

Los Angeles County  
Metropolitan Transportation Authority

# Regional Connector Transit Corridor

East Los Angeles ↔ Santa Monica

Azusa ↔ Long Beach



Metro®

# **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).

**MARCH 2014**

## TABLE OF CONTENTS


	Page No.
Project Summary.....	1
Project Overview & Status.....	2-4
Management Issues.....	4
Project Alignment.....	5
Base Project Scope.....	6-8
Project Status	
• Project Schedule	
◦ Key Milestones Six-Month Look Ahead.....	9
◦ Project Summary Schedule.....	10
◦ Critical Path Narrative.....	11
• Project Cost	
◦ Project Cost Status .....	12
◦ Project Cost Analysis.....	12
• Financial/Grant	
◦ Financial/Grant Status.....	13-14
• Staffing Status	
◦ Total Project Staffing.....	15
◦ Metro Staff.....	16
◦ Construction Management Support Services Consultant.....	16
◦ Engineering Services Consultant.....	17
• Real Estate Status.....	18
• Quality Assurance Status.....	18
• Environmental Status.....	19
• Construction Relations Status .....	20
• Creative Services Status .....	21
• Safety & Security Status.....	21
• Third Party Agreement and Advanced Utility Relocation Status.....	22
• Peak Hour and Nighttime Construction Variances.....	23
• California Public Utilities Commission (CPUC) Crossing Summary...	23

## **TABLE OF CONTENTS (Continued)**

	Page No.
• Chronology of Events.....	24
• Construction Contracts	
○ Contract Status	
➤ Contract C0981R.....	25
○ Construction Photos.....	26
Appendices	
• Cost and Budget Terminology.....	27
• List of Acronyms .....	28-31

**PROJECT SUMMARY**

As of March 2014

<b>LOCATION:</b> Downtown Los Angeles				<b>CONSTRUCTION MANAGEMENT CONSULTANT:</b> ARCADIS			
<b>DESIGN CONSULTANT:</b> Connector Partnership JV				<b>CONTRACTOR:</b> TBD			
<b>TWC UTILITY WORK AT 5TH STREET AND FLOWER</b>				<b>WORK COMPLETED PAST MONTH</b>			
				<ul style="list-style-type: none"> <li>- D/B Contract C0980 Amendment #11 issued on March 14, 2014</li> <li>- D/B Contract C0980 BAFO evaluation continues</li> <li>- Contractor mobilized and started Survey and Ambient Noise Monitoring for Contract C0981R Advanced Utility Relocation</li> <li>- Continue efforts seeking Peak Hour Exemptions from the City for C0981R</li> <li>- Awaiting LAFD and DWP permit for the new above-ground Storage Tanks that will be installed at the LA Times site</li> <li>- Continue third party advance utility relocations on Flower Street</li> <li>- LADWP completed stub out for TBM power feed on Temple Street</li> <li>- Metro acquired Volk properties for 1st and Central Station</li> </ul>			
				<b>SCHEDULE ASSESSMENT</b>			
<b>EXPENDITURE STATUS (\$ In Millions)</b>				<b>MAJOR SCHEDULE ACTIVITIES</b>	<b>PRIOR PLAN</b>	<b>CURRENT PLAN</b>	<b>VARIANCE WEEKS</b>
<b>ACTIVITIES</b>	<b>CURRENT BUDGET</b>	<b>EXPENDED AMOUNT</b>	<b>PERCENT EXPENDED</b>	<b>Environmental</b>			
				FES / FEIR	N/A	04/26/12	Complete
<b>DESIGN</b>	\$109.4	\$37.7	34.4%	<b>Design</b>			
<b>RIGHT-OF-WAY</b>	\$115.9	\$10.1	8.7%	PE Notice to Proceed	N/A	01/04/11	Complete
<b>CONSTRUCTION</b>	\$846.3	\$3.2	0.4%	Final Design complete	11/04/15	11/04/15	0
<b>OTHER</b>	\$355.3	\$46.9	13.2%	<b>Right-of-Way</b>			
<b>TOTAL</b>	\$1,426.9	\$97.8	6.9%	All parcels available	06/30/15	06/30/15	0
Current Budget Includes Environmental Planning and Finance Costs. Note: Expended amount is through Feb. 2014.				<b>Construction - Main Design / Build Contract</b>			
<b>AREAS OF CONCERN</b>				Notice to Proceed	05/30/14	05/30/14	0
- Market conditions may lead to higher construction costs				Construction complete	09/18/20	09/18/20	0
				<b>CRITICAL ACTIVITIES / 3 MONTH LOOK AHEAD</b>			
				<ul style="list-style-type: none"> <li>- Seek Board authorization to award D/B Contract C0980 April 2014.</li> <li>- Award Contract and issue NTP for D/B Contract C0980</li> <li>- Mobilize D/B Contract C0980 Design Team</li> <li>- Start Construction for Contract C0981R Advanced Utility Relocations</li> <li>- Complete Diesel Tank relocation from 2nd/Broadway Station site to LA Times Building, expected completion July 29, 2014</li> </ul>			
<b>ROW ACQUISITION</b>	<b>PLAN</b>	<b>ACQUIRED</b>	<b>REMAINING</b>				
PERMANENT PARCELS	5	2 *	3				
TEMPORARY PARCELS	29	0	29				
<b>TOTAL PARCELS</b>	34	2	32				
* Volk Properties							

## **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 planned for summer 2020.*

*The LPA 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 and 2nd Street to just west of Central Avenue where the alignment would veer northeast under privately-held property, Japanese Village Plaza. At 1<sup>st</sup> Street and Central, the tracks continue underground heading northeast under 1st 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. The project delivery method for this contract consists of a two-step best value procurement approach with submittal of qualification statements through a RFQ process, pre-qualification of qualified proposers followed by release of a RFP soliciting technical and price proposals with an option at Metro’s discretion for best and final offers (BAFO). Proposals were received on September 9, 2013 and subsequently, amendments 9 – 11 requesting a BAFO were transmitted. Revised BAFOs were received on 03/28/14 and are under evaluation.

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 Notice to Proceed on February 18, 2014.

## **PROJECT OVERVIEW & STATUS (Continued)**

### **Construction**

Advanced utility relocations by 3<sup>rd</sup> parties continue at several locations. So Cal Gas Co. (SCG) completed gas line relocation at 2<sup>nd</sup> Street and Broadway. AT&T and TWC started utility relocations at Flower Street. LADWP completed stub out work for TBM power on Temple Street.

EN077 Contractor, Arcadis, is waiting for the LAPD permit for the new above-ground storage tanks that will be installed at the LA Times site.

### **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. Metro staff has determined that the best interim course of action is to expand and reconfigure the existing ROC facility. Conceptual design and preliminary engineering level design have started and expansion will be completed in time to support each one of those new lines and extensions.

### **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 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.

### **Program Management**

The current project cost is estimated at \$1,426.93 million dollars and includes \$24 million in environmental and planning costs and \$27.57 million in finance cost. The original and current budget will be established upon Metro Board approval of the Life-of-Project (LOP) budget in the second quarter of 2014.

Funding for the project comes from a variety of sources such as 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.

