Los Angeles County
Metropolitan Transportation Authority

Regional Connector Transit Corridor

MONTHLY PROJECT STATUS REPORT

MAY 2017

Metro®

REGIONAL CONNECTOR
TRANSIT CORRIDOR PROJECT

MONTHLY PROJECT STATUS REPORT

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

May 2017

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PROJECT SUMMARY

As of June 2, 2017

REGIONAL CONNECTOR TRANSIT CORRIDOR PROJECT
DESIGN CONSULTANT: Connector Partnership JV

CONSTRUCTION MANAGEMENT CONSULTANT: ARCADIS
CONTRACTOR: Regional Connector Constructors, Joint Venture

TBM breakthrough at Grand Av Arts/Bunker Hill Station

WORK/ACTIVITY DURING PAST MONTH

- Completed TBM mining under Red Line
- TBM broke through Grand Av Arts/Bunker Hill Station
- Completed tunnel eyes (left tunnel) at Grand Av Arts/Bunker Hill
- Completed temporary decking along 2nd Street (Historic Broadway)
- Received 126" Storm Drain Pipes (Hobas)
- Completed water relocation work along Flower St
- Utility hanging under decking on Flower St (4th St - 5th St)
- Pile installation on Flower Street (between 5th St - 6th St)
- 6th/Flower Power conduit alignment design approved by LABOE
- Five-month full closure of 6th Street approved by LADOT, Caltrans and LADPW

EXPENDITURE STATUS ($ In Millions)

ACTIVITIES	CURRENT BUDGET	EXPENDED AMOUNT	PERCENT EXPENDED
DESIGN	$149.1	$126.0	84.5%
RIGHT-OF-WAY	$120.5	$73.8	61.3%
CONSTRUCTION	$1,164.0	$467.1	40.1%
OTHER	$376.5	$119.3	31.7%
TOTAL	$1,810.1	$786.2	43.4%

Current Budget reflects Board approved Life-of-Project Budget and Finance Charges.

Note: Expended amounts are through 05/31/2017.

SCHEDULE ASSESSMENT

MAJOR SCHEDULE ACTIVITIES	PRIOR PERIOD	CURRENT PLAN	VARIANCE FROM PRIOR PERIOD (Weeks)
Environmental			
FEIS / FEIR	N/A	04/26/12	Complete
SEIS Flower St.	N/A	12/18/15	Complete
Design			
PE Notice to Proceed	N/A	01/04/11	Complete
Final Design complete	07/17/17	09/14/17*	8.4
Right-of-Way			
All parcels available	08/15/18	08/15/18	0
Construction - Design / Build Contract			
Notice to Proceed	07/07/14	07/07/14	Complete
Construction complete	10/19/21	10/21/2021	0.3
Revenue Service Date	12/17/21	12/19/2021	0.3

Note: No adverse impact to the overall schedule is anticipated from current design delays.
*Excluding the completion of 2nd/Hope Pedestrian Bridge Design

Note: ROW dates are adjusted to reflect the latest D/B Contractor's coordinated Need Dates. Duco Yard need date is in August 2018.

AREAS OF CONCERN

- Securing and maintaining work hour variances along the entire alignment will serve to facilitate field productivity. Conversely, delays and or disruptions to permits will directly yield to extended construction schedules, and added costs. Metro looks to continue collaboration with the LA Police Commission and stakeholders – complemented by strict adherence to environmental requirements – to allow for timely permitting as may be required.
- Detailed design is underway to relocate the 6th/Flower DWP power assets. This work requires collaboration with COLA and Caltrans relative to TCPs, BOE approvals, DWP efforts, etc. to minimize schedule and cost impacts. Stakeholder challenges are also anticipated; engagement by Metro outreach resources are proceeding accordingly.

ROW ACQUISITION	PLAN	CERTIFIED	ACQUIRED	REMAINING
PERMANENT PARCELS	5	5	4	1*
TEMPORARY PARCELS	31	16	16	2*
TOTAL PARCELS	36	21	20	3**

* Remaining parcels are scheduled in-advance of need dates.
** DucoYard, 2nd & Hope Pedestrian Bridge, and Wye Fan Plant.

CRITICAL ACTIVITIES / 3 MONTH LOOK AHEAD

- Review & Approval of AFC package for Historic Broadway Station
- Preparation of WYE fan plant and Flower Cut & Cover 100% submittal
- Preparation of Civil Segment A & B 100% submittal
- Complete TBM mining (1st alignment left tunnel)
- Complete excavation of Level 3 at Historic Broadway Station
- Complete tunnel eyes installation at TBM retrieval pit (Flower St)
- Complete CIP vault design for 6th/Flower DWP Power Relocation
- Complete TBM removal (1st - Left)
- Complete storm drain relocation at Historic Broadway Station
- TCP implementation for 6th/Flower full closure

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 2nd Street in Downtown Los Angeles. The Project has been re-sequenced to become operational in a single phase. It will link to the existing Eastside Gold Line along 1st Street and the existing Gold Line to Pasadena along Alameda Street toward Union Station. The Revenue Service Date (RSD) is planned for December *19*, 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 1st Street and Central, the tracks continue underground heading northeast under 1st and Alameda Streets. A junction ("Wye") will be constructed 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 East Los Angeles. The north portal will be located northeast of the current Little Tokyo/Arts District Station and tracks. This portal will rise to connect to the existing LRT bridge over the US-101 freeway. The portal will be connected to the 1st and Alameda junction by a new cut and cover box structure crossing beneath Temple Street and Alameda Streets, running immediately east of the existing Little Tokyo/Arts District Station and tracks. The east 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 East Los Angeles.

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 (RCC), 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; Notice to Proceed (NTP) to RCC, 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 the C0980 D/B Contractor, RCC.

PROJECT OVERVIEW & STATUS (Cont.)

Construction

Varied operations are underway throughout the alignment to include: guideway and station box support of excavation, excavation, TBM mining, settlement monitoring instrumentation placement, and utility relocations. Operations are currently active seven days with some being performed on a multiple-shift basis.

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 with each successive integration of the Crenshaw/LAX, Regional Connector and Purple Line projects.

Light Rail Vehicle

Four (4) Light Rail Vehicles (LRVs) for the Project will be procured and delivered by Kinkisharyo International, LLC under Contract P3010. The base contract includes 78 LRVs and options of 157 for a total of 235. The four (4) LRVs for the Regional Connector Project are currently in Option 2 of the P3010 Contract. The manufacturer continued performing qualification and post shipment tests on prototype cars 1 and 2 at LACMTA's Green Line shop.

Program Management

In January 2017, the Metro Board revised the Life of Project Budget for Regional Connector Project 860228 to $1.756 billion. The budget for Concurrent Non-FFGA activities related to Project 861228 remains at $39.9 million.

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 - 56% - comes from federal sources.

Project commitments through *May* 2017 increased by $*9.5* million to $1.43 billion or 80.6% of the Current Budget. The increase reflects RCC executed modifications, Legal and Community Relations. Project expenditures through *May* 2017 are $*763.5* million or *43.1*% of the budget. The expenditures to date cover all cost elements including: engineering management, construction management support services, third party utility relocation work, agency administration, design build contract (C0980), right of way, various master cooperative agreements, and other professional services.

PROJECT OVERVIEW & STATUS (Cont.)

The project master schedule forecasts revenue service in 2021 through a simultaneous opening of both the Azusa and East LA legs of the Metro Gold Line.

A comprehensive risk refresh process was undertaken in late 2016 by both Metro and the FTA/PMOC to evaluate current schedule and cost forecasts. Outcomes for total project costs were compatible and contributed to establishing an increased Life of Project Budget. The Project's Risk Register is reviewed and updated monthly.

MANAGEMENT ISSUES / OPPORTUNITIES

Concern No. 1: *Unforeseen conditions at 6th & Flower DWP relocation could further impact schedule and budget*.

Status/Action: *Designs have been fully reviewed with extensive potholing information. Project is managing DWP and RCC crews closely to work concurrently in street closure*.

Concern No. 2: *Complex Systems Integration may delay the project's planned Revenue Service Date*.

Status/Action: *Project has initiated high level management discussions designed to address system-wide operating policies and potential capital projects needed to support an integrated LRT system with the completion of the Regional Connector Project. Working-level system integration teams have also been established*.

Concern No. 3: *Managing and responding to stakeholder needs during cut-and-cover activities along Flower Street has the potential to impact both schedule and budget*.

Status/Action: *Project is engaged in active stakeholder outreach and construction impact mitigation. Working closely with the contractor to ensure concerns are addressed and that MMRP requirements are fully complied with*.

PROJECT ALIGNMENT

BASE PROJECT SCOPE

Engineering

This phase consists of Preliminary Engineering (PE), Advanced PE (APE) and Final Design. During PE, The Connector Partnership, a joint venture between AECOM, Inc. and Parsons Brinkerhoff (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 CPJV 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. The balance of Final Design is being performed by the RCC as part of the C0980 Contract.

Metro Furnished Equipment

Metro is procuring Light Rail Vehicles and Universal Fair System (UFS) equipment. Four (4) Light Rail Vehicles for the Project will be procured and delivered by Kinkisharyo International, LLC under Option 2 of Contract P3010. The vehicles will 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 RCC as follows:

Third Party Advanced Utility Relocations

Several utility owners have already relocated many of their assets and will continue to do so through mid-2017. The utilities include fiber optic, telephone, cable television, electrical (power cable pulling and splicing), and natural gas lines. Utility work started in late 2012 and has progressed throughout the alignment.

BASE PROJECT SCOPE (Cont.)

Contract C0980 Regional Connector Design Builder

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

The design-build contractor also must meet sensitive noise and vibration standards at Disney Music Hall and the Colburn Music School, control subsidence along the alignment, and meet various other requirements for the various stakeholders along the alignment. This contract was awarded to Regional Connector Constructors, JV (RCC) on May 6, 2014 and NTP was issued July 7, 2014. Metro has exercised several contract options and has added the remaining Advanced Utility Relocation work (C0981R Contract) to the 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 were long-lead construction tasks that were known to conflict with cut and cover excavations.

The scope of this work included 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 was transferred to C0980 Contract. Contract C0981R was closed out and final payment processed.

BASE PROJECT SCOPE (Cont.)

Professional Services

Contract MC070 – Construction Management Support Services

Metro awarded the contract for Construction Management Support Services (CMSS) to ARCADIS, Inc. ARCADIS' Project Manager and other staff are co-located with Metro at the Integrated Project Management Office (IPMO) located at the Mangrove site.

Contract E0119 – Preliminary Engineering and Design Support Services During Construction

Metro awarded this contract to CPJV. CPJV provided preliminary engineering services to support the EIR/EIS, prepared project definition documents for Contract C0980, and prepared the basis for final design development for Contract C0981. CPJV is currently performing design support during construction (DSDC) for the C0980 contract.

