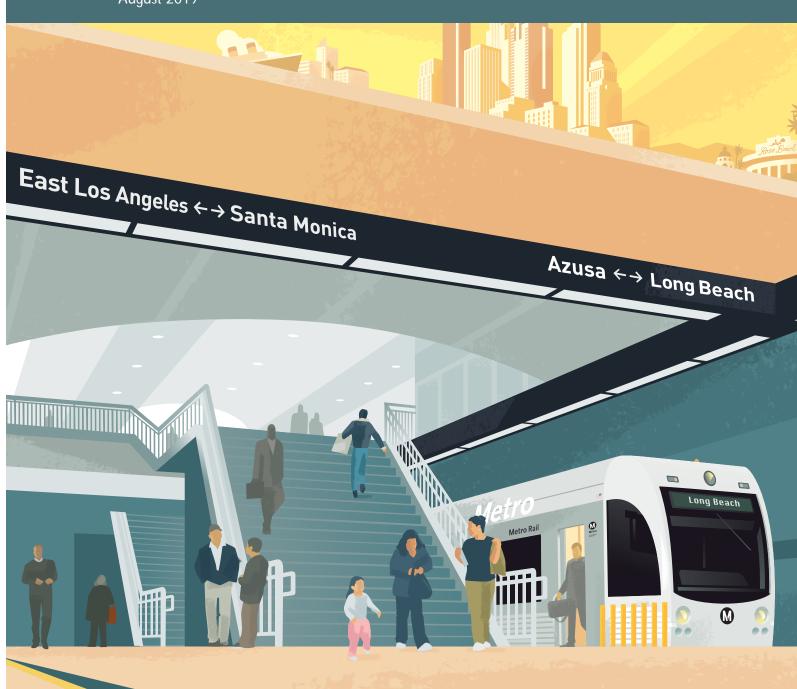
Regional Connector Transit Project

MONTHLY PROJECT STATUS REPORT

August 2019





REGIONAL CONNECTOR TRANSIT 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).

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PROJECT OVERVIEW

Project Background

The Regional Connector Transit Project (Project) will link the terminus of the Blue and Expo Lines at 7th/Metro Center to the Gold Line near the current Little Tokyo/Arts District Station through a new 1.9-mile underground alignment in downtown Los Angeles. The alignment includes three underground stations: Grand Av Arts/Bunker Hill; Historic Broadway; and Little Tokyo/Arts District.

From the existing 7th Street/Metro Center Station, the Project alignment will extend north under Flower Street to 2nd Street. It will then proceed east underneath 2nd Street to just west of Central Avenue where the alignment will veer northeast under privately-held property to the new Little Tokyo/Arts District Station at 1st and Central. The alignment continues briefly eastward through a Wye Junction (Wye) constructed beneath the 1st and Alameda intersection. To the north of the Wye at Temple and Alameda, and to the east of the Wye at 1st and Vignes, trains will connect with the Gold Line by rising to the surface through two new transition portals heading north to Pasadena, and east to East Los Angeles.



Upon completion, the Project will in effect facilitate regional light rail service along a 49-mile north-south route – Azusa to Long Beach, and a 23-mile east-west route – East LA to Santa Monica.

Passenger forecasts in 2035, as a result of the improved service, indicate 90,000 daily transit trips will occur through the 1.9-mile downtown trunk, including 17,000 new riders.

The above Project configuration is based on years of planning and environmental work that is reflected in the following milestones:

- Metro Board approval of Alternative Analysis January 2009
- Initiation of Draft EIS/EIR February 2009
- Initiation of Preliminary Engineering (PE) January 2011
- Metro Board certification of Final EIS/EIR April 2012
- FTA issuance of Record of Decision June 2012
- PE and Advanced PE complete March 2013
- FTA award of Full Funding Grant Agreement February 2014.

Major Procurements

<u>Utility Relocation</u>: Advanced Utility Relocation Contract, C0981R, was awarded to Pulice Construction, Inc. in January 2014 and the Notice to Proceed (NTP) issued on February 18, 2014. Contract C0981R was terminated for convenience on April 14, 2015 and remaining AUR work was transferred to the C0980 Design/Build (D/B) Contractor.

<u>Guideway & Systems Contract</u>: The Board authorized to solicit a major D/B contract, C0980, in August 2011. A contract was awarded on April 24, 2014 to Regional Connector Constructors (RCC), a joint venture of Skanska USA Civil West California District, Inc. and Traylor Brothers, Inc. in the amount of \$927,226,995. NTP was issued July 7, 2014. The final engineering and design for the joint venture is performed by Mott McDonald.

<u>Vehicles</u>: Metro is procuring four (4) Light Rail Vehicles (LRVs) for the Project. The vehicles will be built and delivered by Kinkisharyo International, LLC under Option 2 of Contract P3010. Delivery and acceptance of four LRVs is anticipated no later than February 2020.

Rail Operations Center (ROC): The existing functional operations at the ROC are being expanded to accommodate the central control functions associated with five new rail lines to include Regional Connector. The Project is contributing \$4.07M towards this expansion which is scheduled to be completed by June 2021.

<u>Fare Collection</u>: Procurement of Universal Fare System and Ticket Vending Machine equipment was completed in January 2018 with award to Cubic Corporation. Metro is coordinating with RCC for installation and testing schedules, which are currently expected to begin in late 2020. The scope addition of fare transfer equipment in the three Regional Connector stations is on hold pending decision to proceed. A decision will be made no later than January 2020.

Program Management

The RCC contract is being managed by a team of Metro and consultant personnel jointly located at the Integrated Project Management Office (IPMO). The consultant component is comprised of The Connector Partnership, a joint venture between AECOM, Inc. and WSP (CPJV) which provides engineering and design support services while Arcadis, Inc., provides construction management support services. An overview of staffing is provided under the Staffing Section of this report. The on-site program management team is also supported by Metro Headquarters resources to include, but not limited to, engineering, risk management, environmental, quality management, operations and creative services departments.

<u>Project Schedule and Budget</u>: The Revenue Service Date (RSD) is planned for Summer/Fall 2022.

In January 2017, the Metro Board revised the Life of Project (LOP) Budget for Regional Connector Transit Project 860228 to \$1.756 billion. The LOP budget for Concurrent Non-FFGA activities related to Project 861228 remains at \$39.9 million. Financing costs are estimated at \$14M. Cost forecasts remain consistent with budgets. A detailed FFGA budget forecast is included under the Project Cost Section of this report.

Funding has been secured from a variety of sources, detailed in the Financial/Grant Section on Page 19, to include:

- Federal New Starts Grant
- Federal Congestion Management Air Quality and RIP Programs
- USDOT TIFIA loan proceeds
- State Proposition 1A/1B and Capital Project Loan proceeds
- City of Los Angeles
- Lease revenues.

<u>Construction and Community Relations</u>: The Construction and Community Relations Team is tasked with promoting the Project and performing public outreach within the communities to keep stakeholders informed of construction activities occurring along the Project alignment. To facilitate the communication, community leadership councils have been formed which represent geographic-based constituent groups along the alignment.

The Project is also engaged in social media outreach and various marketing and advertising efforts designed to keep the public informed and supportive of the Project. These efforts are aimed at promoting businesses that are affected by construction. An overview of monthly activities is presented in the Construction and Community Relation Section of this report.

