29, 2021.

## **SCHEDULE CONTINGENCY DRAWDOWN**

Due to AUR work delays and transfer of work scope to C0980 contract, the schedule milestones and contingency are being re-evaluated and will be reflected in the master schedule once the plan is submitted and approved by Metro.

**PROJECT COST STATUS**

REGIONAL CONNECTOR TRANSIT CORRIDOR PROJECT (860228)

COST REPORT

DOLLARS IN THOUSANDS

SCC CODE	DESCRIPTION	FFGA BUDGET	ORIGINAL BUDGET	CURRENT BUDGET		COMMITMENTS		EXPENDITURES		CURRENT FORECAST		BUDGET/ FORECAST VARIANCE
				PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	
10	GUIDEWAY & TRACK ELEMENTS	280,622	204,691	12,391	240,370	-	227,979	240	13,321	10,261	240,370	-
20	STATIONS, STOPS, TERMINALS, INTERMODAL	354,268	219,477	647	230,427	-	229,779	1,021	1,299	602	230,427	-
30	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN.	-	-	-	-	-	-	-	-	-	-	-
40	SITework & SPECIAL CONDITIONS	141,785	422,453	59,476	531,344	1,625	465,438	4,970	232,607	55,517	531,344	-
50	SYSTEMS	69,667	73,848	1,095	74,942	52	63,317	-	-	105	74,942	-
	CONSTRUCTION SUBTOTAL (10-50)	846,343	920,468	73,609	1,077,083	1,677	986,514	6,231	247,227	66,485	1,077,083	-
60	ROW, LAND, EXISTING IMPROVEMENTS	115,889	74,208	8,495	82,704	-	73,820	12	46,041	8,495	82,704	-
70	VEHICLES	16,275	16,275	-	16,275	-	2,000	-	-	0.00	16,275	-
80	PROFESSIONAL SERVICES	261,455	257,973	4,750	268,954	212	202,145	3,470	157,527	3,770	268,954	-
	SUBTOTAL (10-80)	1,239,963	1,268,925	86,854	1,445,016	1,890	1,264,479	9,713	450,795	78,749	1,445,016	-
90	UNALLOCATED CONTINGENCY	135,399	126,892	42,670	80,325	-	-	-	-	50,774	80,325	-
100	FINANCE CHARGES	27,571	7,115	-	7,115	-	-	-	-	-	7,115	-
	TOTAL PROJECTS 460228 & 860228 (10-100)	1,402,932	1,402,932	129,524	1,532,456	1,890	1,264,479	9,713	450,795	129,524	1,532,456	-
	ENVIRONMENTAL/PLANNING - 400228	-	6,075	-	6,075	-	6,075	-	6,075	-	6,075	-
	ENVIRONMENTAL/PLANNING - 460228	-	18,125	2,300	20,425	2,300	20,425	15	18,575	1,800	20,425	-
	TOTAL PROJECTS 400228 & 460228 (ENV/PLAN'G)	-	24,200	2,300	26,500	2,300	26,500	15	24,650	1,800	26,500	-
	400228, 460228, & 860228 TOTAL	1,402,932	1,427,132	131,824	1,558,956	4,190	1,290,979	9,728	475,446	131,324	1,558,956	0

NOTE: EXPENDITURES ARE CUMULATIVE THROUGH 11/30/2015

**PROJECT COST ANALYSIS**

**Original Budget:**

The Original Budget of \$1.43 billion reflects the Board approved Life-of-Project (LOP) budget on April 24, 2014 plus Finance Charges of \$7.1 million.

**Current Budget:**

The Board in December 2015 approved an increase Life-of-Project (LOP) budget of \$131.8 million to \$1,551.8 million. The new budget includes \$7.1 million Finance Charges for a total of \$1,558.9 million.

**Commitments:**

The Commitments increased by \$4.19 million this period to \$1.291 billion which represent 82.81% of the Current Budget. The increase is due to RCC modifications, community relations and Environmental/Planning.

**Expenditures:**

The Expenditures are cumulative through November 2015. Expenditures increased by \$9.73 million this period for costs associated with C0980 Design Build contract, C0981R contract, Engineering Management Support, Metro Project Administration, Construction Management Support Service, Legal Services, and Third Party Master Cooperative Agreements with the City of LA, Community Relations, ROW and Environmental Consultant Services. The \$475.45 million in expenditures to date represents 30.5% of the Current Budget.

**Current Forecast:**

There was an increase in Forecast of \$131.1 million to \$1,551.8 million.

**PROJECT COST STATUS (Cont.)**

CONCURRENT NON-FFGA ACTIVITIES (861228)

PROJECT COST STATUS BY FTA SCC

DOLLARS IN THOUSANDS

SCC CODE	DESCRIPTION	ORIGINAL BUDGET	CURRENT BUDGET		COMMITMENTS		EXPENDITURES		CURRENT FORECAST		BUDGET / FORECAST VARIANCE
			PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	
10	GUIDEWAY & TRACK ELEMENTS	-	-	-	-	-	-	-	-	-	-
20	STATIONS, STOPS, TERMINALS, INTERMODAL	-	-	-	-	-	-	-	-	-	-
30	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN.	10,480	-	10,480	-	10,480	-	-	-	10,480	-
40	SITWORK & SPECIAL CONDITIONS	-	-	-	-	-	-	-	-	-	-
50	SYSTEMS	-	-	-	-	-	-	-	-	-	-
	CONSTRUCTION SUBTOTAL (10-50)	10,480	-	10,480	-	10,480	-	-	-	10,480	-
60	ROW, LAND, EXISTING IMPROVEMENTS	27,748	-	27,748	-	27,748	0	22,551	-	27,748	-
70	VEHICLES	-	-	-	-	-	-	-	-	-	-
80	PROFESSIONAL SERVICES	650	-	650	-	650	13	96	-	650	-
	SUBTOTAL (10-80)	38,878	-	38,878	-	38,878	13	22,647	-	38,878	-
90	UNALLOCATED CONTINGENCY	1,113	-	1,113	-	-	0	0	-	1,113	-
100	FINANCE CHARGES	-	-	-	-	-	-	-	-	-	-
	TOTAL PROJECTS 861228 (10-100)	39,991	-	39,991	-	38,878	13	22,647	-	39,991	-
	861228 TOTAL	39,991	-	39,991	-	38,878	13	22,647	-	39,991	-

NOTE: EXPENDITURES ARE CUMULATIVE THROUGH 11/30/2015

**PROJECT COST ANALYSIS**

**Original Budget, Current Budget, and Current Forecast:**

The Original Budget, Current Budget, and Current Forecast reflect the Board approved Life-of-Project (LOP) budget on April 24, 2014.

**Commitments:**

The Commitments reflect the Board approved Life-of-Project (LOP) budget on April 24, 2014 less the Unallocated Contingency of \$1.1 million. Right-of-Way (ROW) numbers shown under Commitment are the obligated numbers; expenditures as of this period are \$22.6 million.