KEY MILESTONES SIX-MONTH LOOK AHEAD

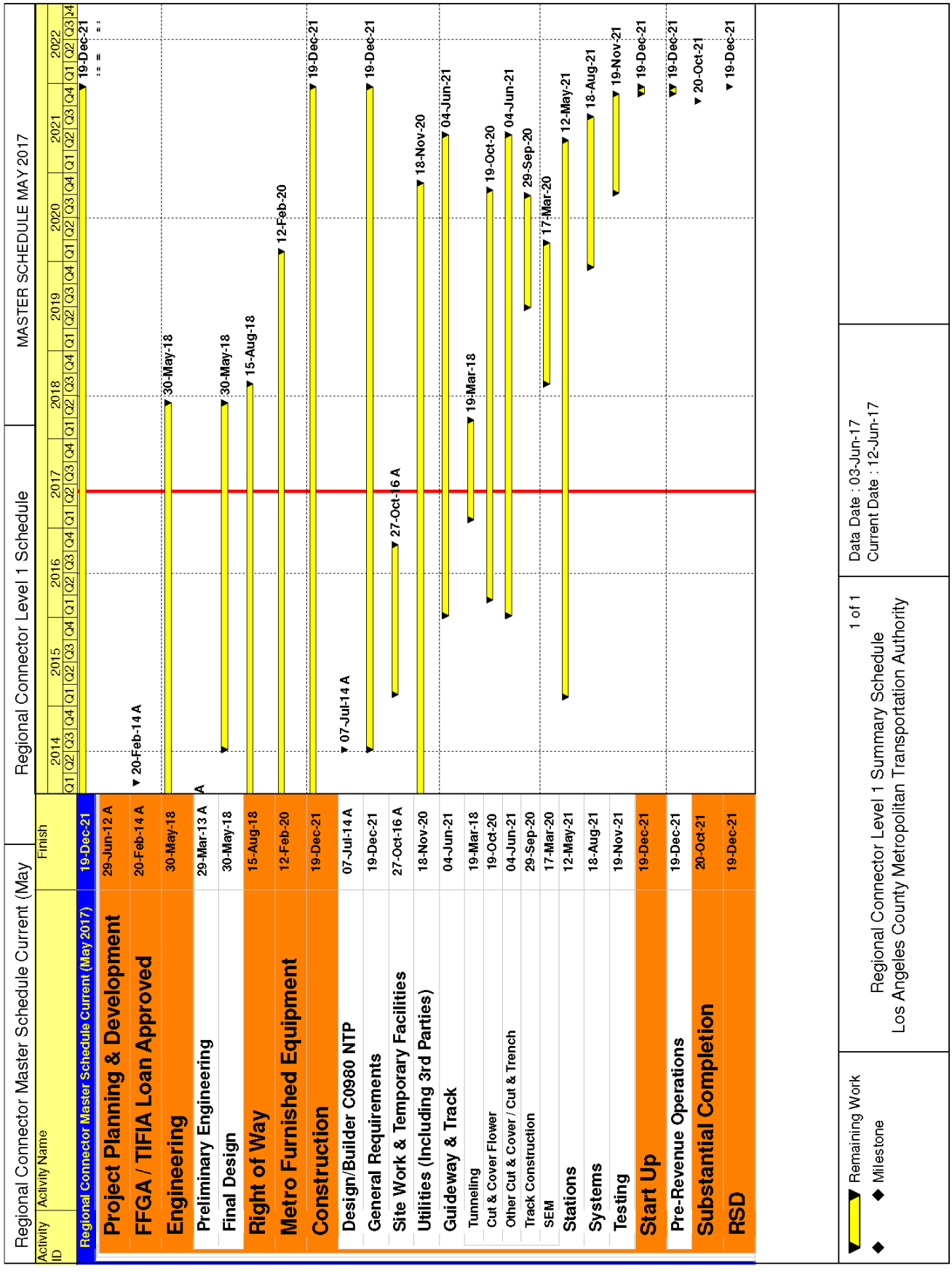
	Milestone Date	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17
Complete TBM mining under Red Line tunnel	05/05/17 A	⬡					
Complete Temp Decking on 2nd Street (Historic Broadway)	05/06/17 A	⬡					
Complete Flower St Water Line (South of 5th)	05/07/17 A	⬡					
Skid TBM through Grand Av Arts/Bunker Hill Station Box (1st)	06/01/17		⬡				
TCP Implementation for 6th/Flower Full Closure	06/03/17		⬡				
Complete TBM Retrieval Pit Tunnel Eye	06/09/17		⬡				
Historic Broadway Station Package - AFC Approved	06/12/17		◆				
DU12 Communication - 100% Design	06/13/17		⬡				
Civil Segment A - 100% Design	06/16/17		⬡				
Civil Segment B - 100% Design	06/23/17		⬡				
DU2 Cut & Cover - 100% Design	06/23/17		⬡				
Complete TBM Mining (1st Alignment - Left Tunnel)	07/14/17			⬡			
Civil Segment A - AFC Approved	07/24/17			◆			
Civil Segment B - AFC Approved	07/31/17			◆			
Complete TBM Removal (1st - Left)	08/04/17				⬡		
Complete Storm Drain Relocation at Historic Broadway Sta	08/15/17				⬡		
DU2 Cut & Cover - AFC Design	08/16/17				⬡		
Complete Pile Intallation on East side of Flower South	08/17/17				⬡		
Complete TBM Assembly & Launch (2nd - Right)	09/25/17					⬡	
DU2 Cut & Cover - AFC Design Approved	09/14/17					◆	
Complete Flower South Temp Decking (DB 39-63, 5th~6th)	10/15/17						⬡

◆ MTA Staff Ⓜ MTA Board Action ⧗ **FTA** (Federal Transit Administration) ▽ Utility Company

△ Other Agencies ▭ Contractors ⬭ Design Consultant ⬡ C0980 D/B Contractor

"A" following date is actual and completed * New

PROJECT SUMMARY SCHEDULE

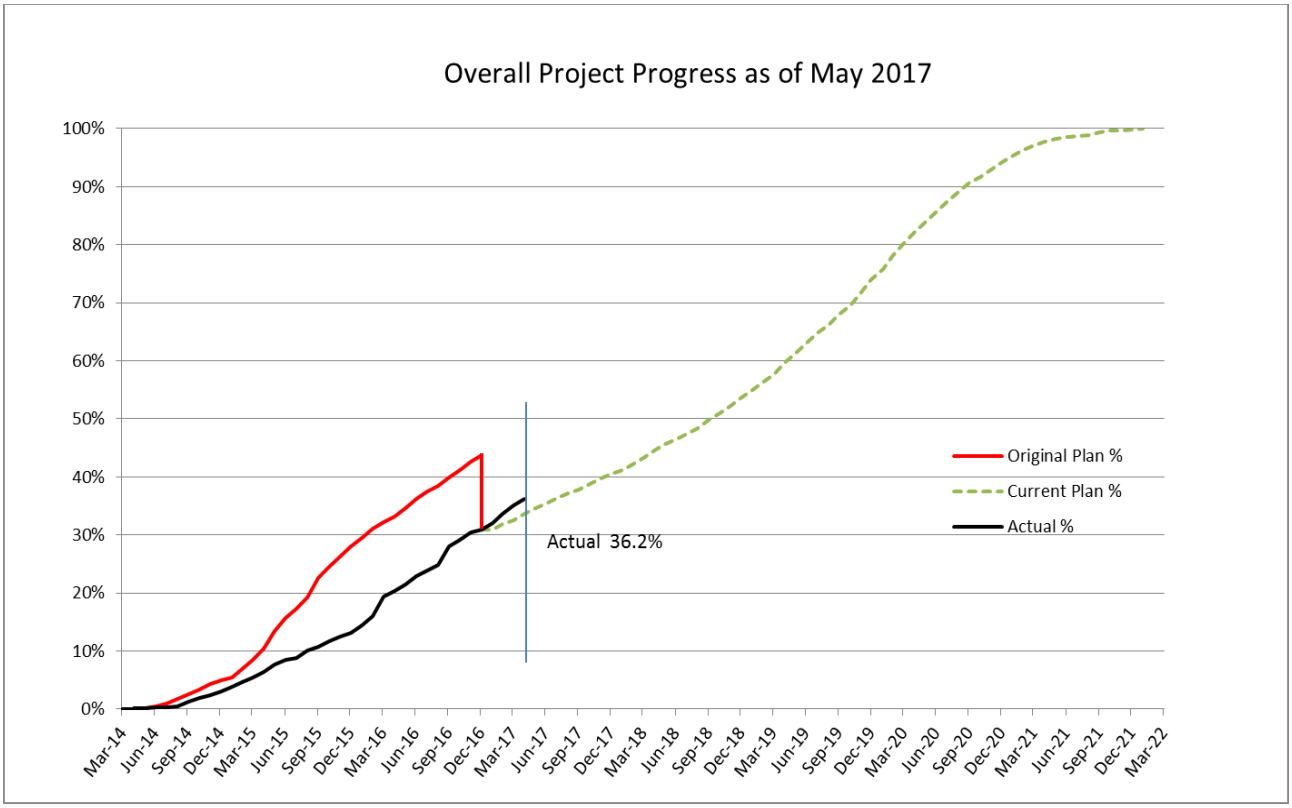


SCHEDULE MEASUREMENTS

	Status	Change from Last Period	Comment
Forecast Revenue Service	12/*19*/2021	*2* CD	
TIFIA Revenue Service	2/25/2023	None	
FFGA Revenue Service	2/25/2023	None	
Final Design Progress:			
Contract C0980	*97.9*%	*0.1*%	Not impacting the critical path of the project
Construction Contracts Progress:			
Contract C0981R & C0980	*32.2*%	*1.1*%	

Note: 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). Progress values include executed modifications and change orders.

PROJECT PROGRESS STATUS

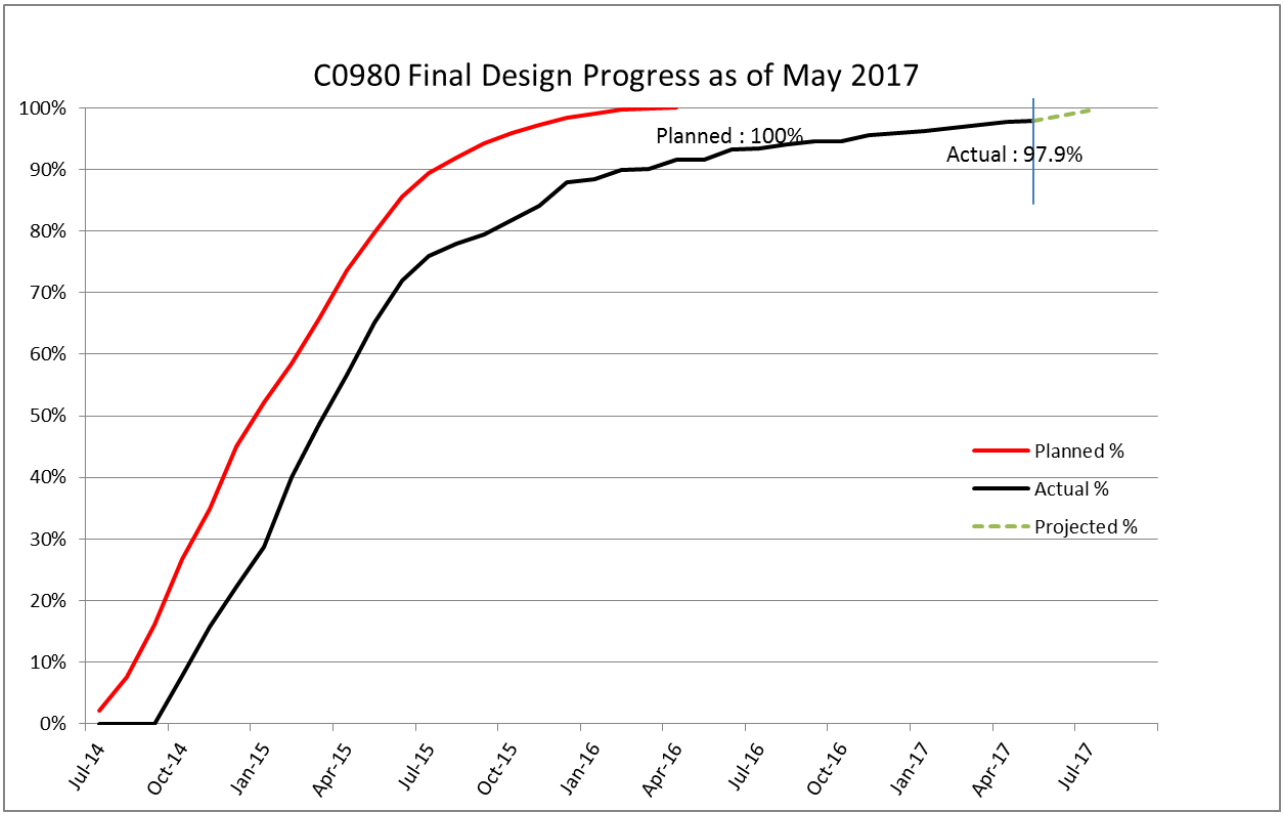


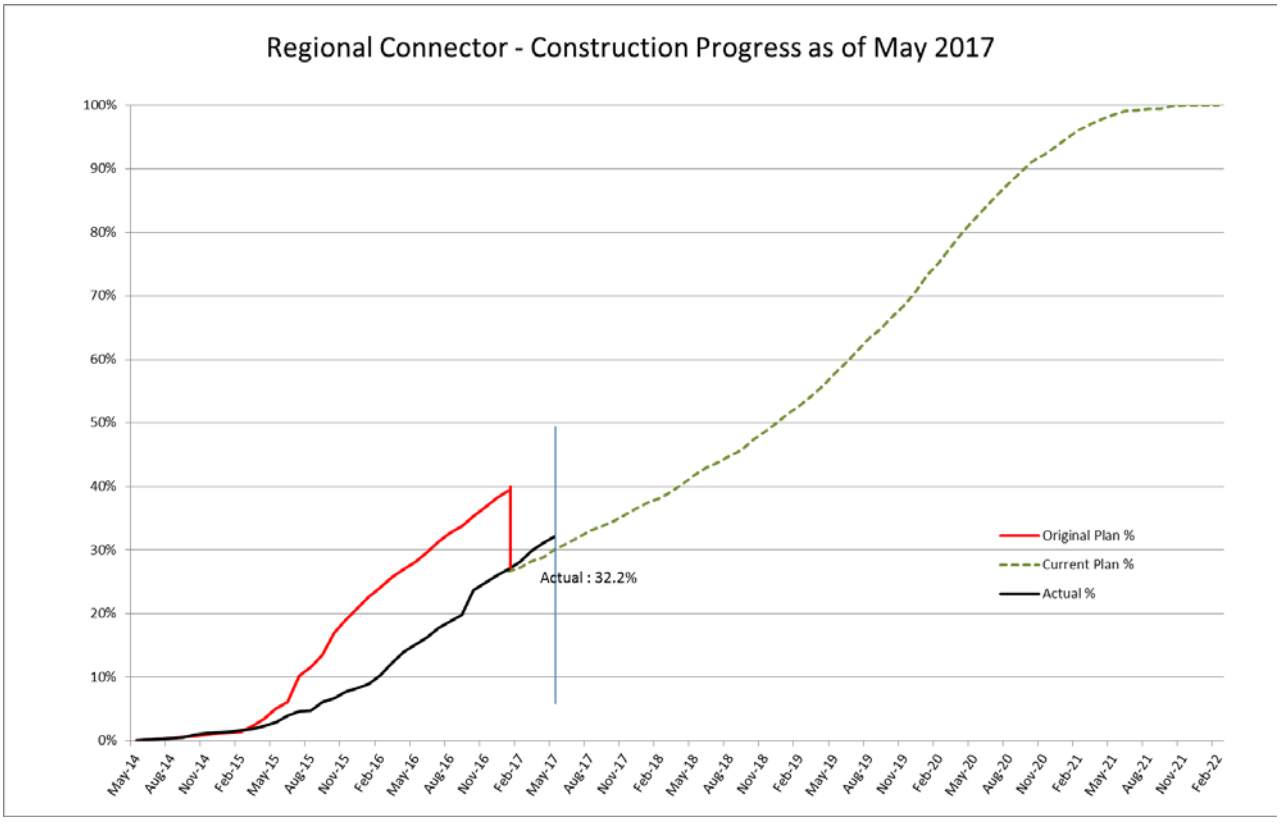
The above is based on the planned and actual progress of C0980 (Design-Build) as reflected in its re-baselined contract schedule, and the C0981 (AUR) as-built schedule.