The project commitments through February 2014 are \$244.4 million or 17.1% of the current cost estimate. The project expenditures thru February 2014 are \$97.8 million or 6.9% of the current cost estimate. The expenditures to date are for environmental/planning, preliminary engineering, third party utility relocation work, agency reviews/coordination, advanced utility relocation construction, right-of-way and professional services.

## **PROJECT OVERVIEW & STATUS (Continued)**

The project master schedule reflects a forecast of September 2020 for Revenue Service, which will be executed in two phases. Phase 1 Revenue Service Date to Eastside is on May 2020 and phase II Revenue Service Date to Pasadena is on September 2020. The forecast Revenue Service Date reflects an executed FFGA with the FTA February 20, 2014 and the award of the D/B contract C0980, in the spring 2014.

A Risk Register was developed for the project and was updated quarterly during the early phases of the project to reflect any new risks that derive from concerns or issues. A more comprehensive Risk Register is being developed for the construction phase. Metro is planning to resume reporting of risks after the award of the Design/Build Contract C0980. Risk Management reporting will continue to be on a quarterly basis.

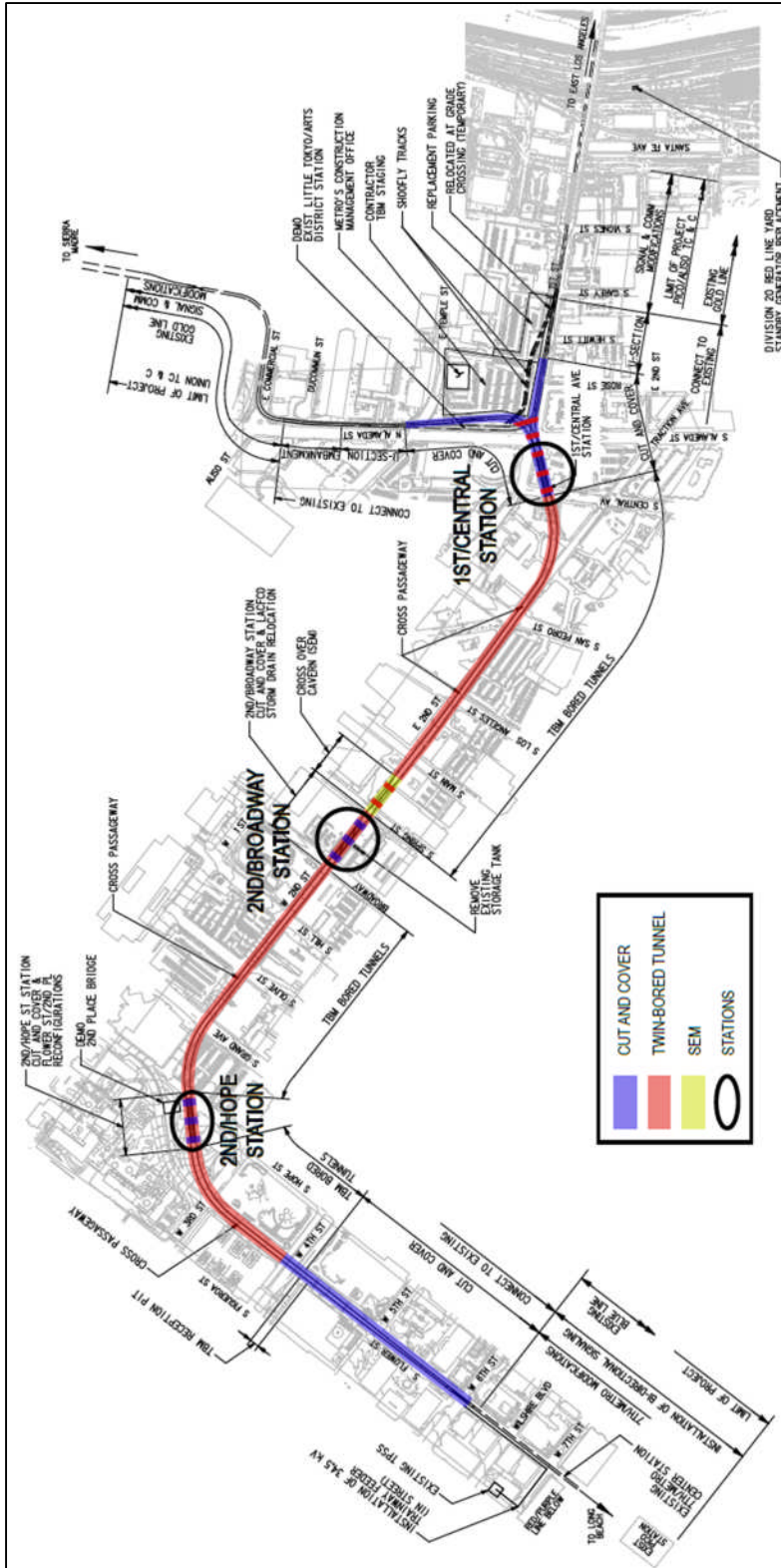
Metro has been coordinating on lessons learned with the U.S. Department of Transportation (USDOT) on a TIGER Project Delivery Initiative. This initiative is to look at best practices and lessons learned on major transit projects. A final report was provided to Metro in January 2013. There will be further discussions on lessons learned next year.

## **MANAGEMENT ISSUES**

No Management Issues this period.



PROJECT ALIGNMENT



## **BASE PROJECT SCOPE**

The Project provides a 1.9-mile-long connection between the Gold Line light rail transit (LRT) lines from Pasadena and East Los Angeles to the Blue Line to Long Beach and the Expo Line to Culver City, and the future Expo Line Extension to Santa Monica. The alignment will extend underground from the 7th Street/Metro Center Station following Flower Street, curving east under the 2nd Street roadway tunnel and 2nd Street, and continuing under the intersection of 1st and Alameda Streets, surfacing to connect to the Metro Gold Line tracks within 1st Street at grade to the east and north of Temple Street toward Union Station. The Board adopted the underground light rail system as the Locally Preferred Alternative (LPA) in October 2010.

The Final EIS/EIR was certified by the Metro Board on April 26, 2012 and the FTA issued the Record of Decision on June 29, 2012. The Record of Decision allowed the Project to proceed with real estate acquisitions and advanced utility relocations. On February 20, 2014 Metro received an executed FFGA from the FTA to proceed with final design and major construction; on the same date, Metro received an executed TIFIA Loan from USDOT.

### **Engineering**

This phase consists of Preliminary Engineering (PE) 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 enough detail to provide the conceptual 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 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 will be performed by the D/B contractor as part of the C0980 Contract. The scope is listed below.

### **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. UFS equipment will be designed, fabricated and installed under a Metro contract.

### **Construction**

The scope of work in this phase will be performed by Third Party utility companies and by two Metro contracts as follows:

## **BASE PROJECT SCOPE (Continued)**

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

A number of utility owners will be relocating their own utilities. The utilities include fiber optic, telephone, cable television, electrical (power cable pulling and terminations), and natural gas lines starting 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

The Utility Owners involved are: AT&T, Level 3 Communications, MCI (Verizon Business), MFN/Above.net, NextG Networks Inc., Qwest, So Cal Gas (SCG), Sprint-Nextel, Time Warner Cable (TWC), XO Communications, and GTE Verizon. Metro will undertake coordination of these activities.