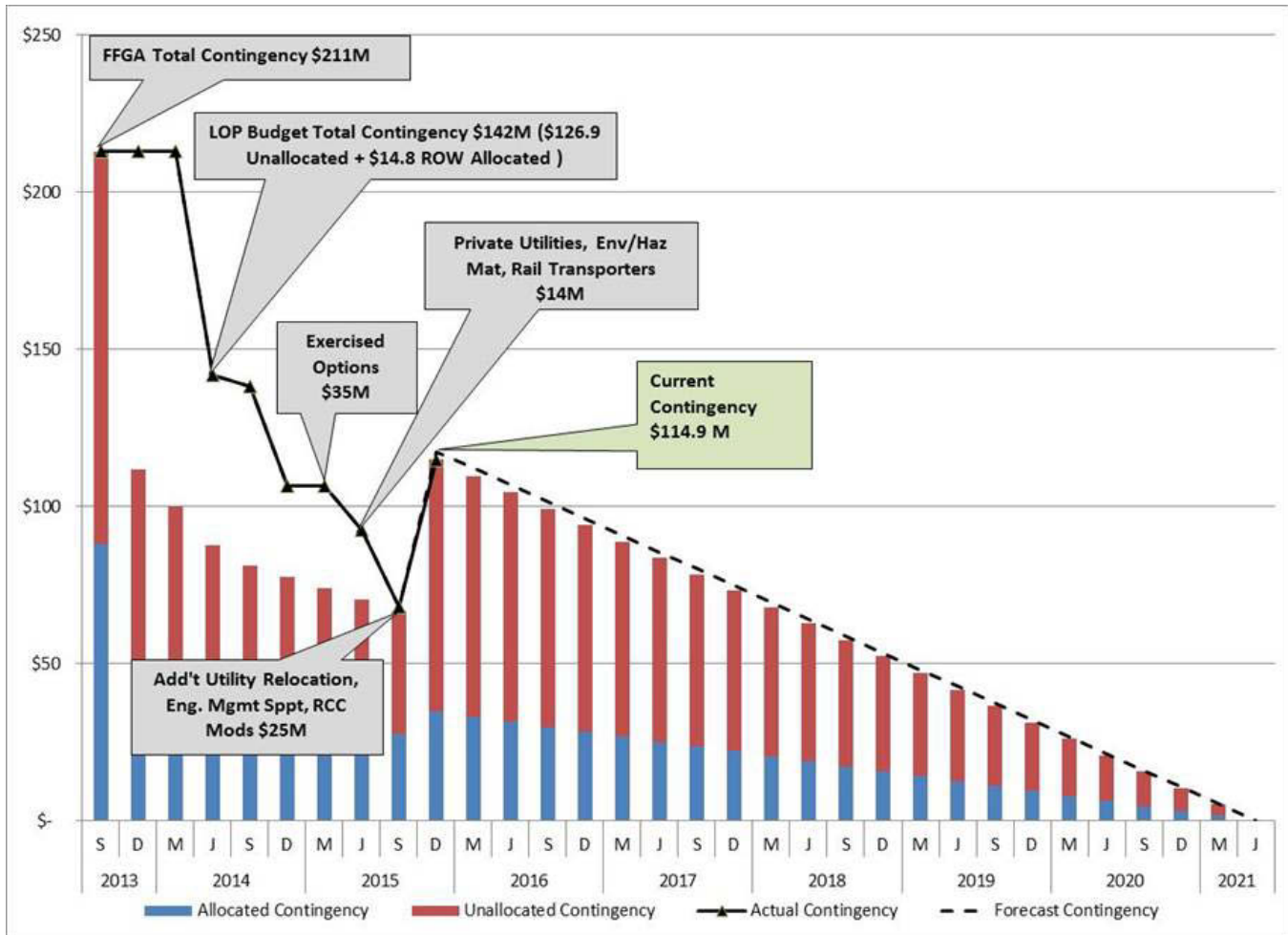
**Expenditures:**

*There was a \$13k Expenditure incurred in this period. The \$22.65 million in expenditures to date represents 56.6% of the Current Budget.*

**Current Forecast:**

*There was no change to the Forecast for this period.*

## COST CONTINGENCY DRAWDOWN

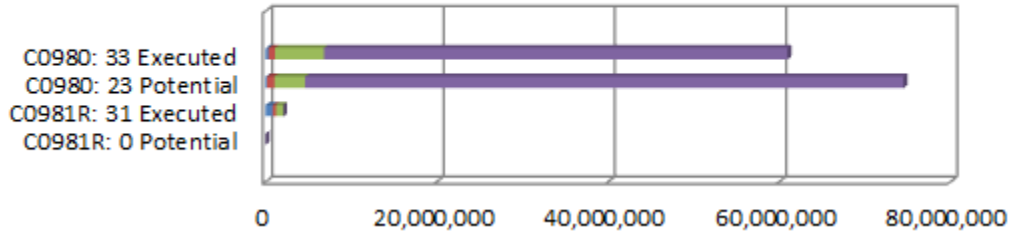


## COST CONTINGENCY DRAWDOWN ANALYSIS

*The Board in December 2015 approved an increase to Life-of-Project budget by \$131.8 million. The Regional Connector Transit Corridor Project budget of \$1.56 billion includes an “unallocated contingency” amount of \$80.3 million, which is included as a separate Standard Cost Category (SCC) element. Also included within the current budget is an “allocated contingency” of \$31.3 million allocated to Design Build Contract, \$3.00 million allocated for Private Utilities, and \$0.25 million to Environmental Planning. The remaining project cost contingency is \$114.9 million.*

## SUMMARY OF CONTRACT MODIFICATIONS

**Contract Modifications (MODs) by Cost Level**



	C0980		C0981R		Total
	34 Executed	23 Potential	31 Executed	0 Potential	
■ Under \$100K	322,662	130,000	814,761	-	1,267,423
■ \$100K to \$250K	760,311	870,000	372,752	-	2,003,063
■ \$250K to \$1M	5,696,164	3,578,387	863,000	-	10,137,551
■ Over \$1M	54,160,692	69,929,135	-	-	124,089,827
<b>Total Contract MODs</b>	<b>60,939,829</b>	<b>74,507,522</b>	<b>2,050,513</b>	<b>-</b>	<b>137,497,864</b>
<b>Contract Award Amount</b>	<b>927,226,995</b>	<b>927,226,995</b>	<b>25,643,000</b>	<b>25,643,000</b>	
<b>% of Contract MODs</b>	<b>6.6%</b>	<b>8.0%</b>	<b>8.0%</b>	<b>0.0%</b>	

Percent of contract MODs equals the Total Contract MODs divided by the Contract Award Amount.

31 changes with a total value of \$2.051 million have been executed since execution of Contract C0981R.

34 changes with total value of \$60.94 million have been executed since execution of Contract C0980 and 23 potential changes with a total value of \$74.51 million is pending.

**DISADVANTAGED BUSINESS ENTERPRISE (DBE) STATUS**

**Contract C0980 Regional Connector Transit Corridor Design-Build**

- DBE Goal – Design: 20%
- Current DBE Commitment - Design: \$11,001,257 (22.63%)
- *Current DBE Participation: 17.97%*
- Twenty (20) Design DBE sub-consultants have been identified to date
  
- DBE Goal – Construction: 18%
- Current DBE Commitment - Construction: \$167,219,576 (18%)
- *Current DBE Participation: 11.91%*
- *Forty (40) Construction DBE sub-consultants have been identified to date*

**PROJECT LABOR AGREEMENTS (PLA) STATUS**

**Contract C0980 Regional Connector Transit Corridor Design-Build**

- Targeted Worker Goal - 40.0%
- *Targeted Worker Current Participation - 59.53%*
  
- Apprentice Worker Goal - 20.0%
- *Apprentice Worker Current Participation - 17.19%*
  
- Disadvantaged Worker Goal - 10.0%
- *Disadvantaged Worker Current Participation - 9.95%*

**FINANCIAL/GRANT STATUS**

**Status of Funds Anticipated**

**December 2015**

<b>FEDERAL - CMAQ</b>	METRO SUBMITTED ON NOVEMBER 25, 2013 A GRANT APPLICATION OF \$64.0M TO THE FTA. GRANT APPROVAL WAS EXECUTED ON SEPTEMBER 24, 2014. FUNDS ARE AVAILABLE FOR DRAW DOWN
<b>FEDERAL - SECTION 5309 NEW STARTS</b>	METRO SUBMITTED ON NOVEMBER 25, 2013 A GRANT APPLICATION OF \$65.0 M TO THE FTA. GRANT APPROVAL WAS EXECUTED ON SEPTEMBER 23, 2014. METRO SUBMITTED ON JUNE 11, 2015 A GRANT AMENDMENT OF \$100M. GRANT AWARDED AUGUST 2015. FUNDS ARE AVAILABLE FOR DRAW DOWN
<b>MEASURE R - TIFIA LOAN:</b> (Transportation Infrastructure Finance & Innovation Act)	A TIFIA LOAN AGREEMENT BETWEEN THE DEPARTMENT OF TRANSPORTATION AND METRO FOR \$160M WAS EXECUTED ON FEBRUARY 20, 2014. FIRST DISBURSEMENT OF \$61,864,368 RESCHEDULED TO 4TH QUARTER OF FY 16.
<b>STATE PROP 1A HSRB</b>	ALLOCATION REQUEST OF \$114.9M TO THE CTC WAS SUBMITTED ON JUNE 27, 2013. ALLOCATION WAS APPROVED ON JULY 18, 2014. FUNDS HAVE BEEN DRAW DOWN.
<b>STATE PROP 1B PTMISEA</b>	ALLOCATION REQUEST OF \$135.1M WAS APPROVED ON APRIL 24, 2013. FUNDS ARE AVAILABLE FOR DRAW DOWN.
<b>CITY OF LA</b>	FUNDING AGREEMENT OF \$42M WITH THE CITY OF LA WAS APPROVED IN JUNE 2014. PAYMENT SCHEDULE OF \$5.0M FOR FY 2016 IS AVAILABLE FOR DRAWDOWN.

**Status of Funds by Source**

**December 2015**

SOURCE	(A) ORIGINAL BUDGET	(B) TOTAL FUNDS ANTICIPATED	(C) TOTAL FUNDS AVAILABLE	(D) (D/B) COMMITMENTS		(E) (E/B) EXPENDITURES		(F) (F/B) BILLED TO FUNDING SOURCE	
				\$	%	\$	%	\$	%
				FEDERAL - CMAQ	\$64.000	\$64.000	\$64.000	\$64.000	100%
FEDERAL - SECTION 5309 NEW STARTS	\$669.900	\$669.900	\$165.000	\$669.900	100%	\$118.215	18%	\$109.921	16%
FEDERAL - RIP	\$0.000	\$14.400	\$0.000	\$14.400	100%	\$0.000	0%	\$0.000	0%
MEASURE R - TIFIA LOAN	\$160.000	\$160.000	\$0.000	\$160.000	100%	\$0.000	0%	\$0.000	0%
STATE PROPOSITION 1A HSRB *	\$114.874	\$114.874	\$114.874	\$114.874	100%	\$114.874	100%	\$114.874	100%
STATE PROPOSITION 1B PTMISEA **	\$149.500	\$135.100	\$135.100	\$135.100	100%	\$135.100	100%	\$106.083	79%
STATE STIP RIP	\$2.590	\$2.590	\$2.590	\$2.590	100%	\$2.590	100%	\$2.590	100%
STATE CAPITAL PROJECT LOANS - OTHERS ***	\$132.466	\$284.730	\$284.730	\$130.115	46%	\$63.890	22%	\$63.890	22%
MEASURE R	\$27.571	\$7.115	\$0.000	\$0.000	0%	\$0.000	0%	\$0.000	0%
CITY OF LOS ANGELES	\$41.984	\$42.000	\$0.000	\$0.000	0%	\$0.000	0%	\$0.000	0%
LEASE REVENUE	\$64.247	\$64.247	\$0.000	\$0.000	0%	\$0.000	0%	\$0.000	0%
<b>TOTAL</b>	<b>\$1,427.132</b>	<b>\$1,558.956</b>	<b>\$766.294</b>	<b>\$1,290.979</b>	<b>82.8%</b>	<b>\$475.446</b>	<b>30.5%</b>	<b>\$438.135</b>	<b>28.1%</b>