The cumulative overall project progress is *36.2*%.

Note: Overall Project Progress Measurement was modified in January 2016 to reflect current methodology: excluding all General Requirements, Construction Mobilization, Design Mobilization and Provisional Sum (Schedule C). Values include executed modifications and change orders.

PROJECT PROGRESS STATUS (Cont.)





MAJOR EQUIPMENT DELIVERY STATUS

Tunnel Boring Machine

RCC designed, procured and delivered the tunnel boring machine (TBM) and equipment.

Light Rail Vehicles

Four (4) Light Rail Vehicles (LRVs) for the Project will be procured and delivered by Kinkisharyo International, LLC under Contract P3010. 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. The 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 RCC completes the final design. Metro is coordinating with RCC for installation and testing schedules.

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

Activity Name	Early Finish	Need Date
ELEVATOR COORDINATION DRAWINGS - 2ND/BROADWAY	4-Jun-17	21-Mar-20
ESCALATOR COORDINATION DRAWINGS - 2ND/BROADWAY	9-Jun-17	13-Dec-19
FAB/DELIV LIGHT FIXTURES - CENTRAL STA	22-Jun-17	26-May-21
FAB/DELIV LIGHT FIXTURES - BROADWAY STA	22-Jun-17	26-May-21
FAB/DELIV LIGHT FIXTURES - HOPE STA	22-Jun-17	3-Jun-21
FAB/DELIV EDGE LIGHTING - CENTRAL STA	18-Aug-17	1-Apr-21
FAB/DELIV EDGE LIGHTING - BROADWAY STA	18-Aug-17	31-Aug-21
FAB/DELIV EDGE LIGHTING - HOPE STA	18-Aug-17	29-Sep-21
ELEVATOR COORDINATION DRAWINGS - 2ND/HOPE	23-Aug-17	26-Aug-20
ESCALATOR COORDINATION DRAWINGS - 2ND/HOPE	28-Aug-17	2-Mar-20
FAB/DELIV 2ND/HOPE UNIT SUBSTATION AND TRANSFORMER	14-Sep-17	28-Jun-19
FAB/DELIV 2ND/BROADWAY UNIT SUBSTATION AND TRANSFORMER	14-Sep-17	19-Sep-19
PROCURE LIGHTWEIGHT BACKFILL SUBCONTRACTOR	29-Sep-17	13-Nov-20
FAB/DELIV ELEVATORS - 1ST/CENTRAL	31-Dec-17	25-Jan-21
FAB/DELIV TRAIN CONTROL CABLE	16-Jan-18	16-Jan-20
FAB/DELIV ESCALATORS - 1ST/CENTRAL	21-Mar-18	3-Oct-21
PROCURE FIRE PROTECTION SUBCONTRACTOR	22-Mar-18	17-Jun-19
FAB/DELIV EMERGENCY VENTILLATION FANS - HOPE (4)	1-Jun-18	28-Jun-19
FAB/DELIV EMERGENCY VENTILLATION FANS - BROADWAY (4)	1-Jun-18	12-Dec-19
FAB/DELIV ELEVATORS - 2ND/BROADWAY	4-Jun-18	21-Mar-21
FAB/DELIV 2ND/HOPE TPSS	8-Jun-18	17-Apr-19
FAB/DELIV OCS POLES / EQUIPMENT	8-Jun-18	29-Dec-20
FAB/DELIV OCR FOR TUNNEL	8-Jun-18	29-Jan-21
FAB/DELIV ESCALATORS - 2ND/BROADWAY	9-Jun-18	25-Feb-21
FAB/DELIV ELEVATORS - 2ND/HOPE	23-Aug-18	26-Aug-21
FAB/DELIV ESCALATORS - 2ND/HOPE	28-Aug-18	2-Mar-21
FAB/DELIV TRAIN CONTROL EQUIPMENT	31-Jan-19	1-Feb-21
FAB/DELIV 2ND/BROADWAY TPSS	5-Mar-19	10-Jan-20
PROCURE MASONRY SUBCONTRACTOR	24-Jun-19	21-Oct-20
PROCURE STEEL (PERMANENT) SUBCONTRACTOR	24-Jun-19	12-Mar-21
PROCURE DOORS & HARDWARE SUBCONTRACTOR	1-Jul-19	19-Feb-21
PROCURE TRACK SUBCONTRACTOR - PERMANENT	2-Jul-19	28-Jan-20
PROCURE GLAZING SUBCONTRACTOR	15-Jul-19	29-Apr-21
PROCURE ARCHITECTURAL PRECAST PAVER SUBCONTRACTOR	18-Jul-19	21-Apr-21
PROCURE STATION SIGNS SUBCONTRACTOR	23-Jul-19	22-Oct-21
PROCURE PRECAST COMM STRUCTURE PURCHASE ORDER	26-Jul-19	19-Apr-21
PROCURE STAINLESS STEEL SUBCONTRACTOR	2-Aug-19	18-Feb-21
PROCURE CAULKING & SEALANTS SUBCONTRACTOR	9-Aug-19	21-Jan-21
PROCURE METAL CEILING SUBCONTRACTOR	14-Aug-19	8-Apr-21
PROCURE SHEET METAL SUBCONTRACTOR	22-Aug-19	10-Jun-21
PROCURE PAINT SUBCONTRACTOR	4-Sep-19	8-Apr-21
PROCURE FLUID APPLIED WATERPROOFING SUBCONTRACTOR	4-Sep-19	3-Feb-21
PROCURE DRYWALL & FRAMING SUBCONTRACTOR	18-Sep-19	6-Oct-21

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

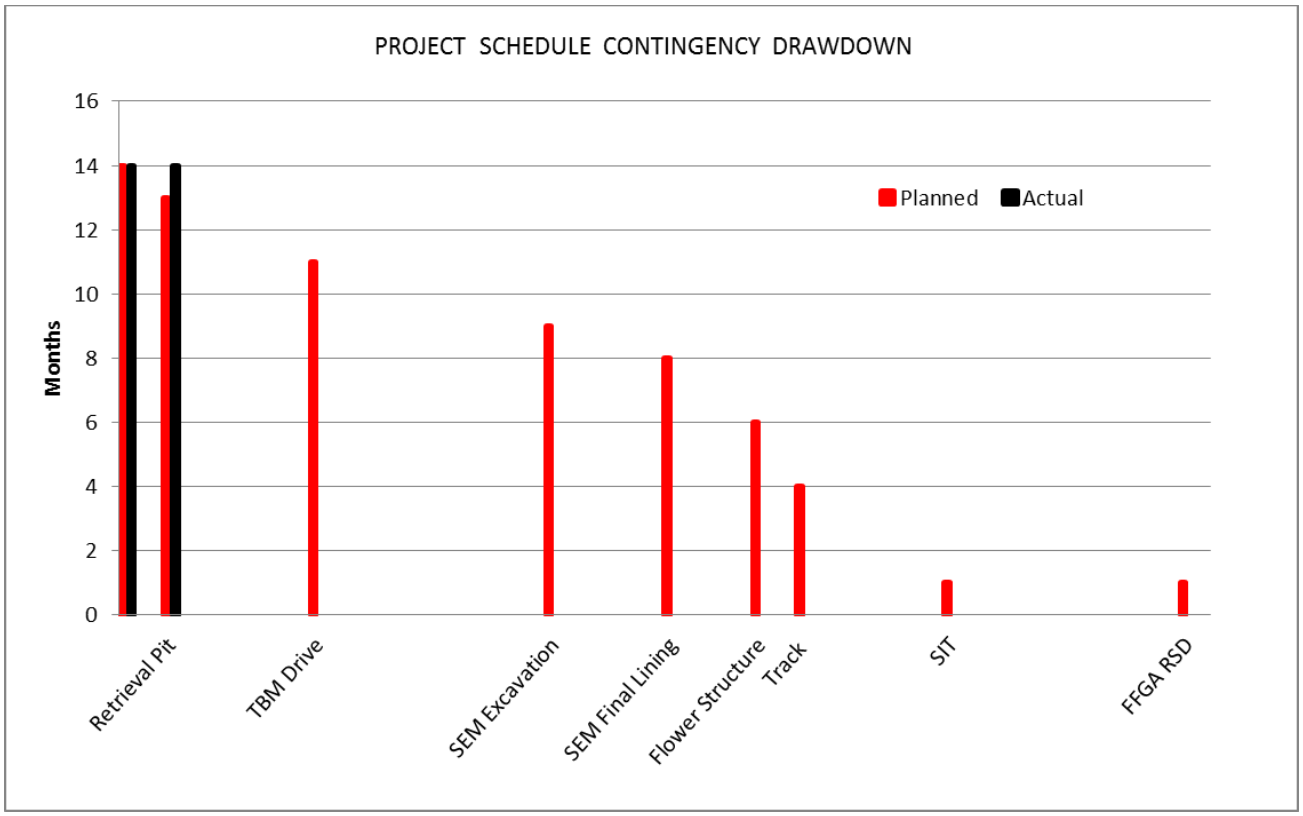
Activity Name	Early Finish	Need Date
PROCURE FLOORING SUBCONTRACTOR	27-Sep-19	28-Oct-21
PROCURE TILE SUBCONTRACTOR	27-Sep-19	8-Mar-21
PROCURE SPRAY ON ACCOUSTICAL FINISH SUBCONTRACTOR	7-Oct-19	5-Mar-21
PROCURE NEW 115RE RAIL - HIGH STRENGTH RAIL	24-Oct-19	20-May-20
PROCURE RAIL - JOBWIDE	24-Oct-19	20-May-20
PROCURE SPECIAL TRACK - JOBWIDE	24-Oct-19	25-Jun-20
PROCURE NEW 115RE RAIL - STANDARD RAIL	24-Oct-19	20-May-20
FAB/DELIV EMERGENCY VENTILLATION FANS - CENTRAL (4)	11-Nov-19	16-Sep-20
PROCURE TERRAZZO SUBCONTRACTOR	11-Nov-19	10-Nov-21
PROCURE PRECAST STRUCTURAL ELEMENTS SUBCONTRACTOR	18-Nov-19	11-Aug-21
PROCURE ARCHITECTURAL CONCRETE PAVING SUBCONTRACTOR	25-Nov-19	7-Apr-21
PROCURE AC SUBCONTRACTOR	12-Dec-19	28-May-21
PROCURE MILLING SUBCONTRACTOR	12-Dec-19	28-May-21
PROCURE PCC PAVING SUBCONTRACTOR	12-Dec-19	28-May-21
FAB/DELIV GLAZING SPIDERS - ALL STATIONS	18-Dec-19	19-May-21
PROCURE BALLASTED TRACK - NORTH ALAMEDA LEG	23-Dec-19	15-Sep-21
PROCURE GRANITE STONEWORK SUBCONTRACTOR	29-Jan-20	4-Oct-21
FAB/DELIV EMERGENCY BOOSTER FANS (12)	6-Feb-20	26-Aug-21
PROCURE PLATE PURCHASE ORDER	11-Aug-20	16-Oct-20
PROCURE MSE PANEL PURCHASE ORDER	11-Aug-20	16-Oct-20

CRITICAL PATH NARRATIVE

Critical Path (C0980):
The critical path runs through the mining of the remaining first leg and second leg of tunnels. After TBM mining, the SEM crossover structure east of the Historic Broadway Station will commence. Once the crossover structure is complete, track work installation will follow. The critical path continues through systems installation and testing from 1st/Alameda to 7th/Flower, followed by systems integration testing and pre-revenue operations.

