

# Metro Division 13 Quarterly Project Status Report



# **METRO DIVISION 13 PROJECT**

## **QUARTERLY PROJECT STATUS REPORT**

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

**DECEMBER 2014**

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**PROJECT SUMMARY**

**METRO DIVISION 13**

**Bus Maintenance and CNG Fueling Facility**

**As of December 2014**

<b>LOCATION:</b> Los Angeles		<b>CONSTRUCTION MANAGEMENT CONSULTANT:</b> MARRS	
<b>DESIGN CONSULTANT:</b> MDG		<b>CONTRACTOR:</b> McCarthy	
<b>PROJECT PHOTO</b> Structural Steel Erection over Ramps		<b>WORK COMPLETED PAST MONTH</b>	
		<ul style="list-style-type: none"> <li>• Continue structural steel erection on south side of building</li> <li>• Continued work in weld shop area in Building 1</li> <li>• Demo abandoned overhead utilities in Building 1</li> <li>• Continue interior build out of dry wall, sprinklers and MEP</li> <li>• Continue sack and patch of concrete at upper levels</li> <li>• Continue masonry walls level 2</li> <li>• Continue installation of roofing systems</li> <li>• Continue installation of lift equipment</li> <li>• Continued work on retaining wall and tanks along side Cesar Ave</li> <li>• Installed light pole foundations along Vignes Street</li> <li>• Performed load test on deck</li> </ul>	
<b>EXPENDITURE STATUS (\$ In Millions)</b>			
<b>SCHEDULE ASSESSMENT</b>			
<b>ACTIVITIES</b>	<b>CURRENT BUDGET</b>	<b>EXPENDED AMOUNT</b>	<b>PERCENT EXPENDED</b>
<b>DESIGN</b>	6.593	6.592	100.0%
<b>RIGHT-OF-WAY</b>	0	0	n/a
<b>CONSTRUCTION</b>	88.8	68.71	77.4%
<b>OTHER</b>	24.95	18.38	73.7%
<b>TOTAL</b>	120.34	93.68	77.8%
Budget as of 11/30/2014		Notice to Proceed	
Expenses as of 11/30/2014		Construction Complete	
<b>AREAS OF CONCERN</b>			
<b>CRITICAL ACTIVITIES / 3 MONTH LOOK AHEAD</b>			
<ul style="list-style-type: none"> <li>• Improvements and widening of Cesar Chavez Ave</li> <li>• Permanent power CNG yard &amp; equipment</li> <li>• Low voltage, ITS, communication, etc. installation by Metro</li> <li>• Art Work Lantern Prototype structural steel fabrication/delivery</li> <li>• LADWP permanent power to electrical switch yard</li> </ul>		<ul style="list-style-type: none"> <li>• Complete DWP onsite service yard work for electrical switchgear</li> <li>• Finalize the artwork lantern structural frame and lighting</li> <li>• Complete installation of CNG MSA and meter assembly</li> <li>• Install the balance of structural steel for building</li> <li>• Complete PCC paving between Metro Bids 1 &amp; 2 to open area</li> <li>• Complete the installation of roof systems on all buildings</li> <li>• Pave all hard surface areas and roads before rainy season starts</li> <li>• Continue installation of mechanical, electrical and plumbing</li> <li>• Install frames, doors, hardware and window glazing</li> </ul>	
<b>ROW ACQUISITION</b>	<b>PLAN</b>	<b>ACQUIRED</b>	<b>REMAINING</b>
PERMANENT PARCELS	0	n/a	0
TEMPORARY PARCELS	0	n/a	0
<b>TOTAL PARCELS</b>	0	n/a	0

## PROJECT OVERVIEW & STATUS

The Division 13 Bus Maintenance and Operations facility is a bus maintenance, operations, and service facility located in downtown Los Angeles, California. The project is to be constructed on existing LACMTA properties located at the northeast corner of East Cesar Chavez Avenue and Vignes Street. The project delivery method is Design/Bid/Build. The facility is designed to accommodate a fleet of CNG buses and consists of a multi-level structured parking garage, a maintenance building, bus fueling, bus washing, chassis wash and non-revenue vehicle washing, non-revenue vehicle fueling, and maintenance and transportation offices and support areas.

Division 13 strives to set an example of sustainable design (LEED Gold goal) and the responsible use of natural resources. Many of the materials specified in the construction of this project are regionally sourced and/or have a high recycled content. Attention has been paid to the use of potable water with an exemplary system of storm water reclamation and reuse for bus operations and washing, and low maintenance native vegetation. Storm water run-off and the urban heat island effect are also addressed by a demonstration green roof on the Transportation Building.

Service and vehicle equipment include two and three-post in-ground lifts with modern, computer controlled automated adjustment, a bus wash system utilizing reclaimed storm water, non-revenue vehicle wash systems utilizing 100% recycled water, three-axis lift systems for accessing roof mounted equipment on buses, mobile work platforms at lower level work areas, high-density palletized stacking systems, carousel and vertical retrieval modules for parts.

*In October 2014, LADWP completed the installation of the new 10" fire water service and pulling underground wires/cables to Division 13 utility yard. The contractor completed all deck and roof deck pours and completed structural steel erection at Chassis Wash. Preparation activities started for the Deck #2 load test. The CNG contractor installed their large compressors.*

*In November 2014, the contractor completed concrete placement of curb, gutters and retaining wall at Vignes and Metro Driveway, installation of overhead light fixtures, electrical conduits, fire sprinklers and demolished abandoned overhead utilities in Building 1. Performed load test on deck #2 on Level 1.*

*In December 2014, LADWP completed onsite service to Division 13. The contractor installed traffic lights at Division 13 driveway. The project team finalized the public art component's structural steel framing. The contractor started installation of Metro Drive PCC Pavement, installation of the Storm Water Recovery System along north side of Cesar Chavez Ave, continued with MEP installations throughout site and with building roof installations. Project is approximately 90% complete.*

## MANAGEMENT ISSUES

### **Concern No. 1: Relocation of Existing Fiber Optic and Copper Cables**

**Status/Action** Metro installed temporary Microwave IT/Communication Systems between the Metro Gateway Building and the Central Maintenance Facilities Buildings. The existing fiber optic and copper duct bank interfered with demolition and construction. To improve the speed of the system temporary fiber optic cables were installed. Metro coordinated with AT&T and Time-Warner cable to relocate permanent fiber optic and copper cables on Lyon Street, Vignes Street, Cesar Chavez Avenue and the new Metro Drive, work is completed.

### **Concern No. 2: Project Schedule Re-assessment**

**Status/Action** The August 2013 Schedule update had 75 working days of negative float. The Contractor has provided written Time Impact Analysis (TIAs) illustrating the impact of the delays on the Critical Path utilizing the current CPM Schedule and a separate fragnets showing Contractor's plan to mitigate various issues. Metro issued modifications to extend the contract completion date.

### **Concern No. 3: Project Cost Re-assessment**

**Status/Action** Professional Services costs are being reassessed, especially those related to design cost.

### **Concern No. 4: Undergrounding of Utilities on Cesar Chavez Avenue**

**Status/Action** AT&T pothole along Cesar Chavez Avenue prior to starting the installation of underground DWP duct banks and precast concrete vaults. During the potholing large voids were found under the street surface. Voids were back filled with concrete slurry. The sewer connection issues at the intersection of Vignes Street and Cesar Chavez Avenue was resolved. Work continued with unforeseen conditions such as unknown utilities, voids and flowing sand that impact the production rate. All U/G conduits are installed and LADWP has installed electrical cables. Demo of existing above ground electrical cables and wood poles was completed.

### **Concern No. 5: Soil Export and Import Issues**

**Status/Action** Over excavation and poor soils as directed by Project Geotechnical Engineer resulted in a significant and unanticipated export of Southern California Gas contaminated soil. Project has to import additional soils to be used as structural backfill throughout the site.

## MANAGEMENT ISSUES (Continued)

### **Concern No. 6: CNG Contractor Coordination**

**Status/Action** With Metro Board approval, Metro recently awarded Division 13 CNG Facility's design and construction to Clean Energy. Metro continues to coordinate CNG layout and construction with the Division 13 Contractor (McCarthy).

### **Concern No. 7: Central Maintenance Facility Coordination**

**Status/Action** Metro continues to coordinate work within the existing CMF Building 1, including new equipment warranties for the Radiator and Welding Shops.

### **Concern No. 8: Time Impact Analysis**

**Status/Action** The contractor has submitted various TIAs in order to determine the total time impacts incurred to the Contract Milestone as a result of Concerns 2 and 5 related to unforeseen sewer obstructions at the intersections of Vignes Street and Cesar Chavez Avenue as well as time impacts due to importing of clean soil for backfill. Metro has issued modifications extending the completion date.

### **Concern No. 9: Direct Cost Impacts**

**Status/Action** McCarthy has submitted Metro reviewed and both parties settled the Direct Cost Impacts related to McCarthy's concrete operations due to installation and schedule impacts from the sewer manholes on Vignes Street.