EXPENDITURES ARE CUMULATIVE THROUGH NOVEMBER 2015  
ORIGINAL BUDGET BASED ON FUNDING PLAN INCLUDED IN THE APPROVED FULL FUNDING GRANT AGREEMENT

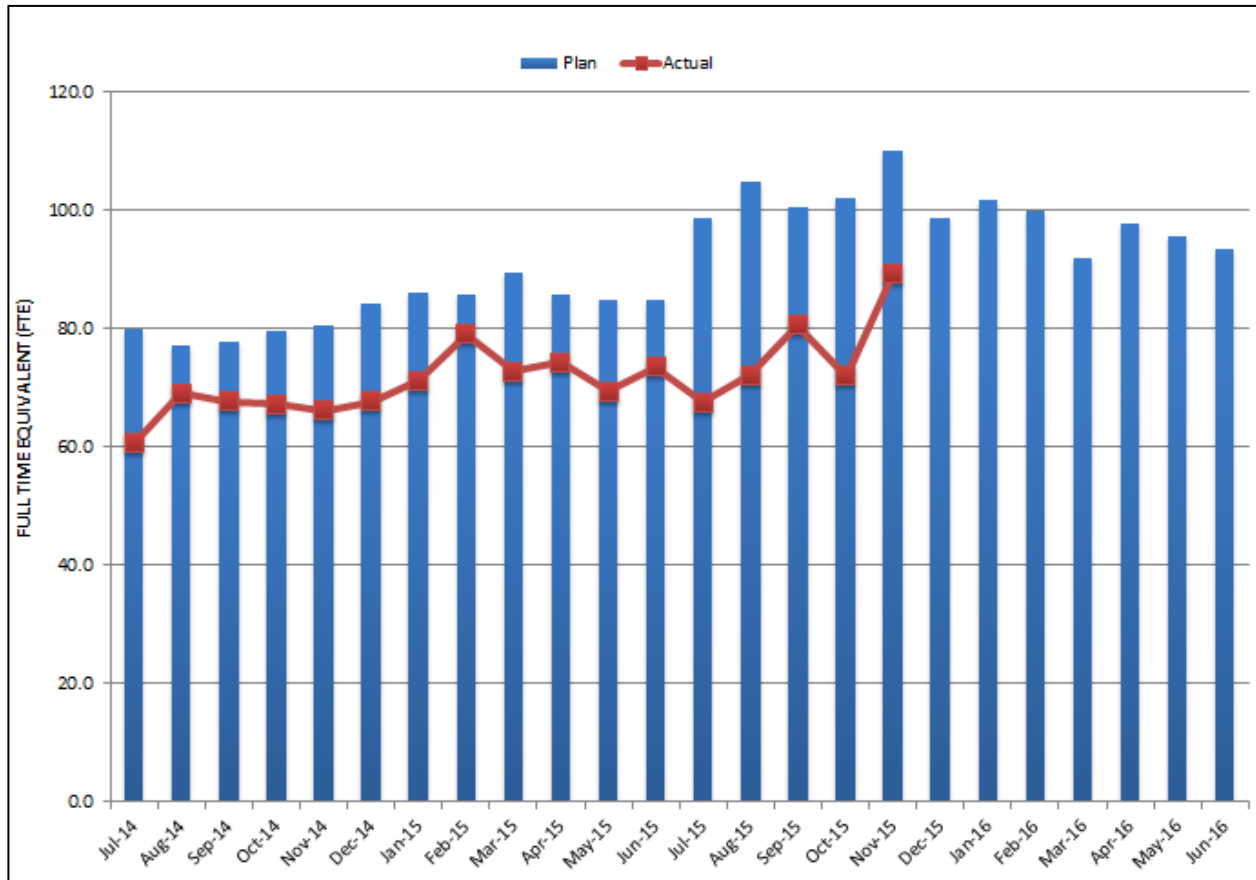
\* STATE PROPOSITION 1A HIGH SPEED RAIL BONDS

\*\* STATE PROPOSITION 1B PUBLIC TRANSPORTATION MODERNIZATION, IMPROVEMENT AND SERVICE ENHANCEMENT ACCOUNT

\*\*\* OTHERS INCLUDE TDA ADMINISTRATION, NB PROPOSITION A ADMINISTRATION, AND PROPOSITION 1B INTEREST (FOR A TOTAL OF \$.318M)

## STAFFING STATUS

### Total Project Staffing – Metro and Consultants



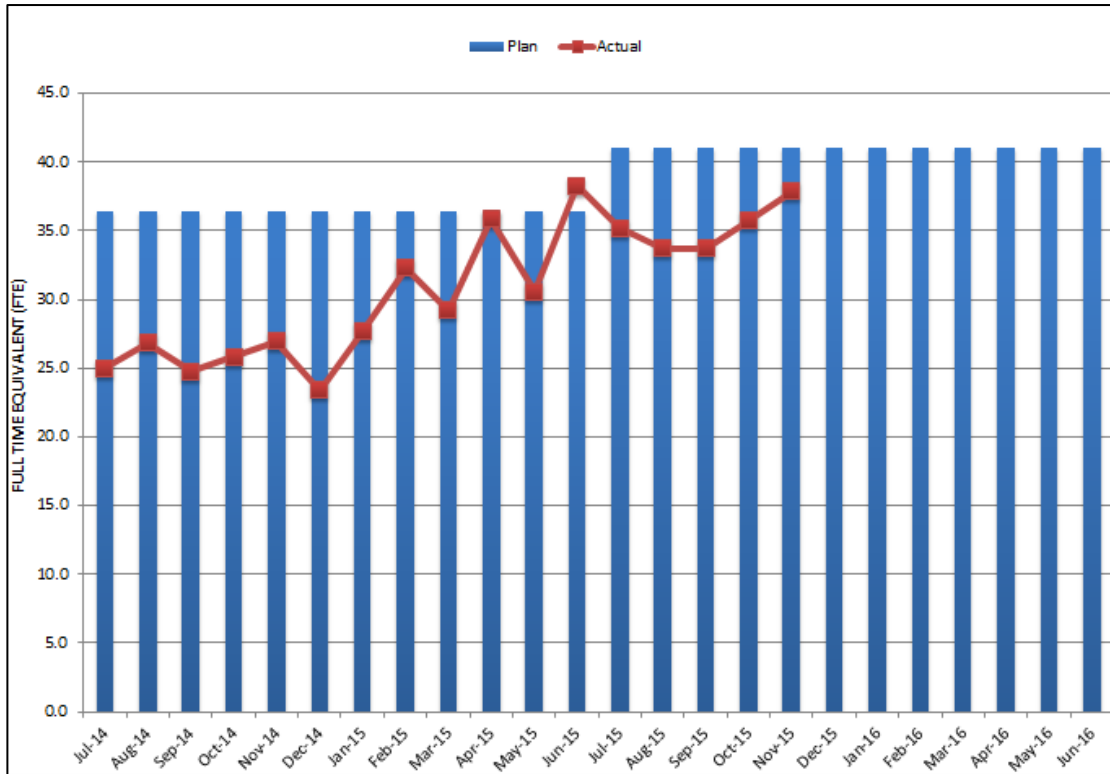
## TOTAL PROJECT STAFFING

The overall FY16 Total Project Staffing plan averages 99.6 FTE's per month.

