

# **Metro**

*Los Angeles County Metropolitan Transportation Authority  
One Gateway Plaza  
3rd Floor Board Room*



## **Agenda - Final**

**Thursday, May 25, 2017**

**9:00 AM**

**One Gateway Plaza, Los Angeles, CA 90012,  
3rd Floor, Metro Board Room**

### **Board of Directors - Regular Board Meeting**

*John Fasana, Chair  
Eric Garcetti, 1st Vice Chair  
Sheila Kuehl, 2nd Vice Chair  
Kathryn Barger  
Mike Bonin  
James Butts  
Jacquelyn Dupont-Walker  
Robert Garcia  
Janice Hahn  
Paul Krekorian  
Ara Najarian  
Mark Ridley-Thomas  
Hilda Solis  
Carrie Bowen, non-voting member*

*Phillip A. Washington, Chief Executive Officer*

***\*A written request to address the Board should be submitted in person at the meeting to the Board Secretary prior to the item being called for discussion. Once discussion on an item begins, requests to speak on that item will no longer be accepted.***

**METROPOLITAN TRANSPORTATION AUTHORITY BOARD RULES**  
(ALSO APPLIES TO BOARD COMMITTEES)

**PUBLIC INPUT**

A member of the public may address the Board on agenda items, before or during the Board or Committee's consideration of the item for one (1) minute per item, or at the discretion of the Chair. A request to address the Board should be submitted in person at the meeting to the Board Secretary. Individuals requesting to speak on more than three (3) agenda items will be allowed to speak up to a maximum of three (3) minutes per meeting. For individuals requiring translation service, time allowed will be doubled.

Notwithstanding the foregoing, and in accordance with the Brown Act, this agenda does not provide an opportunity for members of the public to address the Board on any Consent Calendar agenda item that has already been considered by a Committee, composed exclusively of members of the Board, at a public meeting wherein all interested members of the public were afforded the opportunity to address the Committee on the item, before or during the Committee's consideration of the item, and which has not been substantially changed since the Committee heard the item.

The public may also address the Board on non-agenda items within the subject matter jurisdiction of the Board during the public comment period, which will be held at the beginning and/or end of each meeting. Each person will be allowed to speak for up to three (3) minutes per meeting and may speak no more than once during the Public Comment period. Speakers will be called according to the order in which the speaker request forms are received. Elected officials, not their staff or deputies, may be called out of order and prior to the Board's consideration of the relevant item.

In accordance with State Law (Brown Act), all matters to be acted on by the MTA Board must be posted at least 72 hours prior to the Board meeting. In case of emergency, or when a subject matter arises subsequent to the posting of the agenda, upon making certain findings, the Board may act on an item that is not on the posted agenda.

**CONDUCT IN THE BOARD ROOM** - The following rules pertain to conduct at Metropolitan Transportation Authority meetings:

**REMOVAL FROM THE BOARD ROOM** The Chair shall order removed from the Board Room any person who commits the following acts with respect to any meeting of the MTA Board:

- a. Disorderly behavior toward the Board or any member of the staff thereof, tending to interrupt the due and orderly course of said meeting.
- b. A breach of the peace, boisterous conduct or violent disturbance, tending to interrupt the due and orderly course of said meeting.
- c. Disobedience of any lawful order of the Chair, which shall include an order to be seated or to refrain from addressing the Board; and
- d. Any other unlawful interference with the due and orderly course of said meeting.

**INFORMATION RELATING TO AGENDAS AND ACTIONS OF THE BOARD**

Agendas for the Regular MTA Board meetings are prepared by the Board Secretary and are available prior to the meeting in the MTA Records Management Department and on the Internet. Every meeting of the MTA Board of Directors is recorded on CD's and as MP3's and can be made available for a nominal charge.

## DISCLOSURE OF CONTRIBUTIONS

The State Political Reform Act (Government Code Section 84308) requires that a party to a proceeding before an agency involving a license, permit, or other entitlement for use, including all contracts (other than competitively bid, labor, or personal employment contracts), shall disclose on the record of the proceeding any contributions in an amount of more than \$250 made within the preceding 12 months by the party, or his or her agent, to any officer of the agency, additionally PUC Code Sec. 130051.20 requires that no member accept a contribution of over ten dollars (\$10) in value or amount from a construction company, engineering firm, consultant, legal firm, or any company, vendor, or business entity that has contracted with the authority in the preceding four years. Persons required to make this disclosure shall do so by filling out a "Disclosure of Contribution" form which is available at the LACMTA Board and Committee Meetings. Failure to comply with this requirement may result in the assessment of civil or criminal penalties.

## ADA REQUIREMENTS

Upon request, sign language interpretation, materials in alternative formats and other accommodations are available to the public for MTA-sponsored meetings and events. All requests for reasonable accommodations must be made at least three working days (72 hours) in advance of the scheduled meeting date. Please telephone (213) 922-4600 between 8 a.m. and 5 p.m., Monday through Friday. Our TDD line is (800) 252-9040.

## LIMITED ENGLISH PROFICIENCY

A Spanish language interpreter is available at all Board Meetings. Interpreters for Committee meetings and all other languages must be requested 72 hours in advance of the meeting by calling (213) 922-4600 or (323) 466-3876.



**323.466.3876 x2**

*Español*

**323.466.3876 x3**

한국어

日本語

中文

русский

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ภาษาไทย

Tiếng Việt

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**NOTE: ACTION MAY BE TAKEN ON ANY ITEM IDENTIFIED ON THE AGENDA**

## CALL TO ORDER

## ROLL CALL

APPROVE Consent Calendar Items: 2, 5, 6, 7, 9, 10, 11, 13\*\*, 16, 21, 22, 24, 25, 30, 32, 33, 35, 36, 37 and 38.

Consent Calendar items are approved by one motion unless held by a Director for discussion and/or separate action.

\*\*Requires 2/3 vote of the Board

*Consent Calendar items are approved by one motion unless held by a Director for discussion and/or separate action.*

*\*\*Item requires 2/3 vote*

## CONSENT CALENDAR

2 APPROVE **Minutes of the Regular Board Meeting held April 27, 2017.** [2017-0293](#)

**Attachments:** [April 27, 2017 - Regular Board Minutes](#)

## AD-HOC CONGESTION, HIGHWAY AND ROADS COMMITTEE MADE THE FOLLOWING RECOMMENDATION (5-0):

5 AUTHORIZE the Chief Executive Officer (CEO) to execute a three (3) year agreement for **FY18, FY19 & FY20 with the California Highway Patrol (CHP) to provide services in support of the Metro Freeway Service Patrol (FSP) program**, in the amount of \$4,755,495. [2017-0243](#)

## AD-HOC CONGESTION, HIGHWAY AND ROADS COMMITTEE (5-0) AND CONSTRUCTION COMMITTEE (3-0) MADE THE FOLLOWING RECOMMENDATION:

6 AUTHORIZE Contract Modification No. 42 (CCO 42) by **State of California Department of Transportation (Caltrans) for the construction contract of the Segment 5 of I-5 South Capacity Improvements Project from Orange County Line to I-605** under the Funding Agreement No. MOU.P0004292A-3, in the total amount of \$1,700,000 within the LOP budget. [2017-0151](#)

**Attachments:** [ATTACHMENT A - LOCATION MAP](#)  
[ATTACHMENT B - ORR & DAY BRIDGE](#)

**AD-HOC CONGESTION, HIGHWAY AND ROADS COMMITTEE (5-0) AND CONSTRUCTION COMMITTEE (3-0) MADE THE FOLLOWING RECOMMENDATION:**

- 7 AUTHORIZE Contract Modification No. 115 (CCO 115) by **State of California Department of Transportation (Caltrans) for the construction contract of the Segment 4 of I-5 South Capacity Improvements Project from Orange County Line to I-605** under the Funding Agreement No. MOU.P0004292A-3, in the total amount of \$577,500 within the LOP budget. [2017-0229](#)
- Attachments:     [ATTACHMENT A - LOCATION MAP](#)  
                              [ATTACHMENT B - ORR AND DAY BRIDGE](#)

**FINANCE, BUDGET AND AUDIT COMMITTEE MADE THE FOLLOWING RECOMMENDATION (3-0):**

- 9 AUTHORIZE: [2017-0068](#)
- A. the Chief Executive Officer to execute a five-year, fixed unit rate Contract No. PS27736000 to **Bank of America for basic and specialized banking services**, in an amount-not-to-exceed \$2,328,909, effective July 1, 2017, subject to resolution of protest(s), if any; and
- B. the payment of up to \$320,000 over the next five years for **Federal Deposit Insurance Corporation (FDIC) assessment fees as mandated by 12 C.F.R. § 327.9 to cover insurance premiums for Metro's deposits**. This is an estimate based on historical experience. If FDIC increases the rate and the actual amount exceeds the estimate, staff will seek approval for a Contract modification. The combined total cost of the Contract is a not-to-exceed \$2,648,909 over its entire life-cycle.
- Attachments:     [Attachment A - Procurement Summary](#)  
                              [Attachment B - DEOD Summary](#)

**FINANCE, BUDGET AND AUDIT COMMITTEE MADE THE FOLLOWING RECOMMENDATION (5-0):**

10 AUTHORIZE the Chief Executive Officer to: [2017-0252](#)

- A. AWARD five-year fixed rate bench Contract Nos. PS36627000 through PS36627018, with the firms listed in Attachment A, for **Management Audit Services**, for a not-to-exceed amount of \$6,864,000 for the base three-years, effective July 1, 2017 through June 30, 2020, plus \$2,288,000 for each of the two, one-year options, for a combined total amount not to exceed \$11,440,000, subject to resolution of protest(s), if any; and
- B. EXECUTE Task Orders under these Contracts for audit services in a total amount not-to-exceed \$11,440,000.

Attachments:     [Attachement A - Procurement Summary](#)  
                          [Attachment B - DEOD Summary-](#)

**FINANCE, BUDGET AND AUDIT COMMITTEE (5-0) AND EXECUTIVE MANAGEMENT COMMITTEE (3-0) MADE THE FOLLOWING RECOMMENDATION:**

11 APPROVE: [2017-0183](#)

- A. a new low income fare subsidy program to replace the Rider Relief Transportation Program (RRTP) and Immediate Needs Transportation Program (INTP), with an estimated year one budget of \$14 million, and;
- B. the Title VI Analysis for the new program.

Attachments:     [A-Title VI Environmental Justice evaluation](#)  
                          [B-Description of Current Subsidy Programs](#)

**CONSTRUCTION COMMITTEE MADE THE FOLLOWING RECOMMENDATION (3-0):**

13 FINDING that use of the **design-build project delivery approach for Metro Emergency Security Operations Center Project** pursuant to [2017-0173](#)

Public Contract Code §§22160-22169 to reduce project costs, expedite project completion and allow for negotiation and award of a design-build contract to a responsible proposer whose proposal is determined to be the best-value to Metro.

(REQUIRES 2/3 VOTE OF THE BOARD)

**SYSTEM SAFETY, SECURITY AND OPERATIONS COMMITTEE (3-0) AND EXECUTIVE MANAGEMENT COMMITTEE (3-0) MADE THE FOLLOWING RECOMMENDATION:**

- 16 APPROVE a phased approach to art asset management in response to October 2015 Board Motion (Attachment A). [2017-0013](#)**

Attachments:     [Attachment A - October 2015 Board Directive](#)  
                          [Attachment B - Metro Public Art Collection 05.18.17](#)  
                          [Attachment C - Examples Metro Public Art Collection 05.18.17](#)  
                          [Attachment D - Art Asset Management Board Report Presentation](#)

**EXECUTIVE MANAGEMENT COMMITTEE MADE THE FOLLOWING RECOMMENDATION (3-0):**

- 21 APPROVE amendment of the existing repayment schedule agreement between the County of Los Angeles (County) and the Los Angeles County Metropolitan Transportation Authority (LACMTA) for the State Route 126/Commerce Center Drive Interchange Improvement Project STP-L fund exchange, as shown in Attachment A. [2017-0245](#)**

Attachments:     [Attachment A - Amendment to Exchange Agreement](#)  
                          [Attachment B - 2011 Exchange Agreement for the SR-126 Commerce Center D](#)

**EXECUTIVE MANAGEMENT COMMITTEE MADE THE FOLLOWING RECOMMENDATION (3-0):**

- 22 AUTHORIZE the Chief Executive Officer to execute a five-year lease agreement (Lease Agreement) for the property located at 203 E. College Street, Los Angeles (Property, APN# 5409-014-906) with California Drop Forge, Inc. (Lessee) in the amount of \$7,890.84 monthly with an annual increase of four percent. [2017-0260](#)**

Attachments:     [Attachment A - Drop Forge Inc. Plat Map and Aerial Photo](#)

**EXECUTIVE MANAGEMENT COMMITTEE MADE THE FOLLOWING RECOMMENDATION (3-0):**

24 ADOPT staff recommended positions: [2017-0302](#)

- A. **SB 268 (Mendoza)** - Los Angeles County Metropolitan Transportation Authority **OPPOSE**
- B. ~~**SB 775 (Wieckowski)** - California Global Warming Solutions Act of 2006: Market-Based Compliance Mechanisms **WORK WITH AUTHOR**~~
- C. ~~**SB 657 (Bates)** - California Public Records Act: Reverse Public Records Actions **OPPOSE**~~
- D. **AB 1479 (Bonta)** - Public Records: Custodian of Records: Civil Penalties **OPPOSE**
- E. ~~**AB 302 (Gipson)** - South Coast Air Quality Management District: Fleets **WORK WITH AUTHOR**~~

Attachments:      [Attachment A - SB 268 Mendoza](#)  
                                 [Attachment D - AB 1479 Bonta](#)

**EXECUTIVE MANAGEMENT COMMITTEE MADE THE FOLLOWING RECOMMENDATION (3-0):**

25 AUTHORIZE: [2017-0255](#)

- A. the Chief Executive Officer to execute Modification No. 2 to the **Labor Compliance Bench (the Bench) Contracts Numbers PS-21307700 A-J, for labor compliance monitoring services**, to exercise the second and third year options, extending the contract term from July 1, 2017 to June 30, 2019, increasing the total authorized not-to-exceed amount by \$4,000,000 (\$2,000,000 for each option year) from \$15,056,648 to \$19,056,648; and
- B. the Chief Executive Officer to award and execute task orders for a not-to-exceed total authorized amount of \$19,056,648.

Attachments:      [Attachment A - Procurement Summary](#)  
                                 [Attachment B - List of Consultants](#)  
                                 [Attachment C - Contract Modification-Change Order Log](#)  
                                 [Attachment D - List of Project Task Orders & Paid-to-Date Values](#)  
                                 [Attachment E - DEOD Summary](#)



**FINANCE, BUDGET AND AUDIT COMMITTEE MADE THE FOLLOWING RECOMMENDATION (5-0):**

**30 CONSIDER:**

[2017-0279](#)

- A. ADOPTING the **proposed FY18 Budget** as presented in the budget document (provided in a separate transmittal and posted on metro.net); and
- B. APPROVING the addition of 129 positions, including 22 contract and 107 non-contract full-time equivalent positions, as presented in Attachment A; and
- C. APPROVING the Life of Project (LOP) budgets for new capital projects with LOP exceeding \$5 million, included in the proposed FY18 Budget and presented in Attachment B; and
- D. ADOPTING Life of Project (LOP) budget of \$118.9 million for Blue Line Signaling Rehabilitation and Operational State of Good Repair Improvements that incorporates system compatibility, safety features, and new technology to improve headways during service interruptions, further described in Attachment B; and
- E. AMENDING the proposed budget to add \$8.2 million for engineering support and advanced utility relocation designs on Metro Orange Line Grade Separation (project submitted after proposed budget was published); and
- F. AMENDING the proposed budget to add \$1 million for the Comprehensive Operational Analysis (COA), which is a comprehensive service restructuring study; and
- G. APPROVING the Reimbursement Resolution declaring Metro's intention to issue debt in FY17 18 for capital projects, as shown in Attachment C, with the provision that actual debt issuance will require separate Board approval.

**Attachments:**      [Attachment A - FTE Request for FY18](#)  
                                 [Attachment B - FY18 New Capital Projects](#)  
                                 [Attachment C - Reimbursement Resolution of Metro for Fiscal Year 2018](#)  
                                 [Attachment D - FY18 Public Outreach](#)

**FINANCE, BUDGET AND AUDIT COMMITTEE (5-0) AND EXECUTIVE MANAGEMENT COMMITTEE (3-0) MADE THE FOLLOWING RECOMMENDATION:**

- 32 AUTHORIZE the Chief Executive Officer to negotiate and execute a performance-based Contract Modification to **Cubic Transportation Systems Inc. Contract No. OP02461010 to extend the base contract through December 2024 for no upfront cost of development for Nextlink, a cloud-based connection system that will link the legacy TAP system to programs and services such as the TAP mobile payment app, Bike Share, fare subsidy programs, parking, ride-hailing services and more**, in exchange for sales transaction fees of 0.5-3.0%, based on use of mobile app and retail fare sales for five (5) years of operation after development.

[2017-0272](#)

Attachments:      [Attachment A - Regional Account Integration Architecture](#)  
[Attachment B - Procurement Summary.pdf](#)  
[Attachment C - Contract Modification & Change Order Log.pdf](#)  
[Attachment D - DEOD Summary Cubic](#)

**CONSTRUCTION COMMITTEE MADE THE FOLLOWING RECOMMENDATION (3-0):**

- 33 AUTHORIZE the Chief Executive Officer (CEO) to execute a final Modification to Contract C1013R, with Skanska USA Civil West California District Inc., for the **design and construction of the west entrance at the North Hollywood Station on the Metro Red Line**, in the amount \$1,261,770, adjusting the total current contract price from \$15,743,901.61 to \$17,005,671.61 within the life of project budget.