### **Concern No. 10: Contractual Issues**

**Status/Action** Metro has issued directives and unilateral change orders to the contractor and in return the contractor has issued notices of intent to claim as well as claims on design and construction related issues. In addition, design errors and omissions are above the typical industry standard.

### **Concern No. 11: Traffic Signal Coordination**

**Status/Action** As part of the City's approval for the Division 13 ingress/egress traffic signal, Metro is required to fulfill a condition obtaining the concurrence from the affected businesses along Vignes Street. This issue was resolved in August 2014 and revised drawings were issued to contractor.

## MANAGEMENT ISSUES (Continued)

### **Concern No. 12: Partial Shoring Failure During Elevated Roof Deck #14 Concrete Pour**

**Status/Action** Contractor submitted investigation, demolition and remediation plans as well as safety and quality control protocol to restart all elevated concrete deck pours. Contractor provided a report that evaluated damage to permanent structure. Metro accepted their remedial plans and allowed contractor to re-start roof deck concrete pours. Contractor re-sequenced the work. The shoring failure caused a project delay completion from December 2014 to May 2015. Metro will have contractor perform a load test on Deck Pour #2 that concrete and shoring collapsed onto.

### **Concern No. 13: Permanent Electrical Power**

**Status/Action** Metro continues to work with Department of Water and Power for new permanent electrical power service and not impact the project schedule.

### **Concern No. 14: Compressed Natural Gas (CNG)**

**Status/Action** Metro continues to work with Southern California Gas Company (SCG) for CNG point of connection and new meter set assembly (MSA) to not impact the project schedule. SCG plans to install part of the connection on Vignes Street and some valves on Metro Drive. SCG is scheduled to install MSA the first week of December 2014.

### **Concern No. 15: Furniture, Fixtures and Equipment**

**Status/Action** Metro will procure and install furniture for all new administrative offices and areas in the Division 13 Transportation and Maintenance Buildings and will be using an existing General Services contract to obtain the FFE. A new solicitation is not required. Metro is preparing the purchase order to order the FFE identified in the contract specification. Installation of the furniture is scheduled to start in March 2015 and complete in early May 2015.

### **Concern No. 16: ITS Infrastructure**

**Status/Action** Numerous Project Bulletins were issued for completing the ITS Infrastructure, including: a close circuit television (CCTV) system, security access control system, Local Area Network, M3 kiosks, desktop computer, copiers, printers, smart-boards and the installation of these items in order to enable the individuals working in Division 13 to communicate across the Agency on the enterprise network. Staff will be requesting quotes from vendors for the Procurement and awarding a purchase order.

## MANAGEMENT ISSUES (Continued)

**Concern No. 17: Public Art Component**

**Status/Action** Metro continues to work with the contractor and its subcontractors on the lighting design and engineering for the Division 13 Lantern, in order to not impact the fabrication, delivery and erection of the artwork's structural steel.

**Concern No. 18: Installation of Garage Equipment**

**Status/Action** Metro is coordinating with the Division 13 and Metro's Revenue Department's contractors for a complete and operational garage equipment system, including wireless access points, vaults, probes, bins, garage computer with appropriate software and security cameras.

## PROJECT SCOPE

### PROJECT SIZE:

#### Site Area:

8.25 Acres (Division 13 only) / 10.58 Acres (including the entire site area)

#### Garage and Bus Fueling/Washing:

442,655 sf (~145,000 sf on each of 3 floors; lower level: employee & visitor parking; main level: bus parking, fuel & wash facilities; upper level: bus parking)

#### Maintenance:

71,000 sf (~7,800 sf – lower level; ~54,000 sf – main level; ~9,200 sf mezzanine level)

#### Operations/Transportation Building:

21,000 sf (~5,500 sf – lower level; ~9,000 sf – main level; ~6,500 sf – level two)

#### Bus Parking:

200 equivalent bus parking spaces

#### Employee Parking:

397 Spaces

### FEDERAL GRANTS AWARDED TO PROJECT:

\$47,750,000 State of Good Repair Grant

\$5,500,000 Clean Fuels Grant

### PROJECT BACKGROUND:

Public and infrastructure projects represent a commitment by government to the people they represent. The LA Metro Division 13 project is an example of this commitment. Its high-quality design will convey an element of respect to both the citizens that engage public transportation during their daily routine, and to those the agency employs to operate within the facility. As an efficient and highly functional facility, Division 13 is designed to realize operational savings while being a responsible, sustainable and aesthetically pleasing addition to the community.

- First new maintenance and operation facility to be commissioned by Metro in over 27 years with the goal of providing better service for LA residents
- Designed to optimize Metro's bus transit service throughout Central Los Angeles and the surrounding area
- Division 13's prominent siting will alter the urban landscape by replacing an inefficient surface parking lot with a landmark architectural icon for the LA community

## PROJECT SCOPE (Continued)

- The LA Metro Division 13 project:
  - Includes a maintenance facility with 19 service bays for the operation and maintenance of Metro's fleet
  - Can accommodate up to 200 CNG standard sized buses
  - Is designed to handle 60' long articulated buses
  - Provides a two story bus parking garage with fuel and wash facilities that can park and service 200 standard sized CNG buses daily and a Fleet Operations and Transportation Building for 329 employees
  - Will also accommodate 41 non-revenue vehicles and employee parking for 397
  
- Sustainable design features:
  - Site and building shade structures
  - Natural ventilation
  - Glare and heat gain reduction glazing
  - Daylighting to all major work areas
  - 275,000 gallon underground storm water retention tank
  - Green Roof garden, accessible to Metro employees
  - Cool Roof to reduce Heat Island Effect
  - Water efficient landscaping
  - Registered with the USGBC as Pursuing LEED-NC Gold

Division 13's primary architectural concept addresses the two major street facades of the facility with one palette of materials reflecting two separate conditions of movement. The Cesar Chavez elevation uses architectural panels to screen bus parking and circulation ramps, reflecting the high speed automobile activity that defines western American cities. At night the façade's focus shifts to highlight the functional movement of buses. The Vignes St. elevation addresses a slower, pedestrian scale appropriate to its urban setting and will encourage the public to utilize the urban plaza adjacent to the intersection of the two streets. The transportation building resides in front of the two story garage and is placed adjacent to the street to accommodate a need to screen operational functions while promoting a walkable, urban environment.

### PARKING STRUCTURE

The parking structure will be in 3 levels as explained below.

- The Ground Level Parking will accommodate fare retrieval, bus fueling, and wash activities with enough storage area to accommodate 52 standard buses. The ground floor of the parking structure will be dedicated to bus maintenance activities including tire and repair bays, a brake shop and a materials handling area. An entry lobby, providing elevator and stairway access to each floor of the proposed parking structure, will be located at the northeast and northwest portion of the parking structure.

## PROJECT SCOPE (Continued)

- The 2<sup>nd</sup> level Parking will provide parking for approximately 108 buses and 40 layover spaces. This level will also provide office spaces, break rooms, training room, rest rooms and conference room for Metro Staff.
- The 3<sup>rd</sup> level Parking will include 397 employee and visitor parking spaces.

### BUS MAINTENANCE FACILITY

The proposed parking structure will be flanked by two administrative uses, on the west end immediately north of the Vignes Street/Cesar E. Chavez Avenue intersection, by the two-story administration/office building, while the maintenance building will be located on the east end of the parking structure. The ground floor of the operations building will include dispatch offices, a kitchen and employee lounges, while the second floor will be comprised primarily of office uses. The ground floor of the maintenance building will include general maintenance uses such as tire bays and repair shops as well as a welding and materials handling area. The second floor will include maintenance and transportation offices, a training room and other office-related uses.

### BAUCHET PARKING STRUCTURE

A three-story parking structure has been constructed at the northern portion of the project site. This structure contains 427 parking spaces. The structure will provide approximately 50 employee parking spaces for the Bauchet Street Storage and Facilities' Maintenance Structure and replace the Central Maintenance Facility (CMF) Lot A surface parking lot that has been removed as part of the project. Access to this structure is provided via an entrance located on Macy Street, east of Bauchet Street. Additional egress only will be provided via an egress road located on CMF property that will exit on Cesar Chavez Avenue or Keller Street.

## PROJECT SCOPE (Continued)

### PROJECT LOCATION

The project site is situated in the industrial area northeast of Downtown Los Angeles.