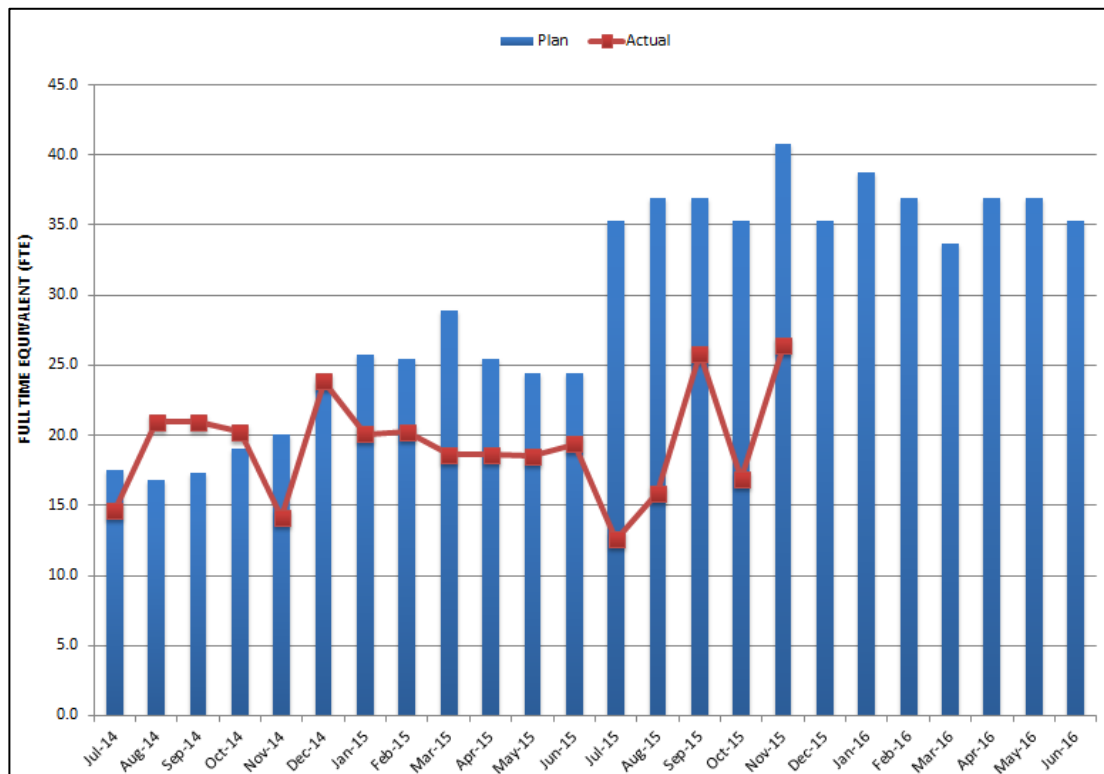
*For November 2015, there were a total of 37.9 FTE's for MTA's Project Administration staff and 51.5 FTE's for consulting staff. The total project staffing for November 2015 was 89.3 FTEs. The main variance of FTE's actual (89.3) versus FTE's planned (110.1) is due to changes as a result of AUR schedule delays at various locations resulting in lower staff needs and charges for this period, which includes, Corporate Safety, Contract Administration, Executive Office Communications, Metro Art, Executive Office Construction, Public Relations, Creative Services, and Environmental Compliance. Metro is working on filling a few additional positions approved in July 2015 Board.*

Note: The planned monthly FTE used in the chart for FY2016 is contingent on the board authorization from January through June 2016 for CMSS Contract.

**Metro Staff**

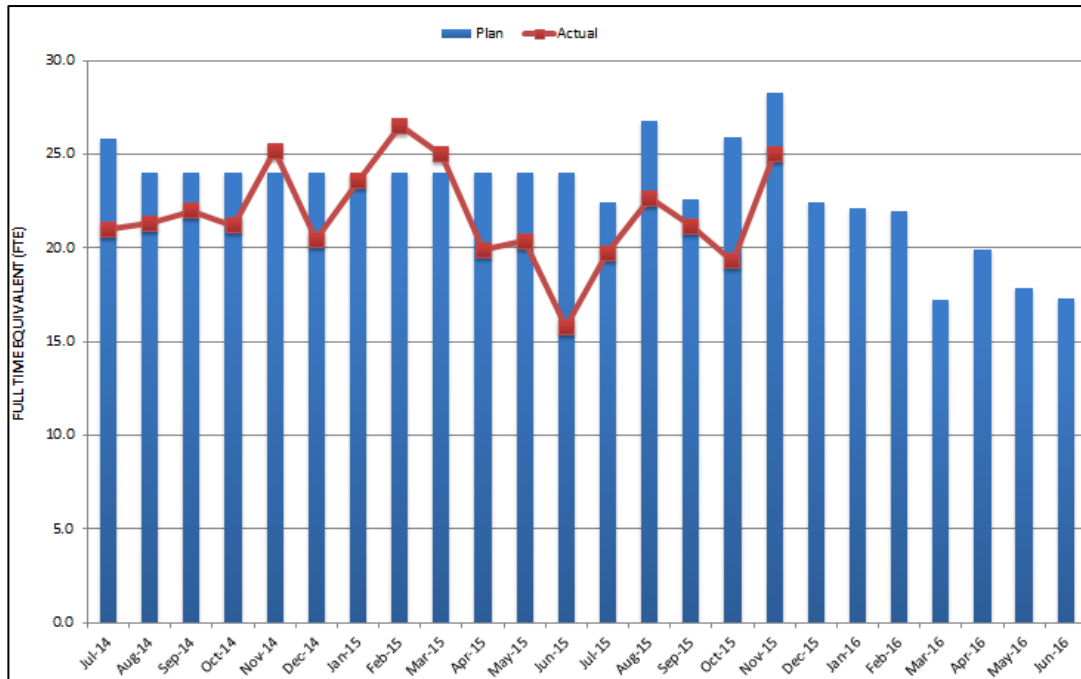


**CONSTRUCTION MANAGEMENT  
SUPPORT SERVICES CONSULTANT**



Note: The variance in FTEs is due to Holiday's time off (Nov. 14), extensive weekend work (Dec. 14) and additional field support staff.

**ENGINEERING SERVICES CONSULTANTS**



Note: The variance in FTEs is due to Holiday's time off and in support of C0980 submittals and C0981R beyond planned completion.

**REAL ESTATE STATUS**

<b>Regional Connector- Real Estate Status Summary December 31, 2015</b>									
Type of Take	Number of Parcels	Certified	Decertified	Appraisals In Process/ Completed	Offers Made	Agreements Signed	Condemnation Filed	Relocations Complete	Parcels Available
Full Takes	3	3	0	3	3	1	2	4	3
Part Takes	2	2	0	2	1	0	1	0	1
SSE	13	9	4	13	10	0	3	0	8
TCE/ROE	16	7	1	8	8	3	2	0	8
<b>Sub Total Parcels:</b>	<b>34</b>	<b>21</b>	<b>5</b>	<b>26</b>	<b>22</b>	<b>4</b>	<b>8</b>	<b>4</b>	<b>20</b>
Relocations	5								
<b>Total Parcels:</b>	<b>34</b>	<b>21</b>	<b>5</b>	<b>26</b>	<b>22</b>	<b>4</b>	<b>8</b>	<b>4</b>	<b>20</b>
* Total number of parcels on this summary (34) reflect a consolidation of some ownerships, whereas ownerships and parcels are separately counted on main Regional Connector Project Control Matrix (43).									

**REAL ESTATE ACQUISITION**

**Central Plants**

- The Project obtained legal possession of the portion of the parcel required for the Project via a Stipulation for Possession effective July 1, 2015. The remaining property interests were acquired through an escrow which closed September 2<sup>nd</sup> and the condemnation was terminated.

**LA Times – LA Times Square**

- Required real estate was transferred at no cost to Project on March 2, 2015.

**Japanese Village Plaza – “JVP”**

- Submitted offer to Japanese Village Plaza in November 2013. JVP rejected offer; MTA Board adopted a resolution to acquire property through condemnation process in June 2014. Tenants have also been named in the condemnation lawsuit by the Judge in order to acquire the rights to survey the property, monitor grout pipe installation, and install and monitor deformation monitoring devices in tenant’s spaces. This action required a new resolution of necessity be adopted by the MTA Board of Directors. The Board action took place at the April 30th Board meeting and the Board adopted the Resolution of Necessity to include the tenants. Agreement has also been reached with several of the tenants which eliminate the requirement to include them in the eminent domain action.
- Court approved Motion on Order of Possession for tunnel and grouting pipe easements against JVP on 6/30/15. Order for Possession effective 7/31/15.

## **REAL ESTATE ACQUISITION (Cont.)**

- Court granted motion to acquire the right to conduct pre-construction surveys and grout pipe installation monitoring effective 5/11/15. Currently working through Court referee to schedule surveys and grout pipe monitoring in tenant spaces - ongoing.
- Motion filed to obtain Order for Possession allowing the right to install and monitor the deformation monitoring devices in 19 tenant spaces. Court granted motion for OP on 8/19/15 and OP became effective 9/21/15. Real Estate has obtained rights on 17 of the 19 tenant spaces via right of entry.

### **Volk**

- FTA and MTA approved the proposed settlement with Volk on the value of the property. Agreement has now been reached with the remaining tenants with regard to their Loss of Good Will claims. Final payments processed and complete.
- C0980 Contractor using site for laydown area.

### **Broad Collection**

- Broad's appraisal review completed. Metro Real Estate negotiated a settlement Subject to approval at November/December Board. Seller changed terms prior to Board meeting – action pulled and negotiations continue. *Agreement not finalized in December. Working to complete in January to take to February 2016 Board.*

### **ANAIBIV**

- Offer accepted. Owner's attorney reworked Purchase Agreement and deed language. Real Estate working with County Counsel to finalize contract and open escrow. Additional language changes being negotiated as of 9/21 to address indemnity and possible environmental contamination disclosed by Seller. *Seller's attorney & County Counsel finalized indemnity language changes – expecting Seller's signature in January 2016.*

### **Hull's Hope**

- RON approved in February but condemnation on hold pending potential decertification of parcel by Project. Received formal decertification of parcel from Project on 6/19/15. Revocation of Offer letter in process and Revocation of RON scheduled for October Board. *Revocation of RON scheduled for January 2016 Board.*

### **401 E Second St (Office Depot)**

- Property owner has not accepted offer for reduced property requirements, but Project has confirmed it will decertify parcel, so RON has been on hold. Received formal decertification of parcel from Project on 6/19/15. Revocation of Offer letter sent 8/13.