[2017-0137](#)

Attachments:      [Attachment A - Procurement Summary.pdf](#)  
[Attachment B - Contract Modification Change Order Log.pdf](#)  
[Attachment C - DEOD Summary.pdf](#)

**APRIL'S PLANNING AND PROGRAMMING COMMITTEE MADE THE FOLLOWING RECOMMENDATION (3-0):**

35 CONSIDER:

[2017-0154](#)

A. APPROVING an updated Project Definition for Environmental Clearance, including three alternatives:

1. SR 60 North Side Design Variation Alternative;
2. Washington Boulevard Alternative with Atlantic Below-Grade Option; and
3. Combined Alternative with both SR 60 and Washington Boulevard via Atlantic Segments; and

B. RECEIVING AND FILING the **Eastside Phase 2 Technical Study Report**. Attachment D contains the Executive Summary. The full report is available upon request.

Attachments:      [Attachment A - July 2015 Board Motion](#)  
[Attachment B - Project Schedule](#)  
[Attachment C – Map of NorthSouth Route Options for Washington Boulevard](#)  
[Attachment D – Eastside Phase 2 Route Options Screening Analysis and Comn](#)  
[Presentation Item 25-Eastside](#)

**APRIL'S SYSTEM SAFETY, SECURITY AND OPERATIONS COMMITTEE MADE THE FOLLOWING RECOMMENDATION (3-0):**

36 AUTHORIZE the Chief Executive Officer to:

[2017-0150](#)

A. AWARD five (5) year, Indefinite Delivery/Indefinite Quantity Contract No. OP7396000 for a **Biomethane Gas Provider to Clean Energy Renewables**, the lowest responsive and responsible bidder for a not-to-exceed amount of \$1,240,520 for the base year (for one bus division as a pilot) and a not-to-exceed amount of \$54,808,110 for a four (4) year option, for a total contract amount of \$56,048,630 (for all bus divisions if the pilot is successful), subject to resolution of protest(s), if any; and

B. EXECUTE individual Task Orders (Transaction Confirmations) and changes within the Board approved contract amount.

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- Attachments:**      [Attachment A - Procurement Summary.pdf](#)  
[Attachment B - DEOD Summary.pdf](#)  
[Attachment C - Ramboll Environ Report September 29, 2016.pdf](#)  
[Attachment D - Biomethane Implementation Plan.pdf](#)

**(CARRIED OVER FROM APRIL'S BOARD MEETING DUE TO ABSENCES AND CONFLICTS)**

**APRIL'S PLANNING AND PROGRAMMING COMMITTEE MADE THE FOLLOWING RECOMMENDATION (3-0):**

- 37**      AUTHORIZE the Chief Executive Officer to execute an Exclusive Negotiations and Planning Agreement (ENA) with Trammell Crow Company and Greenland USA (Developer) for the **properties at North Hollywood Station** (Site), for 24 months with the option to extend up to 30 months. [2017-0144](#)
- Attachments:**      [Attachment A - North Hollywood Joint Development Site](#)  
[Attachment B - Proposed North Hollywood Site Plan and Program Summary](#)  
[Attachment C - North Hollywood ENA Presentation](#)

**(CARRIED OVER FROM APRIL'S BOARD MEETING DUE TO ABSENCES AND CONFLICTS)**

**APRIL'S AD-HOC CONGESTION, HIGHWAY AND ROADS COMMITTEE MADE THE FOLLOWING RECOMMENDATION (3-0-2):**

- 38**      AUTHORIZE the Chief Executive Officer to: [2017-0096](#)
- A. AWARD three, three-year on-call contracts, Contract Nos. AE30673000, AE30673001, and AE30673002, to AECOM Technical Services, Inc., CH2M Hill, Inc., and Parsons Transportation Group, Inc., respectively, for a total not-to-exceed amount of \$30,000,000, for **Highway Program Project Delivery Support Services for Los Angeles County**, subject to resolution of protest(s), if any; and
- B. AWARD Task Orders within the approved not to exceed cumulative value of \$30,000,000.
- Attachments:**      [ATTACHMENT A - PROCUREMENT SUMMARY](#)  
[ATTACHMENT B - DEOD SUMMARY](#)

**(CARRIED OVER FROM APRIL'S BOARD MEETING DUE TO ABSENCES AND CONFLICTS)**

NON-CONSENT

3 Report by the **Chair**. [2017-0377](#)

4 Report by the **Chief Executive Officer**. [2017-0378](#)

**CONSTRUCTION COMMITTEE FORWARDED WITHOUT RECOMMENDATION DUE TO ABSENCES AND CONFLICTS:**

14 CONSIDER: [2017-0188](#)

- A. AUTHORIZING the Chief Executive Officer to award a cost reimbursable fixed fee contract, Contract No. AE35279, to **Kal Krishnan Consulting Services/Triunity Engineering & Management Joint Venture (KKCS/Triunity JV), the most qualified proposer, for Program Management Support Services (PMSS)** for a not-to-exceed amount of \$76,745,629.86 for the base five-years, plus \$32,436,264.59 for a two-year option, for a combined total amount not to exceed \$109,181,894.45, subject to resolution of protest(s), if any;
- B. AUTHORIZING the Chief Executive Officer to execute individual Contract Work Orders and Contract Modifications within the Board approved contract funding amount;
- C. APPROVING Contract Modification Authority specific to Contract No. AE35279 for 10% of the not-to-exceed award value.

Attachments: [Attachment A - Procurement Summary](#)  
[Attachment B - DEOD Summary](#)

**SYSTEM SAFETY, SECURITY AND OPERATIONS COMMITTEE FORWARDED WITHOUT RECOMMENDATION DUE TO ABSENCES AND CONFLICTS:**

20 AUTHORIZE the Chief Executive Officer to: [2016-1004](#)

- A. AWARD Bench Contract No.PS37755 to consultant firms CH2M Hill, Inc., LTK Engineering Services, Mott McDonald, LLC, WSP/Parsons Brinkerhoff, and STV Inc., to establish a general account for consultant support services that will be utilized for **Rail Vehicle and Rail Systems Engineering Consultant Services**, for an amount not-to-exceed \$8,027,100, subject to resolution of protest, if any; and
- B. EXECUTE Task Work Orders within the approved total not-to-exceed amount of the Contract.

Attachments: [Attachment A - Procurement Summary](#)  
[Attachment B - DEOD Summary](#)

**EXECUTIVE MANAGEMENT COMMITTEE FORWARDED WITHOUT RECOMMENDATION DUE TO ABSENCES AND CONFLICTS:**

26 CONSIDER: [2017-0141](#)

- A. AUTHORIZING the implementation of the **Parking Management Pilot Program at the Metro Gold Line Monrovia Station with a public shared parking program during non-peak transit hours;**
- B. AUTHORIZING the implementation of the **Parking Management Pilot Program at the Metro Green Line Crenshaw Station;**
- C. AMENDING Metro's Parking Rates and Fee Resolution (Attachment A) in support of the implementation of the Parking Management Pilot Program and Shared Public Parking Pilot Program at the Monrovia and Crenshaw Stations; and
- D. APPROVING Contract Modification Authority (CMA) to Contract No. PS6264800 with L&R Group of Companies dba Joe's Auto Parks in the amount of \$1.3 million, increasing the total CMA amount from \$838,827 to \$2,138,827 to provide additional parking management services at two (2) locations and improved functions for all 15 Metro parking facilities.

Attachments: [Attachment A - Metro Parking Fee Resolution](#)  
[Attachment B - Letter from the South Bay Regional Service Council](#)

- 27 RECEIVE AND FILE **Policy Advisory Council update on public review of Draft Measure M Master Guidelines.** [2017-0316](#)

**Attachments:** [Attachment A - Policy Advisory Council Update on Draft Measure M Master Gui](#)

**AD-HOC CONGESTION, HIGHWAY AND ROADS COMMITTEE MADE THE FOLLOWING RECOMMENDATION (3-2):**

- 29 RECEIVE AND FILE **status update on the State Route 710 (SR 710) North Project environmental process** including explanation of the performance measures/scoring and methodology used to compare and contrast various alternatives studied in the environmental process leading to recommendation of the Preferred Alternative. [2017-0097](#)

**Attachments:** [ATTACHMENT A- SR 710 North Project Study Area.pdf](#)  
[ATTACHMENT B- SR 710 North Project Performance Evaluation Matrix](#)  
[ATTACHMENT C SR 710 North Single Bore Fwy Tunnel Fact Sheet](#)  
[ATTACHMENT D-SR 710 North TSM-TDM Alternative.pdf](#)

**AD-HOC CONGESTION, HIGHWAY AND ROADS COMMITTEE MADE THE FOLLOWING RECOMMENDATION (3-2):**

- 29.1 CONSIDER **Motion by Fasana and Barger** that to implement mobility improvements that are fundable with existing resources and bring some relief to affected corridor cities, the Metro Board: [2017-0358](#)

A. SUPPORT adoption of the Transportation System Management/Transportation Demand Management Alternative as the Locally Preferred Alternative (LPA) and defer a decision on any other alternative for future consideration by the Board until the community collectively agrees on the value of that investment and funds are identified to implement a project. This decision and the Board's vote will allow for timely implementation of cost-effective transportation improvements that would include the projects that have support by affected jurisdictions on the TSM/TDM list in the EIS/EIR as well as additional improvement projects that can promote capacity enhancements and operational improvements consistent with the Purpose and Need statement of the project in communities along the corridor. The new Measure R and Government Code 54237.7 projects, described in this motion, that are not included in the environmental document will undergo their own environmental process and clearance as necessary.

B. ALLOCATE \$105 million of Measure R funds available for the

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“Interstate 710 North Gap Closure (tunnel) Project” for development and implementation of TSM/TDM projects listed in the EIS/EIR.

- C. ALLOCATE remaining Measure R funds available for the “Interstate 710 North Gap Closure (tunnel) Project” for new mobility improvement projects within the San Gabriel Valley sub-region, if consistent with the purpose and need of the Gap Closure Project to relieve congestion on local streets along the SR-710 alignment between I-10 and I-210, with highest priority for projects proximate to I-10. Newly proposed projects not included in the environmental document will undergo their own environmental process and clearance as necessary.
- D. CONSULT WITH affected jurisdictions and Caltrans and report back to the Metro Board within 90 days on a procedure to initiate the identification of projects to be funded through the SR-710 Rehabilitation Account, as prescribed in Government Code 54237.7. Such projects are to be located in Pasadena, South Pasadena, Alhambra, La Cañada Flintridge, and the 90032 postal ZIP Code, and may include, but are not limited to: sound walls; transit and rail capital improvements; bikeways; pedestrian improvements; signal synchronization; left turn signals; and major street resurfacing, rehabilitation, and reconstruction. Metro shall be responsible for submitting the list of projects to the California Transportation Commission (CTC) who will have the final authority to approve those projects.
- E. ENCOURAGE the corridor cities, Caltrans, and Metro to collectively pursue policies and actions that would promote smart and functional land use, reduce automobile dependency, encourage multi-modal trips, improve traffic operations, and maximize the use of the latest available technologies to enhance the performance of the existing transportation system to minimize impacts of the regional traffic on the communities along the SR-710 corridor.
- F. ENCOURAGE Caltrans, working with Metro and affected jurisdictions, to identify corrective measures to contain the regional traffic on the freeway system and minimize impacts on the local street network in the SR-710 corridor.
- G. DIRECT the Metro staff to work with Caltrans, the corridor cities, and other affected jurisdictions to identify and pursue the new Measure R and the Government Code 54237.7 projects referenced in this motion.
- H. REPORT BACK to the Board when Caltrans selects the Preferred Alternative.



**FINANCE, BUDGET AND AUDIT COMMITTEE AND CONSTRUCTION COMMITTEE FORWARDED WITHOUT RECOMMENDATION DUE TO ABSENCES AND CONFLICTS:**

- 31 AUTHORIZE the CEO to award Contract No. C1081 to Mass Electric Construction Co/Parsons, the selected best value contractor to design and construct the **Blue Line State of Good Repair signaling rehabilitation and operational improvements** for a contract value of \$81,513,000. [2017-0132](#)

Attachments: [Attachment A - Sources and Uses Table](#)  
[Attachment B - Procurement Summary 0132](#)  
[Attachment C-DEOD Summary](#)

- 39 RECEIVE AND FILE the **status report on Measure M Local Return allocation alternatives**. [2017-0226](#)

Attachments: [Attachment A - Motion](#)  
[Attachment B - Summary of Alternatives Updated 5-3-17 rev](#)  
[Attachment C - Alternatives Update](#)  
[Attachment D - Funding Sources Update](#)  
[Attachment E - Alternative Funding Mechanisms](#)

- 40 CONSIDER: [2017-0085](#)

- A. HOLDING a public hearing on the proposed Resolution of Necessity; and
- B. ADOPTING the **Resolution of Necessity authorizing the commencement of an eminent domain action to acquire Project Parcel W-3002 (APN: 4343-005-004), for Purple Line Westside Subway Extension Transit Project Section 2**, consisting of the real property and the improvements pertaining to the realty (hereinafter the "Property" as identified in Attachment A).

(REQUIRES 2/3 VOTE OF THE BOARD)

Attachments: [Attachment A- Site Plan](#)  
[Attachment B- Staff Report](#)  
[Attachment C- Resolution of Necessity](#)

41 CONSIDER:

[2017-0287](#)

- A. HOLDING a public hearing on the proposed Resolution of Necessity;  
and
  
- B. ADOPTING the **Resolution of Necessity authorizing the commencement of an eminent domain action to acquire Project Parcel W-3602 (APN: 4309-001-008), the Purple Line Westside Subway Extension Transit Project Section 2**, consisting of a temporary construction easement and a permanent subsurface tunnel easement (hereinafter the "Property" as identified in Attachment A).

(REQUIRES 2/3 VOTE OF THE BOARD)

Attachments:     [Attachment A- Site Map](#)  
                          [Attachment B- Staff Report](#)  
                          [Attachment C- Resolution of Necessity](#)

**END OF NON-CONSENT ITEMS**

42 **CLOSED SESSION:**

[2017-0380](#)

A. Conference with Legal Counsel - Existing Litigation - G.C. 54956.9(d)

(1):

1. Jonathan Dean, et al. v. LACMTA, LASC Case No. BC413809
2. Linda Faye Thompson v. LACMTA, LASC Case No. BC615865

B. Conference with Legal Counsel - Anticipated Litigation - G.C.

54956.9(d)(4):

Initiation of Litigation (One Case)

C. Conference with Labor Negotiator - G.C. 54957.6:

Agency Designated Representative: Joanne Peterson or designee  
Employee Organizations: SMART, ATU, TCU, AFSCME and Teamsters

D. Conference with Real Property Negotiator - G.C. 54956.8:

1. Property Description: 6101 Wilshire Boulevard, Los Angeles, CA  
Agency Negotiator: Velma C. Marshall  
Negotiating Party: AU Zone Investments #2  
Under Negotiation: Price and Terms
2. Property Description: 1940 Century Park East, Los Angeles, CA  
Agency Negotiator: Carol A. Chiodo  
Negotiating Party: Vinci Academy L.L.C. (Tenant)  
Under Negotiation: Price and Terms
3. Property Description: 13900 Rosecrans Ave., Santa Fe Springs, CA  
Agency Negotiator: Carol A. Chiodo  
Negotiating Party: H.D. Nogle and Sons, Inc. ~~D.P. Milroy, LLC~~  
Under Negotiation: Price and Terms
4. Property Description: 13720 Rosecrans Ave., Santa Fe Springs, CA  
Agency Negotiator: Carol A. Chiodo  
Negotiating Party: D.P. Milroy, LLC  
Under Negotiation: Price and Terms

5. Property Description: 13750 Rosecrans Ave., Santa Fe Springs, CA  
Agency Negotiator: Carol A. Chiodo  
Negotiating Party: Miriam Arato, As Trustee of The Arato Family Trust Utd. May 16, 1986  
Under Negotiation: Price and Terms
  
6. Property Description: 659-665 So. La Brea, Los Angeles, CA  
Agency Negotiator: Carol A. Chiodo  
Negotiating Party: MHK IMPEX Corp. (dba Lawrence of La Brea)  
Under Negotiation: Price and Terms

Consideration of items not on the posted agenda, including: items to be presented and (if requested) referred to staff; items to be placed on the agenda for action at a future meeting of the Committee or Board; and/or items requiring immediate action because of an emergency situation or where the need to take immediate action came to the attention of the Committee subsequent to the posting of the agenda.

COMMENTS FROM THE PUBLIC ON ITEMS OF PUBLIC INTEREST WITHIN  
COMMITTEE'S SUBJECT MATTER JURISDICTION

Adjournment

Metro

Los Angeles County  
Metropolitan Transportation  
Authority  
One Gateway Plaza  
3rd Floor Board Room  
Los Angeles, CA



**Metro**

## Board Report

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**File #:** 2017-0293, **File Type:** Minutes

**Agenda Number:** 2

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**REGULAR BOARD MEETING  
MAY 25, 2017**

**SUBJECT: REGULAR BOARD MEETING MINUTES HELD APRIL 27, 2017  
APPROVE Minutes of the Regular Board Meeting held April 27, 2017.**

# Metro

Los Angeles County Metropolitan Transportation Authority  
One Gateway Plaza  
3rd Floor Board Room



## MINUTES

Thursday, April 27, 2017

9:00 AM

One Gateway Plaza, Los Angeles, CA 90012,  
3rd Floor, Metro Board Room

### Board of Directors - Regular Board Meeting

#### DIRECTORS PRESENT

John Fasana, Chair  
Eric Garcetti, 1st Vice Chair  
Mike Bonin  
James Butts  
Jacquelyn Dupont-Walker  
Robert Garcia  
Ara Najarian

Shirley Choate, non-voting member

Phillip A. Washington, Chief Executive Officer

**CALLED TO ORDER at: 9:20 a.m.**

**ROLL CALL**

1. APPROVED Consent Calendar Items: 2, 5.1, 7, 8, 40, 12, 13, 14, 15, 16, 20, 24, 22, 23, 24, 26, 28, 37, 38, 40, 41 and 43.