Third party Utility Relocation Work at 2<sup>nd</sup> Street and Hope Station completed September 2013. Remaining AT&T, SCG and TWC work is expected to continue through the third quarter 2014.

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

Metro has 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 duration of this contract is approximately 10 months. The relocated utilities are long-lead construction tasks that are known to conflict with cut and cover excavations. Performing the relocation of these utilities in advance removes them from the critical path for the entire project. Pulice Construction is planning to start excavation early May 2014, and will be partially completed by NTP of the main contract (C0980). The anticipated overlap of construction activity with the C0980 Design/Builder is approximately five months. The scope of this work includes the following relocations: LADWP water lines, LADWP power lines, and City of Los Angeles sewer lines. Metro will assist the contractor in obtaining exemptions as necessary for the City of LA nighttime work as well as for Peak Hour work hours. If the work hour variances are not approved by the City, it will impact the cost and completion date for this contract.

## **BASE PROJECT SCOPE (Continued)**

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

This is the largest construction contract of the project, which 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, all electrical and mechanical equipment, and testing. The contractor will restore the site to its previous condition at the end of the project. The duration of this contract is approximately 2300 days, which includes approximately 300 days of bus bridges. 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.

### **CONTRACT MCO70 – CONSTRUCTION MANAGEMENT SUPPORT SERVICES**

Metro has awarded the contract for Construction Management Support Services to ARCADIS, Inc. ARCADIS Project Manager and other staff are co-located with Metro at in an integrated project management office located at the Mangrove site. Metro and ARCADIS recently completed negotiations for the level of effort requirements necessary to support the Project during Metro FY15. The recommendation to execute this contract modification is going to the April 2014 Board Meeting for approval.

### **CONTRACT E0119 – PRELIMINARY ENGINEERING AND DESIGN SUPPORT SERVICES DURING CONSTRUCTION**

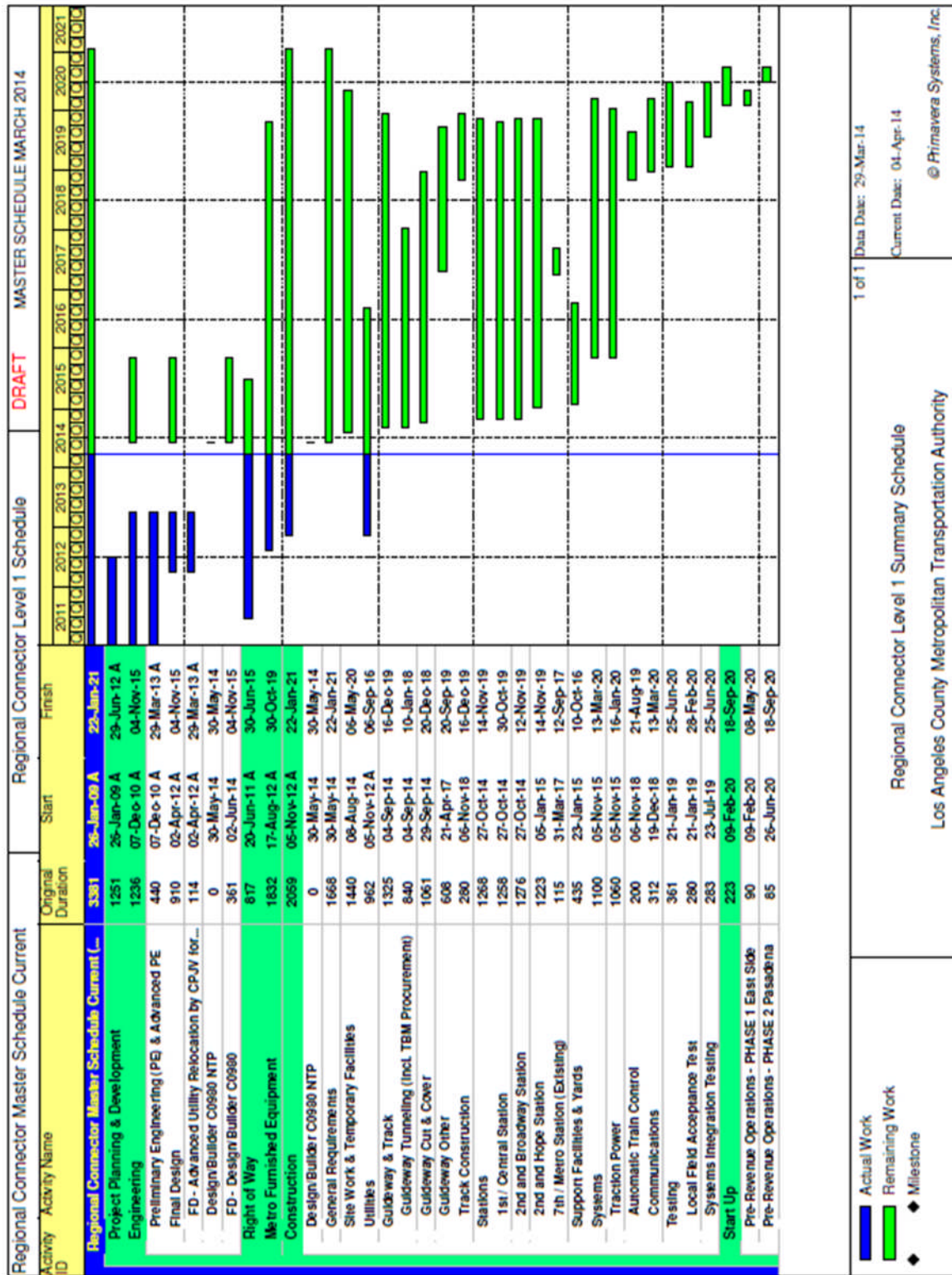
Metro awarded this contract to a joint venture (CPJV) between AECOM, Inc. and Parson Brinkerhoff. CPJV provided preliminary engineering services to support the EIR/EIS, prepared project definition documents for Contract C0980, and prepared the final design documents for Contract C0981. CPJV is currently preparing conformed project definition documents for Contract C0980 when awarded. Metro and CPJV are currently finalizing negotiations for the level of effort requirements to support the Project in Metro FY15. The recommendation for this contract modification will be taken to the May 2014 Board Meeting for approval.

**KEY MILESTONES SIX- MONTH LOOK AHEAD**

	Milestone Date	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14
Received Revised BAFOs for D/B contract C0980	3/28/14 A	◆					
Started Survey Contract C0981R	3/17/14 A	□					
Board Authorizes to Award D/B Contract C0980	04/24/14		Ⓜ				
Award D/B Contract C0980	04/30/14		◆				
Third Party Utility Companies Complete Final Design for Advance Utility Relocations	05/05/14			▽			
Issue D/B Contract C0980 NTP	05/30/14			◆			
Mobilize D/B Contract C0980 Design Team	06/02/14				⬡		
Start Engineering & TBM Design Submittals	07/09/14					◆	
Start Demolition, clear, grub and fencing at Mangrove	08/26/14						⬡

- ◆ MTA Staff
- Ⓜ MTA Board Action
- ✂ FTA (Federal Transportation Authority)
- △ Other Agencies
- Contractors
- Design Consultant
- ⬡ C0980 D/B Contractor
- "A" following date is actual and completed
- \* New Date
- ▽ Utility Company

# PROJECT SUMMARY SCHEDULE



1 of 1 Data Date: 29-Mar-14  
 Current Date: 04-Apr-14  
 © Primavera Systems, Inc.