### **City of Los Angeles (Mangrove Parcels) – No Change**

- Project is still considering potential change to the tunnel easement. Once decision is made, will advise City of Los Angeles and negotiate for the revised easement area.

### **(Former) CRA Parcels - Decertified 6/10/14**

## **QUALITY ASSURANCE STATUS**

### **C0980 Regional Connector D/B**

- Reviewed and provided comments on the Contractor's quality required submittals, construction work plans and milestone submittals.
- Attended "Readiness Review" meetings with Contractor.
- Attended design and construction coordination meetings with the Contractor and the design team.
- Performed oversight verification of Contractor design and field activities.

## **ENVIRONMENTAL STATUS**

- *Pre-Construction Surveys for the Central Japanese Village Parking, the Japanese Village Plaza, the Japanese Village Plaza Mall, the Citibank Group Building, the Veolia Energy Central Plant, the LA Times Mirror Building, the Walt Disney Concert Hall, the Los Angeles Library, the Standard Hotel, Pegasus Apartments, The California Club, the Higgins Building, the Cathedral of Saint Vibiana, the Colburn School of Music, the Eli Broad Museum, the Hikari Apartments, the Nakamura Tetsujiro Building and the Union Bank Building are complete. Pre-Construction Surveys for the Commonwealth Parking Structure, City National/Commonwealth Buildings, and the Westin Bonaventure are in-progress. These surveys are prepared for all historic properties as well as sensitive, non-historic structures within 21 feet of vibration producing construction activities to assess the building category and the potential for ground borne vibration to cause damage to the buildings.*
- *As of December 31, 2015, RCC has installed noise monitors at six Metro-approved locations along the Project alignment. The noise monitors will be instrumental in verifying compliance of construction-generated noise with the local ordinance and thresholds listed in the Project Contract Specifications.*
- *RCC has installed vibration monitors at WDCH, REDCAT, and The Broad Museum. Rights-of-Entry are being negotiated for vibration monitors to be installed at the Colburn School of Music Japanese Village Plaza, the Hikari Apartments, and the Nakamura Tetsujiro Building. Locations are based on the Vibration Monitoring Plan to monitor vibration continuously during peak vibration generating construction.*
- *The Zanja segment No. 3 at 1<sup>st</sup>/Central was treated in accordance with procedures outlined in the project Mitigation Monitoring and Reporting Plan as well as the Memorandum of Agreement between Metro and the State Historic Preservation Office (SHPO) and the FTA. An addendum to the original Level II Historic American Engineering Record (HAER) document was prepared as defined by the National Parks Service (NPS) and as requirement by the Cultural Resources Monitoring and Mitigation Plan (CRMMP). The document was finalized with Metro and will be submitted to NPS at the end of the Project, as more portions of the Zanja may be encountered during future construction activities. Other Zanja segments will be recorded as they are encountered and included in the final package sent to NPS. As of December 31, 2015, no additional Zanja segments were encountered.*
- *SWPPP inspections of all project areas are conducted weekly by RCC to observe site conditions and report on performance of stormwater protection Best Management Practices.*
- *Metro plans to submit the 12<sup>th</sup> Quarterly Mitigation Monitoring and Reporting Plan (MMRP) covering November 2015 to January 2016 to the FTA by February 12, 2016.*

## **CONSTRUCTION AND COMMUNITY RELATIONS STATUS**

### **Construction Relations**

- Responded and addressed project related inquiries from the public received on the project hotline and email.
- *Continued outreach to impacted area stakeholders regarding utility relocation. Distributed 22 construction notices to the public.*
- *Performed outreach to businesses, residents, Hotels, Institutions and local organizations on the following activities:*
  - *1<sup>st</sup> St eastbound and westbound widening*
  - *1st/Alameda water line street closures and Gold Line Station closure for track relocation (shoofly) and cancellation of work*
  - *Waterline relocation at 1<sup>st</sup>/Alameda intersection*
  - *Installation of geotechnical instrumentation project wide*
  - *Utility survey work on Flower St.*
  - *Utility relocation work at 2<sup>nd</sup>/Hope*
  - *Yard mobilization at 2<sup>nd</sup>/Hope*
- Provided construction updates at the following meetings:
  - *Regional Connector's Project wide bi-monthly construction update community meeting*
  - *Legislative Briefing*
  - *Los Angeles Tourism and Convention Board*
  - *Regional Connector Community Leadership Council 2<sup>nd</sup>/Hope, Flower St/Financial District and 1<sup>st</sup>/Central area committees*
  - *Arts District Los Angeles, Arts District Business Improvement District*
  - *Little Tokyo Business Improvement District*
- Continued bi-weekly meetings with: L.A. City Councilmember District 14 and the Mayor's office, the Westin Bonaventure and Common Wealth Partners
- *Coordinated construction activities with the following stakeholders:*
  - *Los Angeles Central Library; Higgins Condominium; Office Depot; Los Angeles Times; JANM; Cardio Barre; Gallery Loft; Broadway Civic Center; Metropolitan News; Bunker Hill Towers Apartments; Grand Tower Apartments; Far East Lounge; The Music Center.*

### **Social Media Outreach Efforts**

- *Facebook has 3,983 likes while Twitter has 1,211 followers.*

## **CONSTRUCTION AND COMMUNITY RELATIONS STATUS (Cont.)**

### **Community Relations**

- *Conducted monthly updates with the Regional Connector Community Leadership Council for station areas representatives on construction related work, upcoming marketing and advertising efforts.*
- *Continued monthly Eat, Shop, Play implementation and promotion of small businesses impacted by construction along the line. ESP provides social media and in-community promotions of area businesses.*
- *Continued work with the Little Tokyo Marketing & Business Task Force. Sound wall signage graphic design discussions continued for 1<sup>st</sup>/Central Station area and Mangrove Yard. Implemented 1<sup>st</sup> annual Holiday Marketplace promotion December 12-13 with local business organizations and 35 local businesses. This program is designed to mitigate construction impacts while providing a model seasonal marketing program that draws patrons to Little Tokyo as a unique transit destination.*

## **CREATIVE SERVICES STATUS**

### **Art Program**

- *Responded to RFIs and Submittals.*
- *Participated in Design Build document reviews.*
- *Continued to support mitigation efforts.*

## **SAFETY & SECURITY STATUS**

### **C0980 Regional Connector**

- Assisted RCC management staff in the generation and submittal of acceptable contractually required safety documentation.
- Met daily with RCC Staff to discuss Work Plans for each day's activities.
- Met daily with RCC's management staff and discussed construction work plans.
- Monitored RCC's pre-employment drug / alcohol testing & new employee safety orientation to insure compliance with contract and regulatory specifications.
- Participated in weekly progress meetings with RCC's management personnel and Metro's Construction Manager to discuss safety/security/quality related issues and construction work schedules.
- Conducted OSHA 30-hour for both Metro's and Construction Management Teams.
- Conducted Project Safety Orientation for new project staff and subcontractors.
- Participated in work plan reviews and daily crew safety meetings.
- Monitored construction field activities on a daily basis to insure compliance with contract specifications. *Participated with RCC staff in field safety inspection walks of multiple project worksites.*
- *RCC reported 71,253 work hours for October. C0980 contract to Date Work Hours are at 492,144 with two recordable injuries, and no Days Away injuries. The C0980 Recordable Injury Rate is 0.81.*
- *Project to Date Work Hours including both the C0980 and the C0981 Advanced Utility Relocation contract are 603,203 hours with 3 recordable injuries with a Project Total Recordable Injury Rate of 0.99.*

### **Third Party Utility Relocations**

- Monitored Third Party contractor's work activities to insure safety compliance.
- Made recommendations to Utility crews regarding contract activities and improving overall traffic control.