Consent Calendar items were approved by one motion except for items 21 and 23 which were held by a Director for discussion and/or separate action and items 10, 22 and 40 which were carried over to the May Regular Board meeting due to absences and conflicts.

JH	PK	JDW	MB	KB	MRT	JF	EG	SK	JB	HS	AN	RG
A	A	Y	Y	A	A	Y	Y	A	Y	A	Y	Y

2. APPROVED ON CONSENT CALENDAR Minutes of the Regular Board 2017-0234 Meeting held March 23, 2017

3. RECEIVED Report by the Chair. 2017-0274

Director Ara Najarian announced dedication of a plaque at the Monrovia Maintenance Division and Gold Line Station in honor of Robert "Bob" Bartlett.

JH	PK	JDW	MB	KB	MRT	JF	EG	SK	JB	HS	AN	RG
A	A	P	P	A	A	P	P	A	P	A	P	P

4. RECEIVED Report by the Chief Executive Officer. 2017-0275

JH	PK	JDW	MB	KB	MRT	JF	EG	SK	JB	HS	AN	RG
A	A	P	P	A	A	P	P	A	P	A	P	P

- 5.1 APPROVED ON CONSENT CALENDAR Motion by Directors Solis, Garcia, Dupont-Walker and Hahn that the Board direct the CEO to: 2017-0270

- A. Based on preliminary designs, advance Item J of Motion 22.1 into environmental review independently from the I-710 Corridor Project;

Motion 22.1 - Item J: Upgrades to the existing Los Angeles River Bike Path consisting of safety, landscaping, hardscape, lighting and access enhancements and fix-it stations including to locations, between Ocean Blvd. [Long Beach] and its northern terminus at Slauson Avenue [Vernon];

(Item 5.1 – continued from previous page)

B. Establish a budget to advance Items J and G of Motion 22.1 into final design once they are cleared environmentally;

Motion 22.1 - Item G: Construction of a new, 8-foot, Class-I bike path and access points within the Los Angeles Flood Control District right-of-way on the western levee of the Los Angeles River Channel from the Pacific Coast Highway [Long Beach] to Imperial Highway [South Gate] to connect with the existing Los Angeles River Bike Path;

C. Identify all eligible funding sources and develop a funding and project delivery strategy to accelerate implementation of Items J and G of Motion 22.1.

D. Evaluate opportunities to streamline the timelines of Item J and G of Motion 22.1 with the Rail-to-Rail/River Project, AB530 Working Group, and the LA River Gap Closure Project (Downtown LA to Vernon); and

E. Report back to the board within 90 days.

7. AUTHORIZED ON CONSENT CALENDAR Contract Modification No. 2017-0067  
114 by Caltrans for **construction contract of the Segment 3 of the I-5 North Capacity Enhancements Project between SR-134 and SR-118** (Project) under the Funding Agreement No. MOU. P0008355/8501A/A6, in the amount of \$552,110.89, using non local fund sources.

8. AUTHORIZED ON CONSENT CALENDAR Contract Modifications 2017-0095  
No. 56-1 & No. 112 (CCO 56-1 & CCO 112) by Caltrans for the **construction contract of I-5 South Carmenita Road Interchange Improvements Project** (the Project) under the Funding Agreement No. MOU.P0006376A-03, in the total amount of \$4,300,000 within the LOP budget.

9. APPROVED: 2017-0098

A. \$11.8 million of additional programming within the capacity of the **Measure R Highway Subregional Programs** and funding changes via the updated project list, as shown in Attachment A;

- Highway Operational Improvements in Arroyo Verdugo
- Highway Operational Improvements in Las Virgenes Malibu
- I-405, I-110, I-105 and SR-91 Ramp and Interchange Imp. (South Bay)
- I-605 Corridor "Hot Spots" Interchange Imp. in Gateway Cities
- I-710 South and/or Early Action Projects in Gateway Cities

(Continued on next page)



(Item 9 – continued from previous page)

- B. AUTHORIZING the CEO or his designee to negotiate and execute all necessary agreements for approved projects; and
- C. RECEIVING AND FILING the **SR-138 Capacity Enhancements** (North County) project list as shown in Attachment B.

Director Ara Najarian introduced graduate students from USC School of Public Policy

JH	PK	JDW	MB	KB	MRT	JF	EG	SK	JB	HS	AN	RG
A	A	Y	Y	A	A	Y	Y	A	Y	A	Y	Y

**10. CARRIED OVER TO MAY REGULAR BOARD DUE TO ABSENCES AND CONFLICTS AWARDING:** 2017-0096

- A. three, three-year on-call contracts, Contract Nos. AE30673000, AE30673001, and AE30673002, to AECOM Technical Services, Inc., CH2M Hill, Inc., and Parsons Transportation Group, Inc., respectively, for a total not-to-exceed amount of \$30,000,000, for **Highway Program Project Delivery Support Services for Los Angeles County**, subject to resolution of protest(s), if any; and
- B. Task Orders within the approved not to exceed cumulative value of \$30,000,000.

**12. APPROVED ON CONSENT CALENDAR:** 2016-0499

- A. ADOPTING a Life of Project (LOP) Budget for \$1,407,900 for the Rail Vehicle Mist System Demonstration Project; and
- B. APPROVING the award and authorize the Chief Executive Officer to execute Contract No. OP3614100 to Knorr Brake Company, LLC for **one (1) prototype Red Line Heavy Rail Vehicle on-board mist fire suppression system** for a two-year period of performance for design, installation and evaluation of the systems for a fixed price amount of \$908,481 subject to resolution of protest, if any.

**13. AUTHORIZED ON CONSENT CALENDAR the Chief Executive Officer to negotiate and award All Risk Property and Boiler and Machinery insurance policies** for all property at the current policy limits at a not to exceed price of \$2.4 million for the 12-month period May 10, 2017 through May 10, 2018. 2017-0062

14. AUTHORIZED ON CONSENT CALENDAR the Chief Executive Officer 2017-0117  
to award indefinite delivery/indefinite quantity (IDIQ), firm fixed unit price  
contracts for a three-year initial term, with two, one-year options for the following  
contracts: 1) PS29117000 and PS29117001 to ASK-intTag, LLC. for Card  
Manufacturing & Adhesive Stickers; 2) PS29117002, PS29117003, and  
PS29117004 to Oberthur Technologies of America Corp. for Adhesive  
Stickers and Card Manufacturing and Fulfillment Services, and 3)  
PS29117005 to Giesecke & Devrient Mobile Security America, Inc. for  
Fulfillment Services effective July 1, 2017, for Metro and Municipal  
Operators. The total combined not-to-exceed amount for 3 base years  
and two one year options is \$26,915,910 (average cost per year \$5.4M)  
inclusive of sales tax for **TAP Card Manufacturing and Fulfillment  
Services**, as identified below:

- Card Manufacturing - Base: \$9,272,563, Option 1: \$3,090,854, Option 2: \$3,090,854 in the total NTE amount of \$15,454,271
- Fulfillment & Distribution- Base: \$6,858,983, Option 1: \$2,286,328, Option 2: \$2,286,328 in the total NTE amount of \$11,431,639
- Adhesive Stickers - Base: \$18,000, Option 1: \$6,000, Option 2: \$6,000 in the total NTE amount of \$30,000

15. AUTHORIZED ON CONSENT CALENDAR: 2017-0086

- A. ADOPTING the **Phase II Metro Bike Share Expansion** (Phase II Expansion) Environmental Analysis findings that the expansion qualifies for a Categorical Exemption under Section 15303 (Class 3) New Construction or Conversion of Small Structures (Attachment A);
- B. AUTHORIZING staff to file the Notice of Exemption for the Phase II Expansion;
- C. ADOPTING the Phase II Expansion Title VI and Environmental Justice Analysis findings that there is no Disparate Impact and no Disproportionate Burden associated with the expansion (Attachment B); and
- D. AUGMENTING the Life of Project budget for Phase II Expansion by \$1,713,000 to \$4,499,000 to include previously Board approved pre-launch related costs.

16. APPROVED ON CONSENT CALENDAR: 2017-0180
- A. APPROVING the SCRRA's request for additional funding for urgent structure and rail tie rehabilitation work up to \$18,381,025.
  - B. PROGRAMMING up to \$18,381,025 in **Measure R 3% funds**.
  - C. AUTHORIZING the Chief Executive Officer, or his designee, to negotiate and execute all necessary agreements between LACMTA and the SCRRA for the approved funding.

20. APPROVED ON CONSENT CALENDAR: 2017-0049
- A. release of **Round 5 of the Transit Oriented Development (TOD) Planning Grant Program**, offering an amount not to exceed \$3,100,000;
  - B. the Round 5 TOD Planning Grant Program Guidelines (Attachment A), which include the Transit Supportive Planning Toolkit and the creation of the Transit Oriented Communities Tax Increment Financing Pilot Program; and
  - C. ADOPTING AND CERTIFYING the Strategic Growth Council Final Grant Report as accurate.

21. AUTHORIZED EXTENDING THE EXISTING CONTRACT FOR 30 DAYS 2017-0140  
AND CARRYING OVER approval of **Metro's Second Revised Amended and Restated Joint Development Agreement ("JDA") with MacArthur Park Metro, LLC, ("MPM")** to: (a) extend the term of the JDA to December 31, 2017, and (b) allow Metro to terminate the JDA if Metro reasonably determines that the Ground Lease will not be executed prior to December 31, 2017 or that the mixed-use joint development project contemplated in the JDA (the "Phase B Project") is not feasible.

JH	PK	JDW	MB	KB	MRT	JF	EG	SK	JB	HS	AN	RG
A	A	Y	Y	A	A	Y	Y	A	Y	A	Y	Y

22. **CARRIED OVER TO MAY REGULAR BOARD DUE TO ABSENCES AND CONFLICTS** 2017-0144  
authorizing the Chief Executive Officer to execute an Exclusive Negotiations and Planning Agreement (ENA) with Trammell Crow Company and Greenland USA (Developer) for the **properties at North Hollywood Station (Site)**, for 24 months with the option to extend up to 30 months.

23. AUTHORIZED the Chief Executive Officer to: 2017-0152
- A. APPROVE Project Definition for Environmental Scoping including four Northern Alignment Options; and
  - B. RECEIVE AND FILE the **West Santa Ana Branch (WSAB) Transit Corridor Northern Alignment Options Screening Report.**

JH	PK	JDW	MB	KB	MRT	JF	EG	SK	JB	HS	AN	RG
A	A	Y	Y	A	A	Y	Y	A	Y	A	Y	Y

24. APPROVED ON CONSENT CALENDAR the formal commitment of 2017-0191  
 \$899.9 million of accelerated **Measure R funds to Westside Purple Line Extension Section 3 (WSPLE3)** to fulfill the Federal Transit Administration's financial rating requirements for Metro's New Starts project request of \$1.3 billion.

26. APPROVED ON CONSENT CALENDAR: 2017-0089
- A. the **Rail to Rail Active Transportation Corridor (ATC) Project** - Segment A Preliminary Design (Attachment A); the findings of the environmental analysis that the project qualifies for CEQA Categorical Exemption under Section 15307 (Class 4) Minor Alterations to Land; and file the Notice of Exemption (NOE) (Attachment B);
  - B. the Rail to River ATC - Segment B Locally Preferred Alternative, Randolph Street Alternative, as described in the Alternative Analysis (AA) (Attachment C) and advance into the Environmental Review/Clearance and Preliminary Design phase after more refined cost estimates for Segment A are developed from 30% design documents.

27. **CARRIED OVER TO MAY CONSTRUCTION COMMITTEE DUE TO ABSENCES AND CONFLICTS** the Chief Executive Officer (CEO) to execute a final Modification to Contract C1013R, with Skanska USA Civil West California District Inc., for the **design and construction of the west entrance at the North Hollywood Station on the Metro Red Line**, in the amount \$1,261,770, adjusting the total current contract price from \$15,743,901.61 to \$17,005,671.61 within the life of project budget. 2017-0137

28. AUTHORIZED ON CONSENT CALENDAR the Chief Executive Officer 2017-0138  
to execute a Modification to Contract No. C1043 with Griffith Company, for the  
**design and construction of the Universal City Pedestrian Bridge**, in the  
amount of \$450,000, increasing the total current contract value from \$24,264,752 to  
\$24,714,752 within the Life of Project budget.
37. AUTHORIZED ON CONSENT CALENDAR the Chief Executive Officer 2017-0158  
to award a 3-year, with two, one year options, firm fixed price Contract No.  
PS6224700 to **Mobility Advancement Group, for Metro's Mystery Rider  
Program** in the amount of \$565,516 for the (3) year base period and \$408,128  
for the (2) one year options, for a total contract amount of \$973,644, subject to  
resolution of protest(s), if any.
38. APPROVED ON CONSENT CALENDAR **amendment of Title 6, Chapter 2017-0206  
6-05 of the Los Angeles County Metropolitan Transportation Authority  
("Metro") Administrative Code** (the "Code"), otherwise known as the Metro  
Customer Code of Conduct, as set forth in Attachment A. The amended  
Code will become effective May 1, 2017.
40. **CARRIED OVER TO MAY REGULAR BOARD DUE TO ABSENCES AND 2017-0150  
CONFLICTS:**
- A. AWARD five (5) year, Indefinite Delivery/Indefinite Quantity  
Contract No. OP7396000 for a **Biomethane Gas Provider to  
Clean Energy Renewables**, the lowest responsive and  
responsible bidder for a not-to-exceed amount of \$1,240,520 for  
the base year (for one bus division as a pilot) and a not-to-exceed  
amount of \$54,808,110 for a four (4) year option, for a total  
contract amount of \$56,048,630 (for all bus divisions if the pilot is  
successful), subject to resolution of protest(s), if any; and
  - B. EXECUTE individual Task Orders (Transaction Confirmations) and  
changes within the Board approved contract amount.
41. ADOPTED ON CONSENT CALENDAR staff recommended positions: 2017-0201
- B. **AB 91 (Cervantes)** - High -Occupancy vehicle lanes **OPPOSE**
  - C. **AB 344 (Melendez)** -- Toll Evasion Violations **OPPOSE**
  - D. **AB 673 (Chu)** - Public transit operators: vehicle safety  
requirements **NEUTRAL**
  - E. **AB 695 (Bocanegra)** - Avoidance of on-track equipment  
**SUPPORT**
  - F. **AB 1454 (Bloom) / SB 768 (Allen)** - Transportation projects: lease  
agreements **SUPPORT**
  - G. **SB 422 (Wilk)** - Transportation projects: comprehensive  
development lease agreements **SUPPORT (Sponsor)**

43. APPROVED ON CONSENT CALENDAR Motion by Ridley-Thomas, 2017-0271 Fasana, Garcetti, Barger, Garcia and Dupont-Walker to direct the Chief Executive Officer, in consultation with appropriate Departments of the County of Los Angeles including the Probation Department, Children and Family Services Department, Office of Education, the Department of Workforce Development, Aging, and Community Services, Department of Public Social Services, and other appropriate entities, to report back to the Executive Management Committee during the June board cycle with a proposed framework for a pilot educational and vocational training program, specifically though not exclusively targeting youth involved in the County's Probation or Child Welfare System, with the objective of facilitating career pathways for local youth into Los Angeles County's transportation sector.

44. RECEIVED oral presentation on High Speed Rail Component of the High 2017-0184 Desert Corridor by High Desert Corridor Joint Powers Authority.

JH	PK	JDW	MB	KB	MRT	JF	EG	SK	JB	HS	AN	RG
A	A	P	P	A	A	P	P	A	P	A	P	P

45. CLOSED SESSION: 2017-0276

A. Conference with Legal Counsel - Existing Litigation - G.C. 54956.9(d)(1)

1. Fred Brown, et al. v. LACMTA, LASC Case No. BC574684

APPROVED settlement in the amount of \$800,000.

JH	PK	JDW	MB	KB	MRT	JF	EG	SK	JB	HS	AN	RG
A	A	Y	Y	A	A	Y	Y	A	Y	A	Y	Y

B. Conference with Labor Negotiator - G.C. 54957.6

Agency Designated Representative: Joanne Peterson or designee

Employee Organizations: SMART, ATU, TCU, AFSCME and Teamsters

NO REPORT.

(Continued on next page)

(Item 45 – continued from previous page)

C. Conference with Real Property Negotiator - G.C. 54956.8

1. Property Description: 1940 Century Park East, Los Angeles, CA  
Agency Negotiator: Carol A. Chiodo  
Negotiating Party: Vinci Academy L.L.C. (Tenant)  
Under Negotiation: Price and Terms

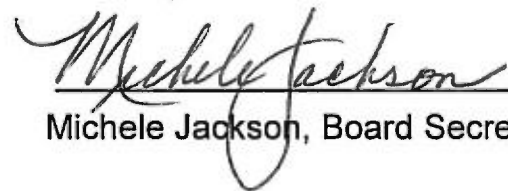
CARRIED OVER DUE TO ABSENCES AND CONFLICTS.

2. Property Description: 6101 Wilshire Boulevard, Los Angeles, CA  
Agency Negotiator: Velma C. Marshall  
Negotiating Party: AU Zone Investments #2  
Under Negotiation: Price and Terms

CARRIED OVER DUE TO ABSENCES AND CONFLICTS.