The previous critical path through DWP Power relocation and cable pulling at 6th/Flower was improved as a result of the five-month full closure of 6th Street between Flower and Hope Street.

PROJECT SCHEDULE CONTINGENCY DRAWDOWN



PROJECT SCHEDULE CONTINGENCY DRAWDOWN ANALYSIS

The project schedule contingency drawdown curve is based on the Anticipated FFGA RSD date of February 25, 2023.

PROJECT COST STATUS

REGIONAL CONNECTOR TRANSIT CORRIDOR PROJECT
COST REPORT
DOLLARS IN THOUSANDS

SCC CODE		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	GUIDEWAYS & TRACK ELEMENTS	280,622	204,691	-44	250,041	1,800	240,590	6,850	87,222	314	250,442	401
20	STATIONS, STOPS, TERMINALS, INTERMODAL	354,268	219,477	0	230,615	0	223,869	1,216	32,855	75	230,690	75
30	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN, BLDGS	0	0	0	0	0	0	0	0	0	0	0
40	SITEWORK & SPECIAL CONDITIONS	141,785	422,453	-23	599,273	366	516,454	4,867	342,814	-151	605,566	6,293
50	SYSTEMS	69,667	73,848	-375	73,599	0	63,689	50	4,195	0	73,599	0
	CONSTRUCTION SUBTOTAL (10-50)	846,343	920,468	-442	1,153,529	2,166	1,044,602	12,984	467,085	238	1,160,297	6,768
60	ROW, LAND, EXISTING IMPROVEMENTS	115,889	74,208	0	92,742	0	74,243	4,179	51,350	0	92,742	0
70	VEHICLES	16,275	16,275	0	16,275	0	16,275	0	1,678	0	16,275	0
80	PROFESSIONAL SERVICES	261,455	257,973	2,476	378,883	7,366	265,047	3,447	218,496	-227	378,883	0
	SUBTOTAL (10-80)	1,239,963	1,268,925	2,034	1,641,429	9,531	1,400,168	20,611	738,610	10	1,648,197	6,768
90	UNALLOCATED CONTINGENCY	135,399	126,892	-2,034	87,912	0	0	0	0	-10	81,144	-6,768
100	FINANCE CHARGES	27,571	7,115	0	14,301	0	0	0	0	0	14,301	0
	TOTAL PROJECTS 460228 & 860228 (10-100)	**1,402,932**	**1,402,932**	**0**	**1,743,642**	**9,531**	**1,400,168**	**20,611**	**738,610**	**0**	**1,743,642**	**0**
	ENVIRONMENTAL/PLANNING - 400228		6,075	0	6,075	0	6,075	0	6,075	0	6,075	0
	ENVIRONMENTAL/PLANNING - 460228		18,125	0	20,425	0	20,425	16	18,858	0	20,425	0
	TOTAL PROJECTS 400228 & 460228 (EVN/PLAN'G)	**0**	**24,200**	**0**	**26,500**	**0**	**26,500**	**16**	**24,933**	**0**	**26,500**	**0**
	400228, 460228, 860228 TOTAL	**1,402,932**	**1,427,132**	**0**	**1,770,142**	**9,531**	**1,426,667**	**20,627**	**763,543**	**0**	**1,770,142**	**0**

NOTE: EXPENDITURES ARE CUMULATIVE THROUGH 05/31/2017

PROJECT COST ANALYSIS – 860228

Original Budget:
The Original Budget of $1.427 billion reflects the April 2014 Board Approved Life-of-Project (LOP), plus finance costs of $7.1 million.

Current Budget:
In January 2017, the Metro Board revised the LOP Budget for the Regional Connector Project 860228 to $1.756 billion. Finance costs, estimated at $14.3 million, are also reflected leading to a total of $1.770 billion. Budgets were adjusted throughout the SCC structure reflecting revised values as of December 2016. The total current budget remains the same as of *May* 2017.

Commitments:
Commitments increased by $*9.5* million this period to $*1.43* billion which represents 80.6% of the Current Budget. The increase is due to execution of Contract C0980 Modifications, Legal and Community Relations.

Expenditures:
Expenditures are cumulative through *May* 2017. Expenditures increased by $*20.6* million this period for costs associated with C0980 Design Build contract, Engineering Management Support, Metro Project Administration, Construction Management Support Service, Legal Services, Third Party Master Cooperative Agreements with the City of LA, Community Relations, ROW and Environmental Consultant Services. The $*763.5* million in expenditures to date represents *43.1*% of the Current Budget.

Current Forecast:
The total current forecast remains the same as the total current budget.

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	GUIDEWAYS & TRACK ELEMENTS	-	0	0	0	0	0	0	0	0	0
20	STATIONS, STOPS, TERMINALS, INTERMODAL	-	0	0	0	0	0	0	0	0	0
30	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN, BLDGS	10,480	0	10,480	0	10,480	0	0	0	10,480	0
40	SITEWORK & SPECIAL CONDITIONS	0	0	0	0	0	0	0	0	0	0
50	SYSTEMS	0	0	0	0	0	0	0	0	0	0
	CONSTRUCTION SUBTOTAL (10-50)	10,480	0	10,480	0	10,480	0	0	0	10,480	0
60	ROW, LAND, EXISTING IMPROVEMENTS	27,748	0	27,748	0	27,748	0	22,498	0	27,748	0
70	VEHICLES	0	0	0	0	0	0	0	0	0	0
80	PROFESSIONAL SERVICES	650	0	650	0	650	-1	203	0	650	0
	SUBTOTAL (10-80)	38,878	0	38,878	0	38,878	-1	22,701	0	38,878	0
90	UNALLOCATED CONTINGENCY	1,113	0	1,113	0	0	0	0	0	1,113	0
100	FINANCE CHARGES	0	0	0	0	0	0	0	0	0	0
	TOTAL PROJECTS 861228 (10-100)	39,991	0	39,991	0	38,878	-1	22,701	0	39,991	0
	861228 TOTAL	39,991	0	39,991	0	38,878	-1	22,701	0	39,991	0

NOTE: EXPENDITURES ARE CUMULATIVE THROUGH 05/31/2017

PROJECT COST ANALYSIS – 861228

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

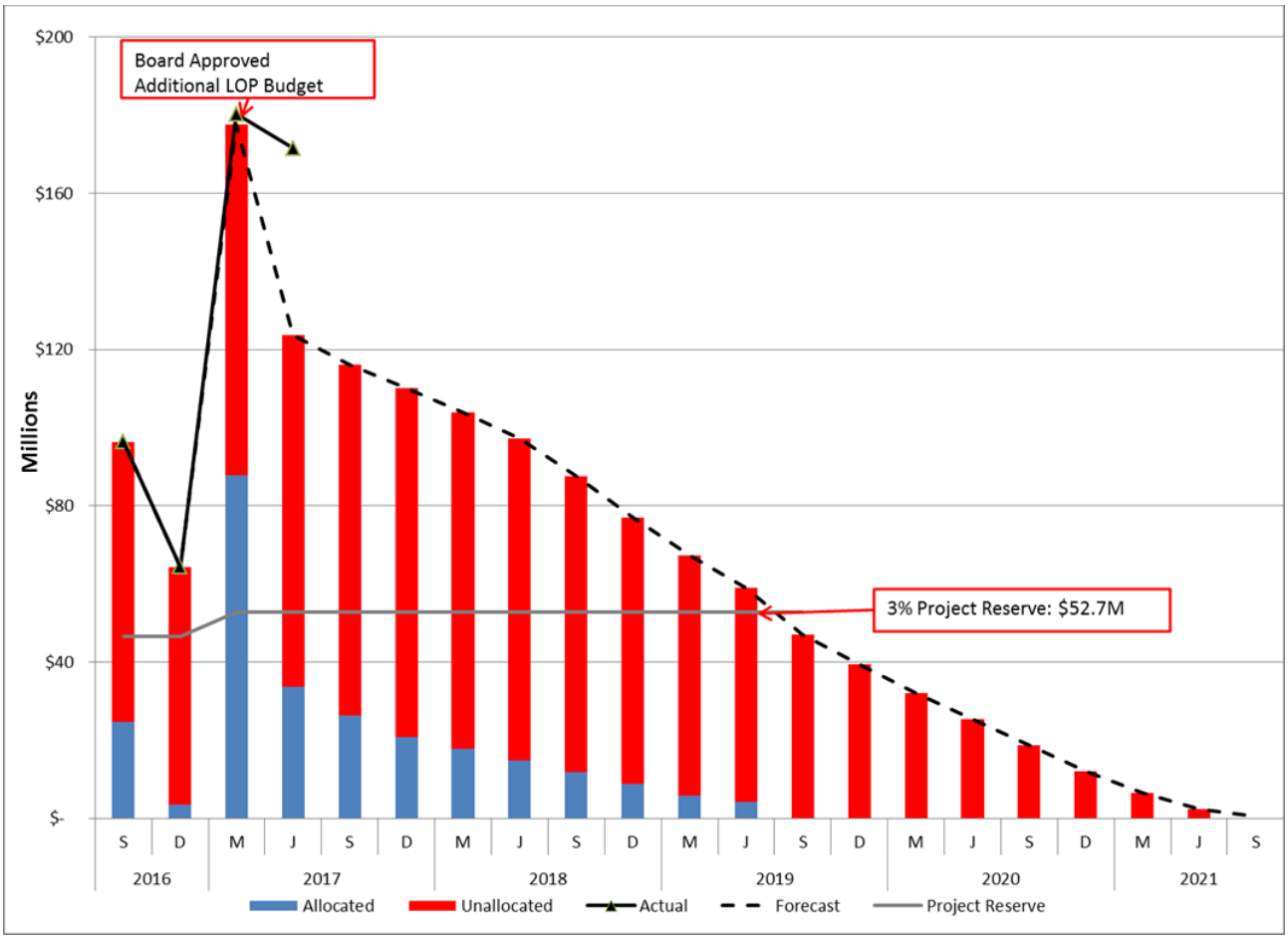
Current Budget:
There is no change to the Budget for this period.

Commitments:
Commitments reflect actions through *May* 2017.

Expenditures:
Expenditures are cumulative through *May* 2017. Expenditures *decreased* by $*1k* this period for costs associated with *professional services*. The $22.7 million in expenditures through *May* 2017 represents 56.8% of the Current Budget.

Current Forecast:
There was no change to the Forecast for this period.

COST CONTINGENCY DRAWDOWN



COST CONTINGENCY DRAWDOWN ANALYSIS

In January 2017, the Metro Board revised the Life-of-Project Budget to $1.756 billion, which included increasing the unallocated contingency to $89 million and allocated contingency to $92.8 million. A revised drawdown plan for unallocated contingency, correlated to anticipate risk trends, was developed to monitor and measure drawdowns moving forward.

Included in the project cost contingency drawdown is a 3% project reserve threshold. Metro's Board is to be notified when it becomes necessary to drawdown contingency below the project reserve threshold to cover project costs. This policy was adopted by the Metro Board of Directors in September 2012.

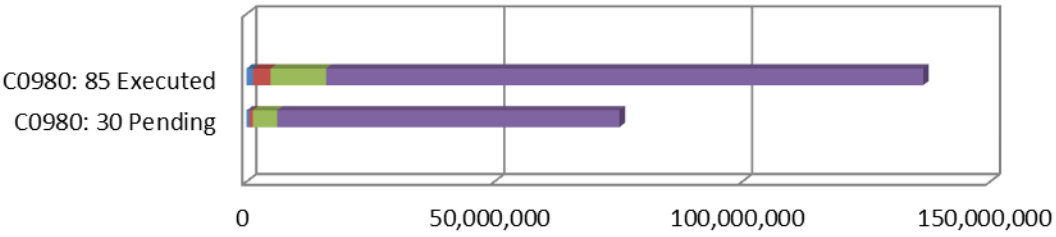
The project cost contingency drawdown curve is based on a 2021 Revenue Service date.

This month there is a drawdown of $*8.73* million from contingency due to D/B modifications. The remaining total project contingency (allocated and unallocated) is $*171.5* million.

COST CONTINGENCY DRAWDOWN ANALYSIS (Cont.)