<u>System Integration</u>: The Project's integration of three separate lines, each possessing distinct system technologies, presents significant challenges for both the Project and Metro at-large. Extensive planning continues to be performed to define logistics of the systems' cut-overs that will be required. The Project will continue to coordinate the completed systems interface design, with on-going procurement in preparation for construction and testing as Metro maintains revenue service on the three operating lines.

<u>Rail Activation</u>: The Project and Metro Operations recognize the extensive planning required in preparation for rail activation of the new regional light rail service the Project will enable through downtown Los Angeles. The training of 400+ operators and supervisors across the regions has surfaced as a key component to rail activation. This training will require dedicated time during rail activation to ensure safety.

Planning efforts have outlined a sequence of dependent testing, training, simulation, and safety certification. From the sequence, a twenty-week schedule has been developed to guide the testing, rail activation and start-up. The twenty weeks are initiated by the Project's issuance of the Substantial Completion milestone to RCC.

EXECUTIVE SUMMARY

In *August*, the Project achieved *59.1%* completion based on earned value measurements for design and construction. The focus of the Project is on facilitating advancement of construction activities throughout the alignment.

The following is an overview of current design and construction activities.

Design Status

Ninety-nine percent (99.9%) of the Final Design has been completed. To advance construction activities critical to the construction schedule, the Civil B (DU5) design package was split into two packages identifying time sensitive utility work. The Project continues to work with RCC and City Agencies to resolve comments on the remaining DU5 Civil B - Street Restoration package. *Final submittal is expected in September*.

Construction Status

1st Street Cut & Cover Tunnel & U-Channel: Continued invert construction.

<u>Wye Structure</u>: Continued the installation of the exterior walls in the Cut & Cover Tunnel. Started invert in the U-Channel section.

<u>Little Tokyo/Arts District Station</u>: Continued the interior walls and mid-level deck at the lower ancillary. Continued the interior walls at the east station box track level area. The concrete placement of exterior walls at the lower ancillary and station box area is expected to be complete in *September*.

<u>Floating Slab Track</u>: Started the rebar fabrication for floating slab pre-cast segments. The floating slab pre-casting is expected to start in September.

<u>Historic Broadway Station</u>: In the station box area, *started the east track* level *invert* and the west concourse level *exterior walls*. In the entrance lower ancillary area, continued the rebar and concrete placement for the concourse level interior walls and columns.

<u>Crossover Cavern</u>: Continued the exterior wall rebar and concrete placement.

<u>Grand Av Arts/Bunker Hill Station</u>: In the west station box area, *completed* the concourse exterior walls. In the east station box area, *completed* the emergency exit stair #3 column and the concourse level interior walls. In the center station box area, continued lower ancillary level deck and *started the exterior walls*. In the entrance area, continued the *ancillary level* exterior walls.

<u>Flower Cut & Cover Tunnel</u>: *In* the north section (4th Street to 5th Street), continued *the installation of the exterior and interior walls. In the* south section (5th Street to 7th/Metro Center Station), completed the removal of the existing exterior wall at 7th/Metro Center interface. Continued the excavation and began concrete invert operations.

Cost and Schedule Summary

As of the reporting date, RCC is late in submitting the June 2019 Schedule Update.

RCC Schedule Metrics

	Original Contract Date/Duration	Time Extension (CD)	Current Contract Schedule	Forecast (Metro PMS)	Variance CD (Trending)
NTP	7/7/14				
Substantial Completion	10/22/20	527	04/01/22	03/24/22	8 days

Critical Path

On the Project Master Schedule, the primary critical path continues through the future Little Tokyo/Arts District Station concrete.

To maintain access between the lower ancillary and the track level station box, a section of the lower ancillary walls was *deferred*. The construction sequence was modified to construct the east exit/vent slab prior to completing the lower ancillary walls. After the east exit/vent slab is completed, the lower ancillary exterior walls can proceed followed by the west exit/vent slab.

After station concrete and backfill are completed, the critical path continues at the future Little Tokyo/Arts District Station through the removal of the temporary decking and pin pile removal at 1st/Alameda. Track provisioning will begin after the pin piles are removed and will be followed by the critical OCS and train control installations. After the majority of the systems installations are complete, systems integration will commence and continue through pre-revenue testing. A summary graphic of the critical path is found on Page 13.

Costs

Project costs continue to track within budget and projected contingency draw-downs. To date, the design and construction changes related to base scope represent approximately 5.5% of the contract value with an increase to 8% now anticipated. There is one notice of intent to claim by RCC. The notice relates to Historic Broadway Station SOE stability issues. Detailed cost and budget information is provided on Page 14.

Key Management Concerns

<u>Item 1</u>: Given the impact the Project will have on light rail operations through downtown Los Angeles and the region, the Rail Activation effort is exceedingly complex. Schedule and cost impacts are likely to surface.

Status/Action: Multiple cut-over, testing and rail activation meetings have been conducted with various Metro Departments. Through this process, all known work items have been identified and those requiring further investigation are being evaluated. Notwithstanding considerable progress, planning meetings continue, as the team plans the complex rail activation and certification process; coordination with all stakeholders in both planning and executing tasks continue. Start-up requirements are similarly being addressed between the Project and Operations' Liaison staff. Operator training will likely govern the pre-revenue operations period. Detailed monitoring of progress will continue.

<u>Item 2</u>: 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: The Project continues to actively engage stakeholders regarding construction impact mitigations. The Project continues to work closely with RCC to ensure stakeholder concerns are addressed and that MMRP requirements are fully complied with. Although decking is complete, and operations are largely now underground, construction impacts are still an issue requiring close coordination with impacted stakeholders during this long-term steady state construction. Early planning for the street restoration phase continues.

<u>Item 3</u>: Addressing City comments on final street restoration plans will result in additional design efforts and Project costs.

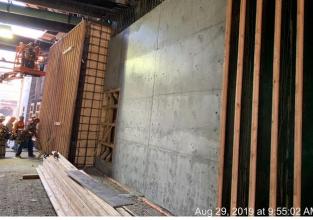
Status/Action: The Project is proceeding with addressing City comments in the final design. In finalizing the second Restoration AFC (DU5) submittal. Metro met with City officials and determined a path forward on critical comments. The second AFC submittal is expected to be submitted in *September* 2019.

<u>Item 4</u>: Design comments from the over-build developer at the Historic Broadway Station has led to design revisions with cost impacts.

Status/Action: Metro/RCC have collaborated closely with the developer to finalize design elements necessary to meet development objectives while working within available budget. Further constructability analysis is being performed as a basis for the parties' further negotiation and reconciling scope and budget.