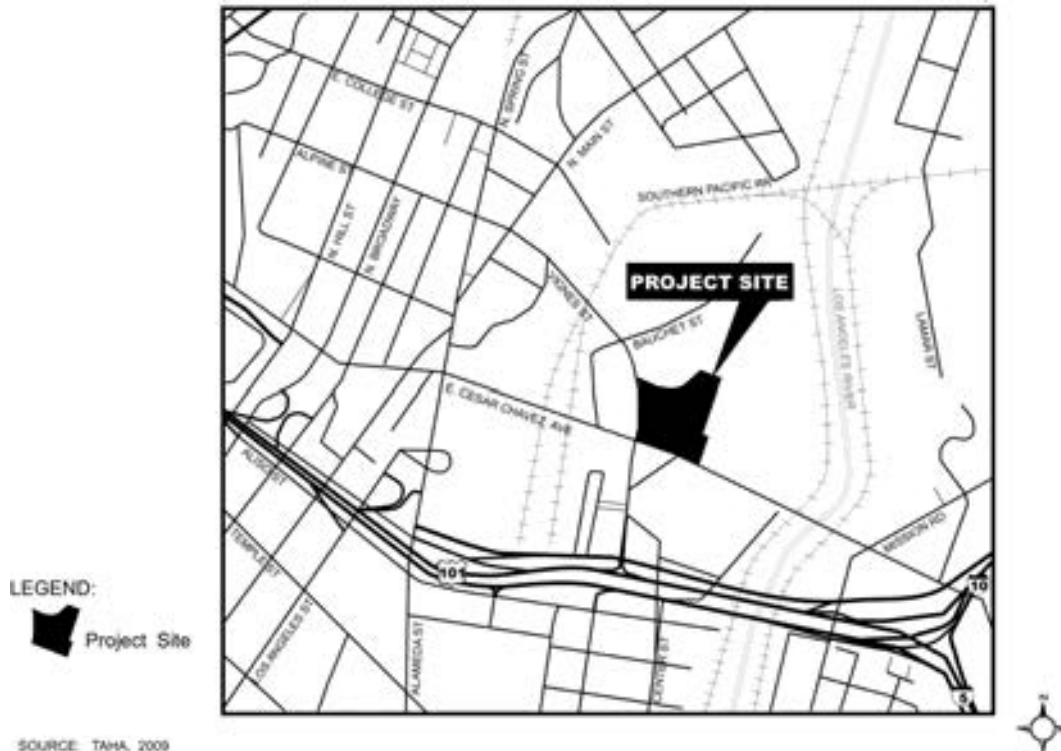


Figure 1 – Location Map

Regional access to the project site is provided by U.S. Highway 101/Interstate 5 (Hollywood Freeway/Santa Ana Freeway), which is less than 0.5 miles south of the project site, and Interstate 10 (San Bernardino Freeway), which is approximately 0.5 miles southeast of the project site.

The project site is located on the northeast corner at the intersection of Vignes St. and Cesar E. Chavez Ave. It is bound by the Twin Towers Correctional Facility and Bauchet Street to the north; Vignes St. to the west; the Metro Support Services Center (MSSC), the Burlington Northern Santa Fe Railroad (BNSF) intermodal yard, and the Los Angeles River to the east and the C. Erwin Piper Technical Center and Cesar E. Chavez Ave. to the south (Figure 1).

## KEY MILESTONE SCHEDULE SIX-MONTH LOOKAHEAD

	Milestone Date	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15
Complete Building No. 1	1/20/2015*	○					
Complete DWP	1/27/2015*	○					
Complete Interior Rough-Ins and Finishes at Building B, Level 1	1/28/2015*	○					
Complete Stair No. 12 at Building C	1/14//2015	○					
Complete Roofing at Building C	1/8/2015*	○					
Complete Elevator No. 1 at Building A	1/20/2015*	○					
Mechanical Start Up at Building A	1/23/2015*	○					
Complete Exterior Skin at Building A	1/28/2015*	○					
PCC Pavement at North Area	1/23/2015*	○					
Complete Landscaping Areas at North Area	2/16/2015*		○				
Complete Street work at West Area	2/26/2015*		○				
Complete PCC pavement at East Area	2/24/2015		○				
Complete Landscaping Area at North/West	2/4/2015*		○				
Electrical Start Up at Building A	2/18/2015*		○				
Start Testing and Quality Control	2/15/2015*		○				
Equipment Start Up at Building B & C	2/26/2015*		○				
Electrical Start Up at Building B & C	2/26/2015		○				



Metro Milestone



Contractor



Third Parties Approval

\* New Date

**Note: Milestone dates will be impacted due to Roof Deck Pour #14 Shoring Partial Collapse on March 28, 2014**

## KEY MILESTONE SCHEDULE SIX-MONTH LOOKAHEAD

	Milestone Date	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15
Mechanical Start Up at Building B & C	2/27/2015		○				
Start Testing and Quality Control at Building B & C	2/15/2015		○				
Complete Structural Steel Ribbon	3/9/2015*			○			
Complete Elevator No. 2 & 3 at Building C	3/16/2015*			○			
Complete Final Inspection at Building B & C	3/16/2015			○			
Start Final Inspection of Facilities	3/16/2015			○			
Complete PCC pavement at South Area	3/17/2015*.			○			
Complete Interior Build Out at Building A	3/19/2015*			○			
Complete Interior Build Out at Building C	3/19/2015*			○			
Complete Building F	3/23/2015*			○			
Complete Initial Punchlist	3/30/2015*			○			
Complete Landscaping Areas at West Area	3/30/2015*			○			
Complete Building A	3/30/2015*			○			
Complete Building B	4/1/2015*				○		
Complete Building C	4/1/2015*				○		
Submit Close out Documents and Punch List Corrections for Building A	4/3/2015				○		
Submit Close out Documents and Punch List Corrections for Building B & C	4/31/2015				○		
Complete Systems Commissioning	5/7/2015*					○	



Metro Milestone



Contractor



Third Parties Approval

\* New Date

**Note: Milestone dates will be impacted due to Roof Deck Pour #14 Shoring Partial Collapse on March 28, 2014**

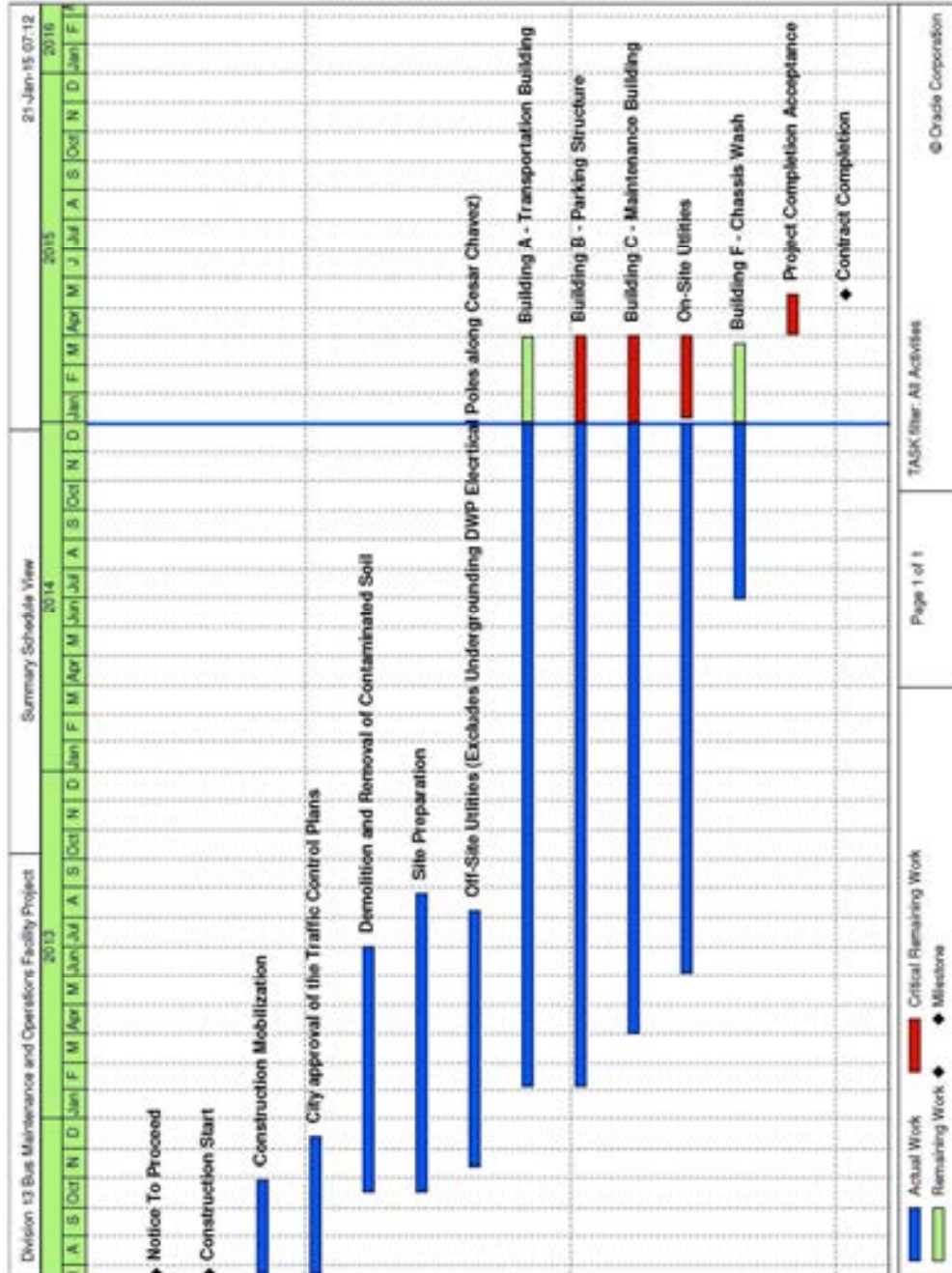
### KEY MILESTONE SCHEDULE SIX-MONTH LOOKAHEAD

	Milestone Date	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15
Complete Final Punch List Corrections	5/11/2015					○	
Contractor's Final Completion Date	5/11/2015					○	

 Metro Milestone    
  Contractor    
  Third Parties Approval    
 \* New Date

**Note: Milestone dates will be impacted due to Roof Deck Pour #14 Shoring Partial Collapse on March 28, 2014**

## PROJECT SUMMARY SCHEDULE



## **CRITICAL PATH NARRATIVE**

Based on the current summary schedule, the primary critical path runs through On-Site Utilities, Building B – Parking Structure, Building C – Maintenance Building and Project Completion and Acceptance.