ADJOURNED at 10:51 a.m. in memory of William T. Coleman, Jr., Former U.S. Secretary of Transportation

Prepared by: Deanna Phillips  
Board Specialist



Michele Jackson, Board Secretary

**Board Report**

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**File #:** 2017-0151, **File Type:** Contract

**Agenda Number:** 6

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**AD-HOC CONGESTION, HIGHWAY AND ROADS COMMITTEE**

**MAY 17, 2017**

**CONSTRUCTION COMMITTEE**

**MAY 18, 2017**

**SUBJECT: I-5 SOUTH CAPACITY IMPROVEMENTS FROM ORANGE COUNTY LINE TO I-605  
(FUNDING AGREEMENT NO. MOU.P0004292A-3) - SEGMENT 5**

**ACTION: AUTHORIZE CONTRACT MODIFICATION**

**RECOMMENDATION**

AUTHORIZE Contract Modification No. 42 (CCO 42) by **State of California Department of Transportation (Caltrans) for the construction contract of the Segment 5 of I-5 South Capacity Improvements Project from Orange County Line to I-605** under the Funding Agreement No. MOU.P0004292A-3, in the total amount of \$1,700,000 within the LOP budget.

**ISSUE**

Segment 5 of the I-5 South Capacity Improvements Project is between San Gabriel River and Orr & Day Road in the Cities of Norwalk and Santa Fe Springs (Attachment A - Location Map). Segment 5 scope of work includes the demolition of the Orr & Day Bridge (the Bridge) over the Union Pacific (UP) railroad tracks.

During the demolition process, UP introduced a new requirement prohibiting the debris of the demolished bridge from falling directly onto the track protection system. Therefore Caltrans was required to modify the demolition method for the Bridge from conventional cracking of concrete onto the track protection system to saw cut & remove to comply with this new requirement.

CCO 42 is to cover the cost of additional effort to remove the Bridge.

The total amount of CCO 42 exceeds \$500,000 and requires Board authorization per the Staff Delegations of Contract Action Approval and Award Authority Memo, dated February 23, 2010.

**DISCUSSION**

In the original construction bid package, the Contractor submitted the common industrial and conventional method of bridge removal for the Bridge, which is to crack the bridge onto the track protection system and remove the debris. However, the submittal was rejected by UP based on a new requirement that stipulates no objects to fall directly onto the track protection system.



The Contractor, Caltrans, Metro and UP considered multiple possible alternatives and determined that saw-cutting and removing the Bridge in segments will provide for bridge stability and track protection, minimize impact to freight schedule, and fulfill the new UP requirement.

The approved methodology will be performed in two stages. In order to maintain the Bridge stability during the removal, the first stage is to saw-cut the bridge deck in designated depth into sections. The second stage will saw-cut each segment through the Bridge and remove the Bridge by sections. The same methodology will be used to remove the Bridge abutments.

CCO 42 is for the second stage of the Bridge removal. Due to the complexity of the removal process, a force account analysis was used to determine the cost.

### Findings

Authorization of CCO 42 in the amount of \$1,700,000 will allow Caltrans to complete demolition of the Bridge and prevent project delay.

### **DETERMINATION OF SAFETY IMPACT**

There is no impact to public safety by approving this action.

### **FINANCIAL IMPACT**

#### Impact to Budget

The current LOP budget of Segment 5 is \$211,671,000 of which \$95,566,000 is Federal funds (CMAQ), \$72,017,000 is State funds (RIP, GF-STIP, TCRP and SHOPP), and \$44,088,000 is local Prop C and Measure R funds. Funding of \$3,000,000 for FY 17 for this project is included in Account 54001 Subsidies to Others, in Cost Center 0442, under Project Number 460340. The change identified will not increase the project budget for the current fiscal year.

The total \$1.7 million cost of CCO 42 is within the FY 17 budget and overall LOP budget. Since this is a multi-year project/contract, the Senior Executive Officer and the Project Manager in Highway Program will be accountable for budgeting the cost in future years. Funding for this work will be provided from Measure R 20% Highway Capital funds, within the I-5 South Capacity Improvements from Orange County Line to I-605 (Line 27 of Measure R Expenditure Plan). This fund is not eligible for Metro bus and rail operations or capital projects.

### **ALTERNATIVES CONSIDERED**

The Board may choose not to approve the staff's recommendation. However, this disapproval would result in schedule delays and cost increases.

**NEXT STEPS**

Upon Board's approval of the recommended action, Metro staff will coordinate with Caltrans to expedite the changes to allow the project to move forward.

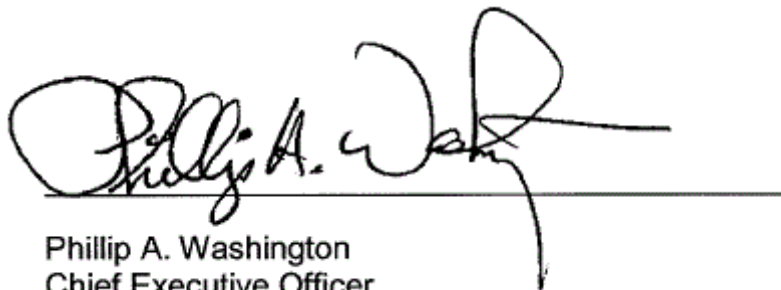
**ATTACHMENTS**

Attachment A - Location Map

Attachment B - Orr & Day Bridge

Prepared by: Victor Gau, Director of Engineering, Highway Program (213) 922-3031  
Abdollah Ansari, Senior Executive Officer, Highway Program (213) 922-4781  
Bryan Pennington, Deputy Chief Program Management Officer (213) 922-7449

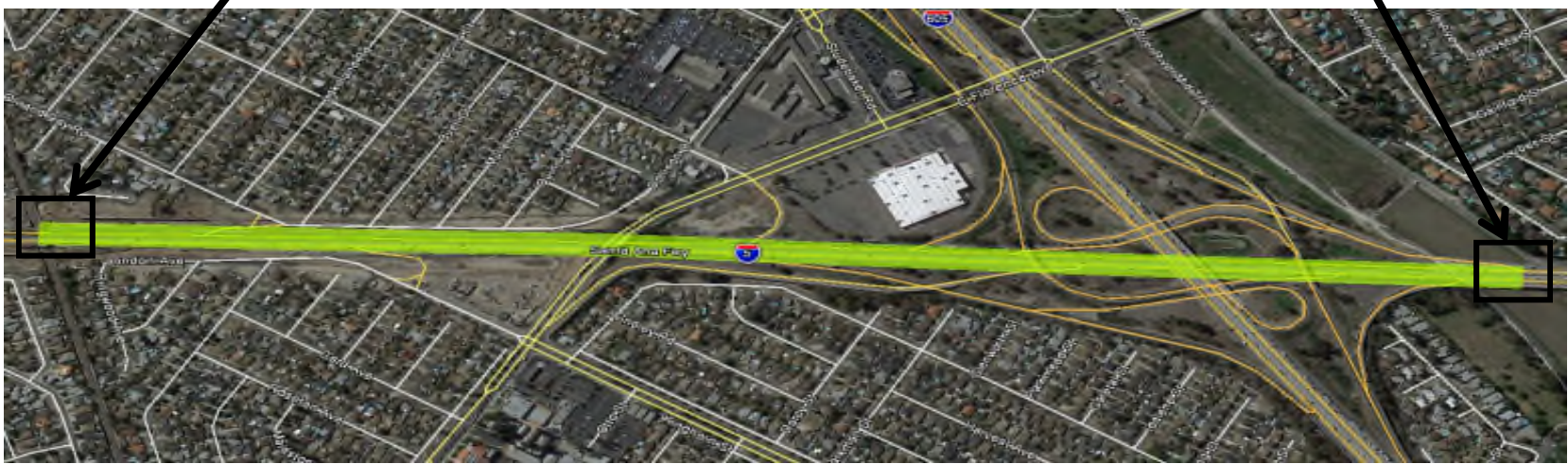
Reviewed by: Richard F. Clarke, Chief Program Management Officer (213) 922-7557



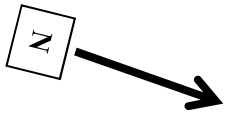
Phillip A. Washington  
Chief Executive Officer

**Orr & Day  
Bridge  
(Attachment B)**

**San Gabriel  
River**



**LOCATION MAP**





**ORR & DAY BRIDGE**

**Board Report**

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**File #:** 2017-0229, **File Type:** Contract**Agenda Number:** 7

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**AD-HOC CONGESTION, HIGHWAY AND ROADS COMMITTEE  
MAY 17, 2017  
CONSTRUCTION COMMITTEE  
MAY 18, 2017****SUBJECT: I-5 SOUTH CAPACITY IMPROVEMENTS FROM ORANGE COUNTY LINE TO I-605  
(FUNDING AGREEMENT NO. MOU.P0004292A-3)- SEGMENT 4****ACTION: AUTHORIZE CONTRACT MODIFICATION****RECOMMENDATION**

AUTHORIZE Contract Modification No. 115 (CCO 115) by **State of California Department of Transportation (Caltrans) for the construction contract of the Segment 4 of I-5 South Capacity Improvements Project from Orange County Line to I-605** under the Funding Agreement No. MOU.P0004292A-3, in the total amount of \$577,500 within the LOP budget.

**ISSUE**

Segment 4 (I-5 at Imperial Highway) and Segment 5 (I-5 at Florence Avenue) of the I-5 South Capacity Improvements Project are two adjacent projects. The Imperial Highway Project is from Orr & Day Road to Silverbow Avenue and the Florence Avenue Project is between Orr & Day Road and the San Gabriel River. (Attachment A - Location Map)

The construction stage 2C of Segment 4, which was designed to move the traffic to the outside lanes of the freeway in both directions to accommodate construction of inside lanes, was scheduled to begin on March 10, 2016 according to the updated baseline schedule approved by Caltrans. However, due to delays in the completion of the Orr & Day Bridge widening in Segment 5, traffic could not be switched as scheduled. Consequently, the start of construction stage 2C of Segment 4 was pushed back 212 work days from March 10, 2016 to February 1, 2017.

**DISCUSSION**

The start of construction stage 2C of Segment 4 depended on the completion of the Orr & Day Bridge widening in Segment 5.

The construction of Segment 5 was initially delayed by utility relocations. Furthermore, the review of the falsework and placement plans of Orr and Day Bridge widening by Union Pacific took longer than specified in the contract documents. The completion of the Orr & Day Bridge widening in Segment 5

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delayed the construction stage 2C of Segment 4 (the Imperial Project) from March 10, 2016 to February 1, 2017.

The Time Impact Analysis (TIA) submitted by the Contractor was analyzed and approved by Caltrans for 212 work days. Within these 212 work days, there were 17 rainy days and 20 non-compensable days, resulting in 175 compensable days at \$3,300 per day of the time related overhead (TRO) resulting in \$577,500 payable to the Contractor.

The total amount of CCO 115 exceeds \$500,000 and requires Board authorization per the Staff Delegations of Contract Action Approval and Award Authority Memo, dated February 23, 2010.

### Findings

Authorization of CCO 115 in the amount of \$577,500 will allow Caltrans to compensate the Contractor and avoid additional costs including interest payable on outstanding balance.

### **DETERMINATION OF SAFETY IMPACT**

There is no impact to public safety by approving this action.

### **FINANCIAL IMPACT**

#### Impact to Budget

The current LOP budget for Segment 4 of I-5 South Capacity Improvements from Orange County Line to I-605 is \$323,285,000 of which \$289,384,000 is State funds (RIP, GF-STIP, CMIA, TCRP and ITIP), and \$33,901,000 is local Prop C and Measure R funds. Funding of \$2,200,000 for FY 17 for this project is included in Account 54001 Subsidies to Others, in Cost Center 0442, under Project Number 460339. The change identified will not increase the project budget for the current fiscal year.

The total \$577,500 cost of CCO 115 is within the overall LOP budget, and will be paid from the Project State Funds. Therefore, there is no impact to Metro budget.

### **ALTERNATIVES CONSIDERED**

The Board may choose not to approve the staff's recommendation. However, this disapproval would result in cost increases.

### **NEXT STEPS**

Upon Board's approval of the recommended action, Metro staff will coordinate with Caltrans to expedite the changes to allow the project to move forward.


**ATTACHMENTS**

Attachment A - Location Map

Attachment B - Orr and Day Bridge

Prepared by: Victor Gau, Director of Engineering, Highway Program (213) 922-3031  
Aline Antaramian, Deputy Executive Officer, Highway Program (213) 922-7589  
Abdollah Ansari, Senior Executive Officer, Highway Program (213) 922-4781  
Bryan Pennington, Deputy Chief Program Management Officer (213) 922-7449

Reviewed by: Richard F. Clarke, Chief Program Management Officer (213) 922-7557



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Phillip A. Washington  
Chief Executive Officer



LOCATION MAP

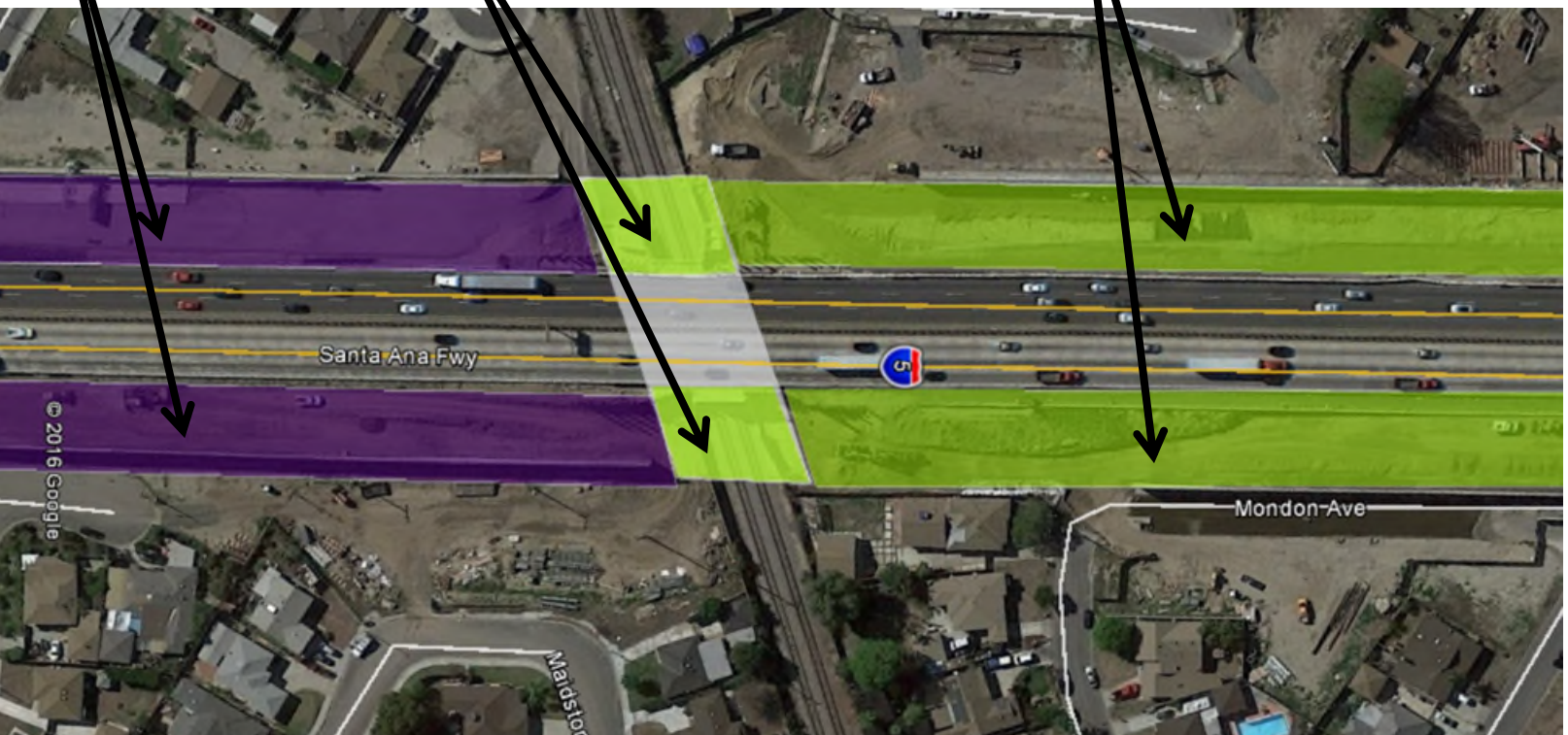


Segment 5  
Florence Avenue

Orr & Day Bridge

Segment 4  
Imperial Highway





Florence Avenue  
Project Widening  
Portion

Orr & Day Bridge  
Widening Portion

Imperial Highway  
Project Widening  
Portion  
(Stage 2C)

ORR & DAY BRIDGE



## Board Report

File #: 2017-0068, File Type: Contract

Agenda Number: 9

### FINANCE, BUDGET AND AUDIT COMMITTEE MAY 17, 2017

**SUBJECT: BANKING SERVICES**

**ACTION: AWARD CONTRACT**

#### **RECOMMENDATION**

AUTHORIZE:

- A. the Chief Executive Officer to execute a five-year, fixed unit rate Contract No. PS27736000 to **Bank of America for basic and specialized banking services**, in an amount-not-to-exceed \$2,328,909, effective July 1, 2017, subject to resolution of protest(s), if any; and
- B. the payment of up to \$320,000 over the next five years for **Federal Deposit Insurance Corporation (FDIC) assessment fees as mandated by 12 C.F.R. § 327.9 to cover insurance premiums for Metro's deposits**. This is an estimate based on historical experience. If FDIC increases the rate and the actual amount exceeds the estimate, staff will seek approval for a Contract modification.

The combined total cost of the Contract is a not-to-exceed \$2,648,909 over its entire life-cycle.

#### **ISSUE**

Metro requires basic banking services such as demand deposit accounts, safekeeping services, daily balance reporting, check processing, and electronic fund transfers (EFT), and specialized services including vault currency counting and custody services.

#### **DISCUSSION**

The current banking services contract expires on June 30, 2017. To ensure critical banking services are not interrupted, Metro must secure a successor service provider to meet its basic and specialized banking needs. The recommended firm, Bank of America, ranked highest in the areas most critical to Metro's needs including: instant access to images and data from lockbox deposits; a streamlined check printing system which allows direct download from Metro's Financial Information System; auto-stale dating of checks; a late cutoff time for same-day/next-day check printing that satisfies Metro's regulatory requirements for workers compensation payments; an extensive branch network in Los

Angeles County; and an experienced customer service team with government banking expertise.