Project Construction Photos

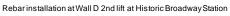




1st Street Cut/Cover Walls Pour Prep

1st/Alameda Wye Formwork/Rebar Installation







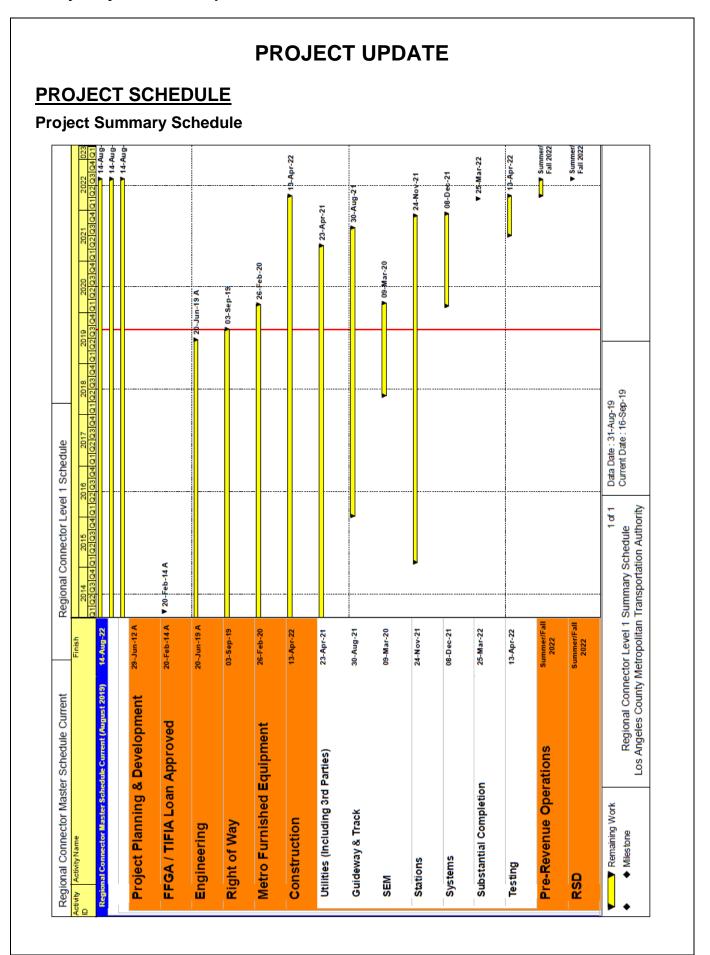
 $Rebar placement of Headwall in SEM\ Cavern$



Rebar installation at Ancillary Wall of Grand Av Arts/Bunker Hill Station



Preparations for concert pour at Invert 9 at Flower St Cut/Cover

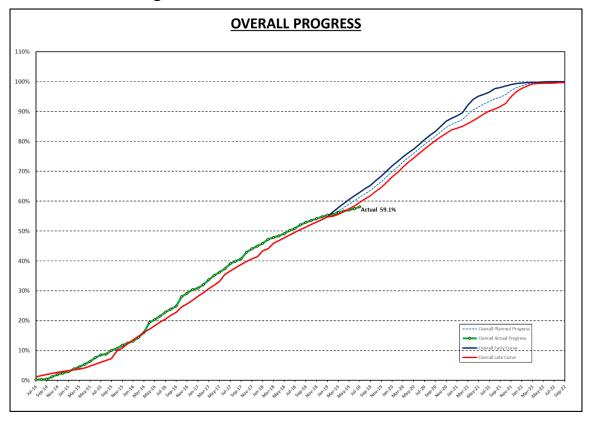


Progress Summary

	Status	Change from Last Month	Comment
Forecast Revenue Service	Summer/Fall 2022		
Proposed TIFIA Revenue Service	2/25/2023	None	
Proposed FFGA Revenue Service	2/25/2023	None	
Final Design Progress:			
Contract C0980	99.9%	0.0%	Remaining design is not impacting the critical path
Construction Contracts Progress:			
Contract C0981R & C0980	56.7%	1.0%	

Note: Construction Progress excludes General Requirements, Construction and Design Mobilization, Final Design and Provisional Sum costs (Schedule C). Progress values include executed modifications and change orders.

Planned vs. Actual Progress



	Milestone Date	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20
Complete 7th Street / Metro Center Wall Demolition	8/9/2019 A						
Complete West Concourse Level Deck at Historic Broadway	8/29/19 A	$\overline{\bigcirc}$					
Station Complete Ancillary Lower Level Exterior Walls at Little	09/16/19		\bigcirc				
Tokyo / Art District Station Complete Concourse Level Walls at Grand Ave / Bunker Hill Station	09/19/19						
Complete Wye Cut & Cover Tunnel Walls	09/30/19						
Complete West Ancillary Deck at Little Tokyo / Art District Station	10/14/19						
Complete SEM Exterior Walls Concrete	11/04/19						
Complete North Flower Cut & Cover Tunnel Walls	11/05/19						
Complete Lower Ancillary Level Walls at Grand Ave / Bunker Hill Station	11/25/19						
Complete 1st Street Tunnel Interior Wall	12/31/19						
Complete Ancillary Deck at Historic Broadway Station	01/02/20						
Complete Upper Ancillary Deck at Little Tokyo / Art District Station	01/08/20						
Other Agencies Contractors	(Federal Transit Design Consultant	Company C0980 D/B					
Other Agencies Contractors A" follow ing date is actual and completed	Transit						
	Transit Design Consultant						
	Transit Design Consultant						
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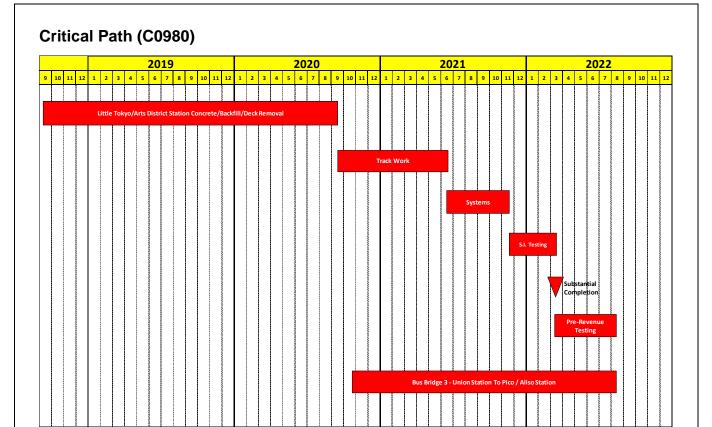
Major Equipment Delivery

Metro Supplied Equipment

Equipment	Initial	Scheduled	Scheduled
	Procurement	Delivery	Installation
LRT	(NTP)	Option 2	N/A
Vehicles	08/20/2012	02/26/2020	
Ticket Vending Machines	~ 01/30/2018	07/08/19 A (warehoused)	05/25/2021 ~08/26/2021