PROJECT COST CONTINGENCY DOLLARS IN THOUSANDS	Contingency	Previous Period	Current Period	To-Date	Remaining Contingency (Forecast)
Unallocated Contingency	89,946	0	(2,034)	(2,034)	87,912
Allocated Contingency	92,809	(2,488)	(6,696)	(9,185)	83,624
Total Contingency	**182,754**	**(2,488)**	**(8,730)**	**(11,219)**	**171,536**

SUMMARY OF CONTRACT MODIFICATIONS



	C0980		
	85 Executed	30 Pending	Total
Under $100K	1,327,440	590,000	1,917,440
$100K to $250K	3,493,404	654,864	4,148,268
$250K to $1M	11,242,353	4,944,042	16,186,395
Over $1M	120,447,000	69,027,878	189,474,878
Total Contract MODs	**136,510,197**	**75,216,784**	**211,726,981**
Contract Award Amount	**927,226,995**	**927,226,995**	
% of Contract MODs	**14.7%**	**8.1%**	

Note:
1. Percent of Contract MODs equals the Total Contract MODs divided by the Contract Award Amount.
2. Pending Mods are under negotiation.

Eighty (85) changes with total value of $136.5 million have been executed since NTP of Contract C0980. An additional thirty (30) changes, with a total estimated value of $75.2 million are pending.

DISADVANTAGED BUSINESS ENTERPRISE (DBE) STATUS

Contract C0980 Regional Connector Transit Corridor Design-Build

As of *April* 2017:

- **DBE Goal – Design**
  A numerically expressed percentage of funds apportioned to Design Contracts and is calculated based upon the relative availability of DBE firms as compared to all firms in the relevant geographic market area: — 20%
- **Current DBE Commitment Design**
  Total DBE Committed Dollars divided by Total Contract Value for Design or Construction: — $11.3M (22.63%)
- **Current DBE Participation**
  Total amount paid to date to DBEs divided by the amount paid to date to Prime: — *17.50%*

Twelve (12) Design DBE sub-consultants have been identified to date

- **DBE Goal – Construction**
  A numerically expressed percentage of funds apportioned to Construction Contracts and is calculated based upon the relative availability of DBE firms as compared to all firms in the relevant geographic market area: — 18%
- **Current DBE Commitment Construction**
  Contract commitment divided by current contract value for Construction: — $157.7M (18%)
- **Current DBE Participation**
  Total amount paid to date to DBEs divided by the amount paid to date to Prime: — *19.80%*

Sixty-three (63) Construction DBE sub-contractors have been identified to date

PROJECT LABOR AGREEMENTS (PLA) STATUS

Contract C0980 Regional Connector Transit Corridor Design-Build

- **Targeted Worker Goal**
  Construction work to be performed by residents from Economically Disadvantaged Area in the United States — 40.00%
- **Targeted Worker Current Attainment** — *58.39%*
- **Apprentice Worker Goal**
  Construction work to be performed by Apprentices — 20.00%
- **Apprentice Worker Current Attainment** — *17.91%*
- **Disadvantaged Worker Goal**
  Construction work to be performed by Disadvantaged Workers who are residents of the United States — 10.00%
- **Disadvantaged Worker Current Attainment** — *8.02%*

FINANCIAL/GRANT STATUS

Status of Funds Anticipated May 2017

FEDERAL - CMAQ	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. ADDITIONAL CMAQ FUNDS WILL BE OBLIGATED IN FY18.
FEDERAL - SECTION 5309 NEW STARTS	METRO SUBMITTED ON NOVEMBER 25, 2013 A GRANT APPLICATION OF $65.O 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 METRO SUBMITTED A GRANT AMENDMENT OF $100M IN JULY 2016. GRANT APPROVAL WAS EXECUTED 0N AUGUST 18, 2016. FUNDS ARE AVAILABLE FOR DRAW DOWN.
MEASURE R - TIFIA LOAN: (Transportation Infrastructure Finance & Innovation Act)	A TIFIA LOAN AGREEMENT BETWEEN THE DEPARTMENT OF TRANSPORTATION AND METRO FOR $160M WAS EXECUTED ON FEBRUARY 20, 2014. THE DISBURSEMENT OF $61,864,368 WAS SPLIT INTO TWO PARTS. RECEIVED THE FIRST DISBURSEMENT OF $25.2 MILLION 4TH QUARTER FY2016. RECEIVED THE SECOND DISBURSEMENT OF $36.7 MILLION 1ST QUARTER FY2017.
CITY OF LA	FUNDING AGREEMENT OF $42M WITH THE CITY OF LA WAS APPROVED IN JUNE 2014. THE FIRST PAYMENT DRAWDOWN OF $5.0M WAS IN JUNE 2016. THE SECOND PAYMENT DRAWDOWN OF $7.0M ANTICIPATED IN JULY 2017.

Status of Funds by Source May 2017

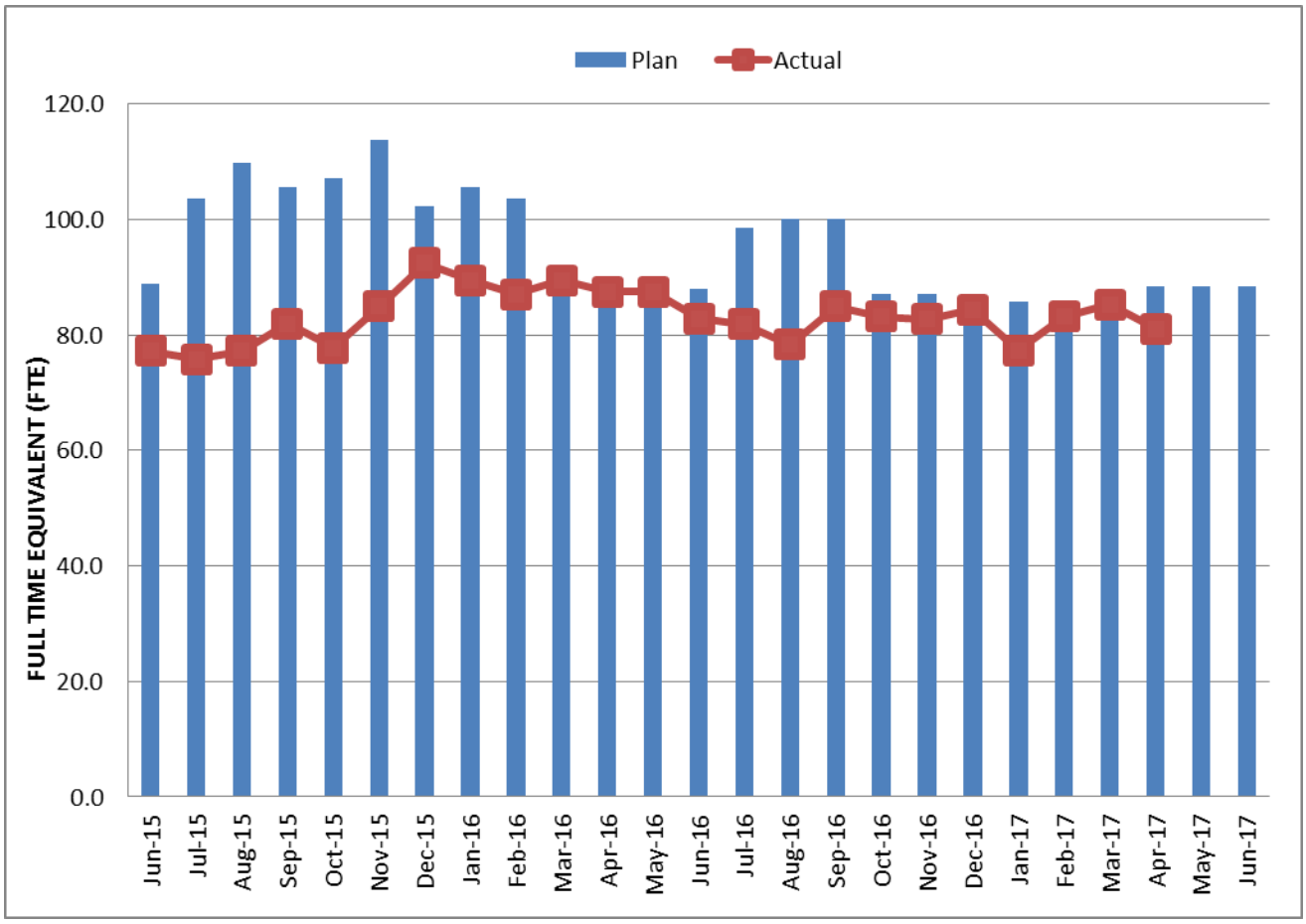
SOURCE	(A) ORIGINAL BUDGET	(B) TOTAL FUNDS ANTICIPATED	(C) TOTAL FUNDS AVAILABLE	(D) COMMITMENTS $	(D/B) COMMITMENTS %	(E) EXPENDITURES $	(E/B) EXPENDITURES %	(F) BILLED TO FUNDING SOURCE $	(F/B) %
FEDERAL - CMAQ	$64.000	$227.000	$64.000	$64.000	28%	$53.974	24%	$40.936	18%
FEDERAL - SECTION 5309 NEW STARTS	$669.900	$669.900	$265.000	$669.900	100%	$236.060	35%	$234.394	35%
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	$61.864	$160.000	100%	$61.864	39%	$61.864	39%
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%	$135.100	100%
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	$325.745	$284.730	$260.803	80%	$154.081	47%	$125.280	38%
MEASURE R	$27.571	$0.000	$0.000	$0.000	0%	$0.000	0%	$0.000	0%
CITY OF LOS ANGELES	$41.984	$41.984	$5.000	$5.000	12%	$5.000	12%	$5.000	12%
LEASE REVENUE	$64.247	$64.247	$0.000	$0.000	0%	$0.000	0%	$0.000	0%
TOTAL	$1,427.132	$1,755.840	$933.158	$1,426.667	81.3%	$763.543	43.5%	$720.038	41.0%

EXPENDITURES ARE CUMULATIVE THROUGH MAY 31, 2017
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

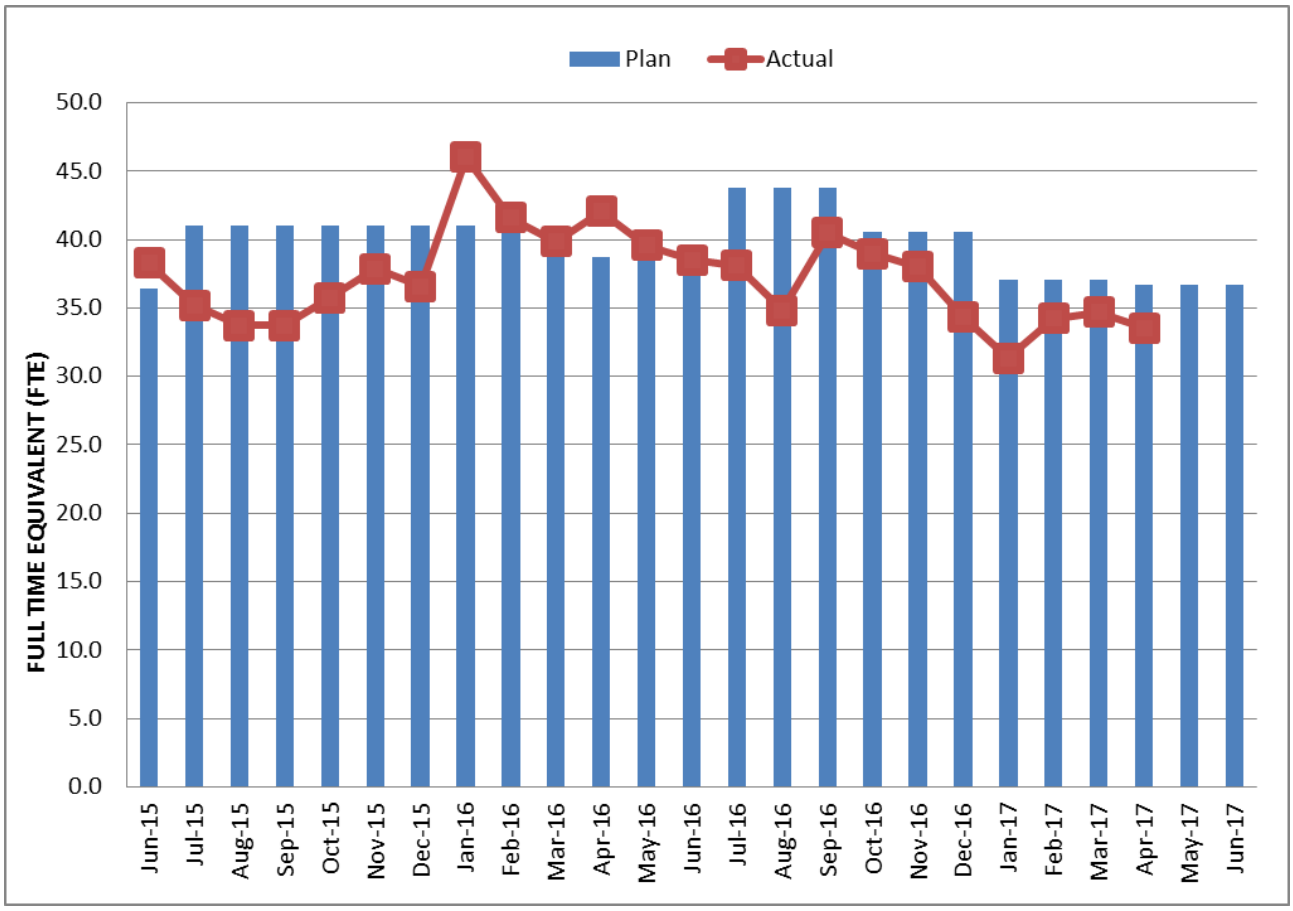
The overall FY17 Total Project Staffing plan averages 90.2 FTE's per month.