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

## **CRITICAL PATH NARRATIVE**

### **Critical Path:**

The longest path to project substantial completion runs through the procurement of the C0980 D/B contract; excavation support system and tunnel final designs; procurement, delivery and assembly of the TBM; 1<sup>st</sup>/Central Station excavation to track level; tunnel mining; 2<sup>nd</sup>/Broadway Station excavation to track level; SEM cross-over cavern construction east of 2<sup>nd</sup>/Broadway Station; 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.

## PROJECT COST STATUS

**COST REPORT**

DOLLARS IN THOUSANDS

DESCRIPTION	ORIGINAL BUDGET	CURRENT BUDGET		COMMITMENTS		EXPENDITURES		CURRENT FORECAST		BUDGET / FORECAST VARIANCE
		PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	
ENGINEERING/CONSTRUCTION (460228 & 860228 )	1,402,932	0	1,402,932	1,608	220,361	1,491	73,990	0	1,402,932	0
460228 & 860228 SUBTOTAL	1,402,932	0	1,402,932	1,608	220,361	1,491	73,990	0	1,402,932	0
ENVIRONMENTAL/PLANNING - 400228	6,075	0	6,075	0	6,075	0	6,075	0	6,075	0
ENVIRONMENTAL/PLANNING - 460228	17,925	0	17,925	0	17,925	0	17,752	0	17,925	0
400228 & 460228 SUBTOTAL	24,000	0	24,000	0	24,000	0	23,827	0	24,000	0
<b>TOTAL</b>	<b>1,426,932</b>	<b>0</b>	<b>1,426,932</b>	<b>1,608</b>	<b>244,361</b>	<b>1,491</b>	<b>97,817</b>	<b>0</b>	<b>1,426,932</b>	<b>0</b>

NOTE: EXPENDITURES ARE CUMULATIVE THROUGH FEBRUARY 2014

## PROJECT COST ANALYSIS

### Original Budget

The Original Budget of \$1.43 billion reflects the “Project Budget” (\$1,402.9M) in the adopted Full Funding Grant Agreement (FFGA), dated February 20, 2014 plus Planning and Environmental costs (\$24M).

### Current Budget

The Current Budget of \$1.43 billion reflects the “Project Budget” (\$1,402.9 M) in the adopted FFGA plus Planning and Environmental costs (\$24M). Board approval of the Life-of-Project (LOP) Budget is expected in April 2014.

### Current Forecast

The Current Forecast is \$1.43 billion.

### Commitments

The Commitments increased by \$1.61 million this period for work associated with Environmental noise monitoring and the LA Times Diesel Tank Relocation. Commitments represent Board approved budget through Fiscal Year 2014. The \$244.4 million in Commitments to date represents 17.1% of the Current Budget.

### Expenditures

The Expenditures are cumulative through February 2014. The Expenditures increased by \$1.49 million this period primarily for costs associated with Engineering Management Support, Metro Project Administration, Construction Management Support Services, Legal Services, Third Party Master Cooperative Agreements with the City of Los Angeles, Community Relations and Environmental Services. The \$97.8 million in expenditures to date represents 6.9% of the Current Budget.



**FINANCIAL/GRANT STATUS**

**Status of Funds Anticipated**

FEDERAL – CMAQ	<p>Metro Submitted on November 25, 2013 a Grant application of \$64.5M to the FTA.</p> <p>Grant approval is expected in May 2014.</p>
FEDERAL – SECTION 5309 NEW STARTS	<p>Metro submitted on November 25, 2013 a grant application of \$65.0M to the FTA.</p> <p>Grant approval is expected in May 2014.</p>
<p>MEASURE R – TIFIA LOAN</p> <p>(Transportation Infrastructure Finance &amp; Innovation Act)</p>	<p>A TIFIA loan agreement between the Department of Transportation and Metro for \$160M was executed on February 20, 2014.</p> <p>Funds are available for draw down.</p>
STATE PROP 1A HSRB	<p>Allocation request of \$114.9M to the CTC was submitted on June 27, 2013.</p> <p>Allocation approval is pending the award of the Design/Build Contract.</p>
STATE PROP 1B PTMISEA	<p>Allocation request of \$149.5M has been approved on April 24, 2013.</p> <p>Funds are available for draw down.</p>
CITY OF LA	<p>Funding agreement of \$42M with the City of LA is pending approval following upcoming transportation committee meeting between the City and Metro.</p> <p>Proposed payment schedule is due to begin no sooner than FY2016.</p>

**FINANCIAL/GRANT STATUS (Continued)**

**Status of Funds by Source**

**March 2014**

SOURCE	(A)	(B)	(C)	(D)	(D/B)	(E)	(E/B)	(F)	(F/B)
	ORIGINAL BUDGET	TOTAL FUNDS ANTICIPATED	TOTAL FUNDS AVAILABLE	\$	%	\$	%	BILLED TO FUNDING SOURCE \$	%
FEDERAL - CMAQ	\$64.000	\$64.000	\$0.000	\$0.000	0%	\$0.000	0%	\$0.000	0%
FEDERAL - SECTION 5309 NEW STARTS	\$669.900	\$669.900	\$0.000	\$29.861	4%	\$3.437	1%	\$0.000	0%
MEASURE R - TIFIA LOAN	\$160.000	\$160.000	\$160.000	\$0.000	0%	\$0.000	0%	\$0.000	0%
STATE PROPOSITION 1A HSRB *	\$114.874	\$114.874	\$0.000	\$0.000	0%	\$0.000	0%	\$0.000	0%
STATE PROPOSITION 1B PTMISEA **	\$149.500	\$149.500	\$149.500	\$149.500	100%	\$29.380	20%	\$29.380	20%
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	\$132.466	\$62.410	\$62.410	47%	\$62.410	47%	\$62.410	47%
MEASURE R	\$27.371	\$27.371	\$0.000	\$0.000	0%	\$0.000	0%	\$0.000	0%
CITY OF LOS ANGELES	\$41.984	\$41.984	\$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>\$1,426.932</b>	<b>\$1,426.932</b>	<b>\$374.500</b>	<b>\$244.361</b>	<b>17.1%</b>	<b>\$97.817</b>	<b>6.9%</b>	<b>\$94.380</b>	<b>6.6%</b>