Design/Builder Equipment Delivery Requirements

Activity Name	Finish	Need Date
FAB/DELIV 144 FO CABLE	3-Dec-19	17-Aug-20
FAB/DELIV HIGH VOLTAGE DISCONNECT - 1ST & CENTRAL	1-May-19	5-Nov-19
FAB/DELIV 2ND/HOPE UNIT SUBSTATION AND TRANSFORMER	7-Jun-19	8-Nov-19
FAB/DELIV EMERGENCY VENTILLATION FANS - HOPE (4)	5-Sep-19	3-Jan-20
FAB/DELIV 2ND/HOPE TPSS	6-Sep-19	9-Mar-20
FAB/DELIV 2ND/BROADWAY UNIT SUBSTATION AND TRANSFORMER	12-Nov-19	9-Apr-20
FAB/DELIV EMERGENCY VENTILLATION FANS - BROADWAY (4)	16-Oct-19	1-Jul-20
FAB/DELIV 2ND/BROADWAY TPSS	6-Sep-19	29-Jul-20
FAB/DELIV CCTV CABLE	3-Dec-19	17-Aug-20
FAB/DELIV CCTV DEVICES	3-Dec-19	17-Aug-20
FAB/DELIV FIRE ALARM CABLE	3-Dec-19	17-Aug-20
FAB/DELIV FIRE ALARM DEVICES	3-Dec-19	17-Aug-20
FAB/DELIV GAS DETECTION CABLE	3-Dec-19	17-Aug-20
FAB/DELIV GAS DETECTION DEVICES	3-Dec-19	17-Aug-20
FAB/DELIV IDS CABLE	3-Dec-19	17-Aug-20
FAB/DELIV IDS DEVICES	3-Dec-19	17-Aug-20
FAB/DELIV RADIO CABLE	3-Dec-19	17-Aug-20
FAB/DELIV RADIO DEVICES	3-Dec-19	17-Aug-20
FAB/DELIV TELEPHONE CABLE	3-Dec-19	17-Aug-20
FAB/DELIV TELEPHONE DEVICES	3-Dec-19	17-Aug-20
FAB/DELIV EMERGENCY VENTILLATION FANS - CENTRAL (4)	16-Oct-19	22-Sep-20
FAB/DELIV TRAIN CONTROL EQUIPMENT	31-Jul-19	5-Nov-20
FAB/DELIVER PIPE STRUTS - 2ND/HOPE - REMAINING ANCILLARY	1-Aug-19	11-Nov-20
FAB/DELIVER WALES - 2ND/HOPE - REMAINING ANCILLARY	1-Aug-19	11-Nov-20
FAB/DELIVER SHORING BEAMS - 2ND/HOPE - REMAINING ANCILLARY	9-Aug-19	11-Nov-20
FAB/DELIV OCS POLES / EQUIPMENT	14-Feb-20	28-Jan-21
FAB/DELIV ELEVATORS - 1ST/CENTRAL	30-Dec-19	4-Mar-21
FAB/DELIV ESCALATORS - 2ND/BROADWAY	27-Jul-20	28-Mar-21
FAB/DELIV ESCALATORS - 2ND/HOPE	27-Jul-20	31-Mar-21
FAB/DELIV ATC FO CABLE	14-May-19	12-Apr-21
FAB/DELIV ELEVATORS - 2ND/BROADWAY	30-Dec-19	20-Apr-21
FAB/DELIV EDGE LIGHTING - CENTRAL STA	18-Oct-19	30-Apr-21
FAB/DELIV SPLICE ENCLOSURES & PATCH PANELS	3-Dec-19	4-Jun-21
FAB/DELIV SEISMIC DETECTION DEVICES	3-Dec-19	7-Jun-21
FAB/DELIV TPIS CABLE	3-Dec-19	10-Jun-21
FAB/DELIV GLAZING SPIDERS - ALL STATIONS	22-Aug-19	17-Jun-21
FAB/DELIV TPIS DEVICES	3-Dec-19	23-Jun-21
FAB/DELIV LIGHT FIXTURES - BROADWAY STA	22-Aug-19	25-Jun-21
FAB/DELIV LIGHT FIXTURES - CENTRAL STA	22-Aug-19	25-Jun-21
FAB/DELIV ELEVATORS - 2ND/HOPE	30-Dec-19	27-Jun-21
FAB/DELIV LIGHT FIXTURES - HOPE STA	22-Aug-19	2-Jul-21
FAB/DELIV COMMUNICATIONS UPS	3-Dec-19	21-Jul-21
FAB/DELIV FEMS CABINETS	3-Dec-19	22-Jul-21
FAB/DELIV RADIO TOWER & ANTENNAE	3-Dec-19	23-Jul-21
FAB/DELIV FEMS CABLE	3-Dec-19	28-Jul-21
FAB/DELIV EMERGENCY BOOSTER FANS (12)	8-Jun-20	22-Sep-21
FAB/DELIV EDGE LIGHTING - BROADWAY STA	18-Oct-19	27-Sep-21
FAB/DELIV EDGE LIGHTING - HOPE STA	18-Oct-19	15-Mar-22
FAB/DELIV ESCALATORS - 1ST/CENTRAL	27-Jul-20	3-Apr-22
FAB/DELIV SCADA RTU	3-Dec-19	11-Jul-22



This month, the critical path continues to run through the Little Tokyo/Arts District Station structure.

Upon the completion of the structure backfill and the temporary deck/pin pile removal at the east end of the station, track access will be turned over to allow the start of track material distribution and installation. After the track material necessary for the entire Flower Cut & Cover Tunnel Section has been *set-in-place*, track installation will commence; starting from 4th/Flower to the 1st Street Portal. Following the track installation, the critical OCR and train control systems installations will follow. After the critical systems work is complete, the systems integration testing will commence and reach Substantial Completion through successful completion of all tests. Upon Substantial Completion, Metro Operations will begin its own integrated testing, followed by operator training and Pre-Revenue Operations.

Bus Bridge 3 – Union Station to Pico/Aliso Station will start as late as possible to minimize the disruption to the existing Gold Line service. The Bus Bridge will begin with demolition of the existing Gold Line facilities and systems within the limits of the Regional Connector Project. During the Bus Bridge, the cut and cover guideway along Alameda together with the Fan Plant will be constructed. Track and systems will follow to integrated testing. The Bus Bridge will end when the Regional Connector Revenue Service starts.

PROJECT COST

Project Cost Analysis – 860228

REGIONAL CONNECTOR TRANSIT CORRIDOR PROJECT COST REPORT

DOLLARS IN THOUSANDS

SCC CODE			ORIGINAL BUDGET	CURREN	T BUDGET	СОММІТ	TMENTS	EXPEN	DITURES	CURRENT	FORECAST	BUDGET/ FORECAST VARIANCE
				PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	VARIANCE
10	GUIDEWAYS & TRACK ELEMENTS	280,622	204,691	0	249,281	118	251,201	2,075	180,564	-1,102	268,436	19,155
20	STATIONS, STOPS, TERMINALS, INTERMODAL	354,268	219,477	0	229,919	267	230,259	1,994	76,108	0	232,354	2,436
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	0	598,417	180	578,841	3,175	468,799	5,325	632,259	33,842
50	SYSTEMS	69,667	73,848	0	73,424	0	67,723	1,408	18,269	1,426	81,288	7,863
	CONSTRUCTION SUBTOTAL (10-50)	846,343	920,468	0	1,151,041	565	1,128,024	8,651	743,741	5,648	1,214,336	63,295
60	ROW, LAND, EXISTING IMPROVEMENTS	115,889	74,208	0	92,742	130	52,615	37	52,500	-73	59,115	-33,626
70	VEHICLES	16,275	16,275	0	16,275	0	16,275	183	6,678	0	16,275	0
80	PROFESSIONAL SERVICES	261,455	257,973	0	379,338	-525	321,161	1,173	292,559	952	393,691	14,354
	SUBTOTAL (10-80)	1,239,963	1,268,925	0	1,639,395	169	1,518,076	10,044	1,095,478	6,527	1,683,418	44,023
90	UNALLOCATED CONTINGENCY	135,399	126,892	0	89,946	0	0	0	0	-6,527	45,923	-44,023
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	169	1,518,076	10,044	1,095,478	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	0	18,988	0	20,425	0
	TOTAL PROJECTS 400228 & 460228 (EVN/PLAN'G)	0	24,200	0	26,500	0	26,500	0	25,063	0	26,500	0
	400228, 460228, 860228 TOTAL	1,402,932	1,427,132	0	1,770,142	169	1,544,576	10,044	1,120,541	0	1,770,142	0

NOTE: EXPENDITURES ARE CUMULATIVE THROUGH 08/31/2019. METRO AND TRIBUNE AGREED ON REIMBURSEMENT OF ~\$1.6 MILLION RELATED TO 2ND/BROADWAY OVERBUILD.