## PROJECT COST STATUS

DIVISION 13  
 FEDERAL PROJECT # CA-04-0190-00, PROJECT 202001  
 ENGINEERING CAPITAL IMPROVEMENT PROJECTS DIVISION  
 METRO TRANSIT PROJECT DELIVERY DEPARTMENT  
 COMBINED COST REPORT BY ELEMENT  
 PERIOD ENDING: December 2014

DOLLARS

ELEMENT CODE	ELEMENT DESCRIPTION	ORIGINAL BUDGET	CURRENT BUDGET		COMMITMENTS		EXPENDITURES		CURRENT FORECAST		BUDGET / FORECAST VARIANCE
			PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	
C	CONSTRUCTION - Division 13 Facility	70,947,000	10,612,000	82,412,000	3,713,000	75,921,000	8,922,000	66,686,000	(154,000)	80,451,000	(1,961,000)
C	CONSTRUCTION - CNG Facility	5,500,000	920,000	6,420,000	-	5,961,000	1,595,000	5,606,000	-	6,420,000	-
S	SPECIAL CONDITIONS	-	2,433,000	7,888,000	219,000	7,024,000	326,000	6,636,000	(135,000)	7,419,000	(469,000)
R	RIGHT-OF-WAY	-	-	-	-	-	-	-	-	-	-
P	PROFESSIONAL SERVICES	13,425,000	3,081,000	22,706,000	809,000	19,678,000	946,000	18,837,000	24,000	23,128,000	422,000
PC	PROJECT CONTINGENCY	5,128,000	904,000	916,000	-	-	-	-	2,924,000	2,924,000	2,008,000
<b>TOTAL PROJECT</b>		<b>95,000,000</b>	<b>17,950,000</b>	<b>120,342,000</b>	<b>4,741,000</b>	<b>108,584,000</b>	<b>11,789,000</b>	<b>97,765,000</b>	<b>2,659,000</b>	<b>120,342,000</b>	<b>-</b>

NOTE: EXPENDITURES ARE CUMULATIVE THROUGH December 31, 2014

## PROJECT COST ANALYSIS

### Original and Current Budget

The original Life of Project (LOP) budget of \$95,000,000 was established in September 2008 when the project was in preliminary design. In April 2013, the Metro Board increased the Project 202001 LOP by \$9,200,000 from \$95,000,000 to \$104,200,000 and the Current Budget was revised. In October 2014, the Metro Board increased the LOP budget from \$104,200,000 to \$120,342,000, and the project budget was reallocated to match the forecasts for construction, professional services special conditions and to replenish contingency as indicated on Attachment C of the Board Report.

### Current Forecast

Overall, the forecast trended lower this quarter. The Construction forecast is down \$0.154 million due to change notices previously identified as potential claims that were negotiated for less than the contractor's initial request. Special conditions also trended down by \$0.135 million because the last of the charges for contaminated soils were paid using a separate project Metro sets up for environmental concerns. The forecast for Professional Services increased by \$24.0 thousand this quarter. Shuttle services to ferry handicapped employees from the Central Maintenance Facility to Metro Headquarters and a Task Orders for support of the CNG Fueling Contract offset a lower forecast for document control services for the remainder of the project. Given the higher construction budget established in the October 2014 Board Report and that the current construction forecast is running under it has resulted in a replenished contingency about \$2M above the 916K identified in the Board Report.

## PROJECT COST ANALYSIS (Continued)

### **Commitments**

*Commitments at the end of December were \$108.6 million. Commitments increased by \$4.7 million this quarter, most of it (\$3.7M) due to modifications to the construction contract that were executed after the LOP budget increase in October. An additional \$0.219 million was encumbered for third-party agreements with the City of Los Angeles for Fiscal Year 2015. The remaining \$ 809,000 of commitments for Professional Services were for agency costs and task orders issued for construction management activities in support of Division 13, primarily document control for the project and design support for the CNG fueling facility.*

### **Expenditures**

*Expenditures are cumulative through December 31, 2014. Expenditures increased \$11.8 million this reporting period. Most of the expenditures, \$10.5M, were payments for the construction contracts. An additional \$0.326 million was spent this period on Special Conditions for the work AT&T performed in support of undergrounding utilities, and for expenses related to the Master Cooperative Agreements with the City of Los Angeles. The \$0.946 million spent this period on professional services was for costs associated with in-house project administration, the construction management consultants, and construction support by the design consultants.*

## FINANCIAL/GRANT STATUS

DECEMBER 2014

STATUS OF FUNDS BY SOURCE

\$ in millions

SOURCE	(A)	(B)	(C)	(D)		(E)		(F)	
	ORIGINAL BUDGET	TOTAL FUNDS ANTICIPATED	TOTAL FUNDS AVAILABLE	COMMITMENTS \$	(D/B) %	EXPENDITURES \$	(E/B) %	BILLED to \$	(F/B) FUNDING SOURCE %
STATE PROP 1B - PTMISEA*	85.0	52.8	52.8	41.0	78%	45.6	86%	37.8	72%
TDA ARTICLE 4	10.0	14.3	14.3	14.3	100%	0.0	0%	0.0	0%
FEDERAL - 5309	0.0	47.8	47.8	47.8	100%	47.8	100%	47.8	100%
FEDERAL - 5308	0.0	5.5	5.5	5.5	100%	4.4	80%	4.4	80%
PROP C 40% RAIL CAPITAL	0.0	0.0	0.0	0.0	100%	0.0	100%	0.0	100%
<b>TOTAL</b>	<b>95.0</b>	<b>120.3</b>	<b>120.3</b>	<b>108.6</b>	<b>90.2%</b>	<b>97.8</b>	<b>81.2%</b>	<b>90.0</b>	<b>74.8%</b>

\* PTMISEA: Public Transportation Modernization and Improvement Surface Enhancement Account

NOTE: Expenditures are cumulative through December 2014.

## STATUS OF FUNDS ANTICIPATED

**STATE PROP 1B PTMISEA:** State Proposition 1B Bond sales provided \$31M to the project and the funds are available for drawdown. A grant allocation to Caltrans for the remaining \$5.6M was requested in March 2013. Allocation request was approved in January 2014. Funds are available for drawdown. *In November 2014, \$16.1 was transferred from the bus procurement project to the Division 13 Project. Funds are available for drawdown.*