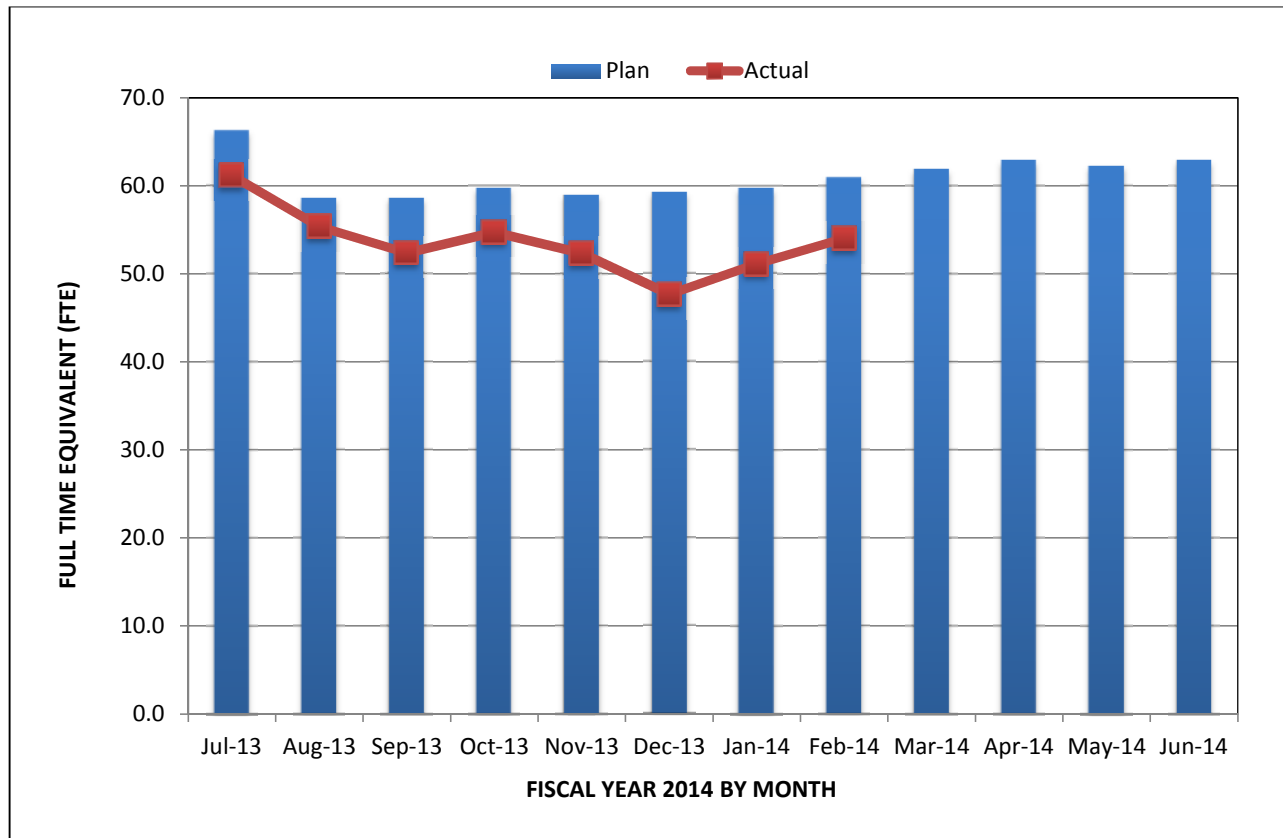
EXPENDITURES ARE CUMULATIVE THROUGH FEBRUARY 2014  
ORIGINAL BUDGET BASED ON FUNDING PLAN INCLUDED IN THE APPROVED FULL FUNDING GRANT AGREEMENT "PROJECT BUDGET" (\$1,402.9M) PLUS  
PLANNING / ENVIRONMENTAL COSTS (\$24M)

\* 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)

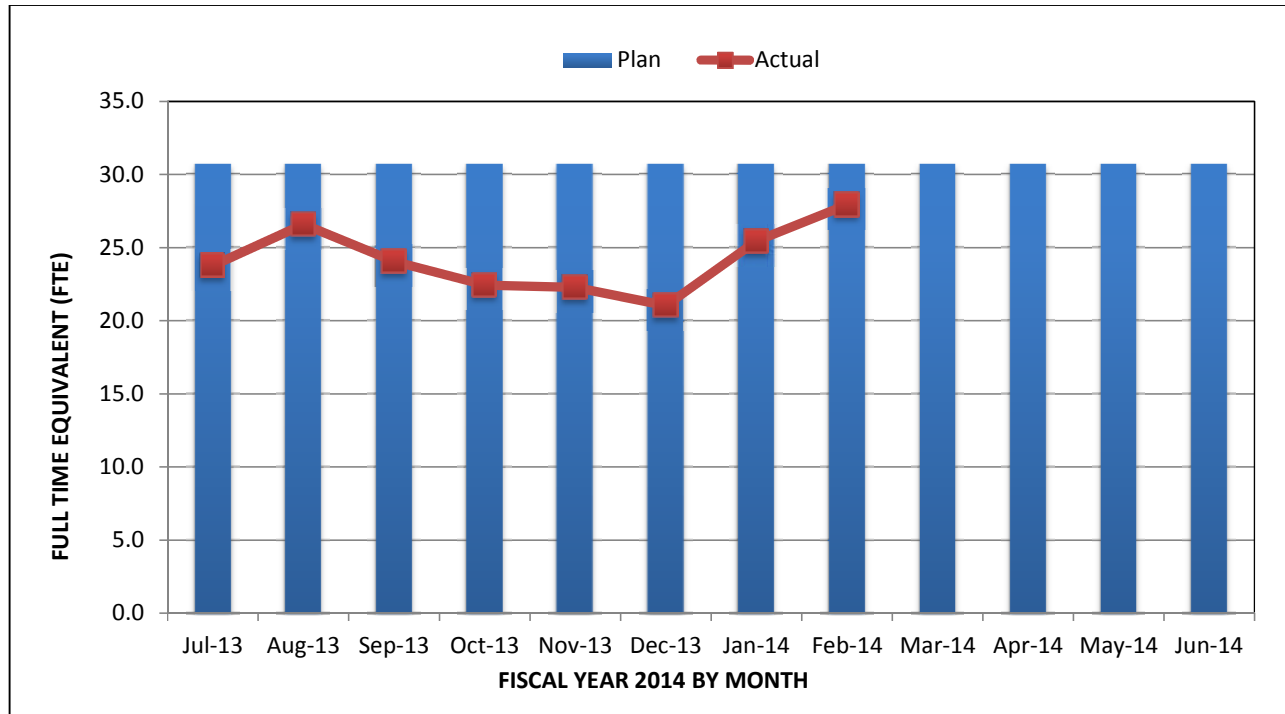
**STAFFING STATUS**  
Total Project Staffing – Metro and Consultants