Original Budget:

The Original Budget of \$1.427 billion reflects the April 2014 Board approved LOP Budget, 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. These values remain current.

Commitments:

Commitments increased by \$0.17 million this month to \$1.54 billion which represents 87.26% of the Current Budget. The overall increase is related to several transactions including: executed modifications for RCC; and return of an unused work order funding from City of Los Angeles.

Expenditures:

Expenditures are cumulative through *August* 2019 and increased by \$10.04 million this month for costs associated with C0980 Design Build Contract, Engineering Management Support, Metro Project Administration, Construction Management Support Services, Third Party Master Cooperative Agreements with the City of LA, Community Relations, and Environmental Consultant Services. The \$1.12 billion in expenditures to date represent 63.3% of the Current Budget.

Current Forecast:

The total current forecast remains equal to the total current budget.

Project Cost Analysis – 861228

CONCURRENT NON-FFGA ACTIVITIES (861228)

PROJECT COST STATUS BY FTA SCC DOLLARS IN THOUSANDS

SCC Description		ORIGINAL BUDGET	CURRENT	BUDGET	СОММІТ	TMENTS	EXPEND	ITURES	CURRENT	FORECAST	BUDGET / FORECAST VARIANCE
			PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	VARIANCE
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	22,470	0	27,748	0
70	VEHICLES	0	0	0	0	0	0	0	0	0	0
80	PROFESSIONAL SERVICES	650	0	650	0	650	0	374	0	650	0
	SUBTOTAL (10-80)	38,878	0	38,878	0	38,878	0	22,844	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	0	22,844	0	39,991	0
	861228 TOTAL	39,991	0	39,991	0	38,878	0	22,844	0	39,991	0

NOTE: EXPENDITURES ARE CUMULATIVE THROUGH 08/31/2019.

Original Budget:

The Original Budget, Current Budget, and Current Forecast reflect the Board approved LOP Budget established April 24, 2014.

Current Budget:

There is no change this month.

Commitments:

Commitments reflect actions through August 2019.

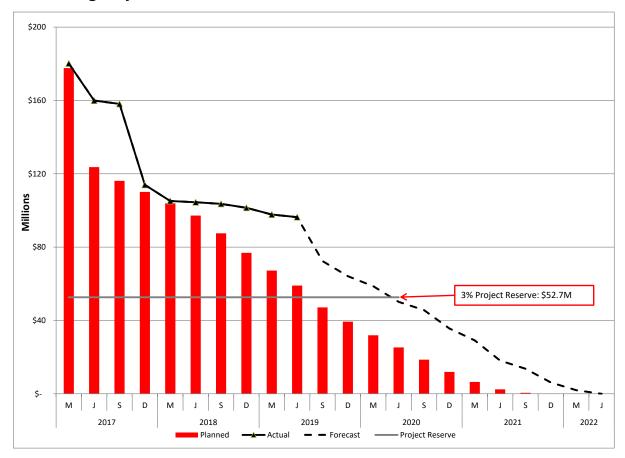
Expenditures:

Expenditures are cumulative through *August* 2019 and this month expenditures remain unchanged. The cumulative \$22.8 million in expenditures through *August* 2019 represent 57.1% of the Current Budget.

Current Forecast:

There was no change to the forecast for this month.

Cost Contingency Drawdown



Cost Contingency Drawdown Analysis

In January 2017, the Metro Board revised the LOP Budget to \$1.756 billion, which included increasing the unallocated contingency to \$89 million and allocated contingency to \$92.8 million. From that action, a revised drawdown plan for unallocated contingency, correlated to anticipate risk trends, was developed to monitor and measure drawdowns moving forward.

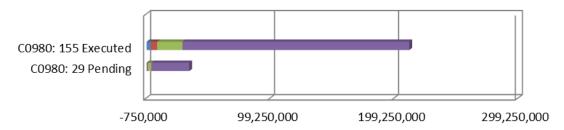
Highlighted in the drawdown is a 3% Project Reserve threshold measured against the LOP Budget. Metro's Board is to be notified when it becomes necessary to drawdown contingency below the threshold to cover Project costs.

In *August*, there was a drawdown of \$0.28 million from contingency. The remaining total project contingency (allocated and unallocated) stands at \$95.97 million.

PROJECT COST CONTINGENCY									
DOLLARS IN THOUSANDS	DOLLARS IN THOUSANDS								
	Original Contingency	LOP Contingency	Previous Period	Current Period	To-Date	Remaining Contingency (Forecast)			
Unallocated Contingency	124,919	89,946	(37,579)	(6,527)	(44,106)	45,840			
Allocated Contingency	86,345	92,809	(48,928)	6,249	(42,679)	50,129			
Total Contingency	211,263	182,754	(86,507)	(278)	(86,785)	95,969			

Summary of Contract Modifications

Contract Modifications (MODs) by Cost Level



	C		
	155 Executed	29 Pending	Total
■ Under \$100K	3,199,533	443,000	3,642,533
■ \$100K to \$250K	5,221,107	600,000	5,821,107
■ \$250K to \$1M	20,424,298	2,606,269	23,030,567
Over \$1M	183,109,237	30,743,878	213,853,115
Total Contract MODs	211,954,175	34,393,147	246,347,323
Contract Award Amount	927,226,995	927,226,995	
% of Contract MODs	22.9%	3.7%	

Note:

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

One hundred and fifty-five (155) changes with a total value of \$211.95 million have been executed since NTP of Contract C0980. An additional 29 changes, with a total estimated value of \$34.39 million, are pending.

DISADVANTAGED BUSINESS ENTERPRISE (DBE)

As of *July* 2019:

DBE Commitment – Design The percentage of funds apportioned to Design Contracts	22.63%
Current DBE Commitment Design Total DBE Committed Dollars divided by Total Contract Value for Design	\$14. <i>5</i> M (22.63%)
Current DBE Participation Total amount paid to date to DBEs divided by the amount paid to date to Prime	24.41%

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

DBE Commitment – Construction The percentage of funds apportioned to Construction Contracts	18%
Current DBE Commitment Construction Contract commitment divided by current contract value for Construction	\$ <i>194.9</i> M (18%)
Current DBE Participation Total amount paid to date to DBEs divided by the amount paid to date to Prime	13.20%

Ninety-four (94) Construction DBE sub-contractors have been identified to date.