For *April* 2017, there were a total of *33.5* actual FTEs for Metro's Project Administration staff and *47.5* FTEs for consulting staff. The total actual project staffing for *April* 2017 was *81.0* FTEs versus FTEs planned (*88.4*).

The shortfall in staffing has not impacted Metro's ability to effectively manage the Project. Review of staffing plans is on-going to ensure needs are addressed.

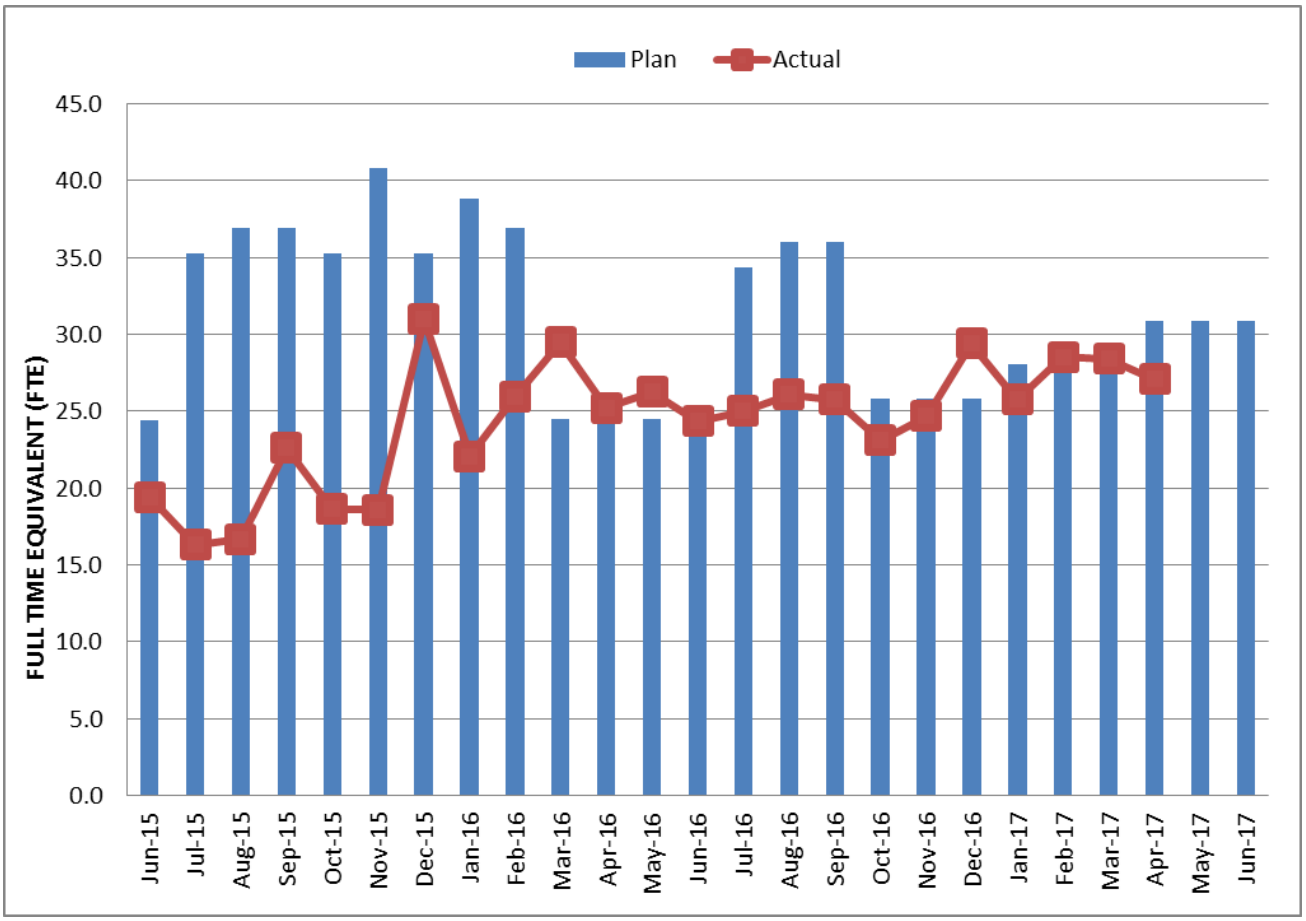
STAFFING STATUS (Cont.)

METRO STAFF



STAFFING STATUS (Cont.)

CONSTRUCTION MANAGEMENTSUPPORT SERVICES CONSULTANT

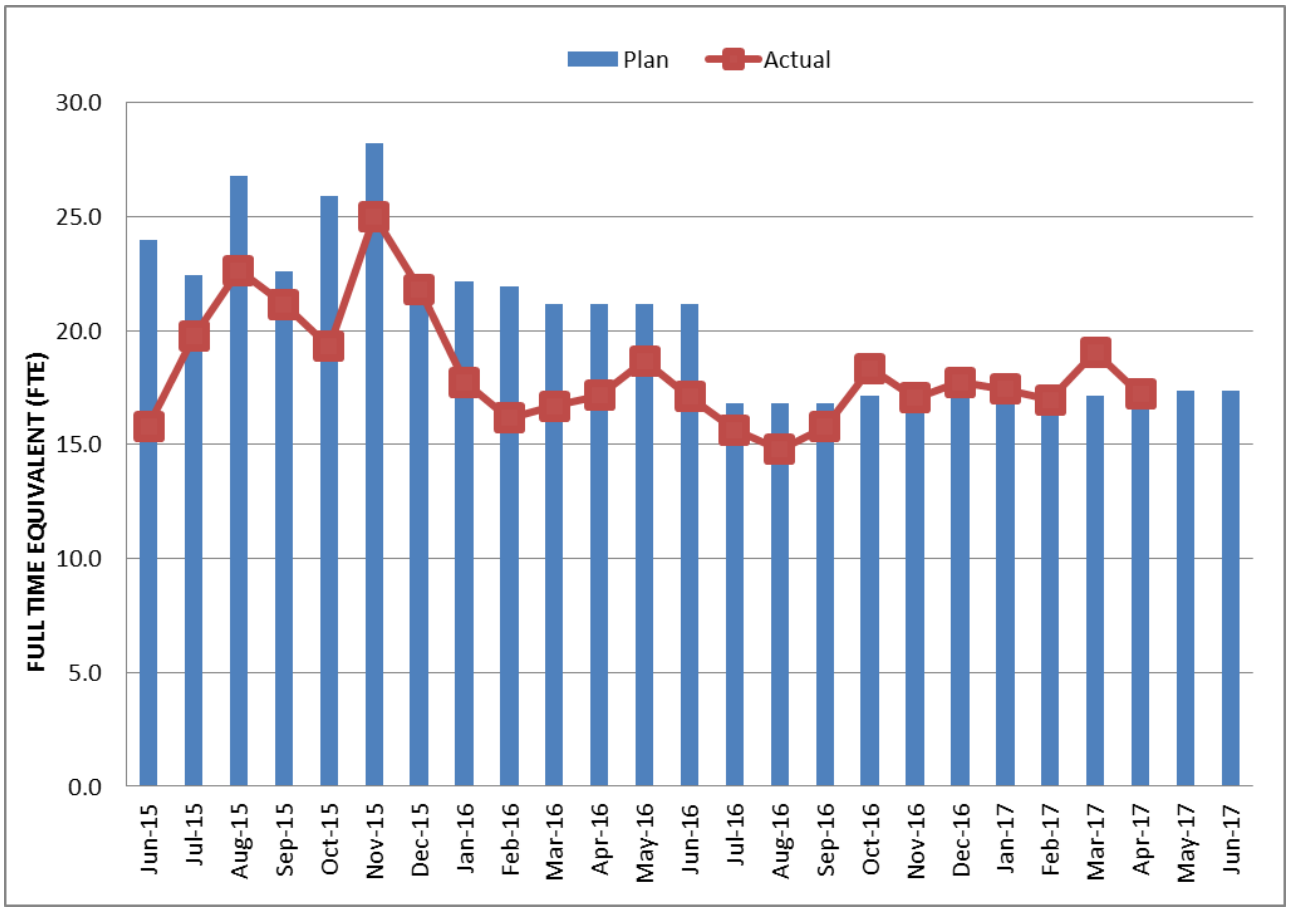


Note:

a) The variance in FTEs is due to holiday time off (Nov. 14), extensive weekend work (Dec.14) and additional field support staff.

b) The Actual FTEs for the month are based on the FTE hours submitted in the invoice for that month.

STAFFING STATUS (Cont.)
ENGINEERING SERVICES CONSULTANTS

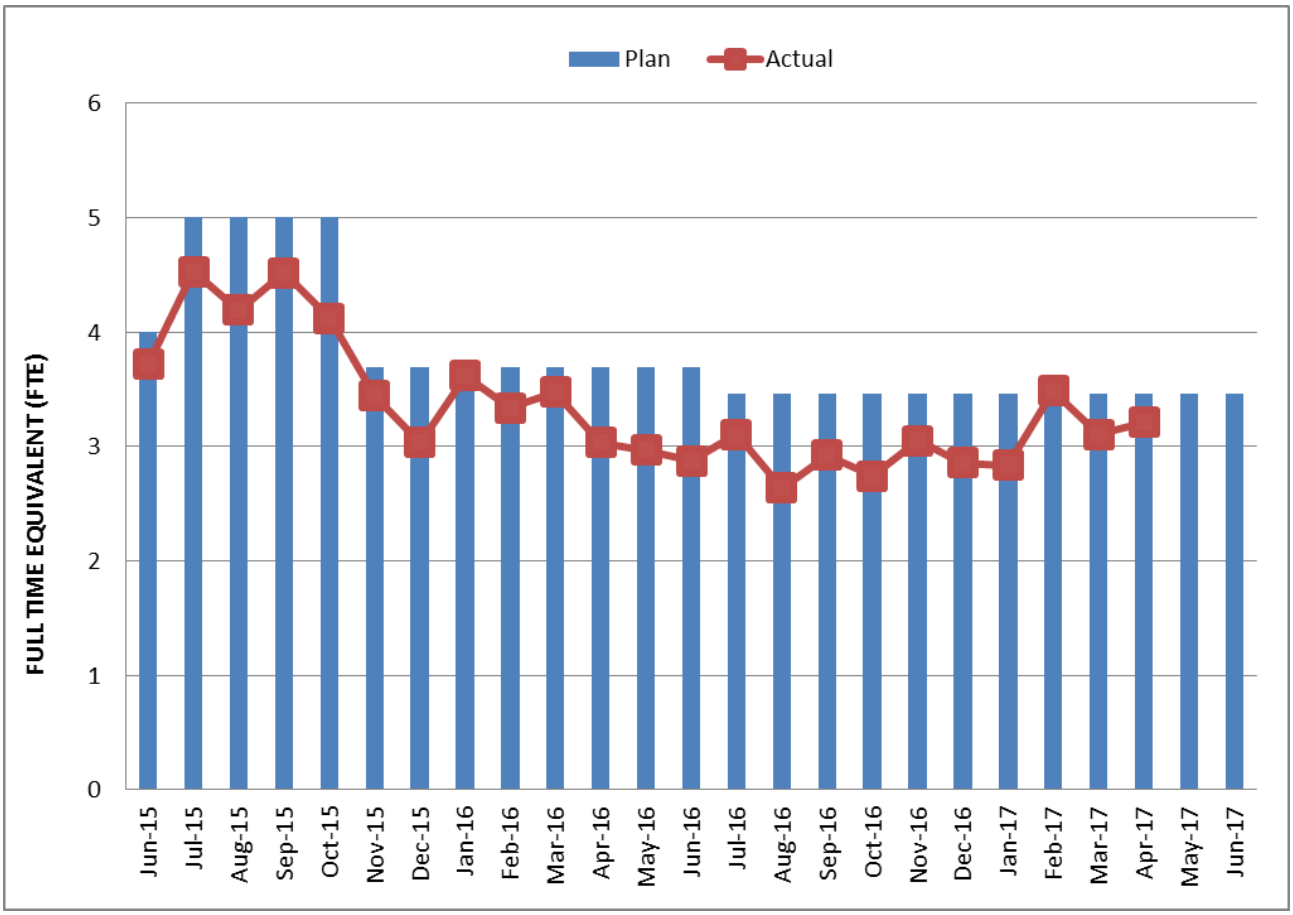


Note:

a) The Actual FTEs for the month are based on the FTE hours submitted in the invoice for that month.