Furthermore, Bank of America was separately scored the highest for their Small Business and Community Reinvestment Activities. Although no SBE/DVBE goal was established, Metro's DEOD noted that Bank of America had provided more small business loans within Los Angeles County in the past year, and is committed to participating in Metro's "How to Do Business" workshops. Overall, Bank of America was the highest rated proposer.

Aside from normal bank service charges, Metro must pay mandatory FDIC assessment fees that are collected by the bank as required by 12 C.F.R. § 327.9. The assessment fees provide deposit insurance protection for depositors of insured banks. The rate is set by the FDIC and is subject to change at any time. This rate increased significantly during the financial crisis in 2009, going from a monthly rate of 0.23% in September 2008 to 3.30% in March 2009. The rate declined to 1.09% in October 2011 and remained flat until September 2016 when the rate increased to 1.46% where it stands today. The assessment fee is calculated by applying the rate to the account's average ledger balance. The estimated \$320,000 five year total is based on the annual average fee of \$64,000 for the period of March 2013 to February 2017.

### **DETERMINATION OF SAFETY IMPACT**

The approval of the recommendation above will have no negative impact on the safety of Metro employees or passengers.

### **FINANCIAL IMPACT**

The funding of \$466,000 for banking services and \$64,000 for the FDIC assessment fee has been included in the FY18 budget in cost center 5210, Treasury Department. The funds are divided among three projects: 4% to Project 100002, Task 30.02; 43% to Project 300076, Task 30.02; and 53% to Project 610340, Task 30.02. Since this is a multi-year contract, the cost center manager and Assistant Treasurer will be accountable for budgeting its costs in future years.

### **Impact to Budget**

The sources of funds are Proposition A, Proposition C, and TDA Administration funds and Enterprise funds. The Prop A/C, TDA Admin funds are not eligible for bus or rail operations. The Enterprise funds are eligible for bus and rail operations.

### **ALTERNATIVES CONSIDERED**

The Board of Directors may choose not to authorize the contract award; however, this alternative is not recommended because banking services are a critical component of the effective management and control of Metro's financial assets and transactions (e.g., vendor invoice payments, payroll, and revenue collection, among many) that support daily operations and projects.

### **NEXT STEPS**

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Upon Board approval, staff will execute Contract No. PS27736000 to Bank of America for basic and specialized banking services, effective July 1, 2017.

**ATTACHMENTS**

Attachment A - Procurement Summary

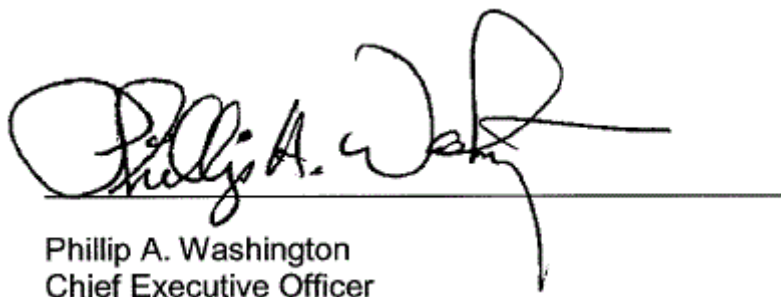
Attachment B - DEOD Summary

Prepared by: Jin Yan, Senior Financial Analyst, (213) 922-2127

Mary E. Morgan, Assistant Treasurer, (213) 922-4143

Reviewed by: Nalini Ahuja, Chief Financial Officer, (213) 922-3088

Debra Avila, Chief Vendor/Contract Management Officer, (213) 418-3051



Phillip A. Washington  
Chief Executive Officer

## PROCUREMENT SUMMARY

## BANKING SERVICES / PS27736000

1.	<b>Contract Number:</b> PS27736000	
2.	<b>Recommended Vendor:</b> Bank of America	
3.	<b>Type of Procurement (check one):</b> <input type="checkbox"/> IFB <input checked="" type="checkbox"/> RFP <input type="checkbox"/> RFP-A&E <input type="checkbox"/> Non-Competitive <input type="checkbox"/> Modification <input type="checkbox"/> Task Order	
4.	<b>Procurement Dates:</b>	
	<b>A. Issued:</b> October 26, 2016	
	<b>B. Advertised/Publicized:</b> October 26, 2016	
	<b>C. Pre-Proposal Conference:</b> November 7, 2016	
	<b>D. Proposals Due:</b> December 2, 2016	
	<b>E. Pre-Qualification Completed:</b> January 19, 2017	
	<b>F. Conflict of Interest Form Submitted to Ethics:</b> December 5, 2016	
	<b>G. Protest Period End Date:</b> May 22, 2017	
5.	<b>Solicitations Picked up/Downloaded:</b> 10	<b>Bids/Proposals Received:</b> 2
6.	<b>Contract Administrator:</b> Gregory Baker	<b>Telephone Number:</b> (213) 922-7577
7.	<b>Project Manager:</b> Jin Yan	<b>Telephone Number:</b> (213) 922-2127

**A. Procurement Background**

This Board Action is to approve Contract No. PS27736000 issued in support of basic and specialized banking services including daily balance reporting, payment processing, automated wire transfer, Automated Clearinghouse (ACH) and Electronic Fund Transfer (EFT) payments, coin and currency deposits, lockbox services, stop payments, remote deposit, and account reconciliation. Board approval of contract awards are subject to resolution of any properly submitted protest.

Request for Proposal (RFP) No. PS27736 was issued in accordance with Metro's Acquisition Policy and the contract type is a firm fixed unit rate. The RFP was issued with a 0% SBE goal due to lack of subcontracting opportunities.

Two amendments were issued during the solicitation phase of this RFP:

- Amendment No. 1, issued on November 10, 2016, clarified how proposers are required to submit the hard copies and electronic copies of the proposal, revised the proposal due date to December 2, 2016, deleted and replaced the Submittal Requirements to remove Merchant Card Services requirement and provided the Pre-Proposal Conference documentation;
- Amendment No. 2, issued on November 16, 2016, amended the Statement of Work under "Section B. Lockbox Services, Subsection 2 to correct the referenced Exhibit to Exhibit C – Price Schedule."

A pre-proposal conference was held on November 7, 2016, attended by 16 participants representing six banks, followed by a site walk of Metro's cash counting facility, where six pre-registered participants representing three banks attended. There were 50 questions asked and responses were released prior to the proposal due date.

A total of two proposals were received on December 2, 2016.

## **B. Evaluation of Proposals**

A Proposal Evaluation Team (PET) consisting of staff from Metro's Treasury, Accounting and Diversity and Economic Opportunity Departments was convened and conducted a comprehensive evaluation of the proposals received. The two proposals received are listed below in alphabetic order:

1. Bank of America (BoA)
2. Wells Fargo

The proposals were evaluated based on the following evaluation criteria and weights:

- |   |            |
|---|------------|
| • Workplan Approach   | 50 percent |
| • Experience and Capabilities of the Firms on the Contractor's Team | 10 percent |
| • Qualifications and Experience of Proposed Personnel               | 10 percent |
| • Small Business and Community Reinvestment Activities              | 10 percent |
| • Cost Proposal   | 20 percent |

Several factors were considered when developing these weights, giving the greatest importance to Workplan Approach.

The PET completed their independent evaluation of the technical proposals on December 15, 2016, and it was determined that Bank of America (BoA) was the highest ranked firm to render the required services.

### **Qualifications Summary of Firms within the Competitive Range:**

#### **BoA**

BoA is the incumbent and has provided Metro with banking services over the last ten years. BoA demonstrated broad experience within the transportation industry and dealing with public agencies. They clearly demonstrated their workplan approach in providing the requested banking services to Metro and presented a strong team that has over 100 years of combined experience. Additionally, BoA provided an extensive list of new programs and innovative approaches that can benefit Los

Angeles County residents and small businesses that included empowering entrepreneurs and women entrepreneurs.

**Wells Fargo**

Wells Fargo’s proposed team has sufficient experience in dealing with banking services for public agencies; however, they did not provide a well presented workplan approach, especially in areas around cut-off times for Lockbox and Depository Services, where a delay of one business day might occur before posting to Metro’s accounts.

A summary of the PET scores is provided below:

1	Firm	Average Score	Factor Weight	Weighted Average Score	Rank
2	<b>BoA</b>				
3	Workplan Approach	96.66	50.00%	48.33	
4	Experience and Capabilities of the Firm's on the Contractor's Team	94.20	10.00%	9.42	
5	Qualifications and Experience of Proposed Personnel	97.70	10.00%	9.77	
6	Small Business and Community Reinvestment Activities	76.50	10.00%	7.65	
7	Cost Proposal	72.70	20.00%	14.54	
8	<b>Total</b>		<b>100.00%</b>	<b>89.71</b>	<b>1</b>
9	<b>Wells Fargo</b>				
10	Workplan Approach	78.66	50.00%	39.33	
11	Experience and Capabilities of the Firm's on the Contractor's Team	75.70	10.00%	7.57	
12	Qualifications and Experience of Proposed Personnel	86.60	10.00%	8.66	
13	Small Business and Community Reinvestment Activities	69.90	10.00%	6.99	
14	Cost Proposal	100	20.00%	20.00	
15	<b>Total</b>		<b>100.00%</b>	<b>82.55</b>	<b>2</b>

**C. Cost/Price Analysis**

The recommended price has been determined to be fair and reasonable based upon technical analysis, price analysis, fact finding, and negotiations.

Metro staff successfully negotiated a cost savings of \$1,560,570.

	<b>Proposer Name</b>	<b>Proposal Amount</b>	<b>Metro ICE</b>	<b>Negotiated NTE amount</b>
1.	Bank of America	\$3,889,479	\$2,500,000	\$2,328,909
2.	Wells Fargo	\$2,828,438	\$2,500,000	

**D. Background on Recommended Contractor**

The recommended firm, BoA, located in Newport Beach, California, has been serving California for over 110 years. In 1982, the bank formed their Public Sector Banking group to address specific needs of federal, state and local government clients. The bank’s team has a combined total of 100+ years of treasury management experience, most of which has been with high-profile public sector clients. BoA is the incumbent on Metro’s current banking services contract.



DEOD SUMMARY

BANKING SERVICES / PS277736000

**A. Small Business Participation**

The Diversity and Economic Opportunity Department (DEOD) did not recommend a Small Business Enterprise (SBE) or Disabled Veterans Business Enterprise (DVBE) participation for this procurement based on a lack of subcontracting opportunities. However, in conjunction with the Treasury Department, DEOD developed evaluation criteria in the Request for Proposal to evaluate each Proposer's small business and community reinvestment activities and willingness to participate in Metro's small business "How to Do Business" workshops to provide information on small business lending.

As part of its proposal, Bank of America, committed to participate in Metro's small business workshop by providing a speaker to provide information on financial services and resources on financing to cash management. Upon Board approval of the subject award, DEOD will meet with Bank of America representatives to discuss its participation in the small business outreach workshop calendar.

**B. Living Wage and Service Contract Worker Retention Policy Applicability**

The Living Wage and Service Contract Worker Retention Policy is not applicable to this Contract.

**C. Prevailing Wage Applicability**

Prevailing wage is not applicable to this Contract.

**D. All Subcontractors Included with Recommended Contractor's Proposal**

No Subcontractors were included in Bank of America's proposal.

**E. Project Labor Agreement/Construction Careers Policy**

Project Labor Agreement/Construction Careers Policy is not applicable to this Contract.



## Board Report

File #: 2017-0252, File Type: Contract

Agenda Number: 10

**REVISED**  
**FINANCE, BUDGET AND AUDIT COMMITTEE**  
**MAY 17, 2017**

**SUBJECT: AUDIT SERVICES BENCH FY2018 TO FY2022**

**ACTION: AWARD BENCH CONTRACTS**

### **RECOMMENDATION**

AUTHORIZE the Chief Executive Officer to:

- A. AWARD five-year fixed rate bench Contract Nos. PS36627000 through PS36627018, with the firms listed in Attachment A, for **Management Audit Services**, for a not-to-exceed amount of \$6,864,000 for the base three-years, effective July 1, 2017 through June 30, 2020, plus \$2,288,000 for each of the two, one-year options, for a combined total amount not to exceed \$11,440,000, subject to resolution of protest(s), if any; and
- B. EXECUTE Task Orders under these Contracts for audit services in a total amount not-to-exceed \$11,440,000.

### **ISSUE**

Management Audit Services Department (Management Audit) has a recurring need for consulting and assurance services provided by certified public accounting (CPA) firms and other specialty firms. They provide consulting services relating to a broad range of audits and reviews including completion of the Board approved annual audit plan, assistance with CEO/Board requested assignments, staffing support for fluctuating workload requirements, and conduct of large and/or complex audits. The Multiple Award Agreement (bench) is necessary for two primary reasons: to provide specialized expertise and to augment Metro staff.

### **DISCUSSION**

We are required to comply with Generally Accepted Government Auditing Standards (GAGAS). GAGAS has a due professional care standard which requires Management Audit to bring in outside experts to supplement staff when the area being audited requires technical or specialized skills that are not available within the department. Co-sourcing is typically used to supplement staff when a sudden influx of time sensitive audits exceeds available resources. Outsourcing can be used

depending on the complexity of the audit or if the specialized skillsets are not available in-house. Audits that normally fall under this requirement include information technology audits and specialized audits such as construction projects and processes including cost estimating. Other areas of work outsourced or co-sourced to firms include CEO requested audits, Call-for-Projects closeout audits, Caltrans audits, other grant audits such as State Transportation Improvement Program, financial and compliance audits of ExpressLanes, PTSC-MTA Risk Management Authority, Crenshaw Project Corporation, etc., and audits of contracts for pre-award, incurred cost, settlement claims and Buy America.

Since this is a multiple award agreement, no firm has been guaranteed any work. The recommended not-to-exceed amount of \$11,440,000 is estimated for work needed over the next five years. The projected services are based upon historical work outsourced for audit services and work identified for outsourcing in the FY18 audit plan, in addition to other utilization of the bench by other departments.

### **DETERMINATION OF SAFETY IMPACT**

The approval of the recommendation above will have no negative impact on the safety of Metro employees or passengers.

### **FINANCIAL IMPACT**

Management Audit has requested approximately \$685,000 for this agreement in the proposed FY18 budget in cost center 2510 - Management Audit, under project 100001 - General Overhead. Since this is a multi-year agreement, the cost center managers, Chief Auditor and other Executive Officers will be accountable for budgeting the costs in future years.

#### **Impact to Budget**

The source of funds for Project 100001 is General Overhead funds, comprised of Federal, State and local funds. This fund is eligible for bus and rail operating costs.

### **ALTERNATIVES CONSIDERED**

Two alternatives were considered. One alternative would be to hire additional full-time staff to perform the audits. However, this alternative is not considered cost effective because the volume of work is constantly changing making this activity subject to peak periods alternating with periods of low activity. Further, some projects require various technical or specialized skills that are not available since it is not practical to hire staff for each of the particular skillsets. Another alternative would be to obtain the audit services as separate procurements. This also is not recommended, as this would prolong the procurement process making it difficult to complete time-sensitive audits within the planned timeframe. In addition, because of the frequency of task orders typically issued, this would require a substantial amount of procurement processing time.

### **NEXT STEPS**

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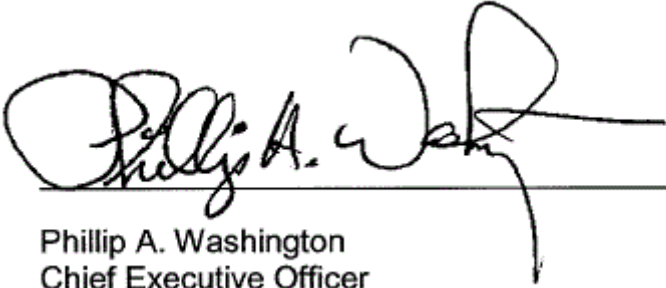
Upon Board approval, staff will proceed to establish the audit services bench contracts effective July 1, 2017, and work will be completed as needed on a task order basis.

**ATTACHMENT**

- A. Procurement Summary
- B. DEOD Summary

Prepared by: Monica Del Toro, Audit Support Manager, (213) 922-7494

Reviewed by: Diana Estrada, Chief Auditor, (213) 922-2161  
Debra Avila, Chief Vendor/Contract Management Officer, (213) 418-3051



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Phillip A. Washington  
Chief Executive Officer

## PROCUREMENT SUMMARY

## AUDIT SERVICES BENCH FY2018 TO FY2022 / PS36627000 – PS36627018

1.	<b>Contract Number:</b> PS36627000 through PS36627018	
2.	<b>Recommended Vendor:</b> (See Below)	
3.	<b>Type of Procurement (check one):</b> <input type="checkbox"/> IFB <input checked="" type="checkbox"/> RFP <input type="checkbox"/> RFP–A&E <input type="checkbox"/> Non-Competitive <input type="checkbox"/> Modification <input type="checkbox"/> Task Order	
4.	<b>Procurement Dates:</b>	
	<b>A. Issued:</b> January 17, 2017	
	<b>B. Advertised/Publicized:</b> January 17, 2017	
	<b>C. Pre-Proposal Conference:</b> February 13, 2017	
	<b>D. Proposals Due:</b> March 2, 2017	
	<b>E. Pre-Qualification Completed:</b> April 19, 2017	
	<b>F. Conflict of Interest Form Submitted to Ethics:</b> April 19, 2017	
	<b>G. Protest Period End Date:</b> May 22, 2017	
5.	<b>Solicitations Picked up/Downloaded:</b> 50	<b>Bids/Proposals Received:</b> 20
6.	<b>Contract Administrator:</b> Barbara A. Gatewood	<b>Telephone Number:</b> (213) 922-7317
7.	<b>Project Manager:</b> Diana Estrada, Chief Auditor	<b>Telephone Number:</b> (213) 922-2161

**A. Procurement Background**

This Board Action is to establish multiple award audit service Contracts for a five-year term, inclusive two one-year options. The Contracts will be effective July 1, 2017 with a cumulative total amount not to exceed \$11,440,000. The purpose of these Contracts is to provide audit support to Management Audit Services for large and/or technically complex audits, for assistance in the development of the annual audit work plans, and to assist with CEO/Board request assignments. These services will be performed on an “as-needed” basis for which task orders will be issued. Board approval of contract awards are subject to resolution of any properly submitted protest.