PROJECT LABOR AGREEMENTS (PLA)

As of *July* 2019:

Targeted Worker Goal Construction work to be performed by residents from Economically Disadvantaged Area in the United States	40.00%
Targeted Worker Current Attainment	58.94%
Apprentice Worker Goal Construction work to be performed by Apprentices	20.00%
Apprentice Worker Current Attainment	17. <i>15</i> %
Disadvantaged Worker Goal Construction work to be performed by Disadvantaged Workers who are residents of the United States	10.00%
Disadvantaged Worker Current Attainment	9.80%

FINANCIAL/GRANT

Status of Funds by Source

August 2019

	(A)	(B)	(C)	(D)	(D/B)	(E)	(E/B)	(F) BILLED TO	(F/B)
SOURCE	ORIGINAL BUDGET	TOTAL FUNDS	TOTAL FUNDS	COMMITMENTS		EXPENDITURES		FUNDING SOURCE	
		ANTICIPATED	AVAILABLE	\$	%	\$	%	\$	%
FEDERAL - CMAQ	\$64.00	\$218.11	\$64.00	\$128.91	59%	\$49.87	23%	\$46.02	21%
FEDERAL - SECTION 5309 NEW STARTS	\$669.90	\$669.90	\$465.00	\$669.90	100%	\$403.15	60%	\$394.15	59%
FEDERAL - RIP	\$0.00	\$1.41	\$1.41	\$1.41	100%	\$1.41	100%	\$1.41	100%
MEASURE R - TIFIA LOAN	\$160.00	\$160.00	\$135.71	\$160.00	100%	\$135.71	85%	\$135.71	85%
STATE PROPOSITION 1A HSRB *	\$114.87	\$114.87	\$114.87	\$114.87	100%	\$114.87	100%	\$114.87	100%
STATE PROPOSITION 1B PTMISEA **	\$149.50	\$135.16	\$135.16	\$135.16	100%	\$135.16	100%	\$135.16	100%
STATE STIP RIP	\$2.59	\$17.00	\$2.59	\$15.58	92%	\$2.59	15%	\$2.59	15%
STATE CAPITAL PROJECT LOANS - OTHERS ***	\$132.47	\$274.83	\$274.83	\$274.83	100%	\$238.60	87%	\$224.14	82%
MEASURE R	\$27.57	\$0.00	\$0.00	\$0.00	0%	\$0.00	0%	\$0.00	0%
CITY OF LOS ANGELES	\$41.98	\$41.98	\$28.00	\$31.23	74%	\$28.00	67%	\$28.00	67%
LEASE REVENUE	\$64.25	\$79.07	\$0.00	\$0.00	0%	\$0.00	0%	\$0.00	0%
GENERAL FUND - METRO	\$0.00	\$43.50	\$43.50	\$12.68	29%	\$11.17	26%	\$11.17	26%
TOTAL	C4 407 10	₾4.755.0 4	₾4 005 00	P4 544 50	600/	©4.400.51	0.407	₾4 000 CC	200
TOTAL	\$1,427.13	\$1,755.84	\$1,265.08	\$1,544.58	88%	\$1,120.54	64%	\$1,093.22	62%

- NOTES:

 1. EXPENDITURES ARE CUMULATIVE THROUGH AUGUST 31, 2019

 2. METRO AND TRIBUNE AGREED ON REIMBURSEMENT OF \$1.6 MILLION RELATED TO 2ND/BOARDWAY OVERBUILD.

 3. ORIGINAL BUDGET BASED ON FUNDING PLAN INCLUDED IN THE APPROVED FULL FUNDING GRANT AGREEMENT

 4. LACMTA RESERVES THE ABILITY TO UPPOATE COSTS AND CHANGE FUND SOURCES AS REQUIRED.

 * STATE PROPOSITION 1A HIGH SPEED RAIL BONDS

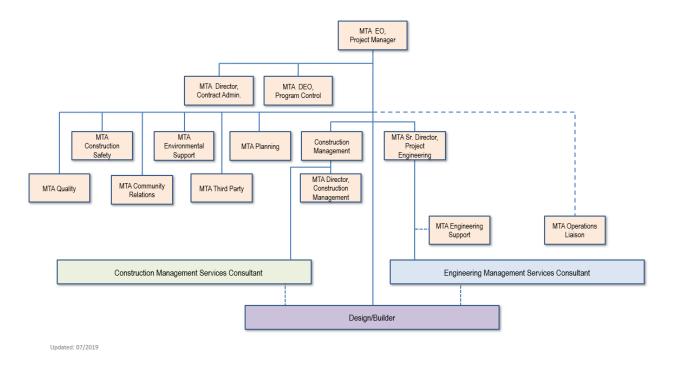
 ** STATE PROPOSITION 1B PUBLIC TRANSPORTATION MODERNIZATION, IMPROVEMENT AND SERVICE ENHANCEMENT ACCOUNT

 *** OTHERS INCLUDE TDA ADMINISTRATION, AND NB PROPOSITION A ADMINISTRATION (FOR A TOTAL OF \$.255M)

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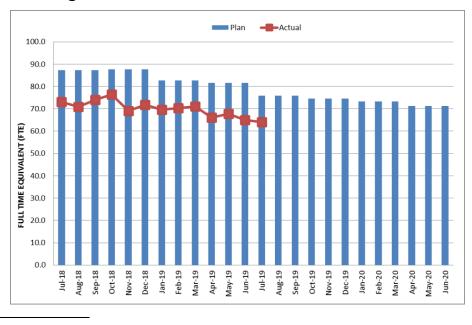
PROJECT ORGANIZATION AND STAFFING

The D/B contract is being managed by a joint team of Metro and consultant personnel jointly located at the Integrated Project Management Office (IPMO).



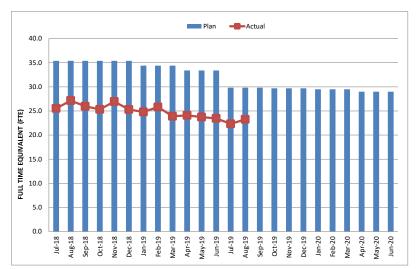
The overall *FY20* Total Project Staffing plan averages *73.7FTE's* per month. The total actual project staffing for *July* 2019 was *64.1;* 23.3 FTEs for Metro's Project Administration staff and *40.9* FTEs for consulting staff. Review of staffing plans is on-going to ensure staffing needs are appropriately managed.

Total Project Staffing - Metro and Consultants

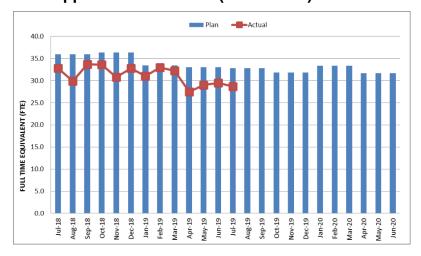


July actuals include 3.4 FTEs related to PMSS Services.

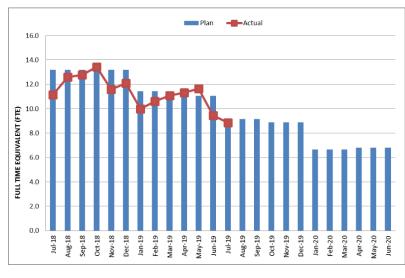
Metro Staff



CM Support Services Staff (Consultant)



Engineering Services Staff (Consultant)



Staffing by Group

The opposing graphs represent planned vs. actual staffing levels by group.

Metro staffing includes full-time staff located in the IPMO as well as part-time support located at Gateway Headquarters.

Staffing plans are developed for each fiscal year based on Project needs.

REAL ESTATE

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

Open Real Estate Matters

City of Los Angeles (Mangrove Parcels)

The City and MTA reached agreement on the value of the TCE extension and the
permanent easements required for the Fan Plant. Timely access to the Fan Plant
will be available for construction needs, and the yard TCE is extended into mid2022 pending City Council approval of the Mangrove agreement. FTA and the MTA
Board approval was obtained in July.