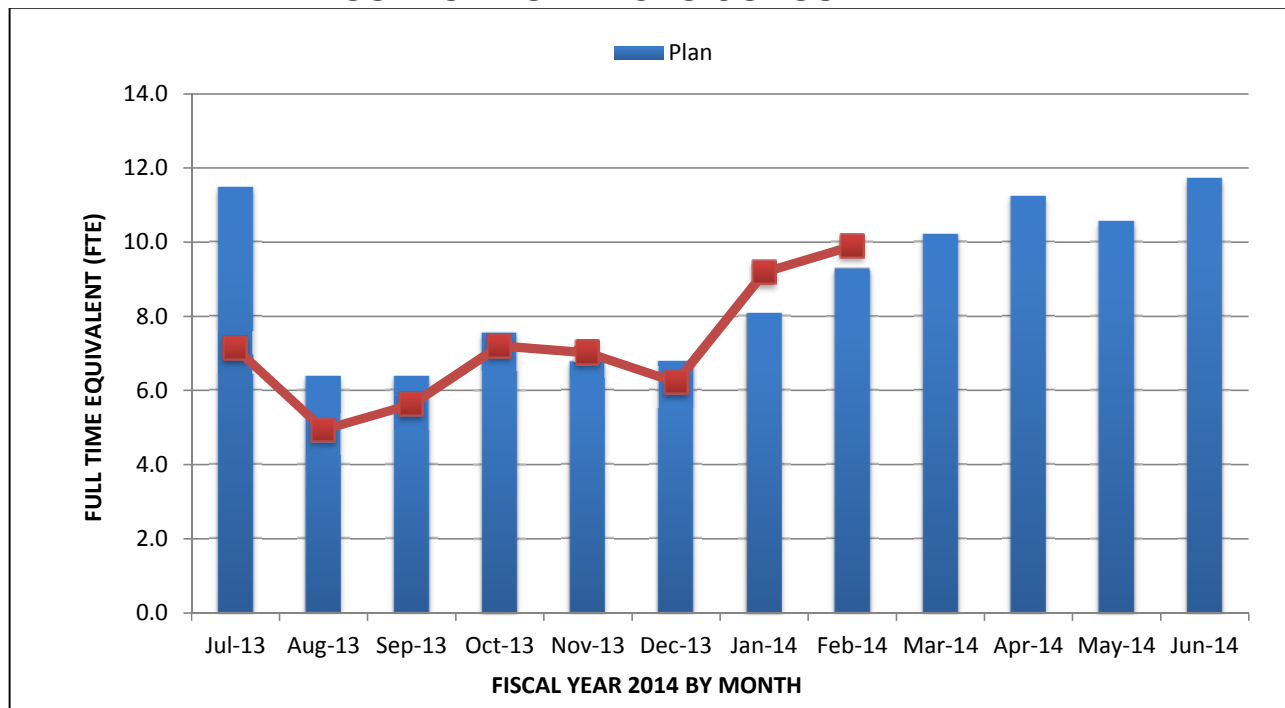
The overall FY 14 Total Project Staffing plan averages 61.0 FTE's per month.

For February 2014, there were a total of 27.9 FTE's for MTA's Project Administration staff and 26.1 FTE's for consulting staff. The total project staffing for February 2014 was 54.0 FTEs.

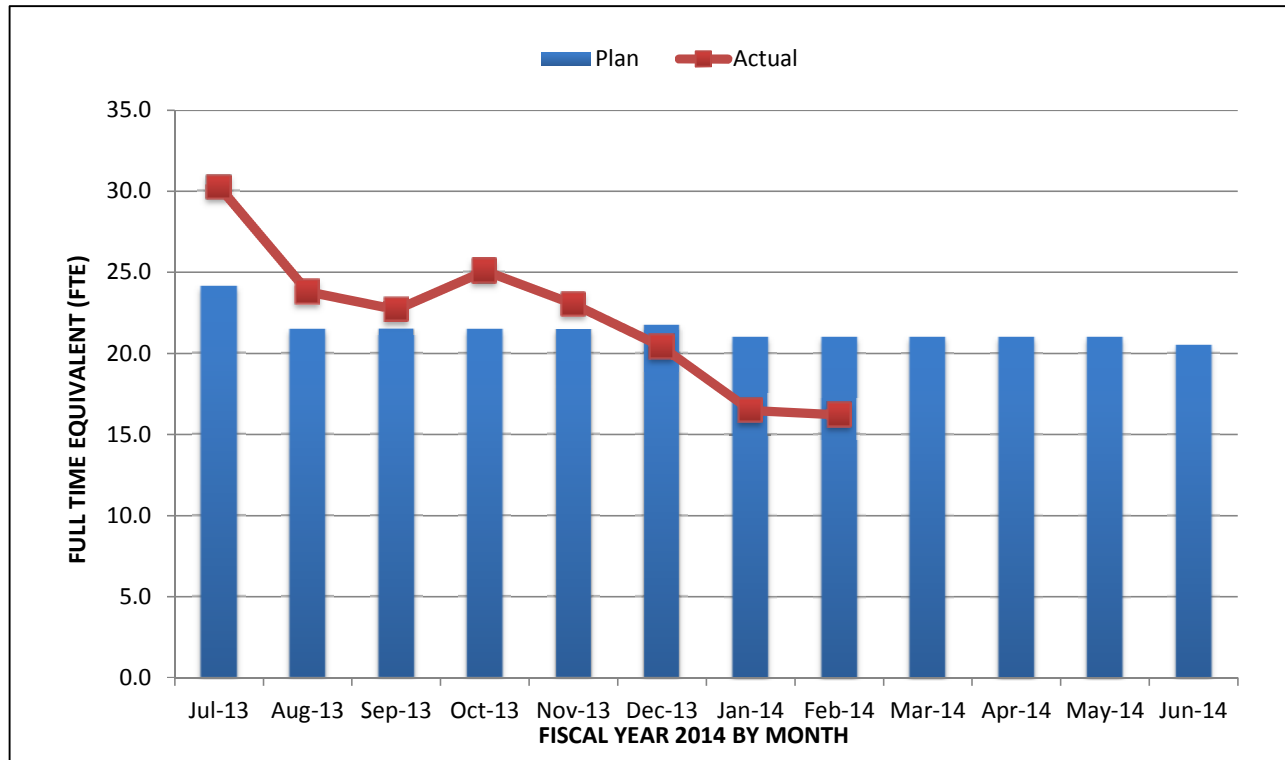
**STAFFING STATUS (Continued)  
METRO STAFF**



**CONSTRUCTION MANAGEMENT  
SUPPORT SERVICES CONSULTANT**



### STAFFING STATUS (Continued) ENGINEERING SERVICES CONSULTANTS



## REAL ESTATE STATUS

<b>Regional Connector- Real Estate Status Summary March 31, 2014</b>									
Contract No.	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	2	2	2	2	0
Part Takes	2	2	0	1	0	0	0	0	0
SSE	13	13	0	9	6	0	0	0	4
TCE/ROE	16	8	0	8	5	0	0	0	5
Sub Total Parcels:	34	26	0	21	13	2	2	2	9
Relocation	5								
<b>Total Parcels:</b>	<b>34</b>	<b>26</b>	<b>0</b>	<b>21</b>	<b>13</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>9</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).

## QUALITY ASSURANCE STATUS

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

- No activity this month.

### **C0981R Advanced Utilities Relocation D/B/B**

- Reviewed and approved Contractor's Project Quality Manual and Procedures (PQMP), and approved the Project Quality Manager (PQM). Reviewed and provided comments on the Contractor's initial submittals including Construction Work Plans (CWP).
- Attended readiness review meeting for potholing.