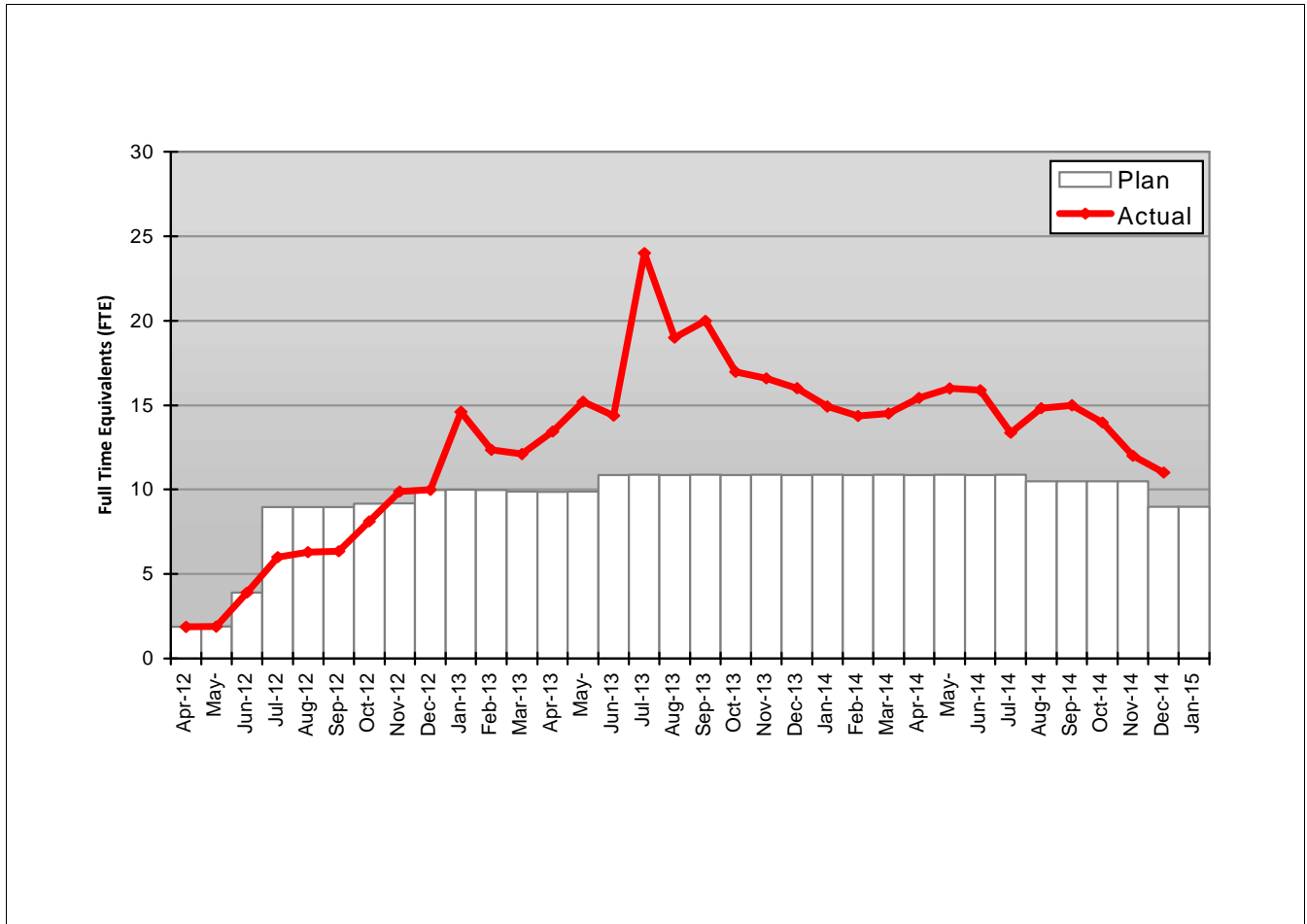
**TDA ARTICLE 4:** In April 2013, the Metro Board approved an increase of \$9.2M for a revised funding of \$14.3M. *The FY15 funding plan includes \$14.3M of TDA Article 4.*

**FEDERAL 5309:** \$47.8M under FTA grant CA-04-0190 is available for drawdown for the construction of Division 13 Bus Operations and Maintenance Facility.

**FEDERAL 5308:** \$5.5M under FTA grant CA-58-0006 is available for drawdown for the construction of Division 13 CNG Fueling Facility.

## STAFFING STATUS

### Total Project Staffing – FTEs



### Total Project Staffing

The changes to the staffing status are due to unanticipated number of Request-For-Information (RFIs), unanticipated number of Change Notices, changes to design, additional design need and construction delays. The indicated unanticipated work and delays increased the need for additional staffing to support the construction management.

## ENVIRONMENTAL STATUS

### Environmental Status since issuance of the FTA NEPA Categorical Exclusion:

- A NEPA CE was granted by the FTA on December 18, 2009.
- Lyon Street was vacated on November 18, 2009.
- A street tree removal permit was granted from the City of LA on May 19, 2011.
- All encountered contaminated wastes have been properly characterized and disposed of at permitted facilities.
- Metro Environmental Contractor removed existing clarifier on south side of existing Building 3 (Dec 2012).

**The following IS/MND mitigation measures have been addressed and included in the Specification and/or Design drawings:** AE 1, AE 2 (LEED requirements), AE3, CR4, N4, GS 1. The Aesthetics mitigation measures have been addressed as part of the LEED design process.

**The following construction mitigation measures are being implemented as required: They are continually renewed and adjusted per changing site conditions:** AQ1, AQ 2, AQ3, AQ4, AQ5, AQ6, AQ7, CR1, CR2, CR3, CR4, CR5, CR6, G52, HM1, HM2, HM3, N3.

- Regarding mitigation measures CR1 – CR6, Archaeological and Paleontology monitoring have been occurring since project excavation began. To date, 17 features have been uncovered and will be evaluated against Section 106 requirements. One feature, a human bone was discovered and the LA County Coroner was notified. Consultation then ensued between the Native American Most Likely Descendent (MLD), Federal Transit Administration, State Historic Preservation Officer and Metro. Consultation and the resulting process are documented in a letter to SHPO dated May 20, 2013. Native American monitoring will continue through the remainder of the excavation per agreement with the MLD. Carbon dating of the human remains is completed and will be documented in the final Section 106 report. Main excavation is completed and only a small amount of follow up work remains. *Work is expected to be complete in February 2015.* As agreed, archaeological and Native American monitoring will continue during ground disturbance that has the potential to encounter intact cultural or paleontological materials. Presently, we are also researching, curating artifacts and working on a draft final report. Regarding the noise mitigation measure (N1-N4), no noise complaints have been received to date. Continue with MLD monitoring throughout the remainder of project as necessary.

## QUALITY ASSURANCE STATUS

### **C0974 Division 13 Maintenance & Operations Facility**

- *Attended meetings with Structural design and Analysis to address planning for Load Testing of the partial collapse.*
- *Witnessed the actual Load Test. Test results will be contained in a WDP Report (Austin, Texas) in January 2015.*
- *Reviewed draft of the WJE Partial Collapse Analysis Report (Pasadena, CA). Final report is scheduled to be issued in January 2015.*
- *Arranged oversight soil testing and welding/material testing on the facility.*
- *Participated in weekly Job Walks, Project Readiness Review Meetings and Project Status Meetings.*

## SAFETY AND SECURITY STATUS

- *There were no recordable injuries on the Project during the quarter from October to December 2014.*
- Safety Staff participated in pre-activity (readiness review) meetings to ensure compliance with approved Work Plans and contract specifications.
- Monitoring construction activities during day shifts to ensure contractor compliance with contract specifications.
- Safety staff attended weekly Progress Meetings, Foreman's Weekly Safety Meetings and other project meetings to evaluate Contractors Safety Program compliance with contract requirements.
- *Performed project wide safety walks with the Contractor and assisted with any safety concerns and corrective actions.*
- *McCarthy conducted a new hire orientation to cover jobsite safety rules and Metro compliance regulations. The project had an increase in work force to 107 craft workers.*
- *October – December: McCarthy Work Hours: 71,420 (Design and Construction): 3,480*
- *Contractor – Project to Date Work Hours: 359,755 (Design & Construction)*
- *Total Project to Date Work Hours (Contractor & Metro Staff): 407,755*
- *Project to Date Recordable Injury Rate: 0.49 (each rate is per 200,000 work hours)*
- *Project to Date Total Time Away Injury Rate: 0.0 (Zero Time Away From Work Injuries)*
- *Project to Date Total Days Away Rate: 0.0 (Zero Days Away From Work)*

**THIRD PARTY AGREEMENT STATUS**

<b>Third Party</b>	<b>Type of Agreement</b>	<b>Forecast Execution Date</b>	<b>Required Need Date</b>	<b>Status/ Comments</b>
City of Los Angeles	Master Cooperative Agreement	Completed	N/A	Executed
LADWP Power	Utility Cooperative Agreement	Completed	N/A	Executed
LADWP Water	Utility Cooperative Agreement	Completed	N/A	Executed
Verizon	Utility Cooperative Agreement	Completed	N/A	Executed
AT&T	Utility Cooperative Agreement	Completed	N/A	Executed
Southern California Gas Company	Utility Cooperative Agreement	Completed	N/A	Executed