<u>Department of Water and Power 'Duco Yard' – DWP (RC-473)</u>

 LADWP and Metro staff have agreed to terms and conditions. The formal agreement requires approval by LADWP's Board and the City Council.

QUALITY ASSURANCE

Metro QA performed the following activities during the month of *August*:

- Reviewed and provided comments on RCC's quality-related submittals
- Performed oversight verification of RCC's design and construction activities
- Reviewed test results for Portland Cement Concrete, Soils Testing, Asphalt Testing and Non-Destructive Testing of Welding
- · Attended "Readiness Review" meetings with RCC
- Attended Bi-Weekly Quality Review Meetings with RCC Quality Management.
- Metro QA conducted a surveillance (C980-Surv-2019-016) for the infill of the walls at 7th/Metro Station. No anomalies were found during installation activities and the surveillance was closed.
- Metro QA conducted a surveillance (C980-Surv-2019-017) for the receipt of train control equipment at Mass Electric. No anomalies were found during installation activities and the surveillance was closed.
- Metro QA conducted a Quarterly Audit (C980-AUD-2019-002) of the RCC Quality Management System regarding Sub-contractors and As-Built Drawings. There was one (1) Finding, and one (1) Observation noted during the Audit. The Audit will remain open pending the resolution of the Finding.

RCC NCR 0044 was drafted for defective concrete being placed during the placement of the 2nd lift of Cross Passage #1. The disposition was approved by the Engineer of Record and Metro, repairs were executed satisfactory, and the NCR was closed.

RCC NCR 0056 was issued for a miss-located embedded item that was not identified prior the placement of concrete. *The NCR was approved by the Engineer of Record and Metro and closed.*

RCC NCR 0059 was issued due to cutting of permanent rebar. The NCR disposition was approved by the Engineer of Record and Metro and closed.

RCC NCR 0061 was issued due to a spall exceeding limits allowed by the repair procedure that was created by the installation of the Tunnel Liner during Tunneling Activities. *The NCR was closed.*

RCC issued NCR 0066 for concrete placement at Historic Broadway Station has been reworked. *Concrete Strength Tests were satisfactory, and the NCR was closed.*

RCC issued NCR 0070 for a re-strut being knocked out of place due to the waler that caused the damage documented in NCR 0069 at Grand Av Arts/Bunker Hill Station. *The condition was accepted by the Engineer of Record and the NCR was closed.*

RCC issued NCR 0071 for defective concrete that was discovered after formwork removal for placement of Wall #10 at the future Little Tokyo/Arts District Station. *The Engineer and Metro accepted the disposition, repairs were executed satisfactorily, and the NCR was closed.*

RCC issued NCR 0072 for damaged to two (2) utility casings caused during drilling of dowels for concreting operations. The disposition was accepted by the Engineer of Record and Metro, repairs were completed satisfactorily, and the NCR was closed.

RCC NCR 0074 was issued for a damaged threaded conduit at the Entrance and Elevated Slab at Historia Broadway Station. The disposition is with the Engineer of Record for approval.

RCC NCR 0075 was issued for galvanized dowels being cut flush with nut over face plate. This cause the dowels to not be usable for rocker plate installation. A disposition has not been developed by RCC Management for approval by the Engineer of Record.

RCC NCR 0076 was issued for damage to a sewer line installed at Grand Av Arts/Bunker Hill Station that occurred during the drilling of dowels for the platform walls at track level. A disposition is being developed by RCC Management for review by the Engineer of Record and Metro.

RCC NCRs 0038, 0041, 0047, 0052, 0053, 0054, 0057, 0058, 0064, and 0067 remain open with no change.

ENVIRONMENTAL

- Stormwater Pollution Prevention Plan (SWPPP) inspections of all Project areas are
 conducted weekly by RCC and Metro staff to observe site conditions and report on
 performance of stormwater protection per Best Management Practices. Throughout
 August, the weather was primarily warm and sunny with no recorded rain event.
 The sunny conditions increased the fugitive dust conditions and are logged daily by
 all construction areas. Daily street sweeping and increased water spraying of all
 sites continued for dust mitigation throughout the month.
- *Metro* submitted the 26th Quarterly Mitigation Monitoring and Reporting Plan covering May 2019 to July 2019 to the FTA on August 14, 2019. Metro will review the report with the PMOC next month.
- Noise and vibration spot checks continue to be conducted weekly at multiple sensitive locations, and at the location of new activities along the alignment. There have been inquiries from stakeholders adjacent to the future Grand Av Arts/Bunker Hill Station, Flower Cut and Cover, and Historical Broadway Station construction sites; however, Metro/RCC's Community Relations team have been responsive and continue to actively address community concerns.

CONSTRUCTION AND COMMUNITY RELATIONS

Construction Relations

- Responded and addressed Project related inquiries from the public received via the hotline, email and during office hours at the Little Tokyo Community Office. Concerns were addressed by RCC and Metro project staff.
- Performed public outreach and construction coordination to impacted area stakeholders regarding the following construction activities: concrete placement throughout the alignment, utility relocation and pile installation work on Alameda at Temple, planned street closures at 1st/Alameda for restoration, and geotechnical monitor maintenance
- Distributed *twelve* (12) construction notices to the public on the above activities through email and made it available on the Project website and social media outlets.
- Completed a total of eight (8) construction coordination activities with project adjacent property owners to perform maintenance on geo-tech equipment, Metro property and to improve drainage. Café Dulce, Music Center/REDCAT, Metropolitan News, Pegasus Apartments, Standard Hotel, California Club, 7th St/Metro Center Station and Nisei Week Foundation.
- Provided weekly construction updates and coordinated work activities with 26 stakeholders: The Westin-Bonaventure Hotel, 444 S Flower St, Central Library/Maguire Gardens, City National Plaza, The California Club, The Standard Hotel, Public School 213, Pegasus Apartments, Charles Dunn, Paragon Parking, Takami Sushi, The Roosevelt Lofts, 888 Figueroa, and 818 7th St, LTBA, LTCC, LTBID, LTSC, JACCC, JANM, MOCA at Geffen and Savoy Community Association.
- Presented to two (2) community organizations: Little Tokyo Business Association and Historical Cultural Neighborhood Council, on notable progress at the future Little Tokyo/Arts District Station, planned 1st/Alameda street restoration closures set for December 6, 2019 and provided an update on ongoing utility relocation and pile installation efforts on Alameda St.
- Conducted *nine* (9) briefings to local *stakeholders* on *planned construction* activities:
 - 1st/Alameda street closures and restoration: Savoy Community Association,
 Savoy Community Association Transportation Committee
 - Grand Av Arts/Bunker Hill Station pile installation and crane pad demolition: Bunker Hill Tower
 - Flower St concrete placement and excavation schedule: Charles Dunn, Westin Bonaventure Hotel
- Continued standing meetings with: LA City Council District 14, the Mayor's Office

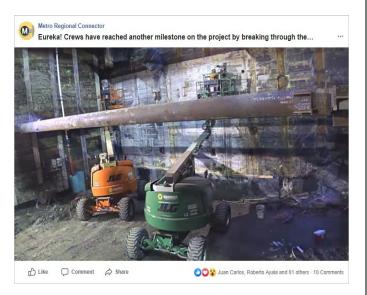
Eat, Shop, Play - Construction Impact Business Mitigation Program Highlights

- Participated in Little Tokyo's Tanabata Festival with an information table to promote Little Tokyo businesses by distributing approximately 75 Delicious Little Tokyo Food Guides and encouraged public transit by issuing promotional TAP cards.
- Continued the distribution of Delicious Little Tokyo Food Guide, a collaboration with Little Tokyo Community Council's Go Little Tokyo and Metro's Eat, Shop, Play program, by making 600 copies available at over 10 locations project wide, including: Ava, Wakaba, Little Tokyo Library, LAPD Headquarters, LA Law Library, Kawada Hotel, Music Center, REDCAT, Pegasus Apartments, Standard Hotel, and Roosevelt Lofts.