STAFFING STATUS (Cont.)

PROJECT MANAGEMENT SERVICES CONSULTANTS



REAL ESTATE STATUS

Regional Connector - Real Estate Status Summary April 30, 2017

Type of Take	Number of Parcels	Certified	Decertified	Appraisals In Process / Completed	Offers Made	Escrow Closed	Effective OIP	Parcels Available	Remaining
Full Takes	2	2		2	2		2	2	
Part Takes	3	3		3	3			2	1
SSE	12	8	4	9	9	6	2	7	
TCE/ROE	14	5	3	6	6	4	1	5	
PE	3	3		3	3	2		3	
Sub Total	34	21	7	23	23	12	5	20	1
Pedestrian Bridge	420-1, 420-2, 420-3								1
Mangrove Fan Plant	TBD								1
Grand Total	36	21	7	23	23	12	5	20	3

REAL ESTATE ACQUISITION

OPEN REAL ESTATE MATTERS

Japanese Village Plaza – "JVP"

- The Project is under construction on the site under an Order of Possession effective July 31, 2015. The trial to determine the value of the required right of way *was held on* April 4, 2017 *and the balance due to the Property owner has been paid. The owners have indicated that they will appeal the jury verdict*.

Broad Collection

- *The subsurface easement was recorded on May 1, 2017 and is available for construction*.

City of Los Angeles (Mangrove Parcels) – No Change

- *The appraisal is underway to value the* additional right of way required for the Fan Plant. *The Project requested that Real Estate delay exercising the* option to extend the 5-year easement for an additional three (3) years *until closer to the expiration date*.

City of Los Angeles Department of Water and Power 'Duco Yard' – DWP (RC-473)

- *LADWP has agreed to a compromise in the valuation of the Property. The Board will be asked to approve the purchase price at its June 22nd meeting. Staff will proceed to draft a Purchase and Sale Agreement*.
- LADWP submitted its estimate of the modification required to their yard to continue their operations. The estimate is being reviewed by the Project. Follow-up interface between the parties continues. Cost and extent of mediation measures required is still at issue.

QUALITY ASSURANCE STATUS

C0980 Regional Connector D/B

- Metro QA reviewed and provided comments on RCC's quality related submittals, Construction Quality Work Plans (CQWPs) and milestone submittals. *During the month of May four (4) CQWPs were received and reviewed*.
- Metro QA also reviewed:
  - o *Test/Inspection Certifications of Arnold Ramirez (RCC Inspection Personnel).*
  - o Test results for Portland cement concrete, welding and MT/UT.
  - o *Engineering design proposals to alleviate Metro Rail Design Criteria shortcomings of tiebacks that were tested at Historic Broadway Station SOE. An internal meeting was held on May 31, 2017 by Metro Engineering to discuss these proposals and to determine if further action is required by RCC. It was determined that the proposals will correct the Metro Rail Design Criteria shortcomings*.
- *There was no monthly as-built review held in May; the next review will be held in June*.
- Performed oversight verification of RCC's design and construction activities, as well as ongoing oversight monitoring of RCC's QA/QC activities.
- *NCR #22 was closed in May. This NCR was issued by RCC Quality for instrumentation readings taken outside of specified time limits. The disposition to this NCR was to utilize the data from Grand Av Arts/Bunker Hill Station reports sent in late to be used in the 4/12/17 report rather than the 4/17/17 report. The readings taken for Little Tokyo/Arts District bi-weekly, that were delivered late, will not be included in the 4/5/17 report as official data; but as an appendix for information only.*
- *NCR #23 remains open and has been sent to the Engineer of Record for approval of recommended disposition*.
- *Metro QA closed QAR (C0980-SUR-2016-07-01) for drawing inconsistencies regarding CN 053 and 077 Drawings*.
- RCC testing performed to date are as follows:
  1. Portland cement concrete 28-day test results: *816*; number accepted: *816*
  2. Asphalt concrete density tests results: 203; number accepted: 203
  3. Soil compaction (in-situ density) tests performed to date: 168; number accepted: 168
  4. Welding MT/UT testing to date is: *7800* number accepted: *7797*

QUALITY ASSURANCE STATUS (CONT.)

- *There will be aggregate samples taken and tested on May 31, 2017, to meet the sampling requirements and determine correction of the aggregate failures that occurred in March and April. There will be a split sample taken by the RCC's Independent Test Lab and Metro's Independent Test Lab. The results were satisfactory. Another sample is scheduled for the third week in June. If it meets the specified requirements this issue will be closed.*

ENVIRONMENTAL STATUS

- As of June 30, 2016, RCC has installed noise monitors at six (6) Metro-approved locations along the Project alignment. The noise monitors are instrumental in verifying compliance of construction-generated noise with the local ordinance and thresholds listed in the Project Contract Specifications. *In May 2017, NMT-4 was relocated from its former position on the RedCat building to a City light standard on Flower St. between two residential buildings: the Bunker Hill Towers and the Promenade. Metro believes that the new NMT location provides additional sound data and improved compliance monitoring*.
- RCC has installed vibration monitors at WDCH, REDCAT, the Broad Museum, Japanese Village Plaza, LA Times, Hikari Apartments, Colburn School and Nakamura Tetsujiro Building. Locations are based on the Vibration Monitoring Plan to monitor vibration continuously during peak vibration generating construction. The Vibration Control Plan Quarter 2 Update for 2017 *was* amended *in April* to include *vibration measurement of annoyance criteria to coincide with TBM advancement adjacent to sensitive receptors, and* a new table showing Maximum Allowable Interior Groundborne Vibration During TBM Operations (units will be shown in *RMS (in/sec) and VdB units* to coincide with the vibration data currently available to Metro via the INFRANet system).
- 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 *submitted* the 17th Quarterly Mitigation Monitoring and Reporting Plan covering February 2017 to April 2017 *to the FTA on May 25, 2017*.
- RCC is currently working on the *100*% landscape design plans for Segment A and the *85% landscape design plans for* Segment B.
- Metro is *preparing* the *5*th Semi-Annual Cultural Resources Report, documenting cultural resources monitoring from *January 2017 to June 2017*. *The report will be submitted to the FTA and the SHPO by July 31, 2017*. Reporting will continue a semi-annual basis until ground-disturbing activities conclude.

CONSTRUCTION AND COMMUNITY RELATIONS STATUS

Construction Relations

- Responded and addressed project related inquiries from the public received on the project hotline, email and during office hours at the Little Tokyo Community Office.
- *Performed public* outreach and *construction coordination* to impacted area stakeholders regarding the following construction activities throughout the alignment: geotechnical instrument installation and maintenance, pavement repair, storm drain work, and *last weekend of Cut & Cover activities*. Distributed nine (9) construction notices to the public on these activities through email and made it available on the project website and social media outlets.
- Coordinated construction activities with *fifteen (15)* stakeholders throughout the project alignment on the above activities.
- Presented to the *West & Central Service Council and The Los Angeles Chamber of Commerce* on the progress of the project, tunneling and the 6th St closure.
- Continued the Historic Broadway parking validation program to mitigate for the loss of parking during Cut & Cover activities at the Historic Broadway Station area.
- Held the Regional Connector Community Leadership Council Committees at: 1st/Central, 2nd/Hope, 2nd/Broadway and Flower St./Financial District on the progress of tunneling, the 6th St./Flower St. closure and ongoing construction activities.
- Continued standing meetings with: LA City Councilmember District 14, the Mayor's Office, Onni Times Square, Common Wealth Partners, The Westin Bonaventure Hotel, Charles Dunn, Citigroup Center, the Central Library/Hines, The Standard Hotel, Pegasus Apartments and the California Club.

Social Media Outreach and Marketing Efforts

- *Celebrated the tunnel boring machine breakthrough at the Grand Av Arts/Bunker Hill Station with a live video broadcast and an overall reach of a-quarter million*.
- Facebook has 10k followers with a total reach of 754k users. Twitter had 401k impressions with 2,593 total followers. The most popular posts included a *reminder on the 6th St closure starting June 3 and a view of underground construction below Flower St*.
- The monthly E-Newsletter had a 22% open rate.

Community Relations

- Continued work with the monthly Little Tokyo Marketing & Business Task Force. Held Small Business workshop with Little Tokyo Service Center Partner and Asian Pacific Islander Small Business program**.**

CREATIVE SERVICES STATUS

Art Program

- Responded to RFIs and Submittals
- Participated in Design Build document reviews
- Participated in coordination meetings with project team
- *Facilitated artwork design update to community based art panel/advisory group*
- Continued to support mitigation efforts

Signage & Environmental Graphic Design

- Responded to RFIs and Submittals
- Participated in Design Build document reviews

SAFETY & SECURITY STATUS

C0980 Regional Connector

- Monitored RCC's pre-employment drug/alcohol testing and new employee safety orientation to insure compliance with contract 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 Project Safety Orientation for new Metro/Consultants, *visitors*, and IPMO project staff. Training sessions included *Safety Orientation*, Underground Safety, and Self Rescuer Training.
- Participated in work plan reviews, daily crew safety meetings, and the RCC 'Safety Stand Down' sessions.
- Monitored construction field activities daily to insure compliance with contract specifications. Participated with RCC staff in field safety inspection walks of multiple project worksites, laydown, and storage yards.
- Monitored Third Party contractor's work activities to insure safety compliance.
- Made recommendations to utility crews regarding contract activities and improving overall traffic control and pedestrian safety.
- RCC reported *no* recordable *injuries* in the month of *May* 2017.
- C0980 Contractor RCC reported *79,708* work-hours for the month of *April* 2017 (work-hours are reported with a one-month lag time). The total C0980 Contract to Date work hours through *April* 2017 are *1,531,311* with a total of *eight (8*) recordable injuries and no Lost Workday case injuries. The C0980 Contract Recordable Injury Rate is *1.04*. The Bureau of Labor Statistics National Average Recordable Injury Rate is 2.8 for heavy civil construction projects.
- Project to Date Total Work Hours including both the C0980 and the C0981 Advanced Utility Relocation contract through *April* 2017 is now *1,642,370* hours with *nine (9)* recordable injuries. Project Total Recordable Injury Rate is now *1.09*. *There have been no days away, lost time, or severe injuries on the project*.

THIRD PARTY AGREEMENT STATUS

Agency	Type of Agreement	Status/Comments
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 in April 2011
Caltrans	Amendment	Executed in August 2011
Private Utilities	LOA, MOU or UCA	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.

ADVANCED UTILITY RELOCATION STATUS

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

- RCC is continuing to coordinate with LADWP and the City of Los Angeles in preparation for relocation of the local LADWP electrical system *for 6th and Flower area*. Metro continues to work with both parties to facilitate coordination of the relocation design and construction in preparation for future decking installation.
- *Metro, LADWP, and RCC addressed Los Angeles Bureau of Engineering's (LABOE) comments from the 6th and Flower Power relocation plans, and submitted the plans to LABOE on May 19, 2017. RCC received approval from LABOE on May 2, 2017 and completed the installation of Lateral 1 conduit on April 4, 2017. LADWP will now continue running conduit by installing it to the live vault, with an estimated completion in early June 2017. This conduit is located on Flower Street, north of 6th Street.*
- *RCC is waiting on approval of the Vault which is located on 6th, West of Flower Street, and on the approval of the shoring plans.*

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

- On Flower Street between 4th Street and Wilshire Boulevard, the water relocation of the 24" waterline started on April 2015 and *was completed on May 7, 2017*.

C0980 UTILITY WORK STATUS

RCC is currently coordinating with all affected utility owners to relocate their utilities by lowering in place or support and protect to accommodate the Regional Connector Project.

PEAK HOUR CONSTRUCTION VARIANCES

Metro is actively pursuing extended hour variances/exemptions to accommodate 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 the City Council District 14th Office to obtain Peak Hour Exemptions.

Historic Broadway and Grand Av Art/Bunker Hill Stations:

- *As of May 8, 2017, Historic Broadway Station has entered steady state condition in which soldier piling/decking operations have been completed in the City ROW.* Emphasis is primarily on underground station construction until approximately the year 2021.
- AM and PM exemptions for the 2nd/Hope full closure have been obtained from January 23, 2016 to April 27, 2019. This is to support utility relocations, piling/decking operations, and the Grand Av Arts/Bunker Hill Station construction.