## CONTRACT STATUS

<p><b>Metro Division 13 Bus Maintenance and Operations Facility Project</b>  <b>Contractor: McCarthy</b></p> <p><b>Major work started/completed this period:</b></p> <ul style="list-style-type: none"> <li>• Completed installation of overhead light fixtures, electrical wiring pulling, HVAC exhaust ducts and fans and louvers at Lower Level.</li> <li>• Completed concrete placement at Levels 2 and 3 for stairs #1 and #2.</li> <li>• Completed iape drywall, installation of stair #18 at guard rails, hollow metal door frames, mezzanine rail and gates, concrete placement and prep and painting at stairs 18 and 19.</li> <li>• Completed installation of overhead electrical conduits, overhead fire sprinkler mains and branches at Lower Level.</li> <li>• LADWP completed installation of 10-in fire water service at Lyon St. and Cesar Chavez.</li> <li>• Completed Installation of structural decks.</li> <li>• Completed foundation, steel rebar and concrete placement of retaining wall along Metro Driveway.</li> <li>• Completed concrete placement at curbs abd gutters at Vignes St. and Metro Driveway.</li> <li>• Started installation and welding of structural steel for Roof Ribbon Systems.</li> <li>• Reinforced and poured sidewalks and slab at Chassis Wash Area.</li> <li>• Started elevator #1 car build out.</li> <li>• Started installation of coiling doors and windows.</li> <li>• Started installation of exhaust air grilles at Lower Level 1.</li> <li>• Started grading and soils compaction.</li> <li>• Started pulling feeder wire and termination to all switchgears.</li> </ul> <p><b>Areas of Concern:</b></p> <ul style="list-style-type: none"> <li>• Import of soil due to contaminated soil exceeding quantity.</li> <li>• Bulletin No. 38r2 Communications Scope of Work, submittal review, WAP, cameras and furniture location.</li> <li>• Export of SCG contaminated soils throughout the project site exceeding the bid quantities.</li> <li>• Fabrication, delivery and erection of artwork structural steel.</li> <li>• Final lighting configuration/design for artwork lantern cube.</li> <li>• Parking control changes and reduction to SOW.</li> <li>• Installation of fare garage equipment and vaulting equipment.</li> <li>• Paving of all hardscape areas.</li> <li>• Permanent power to CNG fueling facility.</li> <li>• Installation of MSA for natural gas from street feed.</li> </ul>	<p><b>Contract No.: C0974</b></p> <p><b>Status as of: January 2, 2015</b></p> <p><b>Major Activities (In Progress):</b></p> <ul style="list-style-type: none"> <li>• Pulling wire from electrical service yard to main electrical rooms.</li> <li>• Interior build out, MEP installation at Building 1.</li> <li>• Installation of overhead electrical conduits and 3200 AMP bus duct.</li> <li>• Installation of door frames, interior drywall and insulation at Level 1.</li> <li>• Pulling wire from electrical service yard to main electrical rooms.</li> <li>• Gas line installation and pressure testing.</li> <li>• Installation of overhead waste coolant, chassis grease and low pressure fluid piping lines.</li> <li>• Welding and installation of overhead piping and tubing.</li> <li>• Excavation and installation of underground piping for fuel system.</li> <li>• Installation of light poles foundation.</li> </ul> <p><b>Major Activities Next Period:</b></p> <ul style="list-style-type: none"> <li>• Continue installation of overhead MEP at Parking Garage, Building A and Maintenance Building C.</li> <li>• Complete 3200 AMP bus duct DWP service yrd to CNG compound.</li> <li>• Installation of vegetated roof at Building A.</li> <li>• PCC pavement at Metro Driveway.</li> <li>• Underground gas and water piping at East Area.</li> <li>• Completion of steel roof ribbon system and roof metal deck.</li> <li>• Exterior skin at Transportation Building.</li> <li>• Transportation Building room finishes.</li> <li>• Installation of racking system and mounted crane at Bldg No. 1.</li> <li>• Installation of street lighting and signals at Cesar Chavez Avenue.</li> <li>• Installation of sidewalk, curbs and gutters along Cesar Chavez Ave.</li> <li>• Final connections of storm water lines at South west pumps.</li> <li>• Installation of MSA at main gas line service by SCG.</li> <li>• Terminate electrical connections to equipment at Building No. 1.</li> </ul> <table border="1" style="width: 100%; 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\* Calendar Days

## CONTRACT STATUS

<p><b>Metro Division 13 Bus Maintenance and Operations CNG Facility Project</b>  <b>Contractor: Clean Energy</b></p> <p><b>Major work started/completed this period:</b></p> <ul style="list-style-type: none"> <li>• Completed installation of the methane detection system (sensors, panels, horns and light trees).</li> <li>• Completed installation of exterior and interior pipe racks.</li> <li>• Contractor started pulling electrical wire to the various CNG equipment.</li> <li>• Continued welding of steel piping and nstallation of overhead piping to service equipment and steel tubing.</li> </ul> <p><b>Areas of Concern:</b></p> <ul style="list-style-type: none"> <li>• CNG point of connection (POC) for MSA and new meters on Metro Drive with Southern California Gas (SCG). SCG plans to install POC and MSA in February 2015.</li> <li>• General contractor connection of permanent power from utility switchgear yard to CNG yard.</li> </ul>	<p><b>Contract No.: C0974</b></p> <p><b>Status as of: January 2, 2015</b></p> <p><b>Major Activities (In Progress):</b></p> <ul style="list-style-type: none"> <li>• Continued with overhead piping installaton.</li> <li>• Continued with electrical conduits installation and mechanical piping.</li> <li>• Welding of service piping.</li> </ul> <p><b>Major Activities Next Period:</b></p> <ul style="list-style-type: none"> <li>• Pressure testing storage to discharge.</li> <li>• Pull wire and termination at CNG equipment.</li> <li>• SCG install MSA and meter.</li> <li>• Test the CNG equipment by fueling of Metro buses.</li> </ul>																																				
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## CONSTRUCTION PHOTOGRAPHS

### FLY OVER JOBSITE PHOTOGRAPH (10-28-14)



Transportation Building, Parking Garage and Maintenance Building in construction; at the bottom side Cesar Chavez Avenue and at the left side Vignes Street.

### FLY OVER JOBSITE PHOTOGRAPHS (11-28-2014)



Transportation Building, Parking Garage and Maintenance Building in construction; at the bottom side Cesar Chavez Avenue and at the left side Vignes Street.

## CONSTRUCTION PHOTOGRAPHS (Continued)

### FLY OVER JOBSITE PHOTOGRAPHS (12-28-2014)



Transportation Building, Parking Garage and Maintenance Building in construction; at the bottom side Cesar Chavez Avenue and at the left side Vignes Street.

## CONSTRUCTION PHOTOGRAPHS (Continued)



O/H electrical conduits installation Maintenance Building.



Installation of metal framing at roof level decks Areas 8, 9 & 10.



Form and rebar reinforcement of the retaining wall Metro Dr.



O/H elect. conduit installation at Transportation Building.

## CONSTRUCTION PHOTOGRAPHS (Continued)



Exterior sheathing board installation at Clerestory at roof deck.



Installation of U/G gas pipe at east side of Maintenance Bldg.



Installation of south elevation ribbon roof structural steel.



Erection of vertical trusses for the roof at Parking Garage.

## CONSTRUCTION PHOTOGRAPHS (Continued)



Installation of O/H HVAC exhaust duct at Maintenance Bldg.



In progress O/H piping installation at Level 1 Parking Garage.



In progress electrical conduit installation Transp. Building.



Erection of horizontal roof trusses at Parking Garage south.

### CONSTRUCTION PHOTOGRAPHS (Continued)



Installation of oil interceptors at east side of Maintenance Bldg.



Retaining wall forms and rebar at Metro Driveway.



Overhead piping for new dispensers at CNG Yard.



Installation of electrical conduit for light poles at Vignes St.

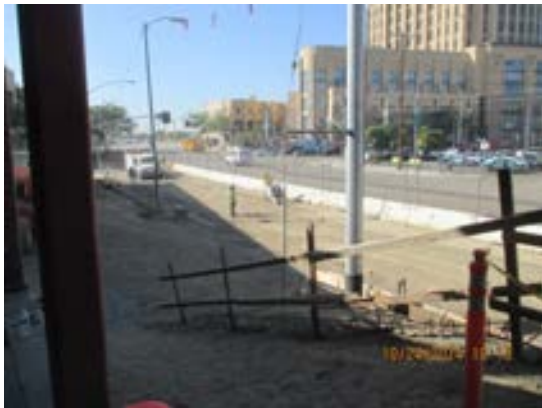
## CONSTRUCTION PHOTOGRAPHS (Continued)



Erection of main roof members at the Maintenance Bldg.



Installation of forms for street curbs and gutters at Vignes St.



Saw cutting & demo existing AC pavement at Vignes St.



Installation of elec. conduits at Transportation Building.

## CONSTRUCTION PHOTOGRAPHS (Continued)



Water proofing along Metro Driveway retaining wall.



Applied liquid waterproofing at Clerestory at Building C.



Placement of aggregate base at Vignes St.



Prep work for the approach to the ramp at Vignes St.

## CONSTRUCTION PHOTOGRAPHS (Continued)



Applied prime and first coat paint at Maintenance Building.



Installation of elec. conduits at Level1 Transportation Bldg.



Form and rebar reinforcement of gutter and curbs at Vignes St.



O/H Bus Duct installation at Maintenance Building.

## CONSTRUCTION PHOTOGRAPHS (Continued)



Concrete placement at bus pad on Vignes St.



Installation of Roof Ribbon Systems at Maintenance Building.



Installation of window metal framing at Transportation Bldg.



Erection trusses for the roof ribbon at Parking Garage.

## CONSTRUCTION PHOTOGRAPHS (Continued)



Interior view at Maintenance Building Level 1.



Side view of roof ribbon installation at the Parking Garage.



In progress installation of window framing at Trans. Building.



Concrete curb installed along Vignes St.

## CONSTRUCTION PHOTOGRAPHS (Continued)



Installation of curtain wall at Transp. Building Level 1.



Erection of trusses for the roof ribbon at Parking Garage.



Installation of roof membrane at the Clerestory at roof level.



Installation of raised flooring panels at Level 1 Transp. Bldg.

### CONSTRUCTION PHOTOGRAPHS (Continued)



Placement of UG Genset fuel gas line at the Chassis Wash.