Request for Proposal (RFP) No. PS36627 was issued in accordance with Metro’s Acquisition Policy and the contract type is task order based. A pre-proposal conference was held on February 13, 2017 with 15 firms in attendance. Questions were received and responded to by Metro staff during the pre-proposal meeting and as part of the meeting minutes and solicitation amendments.

Two amendments were issued during the solicitation phase of this RFP:

- Amendment No. 1, issued on February 6, 2017, changed the Pre-Proposal Conference date from February 9, 2017 to February 13, 2017;
- Amendment No. 2, issued on February 23, 2017, clarified and made revisions to the Evaluation Criteria in the RFP.

## **B. Evaluation of Proposals**

A total of 20 proposals were received in response to this solicitation. The firms are listed below in alphabetical order.

BCA Watson Rice, LLP
Choi Hong Lee & Kang, LLP
Chung and Chung Accountancy
Conrad, LLP
CPC Financial, Inc.
Grant Thornton, Inc.
KNL Support Services
KPMG,LLP
Lopez and Company, LLP
MA and Associates, CPA
Macias Gini O'Connell, LLP
Moss Adams, LLP
Qiu Accountancy Corporation
RTJ, CPA, P.C.
Simpson and Simpson
Susan Hum, CPA
Talson Solutions, LLC
The David Lewis Company, LLP
TAP International, Inc.
Vasquez and Company, LLP

The Proposal Evaluation Team (PET) consisting of staff from Metro's Management Audit Services Department was convened and conducted a comprehensive technical evaluation of the proposals received.

The proposals were evaluated based on the pass/fail criteria listed below. For a firm to receive an award of a contract, the firm must "pass" each criterion as stated in the RFP.

- Degree of the Prime's Skills and Experience
- Experience and capabilities of Firm's On The Contractor's Team
- Effectiveness of Management Plan
- Understanding of Work and Appropriateness of Approach for Implementation

During the initial review of proposals, one of the 20 firms was eliminated from further evaluation. After evaluation of the proposals, including oral interviews of those firms that are new to Metro, it was determined that all 19 firms listed below were qualified to provide audit and/or specialty risk assessment services to Metro and were suitable to be selected as part of the audit bench. In addition, 11 of the 19 firms are Metro certified Small Business Enterprises (SBE).

These firms are listed below in alphabetical order:

No.	CONTRACT NO.	FIRM
1	PS36627000	BCA Watson Rice, LLP
2	PS36627001	Choi Hong Lee & Kang LLP
3	PS36627002	Chung and Chung Accountancy
4	PS36627003	Conrad, LLP
5	PS36627004	CPC Financial, Inc.
6	PS36627005	Grant Thornton, Inc.
7	PS36627006	KNL Support Services
8	PS36627007	KPMG, LLP
9	PS36627008	Lopez and Company, LLP
10	PS36627009	Macias Gini O'Connell, LLP
11	PS36627010	Moss Adams, LLP
12	PS36627011	Qiu Accountancy Corporation
13	PS36627012	RTJ, CPA, P.C.
14	PS36627013	Simpson and Simpson, LLP
15	PS36627014	Susan Hum, CPA
16	PS36627015	Talson Solutions, LLC
17	PS36627016	The David Lewis Company, LLP
18	PS36627017	TAP International
19	PS36627018	Vasquez and Company, LLP

### **BCA Watson Rice, LLP**

BCA Watson Rice LLP is located in Torrance, CA. The firm has been an active vendor on Metro's Audit Bench since 2008, under the name of Thompson, Cobb, Bazillio, Inc. BCA specializes in providing professional auditing services for both private and government agencies, and has also performed work for multiple transportation agencies. BCA Watson Rice is a certified SBE firm, has performed satisfactorily as a firm on the current Metro Audit Bench, and has worked on other projects within Metro's various business units.

### **Choi Hong Lee & Kang LLP**

Choi Hong Lee & Kang LLP, a non-SBE firm, was formed in 2007 and is located in Los Angeles, CA. This firm is new to Metro. Choi Hong Lee and & Kang, LLP specializes in performing audits for government and private firms. This firm specializes in performing financial accounting, accounts payable and receivable auditing services, taxation, and auditing of government grants.

### **Chung and Chung Accountancy Corp., CPA**

Chung and Chung Accountancy Corporation, CPAs is located in Walnut, CA. Chung and Chung have prior experience in government auditing and have been in business for over 15 years. This firm is a certified SBE, and has been on Metro's Audit Bench since 2012. Chung and Chung have performed successfully on audits as a sub-consultant for both BCA Watson Rice and Vasquez and Company.

### **Conrad, LLP**

Conrad, LLP, formed in 2011, is located in Lake Forest, CA and specializes in performing audits for government agencies. Conrad is a certified SBE firm and has performed work for Metro on its first audit bench contract awarded in 2008. Some staff members from Conrad, LLP came from a former bench contractor, Mayer Hoffman McCann. Staff that has performed on Metro's projects performed satisfactorily.

### **CPC Financial Services, Inc.**

CPC Financial Services, Inc. is located in Los Angeles, CA. This company is new to Metro, and is a certified SBE firm. CPC offers accounting, treasury operations, contract compliance audits, indirect expense rate audits and incurred cost audits.

### **Grant Thornton, Inc.**

Grant Thornton, Inc. is located in Los Angeles, CA and has been in business in California for nearly 40 years. This firm specializes in performing audits for government agencies and all types of specialized administrative and management consulting service. This firm has performed satisfactory work for Metro.

### **KNL Support Services**

KNL Support Services, founded in 1995, is located in Los Angeles, CA. KNL specializes in performing audits for government agencies. This firm is a certified SBE, is currently on the Metro bench and has performed satisfactory work for Metro.

### **KPMG LLP**

KPMG, LLP, has provided professional auditing services for more than 20 years. KPMG is located in Los Angeles, CA. KPMG, LLP is the independent U.S. member firm of KPMG International. This firm has provided professional audit and accounting services for Metro, and also has been a firm on Metro's Audit Services Bench since 2008. KPMG specializes in providing internal audits, grant audits, contract compliance and forensics, IT audits, and construction advisory services.

### **Lopez and Company, LLP**

Lopez and Company, LLP has been a participant on Metro's bench formerly as Vargas, Lopez and Company LLP, and recently as Lopez and Company, LLP. This firm is located in Corona, CA. Lopez and Company has been in business for over 20 years and has performed numerous audit engagements for Metro. Lopez is a certified SBE and is currently on Metro's Audit bench. Lopez and Company specializes in pre-award, performance, grant



and claims audits, and has provided augmentation services for Management Audit Services Department for Metro.

**Macias Gini O'Connell, LLP, (MGO).**

Macias Gini O'Connell, LLP (MGO) is located in Los Angeles, CA. MGO has been a participant on the Metro Audit Bench since 2008. MGO is not a certified SBE company. MGO specializes in project management, IT, grant reviews, performance audits, project management, financial audits, and specialized projects for private and government agencies.

**Moss Adams, LLP**

Moss Adams is located in Los Angeles, CA. Moss Adams is not a certified SBE company. This firm specializes in project management, IT, construction audits, financial capability reviews, accounting system reviews, and specialized projects for government, private and transportation agencies. Moss Adams is new to Metro's Audit Bench.

**Qiu Accountancy Corporation**

Qiu Accountancy Corporation is located in Los Angeles, CA. Qiu Accountancy Corporation is a certified SBE and has been a participant on Metro's bench since 2008. Qiu specializes in providing performance, financial, grant management, pre-award, contract compliance audits and also provides augmentation services for Management Audit Services. Qiu Accountancy Corporation has performed numerous audit task orders satisfactorily.

**RTJ, CPA, P.C.**

RTJ, CPA, P.C. is located in Playa Vista, CA. RTJ, CPA, P.C. is a certified SBE and has been a participant on Metro's bench since 2015. RTJ specializes in financial, performance, contract compliance and augmentation services.

**Simpson and Simpson, LLP**

Simpson and Simpson has been a participant on Metro's bench since 2001. This firm is located in Los Angeles, CA. Simpson and Simpson has been in business for over 40 years and has performed numerous audit engagements for Metro. Simpson and Simpson is not a certified SBE firm, and is on Metro's current bench. Simpson and Simpson have performed satisfactorily for Metro.

**Susan Hum, CPA**

Susan Hum, CPA is located in Los Angeles, CA. Susan Hum, CPA is new as a participant to Metro's Audit Bench. However, she has previously provided audit services with another bench firm, Simpson and Simpson. Susan has branched out on her own as a certified SBE and has had experience in working on several Metro projects, contract audits and contract compliance for Management Audit Services since 2010.

### **Talson Solutions, LLC**

Talson Solutions, LLC is located in Philadelphia, PA. The company has been in business over ten years. Talson Solutions is a new firm to Metro and specializes in design and construction audits, improvement of financial controls, program compliance and management, and risk assessments. Talson is a certified SBE firm.

### **The David Lewis Company, LLP**

The David Lewis Company, LLP is located in Woodland Hills, CA. The company has been in business over ten years, and is a firm on Metro's current Audit Bench. The David Lewis Company, LLP specializes in performing financial, grant, IT, entertainment, audit services, and provided augmentation services for Metro. The David Lewis Company, LLP is not a certified SBE firm.

### **TAP International**

Tap International is located in Sacramento, CA. Tap has been in business for over five years, and is currently a firm on Metro's Audit Bench. Tap specializes in performing financial, grant, IT special projects, health and safety, grant management, and also provides augmentation services for Metro. In addition to being on Metro's Audit Bench, Tap has contracted with other departments within Metro, and has performed audit services for both government and transportation agencies. Tap is a certified SBE firm with Metro.

### **Vasquez and Company, LLP**

Vasquez & Company, LLP is another company that has been a participant on Metro's bench since 2003. Vasquez & Company LLP has been in business since 1969 and has performed numerous projects for Metro, and other government and transportation agencies. The firm is located in Los Angeles, CA. Vasquez & Company is not a certified SBE firm. Vasquez & Company, LLP has performed satisfactory work for Metro.

## **C. Cost/Price Analysis**

Each proposer submitted fully burdened labor rates and the rates have been determined to be fair and reasonable based upon adequate price competition. Each individual task order will be competed and negotiated and will comply with all requirements of Metro Acquisition Policy, including the receipt of a proposal for the specific task, independent cost estimate, and technical evaluation before the task order is awarded.

## **D. Background on Recommended Contractor**

All 19 firms listed above are recommended for award. These firms have been evaluated and are determined to be responsive and responsible to work on Metro assignments on an as needed basis.

## DEOD SUMMARY

## AUDIT SERVICES BENCH FY2018 TO FY2022 / PS36627000 – PS36627018

**A. Small Business Participation**

The Diversity and Economic Opportunity Department (DEOD) established a 30% goal inclusive of a 27% Small Business Enterprise (SBE) and 3% Disabled Veteran Business Enterprise (DVBE) goal for this solicitation. Audit Services Bench Proposers were required to submit a “SBE/DVBE Affidavit” confirming their commitment to the 27% SBE and 3% DVBE goal. Additionally, Proposers were required to list all known SBE and DVBE firms that will perform any portion of the work without specific dollar commitments.

The Audit Services Bench is subject to the Small Business Prime (Set-Aside) Program requirements. Eleven of the nineteen bench participants are SBE primes. SBE and DVBE commitments will be determined based on the aggregate of all Task Orders awarded through the bench.

<b>Small Business Goal</b>	<b>SBE <u>27%</u> DVBE <u>3%</u></b>	<b>Small Business Commitment</b>	Various SBE and DVBE Commitments
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**Prime: CPC Financial Services, Inc.**

	<b>SBE/DVBE Subcontractors</b>	<b>% Committed</b>
1.	CPC Financial Services, Inc. (SBE Prime)	27%
2.	TBD (DVBE)	3%
<b>Total Commitment</b>		<b>TBD</b>

**Prime: Grant Thornton, LLP**

	<b>SBE/DVBE Subcontractors</b>	<b>% Committed</b>
1.	Lopez & Company, LLP (SBE)	27%
2.	347 Group, Inc. (DVBE)	3%
<b>Total Commitment</b>		<b>TBD</b>

**Prime: Susan Hum, CPA**

	<b>SBE/DVBE Subcontractors</b>	<b>% Committed</b>
1.	Susan Hum, CPA (SBE Prime)	100% <u>97%</u>
2.	TBD (DVBE)	3%
<b>Total Commitment</b>		<b>TBD</b>

**Prime: Simpson & Simpson, LLP**

	<b>SBE/DVBE Subcontractors</b>	<b>% Committed</b>
1.	Qiu Accountancy Corporation (SBE)	27%
2.	Dennis Nelson CPA APC (DVBE)	3%
<b>Total Commitment</b>		<b>TBD</b>

**Prime: BCA Watson Rice, LLP**

	<b>SBE/DVBE Subcontractors</b>	<b>% Committed</b>
1.	BCA Watson Rice, LLP (SBE Prime)	27%
2.	TBD (DVBE)	3%
<b>Total Commitment</b>		<b>TBD</b>

**Prime: TAP International**

	<b>SBE/DVBE Subcontractors</b>	<b>% Committed</b>
1.	TAP International (SBE Prime)	27%
2.	TBD (DVBE)	3%
<b>Total Commitment</b>		<b>TBD</b>

**Prime: RTJ CPA, P.C.**

	<b>SBE/DVBE Subcontractors</b>	<b>% Committed</b>
1.	RTJ CPA, P.C. (SBE Prime)	97%
2.	TBD (DVBE)	3%
<b>Total Commitment</b>		<b>TBD</b>

**Prime: Chung & Chung Accountancy Corp., CPAs**

	<b>SBE/DVBE Subcontractors</b>	<b>% Committed</b>
1.	Chung & Chung Accountancy Corp., CPAs (SBE Prime)	27%
2.	TBD (DVBE)	3%
<b>Total Commitment</b>		<b>TBD</b>

**Prime: KNL Support Services**

	<b>SBE/DVBE Subcontractors</b>	<b>% Committed</b>
1.	KNL Support Services (SBE Prime)	27%
2.	TBD (DVBE)	3%
<b>Total Commitment</b>		<b>TBD</b>

**Prime: Qiu Accountancy Corporation**

	<b>SBE/DVBE Subcontractors</b>	<b>% Committed</b>
1.	Qiu Accountancy Corporation (SBE Prime)	27%
2.	TBD (DVBE)	3%
<b>Total Commitment</b>		<b>TBD</b>

**Prime: Lopez and Company, LLP**

	<b>SBE/DVBE Subcontractors</b>	<b>% Committed</b>
1.	Lopez and Company, LLP (SBE Prime)	30%
2.	TBD (DVBE)	3%
<b>Total Commitment</b>		<b>TBD</b>

**Prime: Vasquez & Company, LLP**

	<b>SBE/DVBE Subcontractors</b>	<b>% Committed</b>
1.	BCA Watson Rice LLP (SBE)	27%
2.	Daniel R. Arguello (DVBE)	3%
<b>Total Commitment</b>		<b>TBD</b>

**Prime: Conrad, LLP**

	<b>SBE/DVBE Subcontractors</b>	<b>% Committed</b>
1.	Conrad, LLP (SBE Prime)	27%
2.	TBD (DVBE)	3%
<b>Total Commitment</b>		<b>TBD</b>

**Prime: Talson Solutions**

	<b>SBE/DVBE Subcontractors</b>	<b>% Committed</b>
1.	Talson Solutions (SBE Prime)	95%
2.	Compendium International (DVBE)	5%
<b>Total DVBE Commitment</b>		<b>TBD</b>

**Prime: The David Lewis Company, LLC**

	<b>SBE/DVBE Subcontractors</b>	<b>% Committed</b>
1.	The David Lewis Company, LLC (Prime)	27%
2.	TBD (DVBE)	3%
<b>Total DVBE Commitment</b>		<b>TBD</b>

**Prime: Choi Hong Lee & Kang, LLP**

	<b>SBE/DVBE Subcontractors</b>	<b>% Committed</b>
1.	Choi Hong Lee & Kang, LLP (Prime)	27%
2.	TBD (DVBE)	3%
<b>Total DVBE Commitment</b>		<b>TBD</b>

**Prime: Macias Gini & O'Connell LLP**

	<b>SBE/DVBE Subcontractors</b>	<b>% Committed</b>
1.	Macias Gini & O'Connell LLP (Prime)	27%
2.	TBD (DVBE)	3%
<b>Total DVBE Commitment</b>		<b>TBD</b>

**Prime: Moss Adams, LLP**

	<b>SBE/DVBE Subcontractors</b>	<b>% Committed</b>
1.	Moss Adams, LLP (Prime)	27%
2.	TBD (DVBE)	3%
<b>Total DVBE Commitment</b>		<b>TBD</b>

**Prime: KPMG, LLP**

	<b>SBE/DVBE Subcontractors</b>	<b>% Committed</b>
1.	KPMG, LLP (Prime)	27%
2.	TBD (DVBE)	3%
<b>Total DVBE Commitment</b>		<b>TBD</b>

**B. Living Wage and Service Contract Worker Retention Policy Applicability**

The Living Wage and Service Contract Worker Retention Policy is not applicable to this contract.