Social Media Outreach

- Published twelve (12) newsletters including seventeen (17) construction updates, totaling 25.2k mailings.
- Trending stories on social media included time-lapse footage of the breakthrough at 7th St/Metro Center Station where Regional Connector will connect to the Metro Blue and Expo lines, promotion of Nisei Week festival, and Eat, Shop, Play spotlights of Little Tokyo businesses.



Community Relations

- Continued standing meeting with Little Tokyo's Marketing & Business Task Force to identify special events for promotion. Reviewed lessons learned and successes from July's Delicious Little Tokyo event.
- Continue standing coordination meetings with Little Tokyo Community Council, Little Tokyo Service Center and additional community partners to develop comprehensive marketing opportunities for Little Tokyo businesses in advance of upcoming street closures through Metro's Eat, Shop, Play program and available community resources.

 Assisted with marketing and advertisement of two long running cultural events in Little Tokyo: Tanabata Festival and Nisei Week. In addition, Metro operated the Little Tokyo circulated on Nisei Week's Grand Parade and transported over 120 visitors closer to the festivities.

CREATIVE SERVICES

Art Program

- Finalized contracts with glass mosaic artwork fabricator
- Held kick-off meeting with one of two porcelain enamel steel artwork fabricators and artists
- Held meeting with community stakeholders to review developed design for the Atomic Café Interpretive Graphic Display
- Coordinated with RCC on art glass fabricator procurement
- Continued assessment of Project operating impacts to signage systemwide



Artist and PES fabricator kick off meeting

Community stakeholders reviewing photos for the Atomic Cafe Interpretive Graphic Display 2

SAFETY & SECURITY

C0980 Regional Connector

- Monitored RCC's pre-employment drug/alcohol testing and new employee safety orientation to ensure 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 ensure compliance with contract specifications. Participated with RCC staff in field safety inspection walks of multiple project worksites, laydown areas, and storage yards.
- Monitored Third Party contractor's work activities to ensure safety compliance.
- Made recommendations to utility crews regarding contract activities and improving overall traffic control and pedestrian safety.

Project Safety Record

- RCC reported one Recordable Injury during the month of August 2019.
- RCC reported 58,552 work hours for July 2019. RCC's total Contract to Date work hours through July 2019 are 3,157,283 with a total of 15 Recordable Injuries and no Lost Workday (Days Away) case injuries. The C0980 Contract Recordable Injury Rate is 0.95. The Bureau of Labor Statistics reports that the National Average Recordable Injury Rate is 2.8 for heavy civil construction projects.
- Total Contractors' Project to Date Work Hours, including both the C0980 and the completed C0981 AUR contract, through *July* 2019 is 3,268,342 hours with 16 recordable injuries. The Total Project Contractor Recordable Injury Rate is 0.98.
- Total Aggregate Project work hours for Contractors, Metro, and Support Services Consultants, through *July* 2019 is 3,991,085 with 17 Recordable Injuries and no Lost Workday (Days Away) injury cases. The Total Project Aggregate Safety Rate is 0.85.*

^{*}Using RIR method of calculating.

APPENDIX 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
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
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)
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	RCC completed mining and broke through at Grand Av Arts/Bunker Hill Station
June 2017	Five-month full closure of 6th Street approved by LADOT, Caltrans and LADWP
July 2017	RCC completed TBM mining of the first tunnel
August 2017	RCC extracted TBM shields from the Retrieval Shaft
September 2017	RCC began TBM mining of the second tunnel (right)
October 2017	RCC completed TBM mining under JVP (first 500 ft.)
October 2017	RCC completed temporary decking on Flower St. (between 5th and 6th, deck beam 16 to deck beam 58)
November 2017	Completed five-month full closure of 6th Street

November 2017	Initiated underpinning related to the Historic Broadway Station
December 2017	RCC completed mining and broke through at Grand Av Arts/Bunker Hill Station (Right Tunnel)
January 2018	RCC completed TBM mining of the second tunnel (right)
February 2018	RCC began excavation of cross passages
February 2018	RCC began SEM canopy pipe installation
March 2018	RCC began tunnel invert concrete
March 2018	RCC completed infrastructure for power relocation work at 6th/Flower
April 2018	RCC completed entrance structure excavation of Historic Broadway Station
May 2018	RCC began SEM excavation
June 2018	LADWP Power completed cable pulling at 6 th /Flower
June 2018	Completed underpinning related to the Historic Broadway Station
July 2018	RCC completed station box excavation of Historic Broadway Station
August 2018	Completed entrance structure invert of Historic Broadway Station
September 2018	Completed temporary decking of Flower Street
October 2018	RCC started the CN 106.2 Final Design of the Revise Cable Transmission System for the Gold Line
October 2018	Metro completed approval of floating slab test results
October 2018	RCC completed SEM left drift excavation
October 2018	RCC completed Trainway Feeder duct bank at Flower St & 7th St
November 2018	RCC completed Little Tokyo / Arts District Station Box Excavation
November 2018	RCC completed Grand Av Arts/Bunker Hill Station East Platform Level Exterior Walls
December 2018	RCC completed SEM right drift excavation

December 2018	RCC completed the Historic Broadway Station west invert
December 2018	RCC started tunnel walkways between the future Little Tokyo/Arts District Station to Historic Broadway Station
December 2018	RCC started the future Little Tokyo/Arts District Station east invert
December 2018	RCC completed Grand Av Arts/Bunker Hill Station mezzanine concrete
January 2019	RCC completed Grand Av Arts/Bunker Hill Station invert concrete
January 2019	RCC completed SEM center top drift excavation.
January 2019	RCC started Little Tokyo/Arts District Station west cable pit and sump pit
February 2019	RCC completed SEM excavation
February 2019	RCC completed platform level exterior walls at Grand Av Arts/Bunker Hill Station
February 2019	RCC started fire protection in tunnels
March 2019	RCC completed Little Tokyo/Arts District Station invert concrete
March 2019	RCC completed Bored Tunnels walkway concrete
April 2019	RCC completed Grand Av Arts/Bunker Hill Station east concourse deck concrete
April 2019	RCC completed 1 st Street Cut & Cover / U-Channel Level 1 excavation
May 2019	RCC completed North Flower Cut & Cover tunnel invert concrete
May 2019	RCC completed Wye Cut & Cover tunnel invert concrete
June 2019	RCC completed Right Tunnel floating slab curb
July 2019	RCC completed Left Tunnel floating slab curb
July 2019	RCC completed SEM Cavern concrete invert
August 2019	RCC completed 7th Street / Metro Center Wall Demolition
August 2019	RCC completed the Historic Broadway Station West Concourse Deck