Flower Street Cut & Cover Area

- Metro obtained an AM and PM peak hour exemption to place k-rail on the eastside of Flower Street (between 4th and 5th Sts.) to support above and below ground construction operations for decking along Flower Street. Approval was granted by the Board of Public works from October 1, 2016 to November 9, 2019.
- Metro obtained an AM and PM peak hour exemption to perform pre-trenching operations on Flower St (5th St – Wilshire Blvd) from April 10, 2017 to June 23, 2017.
- *Metro obtained a PM peak hour exemption on June 2, 2017 to facilitate the installation of traffic control configuration of the 6th St closure implemented on June 3, 2017*.

POLICE COMMISSION CONSTRUCTION VARIANCES

Metro continues to work closely with the Los Angeles Police Commission and actively pursue new night/Sunday work hour variances as well as expanded geographic limits and time extensions for existing variances to accommodate Project needs.

In *May* 2017, LAPD approved time extensions for *three (3) existing variances for the following locations*:

- At the Flower Street area *one* (*1*) *variance was extended for the TBM retrieval*.
- *At the Historic Broadway Station area, one (1) variance was extended for soldier piles and decking work*.
- *At the 1st/Alameda area, one (1) variance was extended for the 20" waterline work.*

In May 2017, LAPD received two (2) night time variance applications for their review and approval for the locations below:

- *At the 1st/Central work area, one (1) variance application was submitted for the wet and dry utilities on 1st Street between Rose Street and Garey Street.*
- *At the Flower Street work area, one (1) variance application was submitted for the decking operations on Flower Street between the intersection of 5th Street to Wilshire Boulevard*.

CPUC CROSSING SUMMARY

In July 2016, Metro and RCC finalized the items that needed to be included in the checklist for the Safety Certification Status. Metro is in the process of reviewing the Safety Certification Checklist submitted by RCC in October 2016. The list involves both design and construction items below:

- Passenger Stations, Train Control and Signals, Traction Power, Overhead Catenary, Communications, Track and Structures, Vertical Transportation (elevators, escalators), Fire Life Safety Systems, Security Systems, and CPUC Specific Requirements.
- Metro and RCC staff have reached a consensus of each Systems Safety Certification item per discipline that needs to be included in the plan. These items have been inserted into a Microsoft Access Database for tracking, sorting, and distribution to key staff members for alerting of any potential issues that must be resolved. This will ensure that the completion of the Safety Certification Plan will be completed in a timely manner and not impact the Revenue Operation Date (ROD).

As of January 2017, the Safety Certification Checklist has been approved by Metro.

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 first draft FFGA application to FTA for review
September 2013	Received proposals for D/B Contract C0980

CHRONOLOGY OF EVENTS (Cont.)

September 2013	Submitted second 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 Historic 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
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 form 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 Historic Broadway Station Site Move-In

CHRONOLOGY OF EVENTS (Cont.)

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.
January 2016	RCC began implementation of Bus Bridge # 1 (Shoofly Tie-In Work at Little Tokyo.
February 2016	RCC began implementation of full closure at 2nd/Broadway intersection.
March 2016	RCC completed Bus Bridge # 1 (Shoofly Tie-In at Little Tokyo) work.
March 2016	Excavation of 1st/Central Station was initiated.
April 2016	TBM (Tunnel Boring Machine) was delivered to the temporary storage site.
May 2016	Closed 1st Street between Alameda and Central Streets. Opened northbound 1st East of Alameda Street.
June 2016	RCC completed excavation at 1st/Central Station Box
June 2016	RCC began pile installation on west side of Flower Street between 4th and 5th Street
July 2016	RCC initiated pile installation at Historic Broadway Station (West Hammer Head)
July 2016	RCC Initiated CIP invert at 1st/Central Station Box
August 2016	RCC completed 36” waterline replacement at 1st/Alameda
September 2016	RCC completed temporary decking at 1st/Alameda intersection (Wye)

CHRONOLOGY OF EVENTS (Cont.)

October 2016	Metro performed TBM lowering ceremony
October 2016	RCC completed CIP invert at 1st/Central Station Box
November 2016	RCC completed CIP invert at Mangrove Launch Pit and Wye
December 2016	RCC completed Phase 1, 2nd Street Decking in front of LA Times Bldg.
January 2017	Metro Board approved a LOP Budget increase
February 2017	RCC initiated TBM mining (1st – Left)
March 2017	RCC completed TBM mining under JVP (first 500 ft.)
March 2017	RCC completed temporary decking on Flower St. (between 4th and 5th)
April 2017	RCC completed sub-invert at TBM retrieval pit
April 2017	RCC completed CIP invert at Grand Av Arts/Bunker Hill Station Box
May 2017	RCC completed temporary decking at Historic Broadway Station
May 2017	RCC completed water relocation work along Flower Street
June 2017 (Early)	RCC completed mining and broke through at Grand Av Arts/Bunker Hill Station

CONSTRUCTION CONTRACTS

Description: Design-Build Contract **Contractor: Regional Connector Constructors**	**Contract No. C0980** **Status as of: June 2, 2017**
Work Completed: **Design** • Evaluated the tunneling options under the Red Line • AFC package for 1st/Central Station approved • Submitted a full package for 6th/Flower DWP Power relocation to LABOE • 100% SEM Resequencing package submitted • AFC package for Flower Cut & Cover Invert approved • AFC package for 2nd/Broadway Station submitted **Construction** **Tunneling** • Completed mining under SEM Crossover and 2nd/Broadway Station area • Completed TBM breakthrough at Grand Av Arts/Bunker Hill Station **Broadway** • Initiated trestle deck beams and bracing • Initiated level 3 excavation at Station Box **Hope** • Completed concrete pour for Invert #3 & #4 • Initiated tunnel eye installation **Flower** • Completed excavation and sub-invert at TBM retrieval pit	**Major Activities (In Progress):** **Design** • Coordinate with Tribune for the overbuild structure • Review and Approve AFC package for 2nd/Broadway Station • Support feasibility assessment for the Flower Street train control room • Preparation of street restoration design with City families • Preparation of DU2 WYE Fan Plant and Flower Cut & Cover 100% design submittal • Preparation of DU4 Civil Segment A 100% design submittal • Preparation of DU5 Civil Segment B 100% design submittal • Preparation of DU12 Communications 100% design submittal **Construction** **Tunneling** • Relaunch of TBM toward 4th/Flower Retrieval Shaft **2nd/Broadway** • Complete temporary decking installation on 2nd Street • Station Box excavation and strut installation **2nd/Hope** • Tunnel eye installation • Preparation of Concourse Level SOG **Flower** • Complete waterline shutdowns and tie-ins • Pile installation at 5th/Flower intersection • Excavation and utility hanging on Flower Street (between 4th & 5th Street) • Continue DWP Power relocation (Lateral 1 and Mainline B) at 6th/Flower **Project-wide** • Geotechnical equipment installation and monitoring across the project alignment • Pre-con surveys (photograph existing conditions) at various locations, as needed • Underground investigation – potholing Hydrovac and exploratory trenching at various locations project wide • Preparation of submittals and traffic control plans, including weekly meetings with LADOT and City Council District 14

CONSTRUCTION CONTRACTS (Cont.)

Description: Design-Build Contract **Contractor: Regional Connector Constructors**	**Contract No. C0980** **Status as of: June 2, 2017**
Areas of Concern: • Detailed design is underway to relocate the 6th/Flower DWP power assets. This work requires collaboration with COLA relative to TCPs, BOE approvals, DWP efforts, etc. to minimize schedule and cost impacts. Stakeholder challenges are also anticipated; engagement by Metro outreach resources are proceeding accordingly.	**Upcoming Interim Milestones:** **Design** • LADWP Power relocation design at 6th/Flower to be reviewed and approved by LABOE • DU2 WYE Fan Plant and Flower Cut & Cover AFC package to be submitted • SEM Resequencing AFC package to be submitted • DU4 & DU5 Civil AFC package to be submitted • DU12 Communications AFC package to be submitted **Construction** **1st/Central/Tunneling** • Complete TBM mining to 4th/Flower Retrieval Shaft **2nd/Broadway** • Continue excavation of station box at 2nd/Broadway • Storm drain installation on 2nd Street **2nd/Hope** • Complete tunnel eye construction for first tunnel **Flower** • Complete final design of power relocation at 6th/Flower • Continue pile installation on Flower St (between 5th and 6th Street) • Continue DWP Power relocation at 6th/Flower **Project-wide** • Complete placement of geotechnical monitoring instrumentation along the alignment

CONSTRUCTION CONTRACTS (Cont.)

Description: Design-Build Contract
Contractor: Regional Connector Constructors

Contract No. C0980
Status as of: June 2, 2017

Schedule Summary:

Date of Award:	5/6/2014
Notice to Proceed:	7/7/2014
Original Contract Duration:	2430 CD
Current Contract Duration:	2579 CD
Elapsed Time from NTP:	1062 CD

	Original Contract Dates/Duration	Time Extension (CD)	Current Contract	Forecast	Variance CDs
Notice to Proceed	07/07/14		07/07/14		
Milestone 1:	10/22/20	150	03/21/21	02/28/22	-344
Milestone 2:	06/14/20	To be deleted (Mod#74)			
Milestone 5:	08/19/19	To be deleted (Mod#74)			
Milestone 6:	09/18/19	To be deleted (Mod#74)			
Milestone 7:	10/10/15	To be deleted (Mod#74)			
Milestone 8:	8 Weekends	0	8 Weekends	8 Weekends	0
Milestone 9A:	200 Days	To be deleted (Mod#74)			
Milestone 9B:	100 Days	To be deleted (Mod#74)			
Milestone 10:	115 Days	To be deleted (Mod#74)			
Milestone 11:	15 Days	To be deleted (Mod#74)			
Milestone 12:	03/01/21	149	07/28/21	04/29/22	-275

Physical Percent Complete as of : 06/03/17

Design	97.9%
Construction	30.7%

* Note: Physical completion assessment excludes mobilization, general mobilization and Provisional Sum.

Cost Summary:

	$ In millions
1. Award Value:	927.2
2. Executed Modifications:	185.0
3. Approved Change Orders:	1.9
4. Current Contract Value (1+2+3):	1,114.1
5. Incurred Cost:	500.3

CONSTRUCTION PHOTOS

TBM breaking through at Grand Av Arts/Bunker Hill Station

TBM cutter head cleaned

Pile trenching to remove newly abandoned 24” waterline

Utility hanging along Historic Broadway Station SOE

LA County storm drain (Hobas) pipe lowered for installation

Pile installation in front of City National Plaza

APPENDIX

COST AND BUDGET TERMINOLOGY

Project Cost Descriptions

ORIGINAL BUDGET	The Original Project Budget established upon Board approval of Life-of-Project (LOP) budget, plus Finance Costs.
CURRENT BUDGET	The Original Budget plus all approved budget amendments. 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.

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 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
COLA	City of Los Angeles
CPM	Critical Path Method
CPUC	California Public Utilities Commission
CQWP	Construction Quality Work Plan
CR	Camera Ready
CSPP	Construction Safety Phasing Plan
CTC	California Transportation Commission
CUD	Contract Unit Description
DB	Design Build
DBB	Design Bid Build
DDR	Design Deviation Request
DOT	Department of Transportation
DWP	Department of Water and Power
ECI	Engineering Change Instruction
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

APPENDIX

LIST OF ABBREVIATIONS AND ACRONYMS (Cont.)

FTA	Federal Transit Administration
FTE	Full Time Equivalent
GBN	Ground Borne Noise
GBR	Geotechnical Baseline Report
GDSR	Geotechnical Design Summary Report
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

APPENDIX

LIST OF ABBREVIATIONS AND ACRONYMS (Cont.)

PE	Preliminary Engineering
PEER	Permit Engineering Evaluation Report
PIP	Project Implementation Plan
PLA	Project Labor Agreement
PM	Project Manager
PMOC	Project Management Oversight Consultant
PMP	Project Management Plan
PR	Project Report
PSR	Project Study Report
QA	Quality Assurance
QAR	Quality Assurance Report
QC	Quality Control
QPSR	Quarterly Project Status Report
RAMP	Real Estate Acquisition Management Plan
RCC	Regional Connector Contractors
RCMP	Risk Assessment Management Plan
RFC	Request for Change
RFP	Request for Proposals
RHA	Risk Hazard Analysis
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
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
SHPO	State Historic Preservation Office
SIT	System Integration Testing
SOE	Support of Excavation
SOQ	Statement of Qualification
SOV	Schedule of Values
SOW	Statement of Work
SP	Special Provision
SSMP	Safety and Security Management Plan
TBD	To Be Determined
TBM	Tunnel Boring Machine
TCC	Train Control Center
TCE	Temporary Construction Easement
TCP	Traffic Control Plan
TIFIA	Transportation Infrastructure Finance and Innovation Act
TIGER	Transportation Investment Generating Economic Recovery

APPENDIX

LIST OF ABBREVIATIONS AND ACRONYMS (Cont.)

TPSS	Traction Power Substation
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