**C. Prevailing Wage Applicability**

Prevailing wage is not applicable to this contract.

**D. Project Labor Agreement/Construction Careers Policy**

Project Labor Agreement/Construction Careers Policy is not applicable to this contract.



## Board Report

File #: 2017-0183, File Type: Policy

Agenda Number: 11

**REVISED**  
**FARE SUBSIDY PROGRAM PUBLIC HEARING**  
**FINANCE, BUDGET AND AUDIT COMMITTEE**  
**MAY 17, 2017**  
**EXECUTIVE MANAGEMENT COMMITTEE**  
**MAY 18, 2017**

**SUBJECT: NEW LOW INCOME FARE SUBSIDY PROGRAM****ACTION: APPROVE RECOMMENDATIONS****RECOMMENDATION**

APPROVE:

- A. a new low income fare subsidy program to replace the Rider Relief Transportation Program (RRTP) and Immediate Needs Transportation Program (INTP), with an estimated year one budget of \$14 million, and;
- B. the Title VI Analysis for the new program.

**ISSUE**

We are consolidating and expanding our existing fare subsidy programs to increase subsidies and transit benefits to our low-income riders who need it the most.

The new program will focus on low income riders in Los Angeles County and is the merger of current fare subsidy programs, RRTP (Rider Relief Transportation Program) and INTP (Immediate Needs Transportation Program). The new program will incorporate the benefits offered separately under each program into a unified subsidy program for low-income individuals, while preserving special transit and taxi benefits for specific trip purposes through an agency-centered element. The program will utilize funds from the existing programs and additional Measure M revenues to offer additional subsidies to program participants, with a total estimated FY18 budget of \$14 million - \$5 million from INTP, \$5 million from RRTP, and a ~~projected~~ potential \$4 million in new sales tax revenues from at least 25% of the 2% of the Measure M funds for discounts to seniors and students (subject to Board approval of Measure M guidelines and future Board action to program funds). Future year budget will be adjusted based on Measure M revenues (current year receipts and any

unspent funds from prior year), as well as the \$10 million from the INTTP and RRTP.

All elements of the INTTP and RRTP operating guidelines including administration, cost and functions, as previously approved by the Board, will remain in effect until the new fare subsidy program is fully implemented and new third party administrators are in place.

The Title VI analysis performed for the new program found no disparate impact and no disproportionate burden. The full Title VI analysis is included in Attachment A.

## **BACKGROUND**

The proposed program reflects the culmination of a multi-year effort to improve the RRTP and INTTP which are 10 years and 25 years old, respectively. Over their duration, minor changes have been made to the programs but they have generally not kept pace with technological or policy advancements in the Metro system. The new program reflects the feedback, both formal and informal, of our customers, participating agencies, third party administrators, third party pass sales vendors, municipal operators, and affected Metro departments as to the efficiency and effectiveness of the two current programs. Formal customer and agency surveys together with detailed analysis of token utilization and coupon distribution/redemption, and the input of customers gathered throughout the years by Metro staff and program administrators were critical to the formulation of the new program elements. Key deficiencies in the current programs, namely level of benefits, reliance on physical fare media (tokens and coupons), limited access to redemption locations, and no TAP integration have been addressed in the new program.

In FY2015, per Board Motion, an APTA peer review panel was convened to evaluate the agency's fare restructuring strategies. As part of their process, the panel also reviewed the RRTP fare subsidy programs and offered some recommendations for their improvement. The new program incorporates these recommendations.

## **DISCUSSION**

The new program is built upon the successes and lessons learned of the current fare subsidy programs, INTTP and RRTP (please see Attachment B for program descriptions). The program will combine and increase benefits provided separately by each program today, while improving the customer's experience in applying for and utilizing program benefits. Projected efficiencies under the new program together with additional funds from Measure M will fund the expansion of subsidies to program participants, allowing Metro to provide more benefits to more low income riders. An estimated 50,000 individuals are served each month, receiving either tokens through the INTTP or pass discount coupons through the RRTP. The new program, at the \$14 million funding level, is projected to serve 66,000 customers each month.

### **Leveraging Measure M to Benefit Low Income Seniors and Students**



In order to best utilize the Measure M monies available for senior and student discounts, these limited funds will be directed toward fare discounts or free rides to low income seniors and low income students. With the fare subsidy program described below, Metro is aiming to maximize the impact of the Measure M 2% program by providing fare subsidy benefits to the senior and student transit riders who need it most.

<b>Current Program Benefits</b>				
<b>RRTP</b>				
Pass Type	Pass Amount	Current Subsidy Amount per month	Subsidized Pass Price	% Off Pass Price
Regular Fare 30 Day	\$100	\$10	\$90	10%
Regular Fare 7 Day* once a month	\$25	\$10	\$15	40%
College/Vocational Pass 30 Day	\$43	\$6	\$36	14%
Student 30 Day Pass	\$24	\$6	\$18	25%
Senior/Disabled 30 Day Pass	\$20	\$6	\$14	30%
<b>INTP</b>				
<ul style="list-style-type: none"> <li>Individual Benefits – Up to 20 tokens per month (average allocation is 10), or 2 taxi coupons (valued at \$11).</li> <li>Agency Benefits – Vouchers issued at agency discretion (value based on trip distance)</li> </ul>				
<b>Total Budget</b>	\$10 Million Annually			

Today, individuals must elect semi-annually in which program they wish to participate and, therefore, what subsidy they receive - pass discount or tokens. Additionally, any taxi coupon benefits they receive are deducted from their allowable token allotment for the month. Under the new program, there will not be a separate RRTP and INTP program. Low income individuals will be qualified annually and can choose a pass discount or ride benefit each month. Further, taxi allowances will be issued by approved agencies and will not impact an individual’s eligibility for transit assistance.

<b>New Low Income Program Benefits</b> <i>(to be phased in over the next 24 months)</i>				
<b>Individual Benefits (Choice of one each month)</b>				
Pass Type	Pass Amount	New Subsidy per Month	New Subsidized Pass Price	% Off Pass Price
Regular Fare 30 Day	\$100	\$24	\$76	24%
or	\$25	\$6	\$19	24%
Regular Fare 7 Day <i>(four weeks per month)</i>		<i>(four times per month)</i>		
College/Vocational Pass 30 Day	\$43	\$13	\$30	30%
Student 30 Day Pass	\$24	\$10	\$14	42%
Senior/Disabled 30 Day Pass	\$20	\$8	\$12	40%
20 Rides <i>(per month)</i>	<i>Option available as an alternative to pass purchase. Applicable to all rider categories</i>			
<b>Agency Benefits</b>				
<ul style="list-style-type: none"> <li>• Taxi Coupons and/or Vouchers, not counted against individual benefits above. Some short term transit benefits are anticipated as well (e.g., day passes).</li> </ul>				
<b>Total Budget</b>	<b>\$14 million in First Year</b>			

Key features of the new program relative to the RRTP and INTP include...

- Consolidation of Transit Benefits for Individuals - RRTP provides a discount off a weekly or monthly pass while the INTP provides tokens for individual trips. Individuals may not participate in both programs so they must choose to register in one or the other, receiving either the pass discount or tokens. The revised program will allow participants to choose which benefit meets their needs each month. The first purchase made on the customer’s TAP card in each month will determine how the benefit will be used for that month - monthly pass, weekly passes, or 20 rides. Further, very few types of trips or trip purposes qualify for tokens under the INTP program. The revised program will no longer consider trip purpose, making all trips transit eligible.
- Increased Subsidy Amount - RRTP provides \$10 off a full-fare pass, and \$6 off a reduced fare

(senior/disabled, college/vocational, or student) pass. INTP provides an average of 10 tokens (rides) per person per month. Under the new program, customers may choose between a pass discount that will increase to \$24 for full-fare customers and \$13, \$9, or \$8 for reduced fare; or, a monthly ride benefit of 20 rides.

- Simplify Participant Eligibility Process - Customers are required to appear in person twice a year for RRTP coupon distribution, and monthly for INTP token allocation. Under the revised program, participant eligibility will be determined once per year at any time during the year to allow the customer to receive benefits for twelve consecutive months.
- Allow Benefit to be Applied to the U-Pass Program - The new program will include provisions to allow students to apply their program benefit toward their U-Pass purchased from their college or university when not subsidized by the school.
- TAP Integration - Today subsidies are provided in the form of paper coupons (RRTP) and tokens (INTP). When fully implemented, the new program will provide participant benefits through a customer's enrolled TAP card, streamlining and improving the experience for customers, agencies, vendors, and Metro staff.
- New TAP Ride-Based Option - Tying customer benefits to a TAP card allows for a new ride fare product to replace the tokens issued under the INTP today. Under the revised program, the customer can choose either a discounted pass product or the TAP rides each month. This enhancement will allow the customer no receive full benefit of the Metro two hour transfer that is not supportable with the tokens used today.
- Convenient Access to Program Benefits - Customers will be able to utilize taptogo.net as well as the entire TAP vendor network for redeeming their pass or ride benefits under the revised program.
- Agency Sponsored Trips for Immediate Needs Travel - A portion of the program will be dedicated to agency-specific benefits, and will retain a trip purpose requirement like the INTP today. This portion will provide access to taxi services and/or short term/immediate need transit (e.g., 2 rides or Day Pass) through approved agencies/organizations like hospitals and shelters to provide trips categorized by mobility or health limitations, urgency, or safety. A member's enrollment in the transit subsidy element of the new program will not prevent them from receiving these services initiated by an agency on their behalf. We will work with interested parties, including Access and community stakeholders, over the next two years to investigate additional service delivery models to address specialized transportation needs for disadvantaged individuals, including older adults and people with disabilities.
- Incorporating APTA Peer Review Recommendations - In FY2015, per Board Motion an APTA peer review panel was convened to evaluate the agency's fare restructuring strategies. As part of their process, the panel also reviewed the RRTP program and offered some recommendation for the improvement of the program. The new program incorporates these recommendations.

### Implementation Timeline

The program will be phased in over the next two years, coinciding with the implementation of TAP enhancements to the regional vendor network. The first phase of the program will start with an increase in the subsidy value to be implemented during January 2018 coupon distribution. While monitoring the transit demand based on higher subsidy levels, we will modify the guidelines to correspond to the program revisions; evaluate and revise taxi service provisions; and work with the municipal operators participating in the RRTP. In FY19, we will also issue RFP for new administrators with a scope that is adapted to the functions and demands of the new program. Full implementation of the new program is contingent upon the completion of TAP enhancements and implementation of TAP vendor network improvements. Once completed, the vendor network will be capable of matching partial customer payments with the subsidy amount preloaded on their card and act upon their choice of fare instrument for the month. The current programs will continue their operation until the start of the new program.

### **DETERMINATION OF SAFETY IMPACT**

There is no discernible safety impact.

### **FINANCIAL IMPACT**

If the Board approves the program, FY18 funds for the Program will include \$10 million from INTP and RRTP and estimated \$4 million from Measure M 25% minimum of 2% for senior and student discounts (subject to Board approval of Measure M guidelines and future Board action to program funds). Since the \$4 million is an estimate, FY18 program budget will be adjusted based on actual proceeds of the Measure M revenues.

The FY18 proposed budget includes \$10 million, funded with Prop C 40%. Funding for the remaining \$4 million will be addressed once the Measure M funding guidelines have been approved.

### Impact to Budget

The new program would be funded with Prop C 40% Discretionary funds, and pending approval of Measure M funding guideline and Board programming of Measure M 2% allocated to ADA paratransit and senior and student discounts. Any funds not spent in the fiscal year would be available for the following year's budget. Should program participation grow to a level that cannot be supported within the funding estimates, staff will return to the Board for additional guidance.

### **ALTERNATIVES CONSIDERED**

The Board could elect not to approve these recommendations, and the additional Measure M funds could be channeled through either the existing RRTP or INTP programs to use the funds consistent

with the Measure M ordinance, or applied to another program/discount altogether. However, the benefits of the consolidated program with respect to higher benefit levels and an overall improved customer experience would not be realized.

### **NEXT STEPS**

1. Prepare for coupon value increase affecting coupons distributed starting in December 2017 for use in January 2018 and following months.
2. Revise agreements with municipal operator partners.
3. Continue development of system infrastructure to support new administrative processes in coordination with TAP Operation.
4. Identify pilot vendor locations for TAP enhancements, and overall vendor rollout strategy in coordination with TAP Operation.
5. Rebrand and market the new program, including a comprehensive outreach campaign to raise awareness of available discounts.
6. Prepare training materials for participating agencies.
7. Discuss coordination opportunities with other jurisdictions, including the County of Los Angeles, that provide subsidized transit passes to their constituents.
8. Issue RFP for new third party administrators.

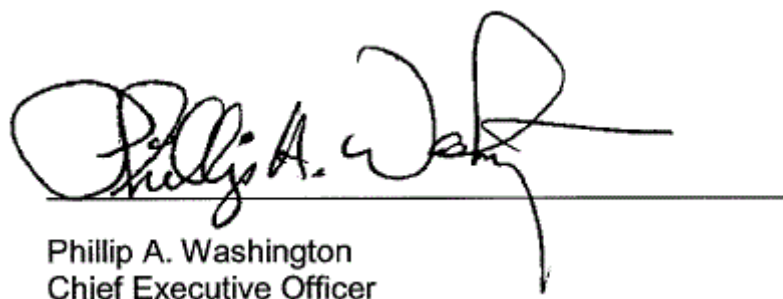
### **ATTACHMENTS**

Attachment A - Title VI/Environmental Justice Evaluation

Attachment B - Description of Current Fare Subsidy Programs

Prepared by: Kelly Hines, Deputy Executive Officer, (213) 922-4569  
Armineh Saint, Senior Manager, Transportation Planning, (213) 922-2369

Reviewed by: Nalini Ahuja, Chief Financial Officer, (213) 922-3088



Phillip A. Washington  
Chief Executive Officer

**TITLE VI / ENVIRONMENTAL JUSTICE EVALUATION  
PROPOSED CONSOLIDATION OF RIDER RELIEF & IMMEDIATE NEEDS  
PROGRAMS**

**Introduction**

Metro's Rider Relief program provides monthly transit subsidies to low income residents of cities and county unincorporated areas that do not offer such assistance to their residents. Coupons are provided to program participants that may be redeemed each month for a 30-Day Pass (EZ-Passes are also eligible) or a 7-Day Pass (if a Full Fare rider).

Metro's Immediate Needs program is administered directly to clients of several hundred social service agencies throughout the county. Metro contracts with FAME Assistance Corp. and International Institute of Los Angeles to manage and supervise these separate agencies. Assistance is provided on a pre-approved basis in the form of transit Tokens, taxi coupons, and taxi vouchers. Up to \$35 in transit Tokens may be provided to clients each month as well as provision of coupons or vouchers for taxi rides on a trip by trip basis.

Participants in both programs are subject to household income restrictions based upon the county's adopted poverty income guidelines, and cannot be otherwise eligible for Medical Assistance, City Ride, ASI, SHORE, or other General Relief transportation services.

**Proposed Action**

It is proposed to merge the transit benefits of both programs into a single, TAP-based program. The taxi benefits offered to some clients of the Immediate Needs program would be unaffected by this proposal. The transit benefits of both programs would be equalized, and may be broadened to include any county resident who meets the income guidelines, pending discussions with jurisdictions that offer similar benefits.

Because the new program would be TAP-based there would no longer be a need to maintain a Token program as the 20-ride alternative, which would be made available to everyone, could be implemented as a 20-ride credit to the TAP card. Furthermore, anyone choosing the 20-ride benefit would be able to take advantage of the free transfers afforded to any rider paying a single fare with a TAP card.

Additionally, the proposed program would offer increased subsidy benefits to anyone using the program to buy down the cost of a pass. For those choosing to apply the benefit to a 7-Day Pass, the proposed program would offer a subsidy toward four 7-Day

Passes within any month rather than the current program's limitation to one such pass in any month.

The existing transit benefits of both programs, and the proposed consolidated benefits of the proposed program, are depicted in Table 1.

TABLE 1

<b>CURRENT AND PROPOSED PROGRAM BENEFITS RIDER RELIEF &amp; IMMEDIATE NEEDS PROGRAMS</b>		
Rider Category	Current Benefit	Proposed Benefit
Full Fare Adult (Rider Relief)	\$10 Coupon usable for: - 30-Day EZ-Pass, or - 30-Day Pass, or - One(1) 7-Day Pass per month	\$24 TAP Credit usable for: - 30-Day EZ-Pass, or - 30-Day Pass, or - Four(4) 7-Day Passes (\$6 credit toward each per month), or - 20-ride TAP credit (equiv. of \$35)
Full Fare Adult (Immediate Needs)	Up to \$35 in Tokens (20 tokens)	
Senior/Disabled/ Medicare (Rider Relief)	\$6 Coupon usable for: - 30-Day EZ-Pass, or - 30-Day Pass	\$8 Coupon usable for: - 30-Day EZ-Pass, or - 30-Day Pass, or - 20-ride TAP credit (equiv. of \$7 to \$17)
Senior/Disabled/ Medicare (Immediate Needs)	Up to \$35 in Tokens (20 tokens)	
Student (K-12) (Rider Relief)	\$6 Coupon usable for: - 30-Day EZ-Pass, or - 30-Day Pass	\$10 Coupon usable for: - 30-Day EZ-Pass, or - 30-Day Pass, or - 20-ride TAP credit (equiv. of \$20)
Student (K-12) (Immediate Needs)	Up to \$35 in Tokens (20 tokens)	
College/Vocational (Rider Relief)	\$6 Coupon usable for: - 30-Day EZ-Pass, or - 30-Day Pass	\$13 Coupon usable for: - 30-Day EZ-Pass, or - 30-Day Pass, or - 20-ride TAP credit (equiv. of \$35)
College/Vocational (Immediate Needs)	Up to \$35 in Tokens (20 tokens)	

## Evaluation of Proposed Action

Since all of the participants in the Rider Relief and Immediate Needs programs will receive increased benefits under the proposed consolidated program, this evaluation will focus on any differences between program participants and other transit riders.