Exterior metal framing installation in progress at Transp. Bldg.



Installation of overhead MEP at Maintenance Bldg. Area 8.



UG water storm line and manholes along Cesar Chavez St.

## CONSTRUCTION PHOTOGRAPHS (Continued)



Installation of sump for the Genset fuel line to Chassis Wash.



Installation of exterior metal framing at North side Building A.



Placement of raised flooring panels at Transp. Bldg. Level 1.



Overhead Elec. Conduits at Level 1 of Parking Garage.

## CONSTRUCTION PHOTOGRAPHS (Continued)



Excavation for storm water lines to the Water Tank #1.



Erection of steel roof Ribbon Assembly System.



Placement of Genset fuel lines to the Chassis Wash Area.



Pressure actuator valves for incoming gas line to CNG Yard.

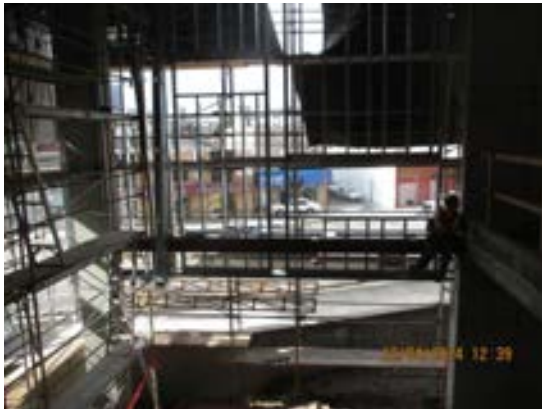
## CONSTRUCTION PHOTOGRAPHS (Continued)



Finish compaction at Metro Driveway.



Electrical conduits and water lines under the raised flooring.



Installation of exterior metal framing in progress at Bldg. A.



Installation of interior metal framing at Bldg. A Level 2.

## CONSTRUCTION PHOTOGRAPHS (Continued)



West view of steel roof ribbon system installation in progress.



Installation of glazing at Clerestory at roof deck Bldg. B.



Installation of raised flooring in progress at Bldg. A Level 2.



Overhead gas piping and compressors at the CNG Yard.

## CONSTRUCTION PHOTOGRAPHS (Continued)



Installation of overhead light fixtures at Level1 Bldg. B.



Light poles at the roof deck of Parking Garage.



Installation of steel Roof Ribbon System in progress.



Installation of corrugated steel roof deck at Maint. Bldg.

## CONSTRUCTION PHOTOGRAPHS (Continued)



Overhead MEP installation in progress of Area 8.



Installation of UG storm water lines at the Water Tank No. 1.



Overhead 18-in storm water pipe at Lower Level Bldg. B.



Installation of exterior sheathing at Transportation Building.

## CONSTRUCTION PHOTOGRAPHS (Continued)



Installation of corrugated steel roof deck in progress.



Installation of steel roof ribbon system in progress at Bldg. B.



Installation of steel rebar basket in progress at Metro Drive.



Installation of catwalk system at the roof deck in progress.

## CHRONOLOGY OF EVENTS – BUS MAINTENANCE FACILITY

December 2, 2011	Project put on hold by Metro Management.
April 3, 2012	Project hold released by Metro Management.
May 15, 2012	Award Notice issued to successful bidder.
May 24, 2012	Contract awarded to McCarthy Building Companies.
May 24, 2012	Limited Notice to Proceed issued to contractor for non-construction, non-craft labor work.
July 23, 2012	Notice to Proceed issued to Contractor.
December 3, 2012	The City of Los Angeles (Department of Transportation) approved temporary Traffic Control Plans.
December 18, 2012	Start of hazardous soil removal.
December 18, 2012	Start City utilities at Vignes Street.
January 8, 2013	Mass grading, over-excavation and recompaction at Transportation and Parking Structure.
January 31, 2013	Mass grading, over-excavation and recompaction at Maintenance Building.
February 6, 2013	Start layout for foundations at Transportation and Parking Garage buildings.
February 28, 2013	Start concrete placement for foundations at Transportation and Parking Structure.
March 12, 2013	Start lower level shear and retaining walls reinforcement at Transportation and Parking Structure.
March 26, 2013	Discover fossilized human bone at Vignes Street.
April 18, 2013	Start excavation and layout foundations at maintenance building.
April 24, 2013	Start footing reinforcement at Maintenance Building.
April 25, 2013	Complete installation of Shoring Piles and Shoring at Diamond Building.

**CHRONOLOGY OF EVENTS – BUS MAINTENANCE FACILITY (Continued)**

April 25, 2013	Complete excavation of foundations at Building C.
April 30, 2013	Start footing concrete placement at Maintenance Building.
May 13, 2013	Start on-site utilities at Transportation Building.
May 15, 2013	Start installation of below grade waterproofing.
May 23, 2013	Complete slot cutting at west side of Building 1.
June 12, 2013	Approval of Cesar Chavez Traffic Plans.
June 18, 2013	Complete installation of storm drain.
July 13, 2013	Install foundation at Building C along H Line.
July 14, 2013	Complete jack and bore from MH #24 to MH #25 intersection Vignes/Cesar.
July 19, 2013	Slot cutting at the south of Building No. 1.
July 23, 2013	Complete foundation of wash pit.
July 29, 2013	Completion of 10 and 8 inch water line.
August 2, 2013	Start relocation of Radiator Shop.
August 7, 2013	Complete installation of offsite sewer line.
August 19, 2013	Complete Slab-on-Grade Phase No. 1 at Building B.
August 22, 2013	Complete wash pit walls.
August 23, 2013	Complete excavation and removal of Lyon Street.
August 30, 2013	Install telephone and data line at Radiator Shop.
Sept. 27, 2013	Install equipment and HVAC System at Radiator Shop.
Sept. 30, 2013	Complete foundations at Building B.
October 11, 2013	Start layout for foundations at Maintenance Building.
October 11, 2013	Start foundations at Building C.

**CHRONOLOGY OF EVENTS – BUS MAINTENANCE FACILITY (Continued)**

October 16, 2013	Start excavation of foundations at Maintenance Building.
October 26, 2013	Start reinforcement for spread footings and grade beams at Maintenance Building.
November 5, 2013	Start demolition of Building No. 1.
November 6, 2013	Concrete placement for foundations at Maintenance Building.
November 7, 2013	Start slab-on grade concrete placement at Transportation Building.
November 13, 2013	Start walls and columns at Building C Level 1.
November 13, 2013	Complete slot cutting at west side of Building 1.
November 22, 2013	Complete relocation of Radiator Shop.
December 4, 2013	Concrete deck pour No.1, Building B elevated deck at Level 1.
December 9, 2013	Complete slab-on grade at Building B.
December 11, 2013	Start 1 <sup>st</sup> level deck panel and beam buildup at Parking Garage.
December 13, 2013	Contractor completed slab-on grade concrete placement at Parking Garage.
December 20, 2013	Start pouring deck at Building B Level 1.
December 23, 2013	Stress reinforcing cables pour No.1.
December 30, 2013	Concrete deck pour No. 2, Building B elevated deck at Level 1.
January 7, 2014	Complete installation of ramp deck no. 1.
January 9, 2014	Contractor completed hard demolition at Building No. 1.
January 21, 2014	Complete installation of 3 Hours Wall at Building C.
January 27, 2014	Complete reinforcement and concrete placement for the elevated decks pour 2, 2, 4, 5 and 6.

**CHRONOLOGY OF EVENTS – BUS MAINTENANCE FACILITY (Continued)**

January 28, 2014	Layout, excavate and install reinforcement for foundations at Area 8 and 9.
February 11, 2014	Completion of elevator shaft Walls, Level 1.
February 14, 2014	Complete installation of Deck Pour No. 8, 9, 10, 11 and 12.
February 17, 2014	Contractor completed balance of concrete Deck Pours No. 7 thru 12, Building B elevated deck at Level 1.
February 17, 2014	Start layout CIP electrical trenches at the DWP Utility Service Yard.
February 21, 2014	Start roof level setting Deck Panel No. 13 at Building B.
March 12, 2014	Complete concrete Deck Pour No. 13, Building B elevated deck roof level.
March 25, 2014	Complete concrete Deck Pour No. 15, Building B elevated deck roof level.
March 28, 2014	Contractor starts concrete Deck Pour No. 14, Building B elevated deck roof level.
March 28, 2014	Roof Deck Pour No. 14 partial shoring collapse. No major injuries, four first aid cases.
April 1, 2014	Contractor Developed and provided Phase 1 demo plan of collapsed Deck #14.
April 8, 2014	SEOR and Metro returned final review and comments of Phase 1 demo plan to Contractor.
April 9, 2014	Contractor starts investigation of Deck #14 collapse.
April 17, 2014	Contractor executes Phase 1 demo plan, the removal of concrete debris of deck #14 collapse.
April 21, 2014	Metro/ WJE starts investigation analysis of deck #14 collapse.