**THIRD PARTY AGREEMENT STATUS**

<b>Agency</b>	<b>Type of Agreement</b>	<b>Status/ Comments</b>
City of Los Angeles	Amendment to Master Cooperative Agreement	Parties will work under 2003 MCA.
Los Angeles Department of Water and Power	Amendment to Memorandum of Understanding	Metro and LADWP will continue to work under the terms of the previous Cooperative Agreement.
Los Angeles County Public Works	Letter of Agreement	Executed on 4/11
Caltrans	Amendment	Executed on 8/11
Private Utilities	LOA, MOU or UCA	<i>All agreements in place with exception of Level 3, Qwest, XO Comm, Zayo and Time Warner. Metro is in discussion with those utilities to establish agreements.</i>

**ADVANCED UTILITY RELOCATION STATUS**

*Metro terminated contract C0981R for convenience on April 14, 2015, and all remaining work was transferred to C0980 contract. The scope of this work includes the following relocations: LADWP water lines, LADWP power lines, and City of Los Angeles sewer lines.*

*LADWP-Power Services anticipated completion dates for cable pulling, splicing and removal of old facilities including the following:*

- Alameda/1st Streets and Flower north of 5th Street: Cable pulling, splicing and removal of old facilities is now complete with the exception of pulling cable for Lateral 3 at Alameda/1<sup>st</sup> Streets, which will eventually provide permanent power to the 1<sup>st</sup>/Central Avenue Station*
- Flower Street south of 5<sup>th</sup> Street (Construction): The remainder of the Design Build Contractor's conduit and vault relocation work in Flower Street between 5th & 6th Streets and the LADWP intercept conduit installation, cable pulling, splicing and removal of old facilities were put on hold pending determination of the need for a redesign due to shallower than expected locations for existing power vaults at 6th Street and Flower Street. A meeting will be scheduled in late January 2016 to discuss the Design Build Contractor's recommendation to address construction conflict.*

## **ADVANCED UTILITY RELOCATION STATUS (Cont.)**

- *2<sup>nd</sup> Street between Spring Street and Broadway (Design): A redesign solution was reached for completion of relocation of electrical facilities at the 2nd/Broadway Station. The work essentially has been broken out into two phases; the first phase is the minimum needed to allow installation of piles; the second phase will install the remainder of necessary electrical facilities. Partial approval by LABOE of Phase 1 has been obtained. The remaining Phase 1 and Phase 2 have been submitted to LABOE for their review and comments.*
- *At 2<sup>nd</sup> and Broadway (Construction): As soon as LABOE approves the power relocation plans, the Phase 1 electrical work by the Design Build Contractor is estimated to be complete in two months, since the relocation of the Sprint joint duct bank (MCI & Century Link) was completed on 12/15/15, and Design Build Contractor completed the installation of vault 207 on December 19th.*
- *At 2<sup>nd</sup> Street and Spring (Construction), the Design Build Contractor was trenching and installing conduit at night, and the work was completed on December 10, 2015. Soon after, LADWP began the intercept work and they are tentatively scheduled to complete this portion of work by late January 2016. In regards to cabling pulling and splicing on 2<sup>nd</sup> Street between Spring Street and Broadway, LADWP is tentatively scheduled to complete the work in late June 2016.*
- *At 2<sup>nd</sup> Street and Broadway (Construction), the Design Build Contractor will resume work on trenching and installing conduit and LADWP will begin intercept work in Broadway and in 2<sup>nd</sup> Street once the full closure of the 2<sup>nd</sup> Street and Broadway intersection is implemented in early February 2016.*

*LADWP-Water Services anticipated completion dates for water installation and removal of old facilities including the following:*

- *At Flower Street between 5th and 6th Street, the Design Build Contractor finished the potholing for the 24" water line work, and now they are currently excavating for the waterline.*
- *At the 1<sup>st</sup> and Alameda Street intersection, the Design Build Contractor is continuing work at night on the installation of 6", 12" and 16" water lines.*
- *Work on the installation of a 20" water line in Central Avenue is scheduled to begin in late January/early February.*

## **C0980 UTILITY WORK STATUS**

*The Design Build Contractor is currently coordinating with all affected utility owners to relocate their utilities by lowering in place or support and protect in order to accommodate the Regional connector Project.*

## **PEAK HOUR CONSTRUCTION VARIANCES**

*Metro is actively pursuing extended hour variances/exemptions to accommodate the Project needs by working with the City of Los Angeles, Bureau of Engineering, the Los Angeles Police Commission, the City of Los Angeles Department of Transportation and City Council District 14<sup>th</sup>, Office to obtain Peak Hour Exemptions.*

### **1st/Central Station:**

- *Metro extended both AM and PM peak hour exemptions for C0980's pre-trenching, and waterline relocation (potholing/excavation) activities at the 1<sup>st</sup> St & Alameda and 1<sup>st</sup> & Central intersections.*
- *Along 1<sup>st</sup> St between Alameda & Vignes St, AM & PM exemptions (for K-Rail) were obtained to support the EB & WB Widening of the future tunnel portal structure on 1<sup>st</sup> St.*
- *AM & PM Exemptions for the Shoofly Full Closure starting Jan 9, 2016 were approved until 3/21/16. Coordination with the City of Los Angeles for an extension is underway.*

### **2<sup>nd</sup>/Broadway Station**

- *Metro extended the K-Rail placement on Broadway between 1<sup>st</sup> & 3<sup>rd</sup> Streets as well as on 2<sup>nd</sup> St between Broadway & Spring St to continue performing utility exploratory trenching/power line installations in support of LADWP-Power Utility Relocations until 2/12/16.*
- *Furthermore, PM peak hour exemptions were obtain for LADWP-Power Relocations on Spring Street between 1<sup>st</sup> & 3<sup>rd</sup> Sts as well as on 2<sup>nd</sup> St between Main & Spring Sts. Exemptions were approved until 2/12/16.*

### **2<sup>nd</sup>/Hope Station & Flower Street Cut & Cover Area**

- *Moreover, AM Peak Hour Exemptions have been obtained for utility relocations/pre-trenching in the vicinity of the Flower Street & 2<sup>nd</sup>/Hope project areas.*

## **POLICE COMMISSION CONSTRUCTION VARIANCES**

Metro continues to actively pursue night/Sunday work hour variances to accommodate the Project needs by working closely with the Los Angeles Police Commission.

*In December 2015, LAPD approved night/Sunday variances for 2nd/Hope Station Area, and 2<sup>nd</sup>/Broadway Station construction.*

*LACMTA continues to successfully work with LAPD to variance obtain time extensions and amendments as necessary.*

## **CPUC CROSSING SUMMARY**

### **Current Status**

Contract C0980 requires the Contractor to design and obtain CPUC approval for the temporary relocation of the existing at-grade crossing of 1<sup>st</sup> Street adjacent to Alameda Street, approximately 500 feet east of its current location at 1<sup>st</sup>/Hewitt Streets. Also, the south Little Tokyo station pedestrian crossing will have to be re-opened to provide pedestrian access. The temporary modification of the existing at-grade crossing will remain in-place until construction of the underground Y junction necessitates closure of the existing Little Tokyo Station, at which point bus bridging will be implemented to transfer passengers between the Pico/Aliso and Union Station. When complete, the Regional Connector Project will no longer have an at-grade crossing at the intersections of 1<sup>st</sup>/Alameda and Temple/Alameda Streets.

On May 13, 2015, RCC received CPUC approval for the temporary relocation of the existing at-grade crossing of 1<sup>st</sup> Street adjacent to Alameda Street, approximately 500 feet east of its current location at 1<sup>st</sup>/Hewitt Street. Additionally, on May 26, 2015, RCC received CPUC approval of the South Little Tokyo station pedestrian crossing Form GO-88B application package.

## **CHRONOLOGY OF EVENTS**

June 2007	Began Alternatives Analysis study
January 2009	Board approval of Alternatives Analysis study and next phase
February 2009	Began Draft Environmental Impact Statement / Report (EIS / EIR)
October 2010	Board approval of Draft EIS / EIR and selection of locally preferred alternative
January 2011	FTA approval to Enter into Preliminary Engineering
January 2011	Began Preliminary Engineering
August 2011	Board authorized to solicit major D/B contract C0980
October 2011	Issued RFQs for D/B contract C0980
December 2011	Began Real Estate Acquisition
March 2012	Completed PE and began Advanced PE
April 2012	Board certification of Final EIS / EIR and adoption of project
April 2012	Began Final Design - Advanced Utility Relocations (AUR)
June 2012	FTA Record of Decision
August 2012	Issued RFQs for D/B contract C0980
January 2013	Issued RFPs for D/Build contract C0980
March 2013	Completed Final Design - Advanced Utilities Relocation (AUR)
May 2013	NTP for Construction Management Services contract MC070
June 2013	Beginning of AUR contract C0981R Bid Period
July 2013	Submitted TIFIA loan application
July 2013	Submitted 1st draft FFGA application to FTA for review
September 2013	Received proposals for D/B Contract C0980
September 2013	Submitted 2nd draft FFGA application to FTA, incorporating FTA comments
October 2013	Submitted Application to FTA Requesting an FFGA
November 2013	Started Emergency Generator Replacement Tank at 2nd street and Broadway Station (LA Times Building)
December 2013	Issued "Notice of Intent to Award" letter to contract C0981R contractor Pulice Construction Inc.
January 2014	Awarded AUR contract C0981R to Pulice Construction Inc.
February 2014	Issued Notice to Proceed for AUR Contract C0981R
February 2014	FTA issued Full Funding Grant Agreement to Metro
March 2014	Issued Amendment # 11 for D/B Contract C0980

## **CHRONOLOGY OF EVENTS (Cont.)**

March 2014	Started Survey for AUR Contract C0981R
April 2014	Metro Board approved the award of D/B Contract C0980 and established a LOP Budget
May 2014	Awarded D/B Contract C0980 to Regional Connector Constructors, Joint Venture
June 2014	Obtained possession of the Mangrove property from the City of Los Angeles
July 2014	Issued Notice To Proceed for D/B contract C0980
August 2014	C0980 D/B Contractor (RCC) began Final Design
September 2014	Metro performed the ground-breaking ceremony for C0980 D/B Contract
October 2014	EN077 Contractor, Arcadis, removed the underground storage tank at LA Times Parking Lot
November 2014	C0981R AUR Contractor completed DWP power work at 1st ST. and Alameda
December 2014	Metro completed Field Vibration Testing for existing Expo and Gold Lines
January 2015	Demolish Buildings at 1st/Central Station
February 2015	Metro approved the Baseline Schedule for C0980 D/B Contract
March 2015	RCC started 2nd/Broadway Station Site Move-In
April 2015	Metro terminated C0981R Contract for convenience
May 2015	RCC started pile installation at Mangrove Launch Pit
June 2015	RCC started decking for shoofly bridge (Pile Cap & Grade Beam)
July 2015	DWP Water started installing 36" Water Valve at Alameda St.
August 2015	RCC completed DWP Power work at Flower & 5th Street
September 2015	RCC started Phase 2 DWP Power Relocation work at Broadway (Behind K Rail).
October 2015	RCC started pile installation at 1st/Central Station
November 2015	RCC completed Central Ave Full Closure (Pile & Decking)
December 2015	Metro Board approved the increase (\$131.8M) of the Project LOP Budget to \$1,589.9 million.