### **3<sup>rd</sup> Party Utility Relocations**

- Inspection oversight

## **ENVIRONMENTAL STATUS**

- Negotiations for an MOU with the Performing Arts Center of Los Angeles County continue.
- Negotiations continue with the Colburn School regarding ground borne noise from future Metro Train Operations.
- Metro continues to monitor noise and vibration at the Savoy Condominiums and Japanese American Museum at 1st and Alameda, as well as the Civic Center Building at 2<sup>nd</sup> and Broadway. Additional monitoring equipment will be installed along Flower St near Maguire Gardens as well as at the Walt Disney Concert Hall and the Colburn School of Music.
- Automated noise monitoring equipment has been installed at nine locations near the advanced utility relocation worksites, as well as in the vicinity of sensitive receptors, including the Walt Disney Concert Hall and the Colburn School of Music.
- Metro continues to monitor noise at all utility relocation construction sites.
- Metro continues to monitor all excavation sites for cultural resources. This monitoring is conducted by AECOM.
- AECOM is continuing to prepare a Historical American Building Survey/Historical American Engineering Record, HABS/HAER, for the Atomic Café Building at the corner of 1<sup>st</sup> Street and Alameda and is incorporating new information recently made available by the Little Tokyo Service Center efforts to research the history of the building.
- Metro is finalizing the Draft Cultural Resource Monitoring and Mitigation Plan for Submittal to FTA and the State Historic Preservation Office, SHPO.
- AECOM is conducting the first annual parking analysis for Little Tokyo. The recently acquired property at 1<sup>st</sup> and Central will not be used for construction staging until any mitigations recommended by AECOM have been completed. The expected completion date is the next reporting period.

## **CONSTRUCTION RELATIONS STATUS**

- Responded and addressed project related inquiries from the public received on the project hotline and email.
- Provided update on the status of construction activities, outreach efforts or project overview :
- Regional Connector Community Leadership Council:
  - 1<sup>st</sup>/Central Station Committee
  - 2<sup>nd</sup>/Hope Station Committee
  - Executive Board
  - Little Tokyo Community Council
- Facilitated meeting with Metro staff and the Little Tokyo Atomic Café Commemorative Panels Working Group.
- Facilitated meeting with Little Tokyo Community Council representative and Metro staff regarding irrigation maintenance of Cherry Blossom trees at the Little Tokyo/Arts District Station.
- Briefed Council District 14 on advanced utility relocation activities and associated traffic control plans.
- Performed door to door outreach to businesses along the alignment of the Regional Connector and surveyed businesses near the 1st/Central station. Encouraged businesses to participate in the Project Area Discount free-marketing program;45 businesses have signed up.
- Distributed eight construction alerts to the public regarding utility relocation activities at the following locations:
  - Temple St/Alameda St – Power relocation
  - 6th St and Flower St – Level 3
  - 2nd St/Spring St – So Cal Gas relocation
  - 1st/Central – AT&T relocation
  - 6th St/Flower St – AT&T relocation
  - Project wide – Survey of exiting underground utilities; installation of noise monitoring devices; pre-construction survey

### **Social Media Outreach Efforts**

- The Facebook likes: 1,010 likes.
- The Twitter followers: 744
- The Regional Connector website viewership decreased by 25.41% with an average viewership of one minute and 18 seconds (1:18).



## **CREATIVE SERVICES STATUS**

### Art Program

- Hosted four Artist Workshops
- Issued survey to artists
- Continue to support mitigation efforts

## **SAFETY & SECURITY STATUS**

- Advised and monitored safety compliance and traffic handling at 3rd Party utility relocations activities at 5<sup>th</sup> Street and Flower (Irish/ATT, VCI along Flower) and DWP 34.5 KV installation at Temple and Alameda.
- Assisted contractors in minimizing impacts to pedestrians and businesses.
- Work with Advance Utility Contractor PULICE Construction to facilitate required submittals.
- Participated in Advance Utility contract startup meetings.

**THIRD PARTY AGREEMENT STATUS**

	<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	All agreements in place with exception of Level 3, Qwest and Time Warner. Metro is in discussion with those utilities to establish agreements.

**ADVANCED UTILITY RELOCATION STATUS**

- Contractor mobilized and started survey and ambient noise monitoring for contract C0981R Advanced Utility Relocations.
- AT&T started utility relocations on Flower Street and will begin relocations at 1<sup>st</sup> and Alameda next period.
- Contract for AT&T work at First Street and Alameda awarded to Irish Construction.
- TWC started utility relocations at 5<sup>th</sup> Street and Flower.
- SCG completed utility relocations at 2<sup>nd</sup> Street and Broadway and will begin gas line relocations at 2<sup>nd</sup> Street and Main/Spring next period.
- LADWP completed stub out for TBM power work on Temple Street, east of Alameda.

## **PEAK HOUR AND NIGHTTIME 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 Office to obtain Peak Hour Exemption and Night Time Work Variance. Current efforts center around gathering information in preparation for applying for an extended hour variance to accommodate the 2<sup>nd</sup>/Broadway Station soldier pile and decking installation for the D/B contract C0980; and coordinating with the C0981R Contractor for peak hour variance to accommodate advanced utility relocations by Metro's contract C0981R and DWP's cable pulling efforts.

## **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. The temporary modification of the existing at-grade crossing will remain in-place until construction of the underground Y junction necessitates closure of the Little Tokyo Station, at which point bus bridging will be implemented to transfer passengers between the Eastside and Union Station. When complete, the Regional Connector Project will no longer have an at-grade crossing of 1<sup>st</sup> Street in the vicinity of 1<sup>st</sup> and Alameda Streets.

Metro and CPUC staff met on March 3, 2014 to discuss worksite Traffic Control Plan for upcoming advanced utility relocation construction in the vicinity of the existing grade crossing at 1<sup>st</sup> Street and Alameda.

### **Near Look-Ahead**

Next meeting will be when Metro and CPUC meet to review Design Builder's designs. Meeting is anticipated in late 2014, but is subject to change once the Contractor is on-board.

### **Extended Look-Ahead**

Form GO-88 will be submitted to temporarily modify the existing at-grade crossings of Alameda Street and 1<sup>st</sup> Street at Hewitt Street for the shoofly during construction. The existing crossing of Temple Street adjacent to Alameda Street and 1<sup>st</sup> Street near Hewitt Street will be removed by project completion.