**CHRONOLOGY OF EVENTS – BUS MAINTENANCE FACILITY (Continued)**

April 29, 2014	Contractor/WDP developed initial plan for Phase 2 removal of deck rebar and tendons of collapsed deck #14 and ramp #3.
April 29, 2014	Contractor WDP performs nondestructive testing of structural slab, columns and ramp elements.
May 12, 2014	Contractor completes concrete Deck Pour No. 17, Building B Elevated Deck Roof Level.
May 19, 2014	SEOR approves design for permanent structure rebuild plan.
May 19, 2014	Contractor completes concrete Deck Pour No.9, Building B Elevated Deck Roof Level.
May 23, 2014	SEOR approves design for permanent structure rebuild plan.
June 6, 2014	Contractor completes concrete Deck Pour No.21 Building B Elevated Deck Roof Level.
June 16, 2014	Contractor completes concrete Deck Pour No.23 Building B Elevated Deck Roof Level.
June 20, 2014	Contractor completes concrete Deck Pour No. 14 and Ramp Deck #3 Building B Elevated Deck Roof Level.
July 1, 2014	Contractor completes foundations.
July 1, 2014	Contractor starts installation of axle-lift equipment at Running Repair Bays in Area 7.
July 2, 2014	Paint prep, prime and first coat begins at lower level Parking Garage and Maintenance Building.
July 9, 2014	LADWP starts electrical pole removal and power is ran underground along Cesar Chavez.
August 4, 2014	Contractor completes Deck Pour No. 22, Building B Elevated Deck Roof Level.
August 6, 2014	LADWP final inspection of DPW switchgears completed.
August 11, 2014	Contractor completes Deck Pour No. 24 and Ramp #4, Building B Elevated Deck Roof Level.

**CHRONOLOGY OF EVENTS – BUS MAINTENANCE FACILITY (Continued)**

August 22, 2014	Contractor begins excavation of the retaining wall foundation at Metro Driveway.
September 4, 2014	Contractor completes concrete pour of delay strips at roof elevation.
September 12, 2014	Contractor completes concrete pour of Retaining Wall Section #2 along Cesar Chavez Avenue.
September 15, 2014	LADWP schedule to start work for the installation of the new 10-in fire service.
September 20, 2014	LADWP starts pulling underground cable to Utility Yard Service.
September 24, 2014	Contractor submits the Load Test Procedure for Deck #1 at Parking Garage.
September 24, 2014	Contractor completes tree removal along Cesar Chavez Avenue.
September 26, 2014	Contractor completes stripping of false work of decks of Building B and C except for delay strip section at Parking Garage Building B.
September 26, 2014	Contractor completes stripping of false work of decks of Building B and C except for delay strip section at parking Garage Building B.
September 26, 2014	Contractor starts structural steel installation.
October 3, 2014	<i>LADWP completes installation of the new 10 inch fire service.</i>
October 7, 2014	<i>Balance of masonry walls completed at Building B.</i>
October 9, 2014	<i>Contractor completes the installation and backfilling of sewer lateral L at Building No. 1.</i>
October 25, 2014	<i>Contractor completes placement of retaining wall at Metro Driveway.</i>
November 13, 2014	<i>Completed final Load Testing procedures at Deck #2.</i>
November 14, 2014	<i>Contractor stripped false work for delay strip at Building B.</i>
November 14, 2014	<i>Contractor completes shop drawings for art work.</i>

**CHRONOLOGY OF EVENTS – BUS MAINTENANCE FACILITY (Continued)**

<i>November 18, 2014</i>	<i>Approval to proceed with revised 10 ½” PCC pavement section at Metro Driveway and east side.</i>
<i>November 19, 2014</i>	<i>Completed placement of exterior light poles at Building B.</i>
<i>November 21, 2014</i>	<i>Contractor starts exterior metal framing at Building A.</i>
<i>December 19, 2014</i>	<i>LADWP completes permanent power and installs meter to utility DWP Yard service.</i>
<i>December 19, 2014</i>	<i>Approved LADOT signaling and stripping plans provided to Contractor.</i>
<i>December 24, 2014</i>	<i>Contractor starts placement of steel rebar reinforcement at Metro Driveway.</i>

## CHRONOLOGY OF EVENTS – CNG FACILITY PROJECT

May 5, 2014	Approval to start construction.
May 9, 2014	Contractor to start mobilization on site.
June 10, 2014	Contractor begins 6-inch suction gas line trench excavation on Metro Driveway.
July 8, 2014	Contractor completes concrete pouring for the light pole footings.
July 8, 2014	Contractor completes 100% design submittal.
July 22, 2014	Underground 6-inch gas suction line installation complete along Metro Driveway.
July 24, 2014	6-inch gas suction line trench excavation and backfill complete at the CNG Compound.
August 14, 2014	Underground electrical conduits installation begins.
August 25, 2014	Contractor completes installation of interior pipe racks structure.
September 4, 2014	Concrete poured for equipment pads at the CNG Yard.
September 17, 2014	Major CNG compressors/dryer skids, diesel fuel generator delivered on site.
September 18, 2014	Contractor completes setting of major gas compression equipment at the CNG Yard.
October 6, 2014	<i>Contractor starts installation of overhead mechanical piping and electrical conduits.</i>
October 27, 2014	<i>Contractor continues installing electrical conduits and mechanical piping in electrical rooms, dispensing and service equipment at the compound area.</i>
December 8, 2014	<i>Contractor starts pressure testing of high pressure system.</i>

## APPENDICES

### COST AND BUDGET TERMINOLOGY

**ADOPTED BUDGET:** The Approved Project Budget as established by Metro Board of Directors at the time it authorizes Construction Project Management Division to commence full design and construction of the project (Project Adoption).

**CURRENT FORECAST:** Evaluation of costs to go combined with actual expenditures.

**COMMITMENTS:** The total of actual contract awards, executed change orders or amendments, approved work orders of Master Cooperative Agreements, offers accepted for purchase of real estate, and other Metro actions which have been spent or result in the obligation of specific expenditures at a future time. Also includes commitments reported by other agencies.

**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 and expenditures reported by other agencies.

## APPENDIX LIST OF ACRONYMS

AFC	Approved For Construction
BNSF	Burlington Northern Santa Fe Railway
CADD	Computer Aided Drafting and Design
CCTV	Closed Circuit Television
CD	Calendar Day
CM	Construction Manager
CMAC	Congestion Mitigation Air Quality
CMIA	Cash Management Improvement Act
CN	Change Notice
CNG	Compressed Natural Gas
CO	Change Order
CPM	Critical Path Method
CPUC	California Public Utilities Commission
CR	Camera Ready
CO	Change Order
CTC	California Transportation Commission
D-B	Design-Build
D-B-B	Design-Bid-Build
DBOM	Design, Build, Operate and Maintain
DD	Design Development
DEIR	Draft Environmental Impact Report
DWP	Department of Water and Power
EA	Environmental Assessment
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
FD	Final Design
FEIR	Final Environmental Impact Report
FHWA	Federal Highway Administration
FIS	Financial Information System
FOCT	Fiber Optics Cable Transmission System
FTE	Full Time Equivalent
IFB	Invitation for Bid
IPO	Integrated Project Office
LA	Los Angeles
LADWP	Los Angeles Department of Water and Power
LFAT	Local Field Acceptance Test
LNTP	Limited Notice To Proceed
LONP	Letter Of No Prejudice
LOP	Life of Project
MCA	Master Cooperative Agreement
METRO	Los Angeles County Metropolitan Transportation Authority

## APPENDIX LIST OF ACRONYMS (Continued)

MIS	Major Investment Study
MOT	Maintenance of Traffic
MOU	Memorandum of Understanding
MSA	Meter Set Assembly
MSSC	Metro Support Services Center
N/A	Not Applicable
NOA	Notice of Award
NTE	Not to Exceed
NTP	Notice To Proceed
O & M	Operations and Maintenance
PC	Project Control
PE	Preliminary Engineering
PIP	Project Implementation Plan
PLA	Project Labor Agreement
PM	Project Manager
PMA	Project Management Assistance
PMP	Project Management Plan
P&P	Policies & Procedures
PR	Project Report
PS&E	Plans, Specs & Engineering
PSR	Project Study Report
QA	Quality Assurance
QAR	Quality Assurance Report
QC	Quality Control
QPSR	Quarterly Project Status Report
RFC	Request For Change or Released for Construction (based on context)
RFP	Request For Proposal
ROM	Rough Order of Magnitude
ROW	Right-Of-Way
RSTP	Regional Surface Transportation Program
RWQCB	Regional Water Quality Control Board
SAFETEA-LU-	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SCE	Southern California Edison
SD	Storm Drain
SEOR	Structural Engineer of Record
SIT	System Integration Testing
SOW	Statement Of Work
SP	Special Provision
TBD	To Be Determined
UPS	Uninterrupted Power Supply
USDOT	United States Department of Transportation
VE	Value Engineering

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

WBS	Work Breakdown Structure
WDP	Whitlock Dalnymple Poston
WP	Work Package