## CONSTRUCTION CONTRACTS

<p><b>Description: Design-Build Contract</b> <b>Contractor: Regional Connector Constructors (RCC)</b></p>	<p><b>Contract No. C0980</b> <b>Status as of: December 31, 2015</b></p>
<p><b>Work Completed:</b></p> <ul style="list-style-type: none"> <li>• DB construction is 6.1% complete as of December 2015.</li> <li>• Final design is 88% complete as of December 2015.</li> <li>• Metro completed review of Fire Assessment for Precast Concrete Tunnel Liner (PCTL) Revision 2 and Tunnel Liner Revision – Polypropylene Fibers Memo Rev 1, Reviewed 100% PCTL Type 3 Reinforcement for Japanese Village Plaza .</li> <li>• Metro completed review of submittals for 100% Design Flower St. and Design Overhead Contact System; Alameda and Wye Alignments; 85% Desing 2nd/Hope Station, Train Control and Communications; AFC Design Revision 2 for 2nd/Hope Station Support of Excavation and Support of Excavation for Broadway Station.</li> <li>• Metro approved Building protection Flower, Hope and Boared Tunnels.</li> <li>• RCC completed 24" storm drain installation on WB 1st Street/Mangrove, including catch basins and manholes.</li> <li>• RCC completed 12" water tie-in at E.1st Street.</li> <li>• RCC completed decking for the Shoofly Bridge and TBM Pit.</li> <li>• RCC completed TBM approach slabs.</li> <li>• RCC installed temporary communication in preparation for Bus Bridge #1 at 1st/Alameda.</li> <li>• Sprint Contractor completed fiber optic relocation on Broadway.</li> <li>• RCC placed Vault 207 on Broadway.</li> </ul> <p><b>Areas of Concern:</b></p> <ul style="list-style-type: none"> <li>• NEPA Law suits could potentially delay the construction. MTA and FTA completed SEIS (Supplemental Environmental Impact Statement) and issued it for public comments on June 12, 2015. The Final SEIS was issued on December 18, 2015.</li> <li>• Advanced Utility Relocation (AUR) Contract was terminated and transferred to C0980 Contract. Mitigation measures are being implemented and alternative scenarios are evaluated by RCC, DWP and Metro. Major street closures are being coordinated with LABOE, LADOT and CD14. Metro and RCC are coordinating with DWP on the re-design and construction issues to mitigate construction schedule at 2nd/Broadway and 1st/Central stations. Schedule Recovery Plan has been developed and field work started at several locations.</li> </ul> <p>Please see the "Management Issues/Opportunities" section for Concerns and Opportunities details.</p>	<p><b>Major Activities (In Progress):</b></p> <ul style="list-style-type: none"> <li>• Metro continues review of Final Floating Mock-up test plan revision 2, AFC Design Building Protection 2nd and Broadway Station and Crossover Cavern, 100% Tieback Removal Temporary Shaft and Adit, Bored Tunnel AFC Design, Specifications Overhead Contact Systems, Traction Power Specifications and Final design of Broadway station and LA Times Underpinning, and Floating Slab Mockup Test Plan Revision 2 as well as review and approval of Final Geotechnical Data Report Rev2.</li> <li>• RCC continues pile installation at 1st/Central Station.</li> <li>• RCC continues demolition and earthwork for Shoofly.</li> <li>• RCC continues work on 1st St. EB and WB widening.</li> <li>• RCC continues 36" storm drain installation on WB 1st Street.</li> <li>• RCC continues 6", 8", 12" and 16" water line construction activities at 1st/Alameda.</li> <li>• RCC continues placing OCS foundations at the Mangrove Yard.</li> <li>• RCC continues geotechnical monitoring install at 1st/Central Yard and Alameda Public ROW.</li> <li>• RCC continues DWP duct bank install for temporary power at 1st/Central.</li> <li>• RCC continues with the installation of electrical duct banks at 2nd/Broadway.</li> <li>• RCC continues the 18" SD Laterals install, pile pre-trenching/potholing and geotechnical monitoring install at 2nd/Hope Station.</li> <li>• RCC continues installation of the 12/24" mainline and laterals on Flower at 5th Street.</li> <li>• RCC continues geotechnical monitoring install on Flower from 4th to 6th Streets.</li> <li>• RCC continues Underground Investigation – Potholing Hydrovac and Exploratory Trenching at various locations project wide.</li> <li>• RCC continues preparation of submittals and traffic control plans, including weekly meetings with LADOT and City Council District 14.</li> </ul> <p><b>Major Activities Next Period:</b></p> <ul style="list-style-type: none"> <li>• Metro will review 1st and Central Station 100% Design, Communications 100% Design, Fire Assessment for PCTL Revision 2, 100% Floating Slab Track drawings and AFC Trackwork Design, AFC Design Revision 1 Building Protection for 2nd/Broadway Station and Crossover Cavern, AFC Design Revision 1 Building Protection for Flower, Hope and Bored Tunnels, 100% Traction Power, Train Control at 7th/Metro station and 1st St. Leg Design.</li> <li>• RCC will begin implementation of Bus Bridge #1 (January 2016)</li> <li>• RCC will resume installation of the Mangrove Noise Barrier.</li> <li>• RCC will resume train drain installation at the Mangrove Yard during 1st St widening.</li> <li>• RCC will resume pile trenching for the Wye at 1st/Alameda in various work areas and 2nd/Broadway.</li> <li>• RCC will begin SOE Pile install at 2nd/Hope.</li> <li>• RCC will begin DWP duct bank/vault potholing at 6th/Flower.</li> <li>• RCC will resume and complete installation of fire hydrant head near 4th/Flower.</li> </ul>

**CONSTRUCTION CONTRACTS (Cont.)**

Description: Design-Build Contract Contractor: Regional Connector Constructors (RCC)		Contract No. C0980 (Cont.) Status as of: December 31, 2015				
Date of Award: 5/6/2014 Notice to Proceed: 7/7/2014 Original Contract Duration 2430 CD  Current Contract Duration 2430 CD Elapsed Time from NTP: 544 CD		Original Contract	Time Extension	Current Contract	Forecast	Variance CDs
	Notice to Proceed	07/07/14	0	07/07/14	07/07/14	0
	Milestone 1:	10/22/20	0	10/22/20	04/01/21	-161
	Milestone 2:	06/14/20	0	06/14/20	12/15/20	-184
	Milestone 3:	05/15/16	0	05/15/16	10/23/16	-161
	Milestone 4:	05/27/18	0	05/27/18	11/04/18	-161
	Milestone 5:	08/19/19	0	08/19/19	12/17/19	-120
	Milestone 6:	09/18/19	0	09/18/19	03/30/20	-194
	Milestone 7:	10/10/15	0	10/10/15	05/12/16	-215
	Milestone 8:	04/22/18	0	04/22/18	12/23/18	-245
	Milestone 9A:	07/14/20	0	07/14/20	10/26/20	-104
	Milestone 9B:	10/22/20	0	10/22/20	02/13/21	-114
	Milestone 10:	10/12/20	0	10/12/20	05/29/21	-229
	Milestone 11:	10/27/20	0	10/27/20	06/13/21	-229
Milestone 12:	03/01/21	0	03/01/21	08/15/21	-167	
Physical completion as of 01/01/2016:	<b>Cost Summary:</b>					<b>\$ In millions</b>
Design 88.0%	1. Award Value:				927.2	
Construction 6.1%	2. Executed Modifications:				41.6	
Total Incurred Cost 28.2%	3. Approved Change Orders:				19.3	
	4. Current Contract Value (1+2+3):				988.2	
	5. Incurred Cost:				278.6	
* Note: Physical completion assessment excludes mobilization, general mobilization and Provisional Sum.						