## **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
March 2014	Received Revised BAFOs for D/B Contract C0980

## CONSTRUCTION CONTRACTS

<p><b>Description: Advanced Utility Relocations</b> <b>Contractor: Pulice Construction, Inc.</b></p>	<p><b>Contract No. C0981R</b> <b>Status as of: March 28, 2014</b></p>																																																
<p><b>Work Completed:</b></p> <ul style="list-style-type: none"> <li>• Contractor Mobilization completed</li> <li>• Schedule of Values approved</li> </ul>	<p><b>Major Activities (In Progress):</b></p> <ul style="list-style-type: none"> <li>• Prepare trench, shoring and traffic control plan submittals</li> <li>• Review the Baseline CPM Schedule and Pay Estimate Submittals</li> <li>• Perform Survey and 30 Day Ambient Noise Monitoring</li> </ul>																																																
<p><b>Areas of Concern:</b></p> <ul style="list-style-type: none"> <li>• None</li> </ul>	<p><b>Major Activities Next Period:</b></p> <ul style="list-style-type: none"> <li>• Perform Potholing at several locations</li> <li>• Continue preparation of submittals and worksite traffic control plans</li> <li>• Start procurement of long lead items</li> <li>• Obtain Peak Hour Exemption</li> </ul>																																																
<p><b>Schedule Summary:</b></p> <p>Date of Award: 01/13/14          Notice to Proceed: 02/18/14          Original Contract Duration: 300 CD          Current Contract Duration: 300 CD          Elapsed Time from NTP: 39 CD</p>	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th></th> <th>Original Contract Dates</th> <th>Time Extension</th> <th>Current Contract</th> <th>Forecast</th> <th>Variance CDs</th> </tr> </thead> <tbody> <tr> <td>Notice to Proceed</td> <td>02/18/14</td> <td>0</td> <td></td> <td></td> <td>0</td> </tr> <tr> <td>Milestone 1:</td> <td>12/15/14</td> <td>0</td> <td>12/15/14</td> <td>12/15/14</td> <td>0</td> </tr> <tr> <td>Milestone 2:</td> <td>07/28/14</td> <td>0</td> <td>07/28/14</td> <td>07/28/14</td> <td>0</td> </tr> <tr> <td>Milestone 3:</td> <td>06/18/14</td> <td>0</td> <td>06/18/14</td> <td>06/18/14</td> <td>0</td> </tr> <tr> <td>Milestone 4:</td> <td>08/12/14</td> <td>0</td> <td>08/12/14</td> <td>08/12/14</td> <td>0</td> </tr> <tr> <td>Milestone 5:</td> <td>09/16/14</td> <td>0</td> <td>09/16/14</td> <td>09/16/14</td> <td>0</td> </tr> <tr> <td>Milestone 6:</td> <td>08/17/14</td> <td>0</td> <td>08/17/14</td> <td>08/17/14</td> <td>0</td> </tr> </tbody> </table>		Original Contract Dates	Time Extension	Current Contract	Forecast	Variance CDs	Notice to Proceed	02/18/14	0			0	Milestone 1:	12/15/14	0	12/15/14	12/15/14	0	Milestone 2:	07/28/14	0	07/28/14	07/28/14	0	Milestone 3:	06/18/14	0	06/18/14	06/18/14	0	Milestone 4:	08/12/14	0	08/12/14	08/12/14	0	Milestone 5:	09/16/14	0	09/16/14	09/16/14	0	Milestone 6:	08/17/14	0	08/17/14	08/17/14	0
	Original Contract Dates	Time Extension	Current Contract	Forecast	Variance CDs																																												
Notice to Proceed	02/18/14	0			0																																												
Milestone 1:	12/15/14	0	12/15/14	12/15/14	0																																												
Milestone 2:	07/28/14	0	07/28/14	07/28/14	0																																												
Milestone 3:	06/18/14	0	06/18/14	06/18/14	0																																												
Milestone 4:	08/12/14	0	08/12/14	08/12/14	0																																												
Milestone 5:	09/16/14	0	09/16/14	09/16/14	0																																												
Milestone 6:	08/17/14	0	08/17/14	08/17/14	0																																												
<p><b>Physical Percent Complete:</b></p> <p>Physical completion of field work as of 3/28/14: 0%*</p> <p>* Note: Physical completion assessment reflects work completed and work in progress.</p>	<p><b>Cost Summary:</b> <span style="float: right;"><b>\$ In millions</b></span></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">1. Award Value:</td> <td style="text-align: right;">25.6</td> </tr> <tr> <td>2. Executed Modifications:</td> <td style="text-align: right;">0.0</td> </tr> <tr> <td>3. Approved Change Orders:</td> <td style="text-align: right;">0.0</td> </tr> <tr> <td>4. Current Contract Value (1+2+3):</td> <td style="text-align: right;">25.6</td> </tr> <tr> <td>5. Incurred Cost:</td> <td style="text-align: right;">0.0</td> </tr> </table>	1. Award Value:	25.6	2. Executed Modifications:	0.0	3. Approved Change Orders:	0.0	4. Current Contract Value (1+2+3):	25.6	5. Incurred Cost:	0.0																																						
1. Award Value:	25.6																																																
2. Executed Modifications:	0.0																																																
3. Approved Change Orders:	0.0																																																
4. Current Contract Value (1+2+3):	25.6																																																
5. Incurred Cost:	0.0																																																

## CONSTRUCTION PHOTOS



5<sup>th</sup> Street and Flower – use of shoring for TWC facilities



5<sup>th</sup> Street and Flower – AT&T CA Pipe installation

**APPENDIX  
COST AND BUDGET TERMINOLOGY**

**Project Cost Descriptions**

ORIGINAL BUDGET	The Original Project Budget established upon Board approval of Life-of-Project (LOP) budget expected in the first quarter of 2014.
CURRENT BUDGET	The Original Budget plus all budget amendments approved by formal Metro Board action. Also referred to as Approved Budget.
COMMITMENTS	The total of actual contracts awarded, executed change orders or amendments, approved work orders of Master Cooperative Agreements, offers accepted for purchase of real estate, and other Metro actions which have been spent or result in the obligation of specific expenditures at a future time.
EXPENDITURES	The total dollar amount of funds expended by Metro for contractor or consultant invoices, third party invoices, staff salaries, real estate and other expenses that is reported in Metro's Financial Information System (FIS).
CURRENT FORECAST	The best estimate of the final cost of the project when all checks have been issued and the project is closed out. Current Forecast is composed of actual costs incurred to date, the best estimate of work remaining and a current risk assessment for each budgeted cost item.

**Cost Report by Element Descriptions**

CONSTRUCTION	Includes construction contracts. Cost associated with Guideways, Stations, Southwestern Yard, Sitework/Special Conditions and Systems.
RIGHT-OF-WAY	Includes purchase cost of parcels, easements, right-of-entry permits, escrow fees, contracted real estate appraisals and tenant relocation.
VEHICLES	Includes the purchase of LRT vehicles and spare parts for the project.
PROFESSIONAL SERVICES	Includes design engineering, project management assistance, construction management support services, legal counsel, agency staff costs, and other specialty consultants.
CONTINGENCY	A fund established at the beginning of a project to provide for anticipated but unknown additional costs that may arise during the course of the project.
PROJECT REVENUE	Includes all revenue receivable to the Metro as a direct result of project activities. This includes cost sharing construction items, insurance premium rebates, and the like.

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

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
LNTP	Limited Notice To Proceed
LONP	Letter Of No Prejudice
LOP	Life-of-Project
LPA	Locally Preferred Alternative
LRT	Light Rail Transit
L RTP	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
PE	Preliminary Engineering
PEER	Permit Engineering Evaluation Report
PIP	Project Implementation Plan
PLA	Project Labor Agreement
PM	Project Manager
PMIP	Project Management Implementation Plan
PMOC	Project Management Oversight Consultant

**APPENDIX  
LIST OF ACRONYMS (Continued)**

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
RAMP	Real Estate Acquisition Management Plan
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
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
SHA	State Highway Account
SHPO	State Historic Preservation Office
SIT	System Integration Testing
SOQ	Statement of Qualification
SOV	Schedule Of Value
SOW	Statement Of Work
SP	Special Provision
SSMP	Safety and Security Management Plan
STB	Surface Transportation Board
STIP	State Transportation Improvement Program
STP	Surface Transportation Program
TBD	To Be Determined
TBM	Tunnel Boring Machine
TCC	Train Control Center
TCE	Temporary Construction Easement

**APPENDIX  
LIST OF ACRONYMS (Continued)**

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
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