## CONSTRUCTION PHOTOS



1<sup>st</sup>/Central Pile Installation

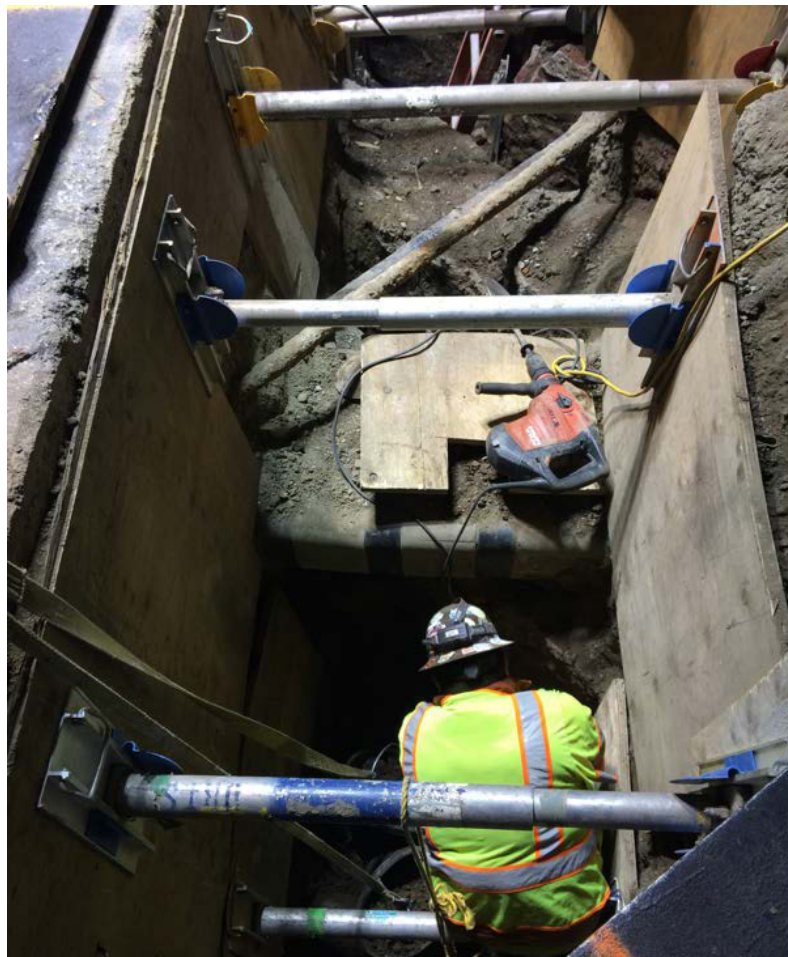


Track Installation at 1<sup>st</sup>/Central Station

## CONSTRUCTION PHOTOS



Installing Inclinometer at 2<sup>nd</sup>/Hope



Trenching underneath ATT and DWPP ductbanks at 5<sup>th</sup> and Flower Sts.

**APPENDIX  
COST AND BUDGET TERMINOLOGY**

<b><u>Project Cost Descriptions</u></b>	
ORIGINAL BUDGET	The Original Project Budget established upon Board approval of Life-of-Project (LOP) budget.
CURRENT BUDGET	The Original Budget plus all budget amendments approved by formal Metro Board action. Also referred to as Approved Budget.
COMMITMENTS	The total of actual contracts awarded, executed change orders or amendments, approved work orders of Master Cooperative Agreements, 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.
<b><u>Cost Report by Element Descriptions</u></b>	
CONSTRUCTION	Includes construction contracts. Cost associated with Guideways, Stations, Southwestern Yard, Sitework/Special Conditions and Systems.
RIGHT-OF-WAY	Includes purchase cost of parcels, easements, right-of-entry permits, escrow fees, contracted real estate appraisals and tenant relocation.
VEHICLES	Includes the purchase of LRT vehicles and spare parts for the project.
PROFESSIONAL SERVICES	Includes design engineering, project management assistance, construction management support services, legal counsel, agency staff costs, and other specialty consultants.
CONTINGENCY	A fund established at the beginning of a project to provide for anticipated but unknown additional costs that may arise during the course of the project.
PROJECT REVENUE	Includes all revenue receivable to the Metro as a direct result of project activities. This includes cost sharing construction items, insurance premium rebates, and the like.

## **APPENDIX**

### **LIST OF ABBREVIATIONS AND ACRONYMS**

AFC	Approved for Construction
APE	Advanced Preliminary Engineering
ATC	Automatic Train Control
ATSAC	Automated Traffic Surveillance and Control
AUR	Advanced Utility Relocation
BAFO	Best and Final Offer
BIM	Building Information Modeling
CADD	Computer Aided Drafting and Design
CALTRANS	California Department of Transportation
CCTV	Closed Circuit Television
CD	Calendar Day
CEQA	California Environmental Quality Act
CM	Construction Manager
CMAQ	Congestion Mitigation and Air Quality Improvement Program
CN	Change Notice
CO	Change Order
CPM	Critical Path Method
CPUC	California Public Utilities Commission
CR	Camera Ready
CSPP	Construction Safety Phasing Plan
CTC	California Transportation Commission
CUD	Contract Unit Description
DB	Design Build
DBB	Design Bid Build
DOT	Department of Transportation
DWP	Department of Water and Power
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPB TBM	Earth Pressure Balance Tunnel Boring Machine
FAR	Federal Acquisition Regulation
FD	Final Design
FEIS	Final Environmental Impact Statement
FEIR	Final Environmental Impact Report
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
GBN	Ground Borne Noise
GBR	Geotechnical Baseline Report
GDSR	Geotechnical Design Summary Report

## **APPENDIX**

### **LIST OF ABBREVIATIONS AND ACRONYMS (Cont.)**

HABS/HAER	Historical American Building Survey / Historical American Engineering Record
IFB	Invitation for Bid
IPMO	Integrated Project Management Office
JV	Joint-Venture
LA	Los Angeles
LABOE	Los Angeles Bureau of Engineering
LABOS	Los Angeles Bureau of Sanitation
LABSL	Los Angeles Bureau of Street Lighting
LACFCD	Los Angeles County Flood Control District
LACMTA	Los Angeles County Metropolitan Transportation Authority
LADOT	Los Angeles Department of Transportation
LADPW	Los Angeles Department of Public Works
LADWP	Los Angeles Department of Water and Power
LAFD	Los Angeles Fire Department
LAPD	Los Angeles Police Department
LNTP	Limited Notice To Proceed
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
MCA	Master Cooperative Agreement
MIS	Major Investment Study
MMRP	Mitigation Monitoring and Reporting Program
MOU	Memorandum of Understanding
MPSR	Monthly Project Status Report
N/A	Not Applicable
NEPA	National Environmental Protection Act
NOD	Notice of Determination
NPDES	National Pollution Discharge Elimination System
NTE	Not to Exceed
NTP	Notice To Proceed
OCC	Operations Control Center
OCR	Overhead Conductor Rail
OCS	Overhead Catenary System
OSHA	Occupational Health and Safety Administration
PA/VMS	Public Address/Visual Messaging Sign
PCTL	Precast Concrete Tunnel Lining
PE	Preliminary Engineering
PEER	Permit Engineering Evaluation Report
PIP	Project Implementation Plan
PLA	Project Labor Agreement
PM	Project Manager

## **APPENDIX**

### **LIST OF ABBREVIATIONS AND ACRONYMS (Cont.)**

PMIP	Project Management Implementation Plan
PMOC	Project Management Oversight Consultant
PMP	Project Management Plan
P&P	Policies & Procedures
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
RAMDPP	Reliability Availability Maintainability Dependability Program Plan
RAMP	Real Estate Acquisition Management Plan
RCC	Regional Connector Contractors
RCMP	Risk Assessment Management Plan
RFC	Request For Change
RFP	Request For Proposals
RFSC	Request for Special Consideration
RHA	Risk Hazard Analysis
RLPE	Red Light Photo Enforcement
ROC	Rail Operations Center
ROD	Record Of Decision
ROM	Rough Order of Magnitude
RON	Resolution of Necessity
ROW	Right-Of-Way
RSD	Revenue Service Date
SAV	Stand Alone Validator
SCAQMD	Southern California Air Quality Management District
SCADA	Supervisory Control and Data Acquisition
SCC	Standard Cost Category
SCG	Southern California Gas Company
SEIS	Supplemental Environmental Impact Statement
SHA	State Highway Account
SHPO	State Historic Preservation Office
SIT	System Integration Testing
SOE	Support Of Excavation
SOQ	Statement of Qualification
SOV	Schedule Of Value
SOW	Statement Of Work
SP	Special Provision
SSMP	Safety and Security Management Plan
STB	Surface Transportation Board
STIP	State Transportation Improvement Program
STP	Surface Transportation Program

## **APPENDIX**

### **LIST OF ABBREVIATIONS AND ACRONYMS (Cont.)**

SUSMP	Standard Urban Stormwater Mitigation Plan
TBD	To Be Determined
TBM	Tunnel Boring Machine
TCC	Train Control Center
TCE	Temporary Construction Easement
TCRP	Traffic Congestion Relief Program
TCTMC	Major Transit and Transportation Construction Traffic Management Committee
TIFIA	Transportation Infrastructure Finance and Innovation Act
TIGER	Transportation Investment Generating Economic Recovery
TPSS	Traction Power Substation
TRACS	Transit Automatic Control System
TVA	Threat Vulnerability Analysis
TVM	Ticket Vending Machine
UFS	Universal Fare System
UST	Underground Storage Tank
USDOT	United States Department Of Transportation
VE	Value Engineering
WBS	Work Breakdown Structure
WP	Work Package
WTCP	Worksite Traffic Control Plan
YOE	Year of Expenditure