The demographics of Rider Relief and all Metro riders (System) are depicted in Table 2.

TABLE 2

RIDER RELIEF MINORITY & POVERTY PARTICIPATION				
	System	Program	Absolute % Diff.	Relative % Diff.
Minority Share	90.3%	94.3%	4.0%	4.4%
Poverty Share	59.1%	100.0%	40.9%	69.2%
Program Shares - FY2017 through Nov 2016				
System Shares from Spring 2016 Customer Satisfaction Survey				

Because Rider Relief participants have a higher minority participation than Metro's system there will be *no Disparate Impact* from providing added benefits to the group. Similarly, because all Rider Relief beneficiaries must have poverty level household incomes, the Poverty share of program beneficiaries is higher than the system share. Therefore, there will be *no Disproportionate Burden* imposed by the proposed program.

The demographics of Immediate Needs and all Metro riders (System) are depicted in Table 3.

TABLE 3

IMMEDIATE NEEDS MINORITY & POVERTY PARTICIPATION				
	System	Program	Absolute % Diff.	Relative % Diff.
Minority Share	90.3%	86.8%	-3.5%	-3.9%
Poverty Share	59.1%	100.0%	40.9%	69.2%
Program Shares - FY2017 through Jan 2017				
System Shares from Spring 2016 Customer Satisfaction Survey				



In this case, the Immediate Needs program has a lower minority participation than the Metro system. However, this difference is not considered significant because the absolute difference is less than 5% and the relative difference is less than 35% - the thresholds of significance adopted by the Metro Board for evaluating fare changes. Therefore, the proposed program will have *no Disparate Impact*. As was the case with the Rider Relief program, since all beneficiaries of these programs come from Poverty household there will be *no Disproportionate Burden* imposed by the proposed action.

## **Description of Current Fare Subsidy Programs**

### **Rider Relief Transportation Program**

The goal of establishing the RRTP was to help mitigate the impact of the fare adjustment on the neediest segment of the transit dependent population in Los Angeles County. The Program started its fare media distribution in April 2008, and in February 2009, the Board approved a motion to include the municipal operators who have raised their fares into the program. To date, ten operators have joined the program. Annually, \$5M is allocated for this program, the administrators of the program are FAME Assistance Corporation (FAC) and Human Services Association (HSA). Currently, the subsidies are \$10 for regular rider and \$6 for reduced fare riders (senior/disabled and students).

### **Immediate Needs Transportation Program**

LACMTA established the INTP in May 1992 and has budgeted \$5 million annually for it since 1993. FAME Assistance Corporation (FAC) and the International Institute of Los Angeles (IILA) are the administrators of the program. In total, there are approximately 600 agencies in the program that distribute bus tokens and taxi vouchers to persons with limited transportation resources. The media is used for trips to medical, shelter, case management, job search/interviews, food and other essential destinations. The eligible participants receive up to 20 tokens and/or 2 taxi coupons (total subsidy not to exceed \$35 a month).



## Board Report

File #: 2017-0013, File Type: Program

Agenda Number: 16

**REVISED**  
**SYSTEM SAFETY, SECURITY AND OPERATIONS COMMITTEE**  
**EXECUTIVE MANAGEMENT COMMITTEE**  
**MAY 18, 2017**

**SUBJECT: METRO PUBLIC ART STATE OF GOOD REPAIR REPORT AND PHASED APPROACH TO ART ASSET MANAGEMENT**

**ACTION: ~~RECEIVE AND FILE~~ APPROVE PHASED APPROACH TO ART ASSET MANAGEMENT**

### **RECOMMENDATION**

**APPROVE a phased approach to art asset management in response to October 2015 Board Motion (Attachment A).**

### **ISSUE**

At the October 2015 meeting, the committee directed staff to a) provide an annual report on the state of Metro's public artworks, b) dedicate a reasonable amount of funds towards maintenance and/or restoration of Metro's public artworks, c) include conservation and/or restoration of existing artworks in all future refurbishment projects, d) budget for maintenance of new artworks as they come online, e) create a regular maintenance plan for each Metro artwork, f) develop an action plan to restore Metro artworks that are not functioning as intended, including the restoration of artwork altered by the Blue Line Upgrades Project. This report provides the requested response.

### **DISCUSSION**

There are currently over 165 permanent artworks installed in Metro stations and facilities throughout the Los Angeles County and these artworks are an important part of the customer experience. While Operations staff regularly removes dust, dirt and debris from a number of artworks as part of their general station cleaning, the majority of the public artworks in the Metro system require special attention and care due to their unique nature and location (Attachment B).

#### **Phased Artwork Maintenance Plan for Existing Lines**

A phased approach to artwork maintenance and ongoing asset management is underway. Per Board direction, Metro began to address the backlog of deferred conservation and maintenance in FY17. The focus and priority has been on the Blue Line. Funds to replace artworks removed/altered by the Blue Line Upgrade Project have been secured and a proposal to refurbish the long non-functioning artwork in the Blue Line tunnel is under consideration as a FY18 Capital Project. A dedicated staff

person is assigned to Blue Line art asset management and has initiated artwork repairs, refurbishments and replacements. This staff member also is developing artwork inventories, condition assessments, and catalogued art documentation as well as preparing comprehensive care and maintenance plans tailored to each of the line's unique artworks. Consultants, including artists, conservators, fabricators and other specialized technicians assist with this work. Metro Art is now implementing regular ongoing Blue Line art asset care and management to ensure the artworks are kept in a state of good repair moving forward.

The next line being phased into a regular art asset management plan is the Red Line, which turns 25 this year. Staff will develop a phased plan to begin art asset management on the Red Line, including a request for additional staff resources in FY19 to address artwork repairs and refurbishments as well as annual inspections, care, and maintenance for the wide range of artworks along the line. Resources for the Green and Gold Lines will be requested as they reach their 20-25 year anniversaries, in FY 21 for the Green Line and FY23 for the Gold Line, as outlined in Attachment B.

There are several benefits to this phased line-by-line approach. With a large art program of 165 projects throughout the system, it allows staff to focus on the oldest art on the system first, and grow the Art Asset Management Program over time as resources are secured. Having a dedicated staff person assigned to care for all of the artworks on a particular line provides clear roles and responsibilities and follows the process of how Operations assigns their staff. Art Asset Project Managers will work directly with the broader Operations team to address site specific needs. They will also work directly with Construction staff to ensure retrofits and station modifications do not negatively impact the artworks as has occurred in the past.

### **New Lines**

In the future, when new lines become operational, art asset management resources should be established along with Operations staff and resource plans in order to ensure appropriate care and art asset management from the onset. Metro has traditionally only funded art program staff for capital project delivery and not for ongoing operational purposes. For example, when the Expo 2 and Foothill Extensions were opened, none of the positions included in the operations staffing plan were allocated to oversee and implement art asset management. Moving forward, staffing resources will be essential to care for the significant number of artworks that will be added to the system through new lines and facilities. As with other assets, once an artwork has fallen into disrepair, its deterioration accelerates and the cost of restoration increases, so it is best to manage that asset as it enters into service.

### **NEXT STEPS**

Staff will continue to pursue a phased art asset management approach and will work to ensure the aesthetic integrity and longevity of the systems art assets as resourced. Staff will work cross-departmentally to apply lessons learned and to ensure that care and management of artworks is included in future operational start up plans. As directed by the Board, staff will provide an annual report on the state of the agency's artworks.

### **ATTACHMENTS**

Attachment A - October 2015 Board Directive

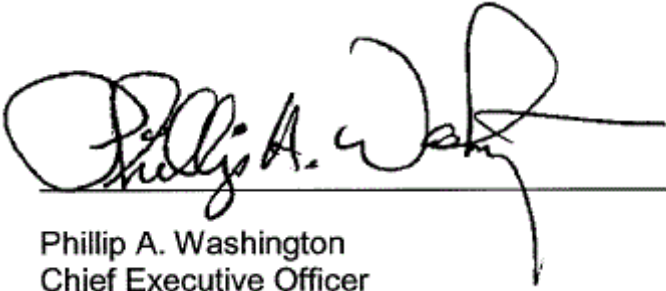
Attachment B - Metro Public Art Collection Asset Condition Report

Attachment C - Examples of Artwork in Need of Repair or Refurbishment

Attachment D - Art Asset Management Board Report Presentation

Prepared by: Maya Emsden, Deputy Executive Officer (213) 922-2720

Reviewed by: Pauletta Tonilas, Chief Communications Officer, (213) 922-3777



Phillip A. Washington  
Chief Executive Officer

**MOTION BY:**

**DIRECTOR JACQUELYN DUPONT-WALKER, SUPERVISOR SHEILA KUEHL  
AND DIRECTOR JOHN FASANA**

**MTA Operations Committee**

October 15, 2015

**Item 44: MTA Public Art**

MTA's public art is an important part of the customer experience.

Public art that is maintained in a state of good repair reinforces the fact that MTA is caring for its system and cares about the experience of its customers.

Conversely, public art that is not in a state of good repair reinforces a perception that MTA is not caring for its system and does not have regard for the experience of its customers.

The first public art in the MTA system was installed in 1991, nearly 25 years ago. Today, MTA has a total of 152 public artworks across all of its rail lines, Union Station, the Gateway Center complex, Division 9, Division 13, and other locations.

Currently, 19 of MTA's 152 public artworks are not functioning as intended due to various factors, including vandalism, electrical failure, and capital projects.

I, THEREFORE, MOVE that the Board instruct the CEO to:

- A. Provide an annual report on the state of MTA's public artworks.
- B. Beginning with the Fiscal Year 2017 budget, dedicate a reasonable amount of funds towards maintenance and/or restoration of MTA public artworks.
- C. Include conservation and/or restoration of existing MTA public artworks in all future line, station, and facility refurbishment projects.
- D. Budget additional funds as needed for maintenance of new MTA public artworks, such as artwork on the Expo Line Phase 2 and Gold Line Foothill Extension.
- E. Create a regular maintenance plan for each MTA public artwork.

CONTINUED

F. Develop an action plan to restore MTA public artworks that are not functioning as intended, including consideration of using remaining Blue Line Upgrades Project funding for the restoration of artwork altered by the Blue Line Upgrades Project.

G. Report back on all the above during the February 2016 MTA Board cycle.

###

## Metro Public Art Collection Asset Report

Metro Blue Line					
Station	Artist / Artwork Title / Components	Year Installed	Annual Maintenance Requirements	Condition Status	FY18 Action Plan
1	Blue Line Tunnel <i>Thomas Eatherton</i> <i>Unity</i> LED light sculpture installations	1991	NA	Not functioning as intended. Electronic artwork requires refurbishment of 82 lightworks.	FY18 Capital Budget has been requested to replace fiber-optic artwork with new, more efficient LED panels.
2	Wardlow <i>Jacqueline Dreager</i> <i>Great Gathering Place</i> Fiberglass, bronze and steel sculptures; Concrete and steel stools; Glass medallion with imagery	1992	Conduct detailed annual artwork inspection and cleaning. Document conditions. Biennial application of gel-coat and wax at fiberglass and bronze elements. Specialized or minor repairs when needed.	Fiberglass artwork sculptural elements are deteriorating.	Perform annual artwork inspections. Document artwork and produce detailed condition and corrective action report. Clean and apply gel-coat and wax at fiberglass and bronze elements
3	7th Street / Metro Center <i>Joyce Kozloff</i> <i>The Movies: Fantasies and Spectacles</i> Ceramic tile murals	1993	Conduct detailed annual artwork inspection and cleaning. Document conditions. Biennial application of sealant along grout. Specialized or minor repairs when needed.	Ceramic artwork tile is damaged.	Perform annual artwork inspections. Document artwork and produce detailed condition and corrective action report. Implement minor repairs, clean and seal grout.
4	7th Street / Metro Center <i>Roberto Gil de Montes</i> <i>Heaven to Earth</i> Ceramic tile murals	1993	Conduct detailed annual artwork inspection and cleaning. Document conditions. Biennial application of sealant along grout. Specialized or minor repairs when needed.	Ceramic artwork tile is damaged.	Perform annual artwork inspections. Document artwork and produce detailed condition and corrective action report. Implement minor repairs, clean and seal grout.
5	Pico <i>Robin Brailsford</i> <i>Time and Presence</i> Painted steel canopy panels	1993	Conduct detailed annual artwork inspection and cleaning. Document conditions. Biennial application of coatings. Specialized or minor repairs when needed.	Paint at artwork panels is fading.	Perform annual artwork inspections. Document artwork and produce detailed condition and corrective action report. Clean and re-coat panels.
6	San Pedro Street <i>Sandra Rowe</i> <i>Hope, Dream, Path, Focus, Belief</i> Patinated, etched, pigmented waxed bronze panels; stainless steel kinetic sculptures	1993	Conduct detailed annual artwork inspection, documentation and cleaning. Biennial application of sealant. Specialized or minor repairs when needed.	Paint at artwork panels has faded. Kinetic elements are damaged.	Perform annual artwork inspections. Document artwork and produce detailed condition and corrective action report. Clean and re-coat panels, repair kinetic elements.
7	Willowbrook / Rosa Parks <i>Joe Sam</i> <i>Hide-n-Seek</i> Painted steel sculpture	1993	Conduct detailed annual artwork inspection and cleaning. Document conditions. Biennial application of coatings. Specialized or minor repairs when needed.	Sculptures have sustained pigeon damage and paint has faded.	Perform annual artwork inspections. Document artwork and produce detailed condition and corrective action report. Clean and re-coat sculptures.
8	Grand / LATT <i>Mark Lere</i> <i>Who, What, Where?</i> Etched and paint filled granite tile paving; etched and paint filled concrete	1994	Completely removed as a result of Blue Line refurbishment Project. CP in place with Artist to replace artwork.	Artwork completely removed during Metro Blue Line Refurbishment Project.	Manage Artist contract to replace artwork. Scheduled completion FY18.
9	Vernon <i>Horace Washington</i> <i>A Tribute to Industry</i> Bronze and powder coated steel stools; galvanized steel benches; stainless steel and painted steel sculpture; ceramic tile	1994	Conduct detailed annual artwork inspection, documentation and cleaning. Biennial application of sealant. Specialized or minor repairs when needed.	Paint at artwork panels is fading.	Perform annual artwork inspections. Document artwork and produce detailed condition and corrective action report. Clean and re-coat sculptures, clean and seal grout tile.
10	103rd Street / Watts Towers <i>Roberto Salas</i> <i>Blue Line Totems in Red</i> Painted steel columns; ceramic tile	1994	Partially removed as a result of Blue Line refurbishment Project. CP in place with Artist to replace artwork.	Artwork partially removed during Metro Blue Line Refurbishment Project.	Manage Artist contract to replace artwork. Scheduled completion FY18.



Metro Blue Line					
Station	Artist / Artwork Title / Components	Year Installed	Annual Maintenance Requirements	Condition Status	FY18 Action Plan
11	Pacific Coast Highway <i>Joe Lewis</i> <i>Twelve Principals</i> Ceramic tile medallions	1994	Conduct detailed annual artwork inspection and cleaning. Document conditions. Biennial application of sealant along grout. Specialized or minor repairs when needed.	Artwork medallions require cleaning.	Perform annual artwork inspections. Document artwork and produce detailed condition and corrective action report. Implement minor repairs, clean and seal grout.
12	Anaheim Street Terry Braunstein <i>Local Odysseys</i> Porcelain enamel medallions	1994	Conduct detailed annual artwork inspection and cleaning. Document conditions. Specialized or minor repairs when needed.	Artwork medallions require cleaning.	Perform annual artwork inspections. Document artwork and produce detailed condition and corrective action report. Implement minor repairs and clean.
13	Slauson East Los Streetscapers <i>South Central Suite</i> Porcelain enamel panels; ceramic tile and pigmented concrete and ceramic tile murals	1995	Conduct detailed annual artwork inspection and cleaning. Document conditions. Biennial application of sealant along grout. Specialized or minor repairs when needed.	Ceramic artwork tile is damaged.	Perform annual artwork inspections. Document artwork and produce detailed condition and corrective action report. Implement minor repairs, clean and seal grout.
14	Compton Eva Cockcroft <i>Past, Present and Future</i> Ceramic tile panels; ceramic tile columns	1995	Conduct detailed annual artwork inspection and cleaning. Document conditions. Biennial application of sealant along grout. Specialized or minor repairs when needed.	Ceramic artwork tile is damaged.	Perform annual artwork inspections. Document artwork and produce detailed condition and corrective action report. Implement minor repairs, clean and seal grout.
15	5th Street Jim Isermann <i>Failed Ideals</i> Stain glass medallions	1995	Partially removed as a result of Blue Line refurbishment Project. CP in place with Artist to replace artwork.	Artwork partially removed during Metro Blue Line Refurbishment Project.	Manage Artist contract to replace artwork. Scheduled completion FY18.
16	1st Street Paul Tzanetopoulos <i>Breezy and Delightful</i> Porcelain enamel kinetic medallions	1995	Conduct detailed annual artwork inspection, documentation and cleaning. Biennial application of coatings and sealant. Specialized or minor repairs when needed.	Artwork medallions require cleaning. Kinetic elements are damaged.	Perform annual artwork inspections. Document artwork and produce detailed condition and corrective action report. Clean medallions panels, repair kinetic elements.
17	Downtown Long Beach Patrick Mohr <i>Angel Train</i> Anodized aluminum sculptures	1995	Conduct detailed annual artwork inspection and cleaning. Document conditions. Biennial application of sealant and wax. Specialized or minor repairs when needed.	Artwork requires cleaning and application of wax sealant.	Perform annual artwork inspections. Document artwork and produce detailed condition and corrective action report. Clean and apply sealant and wax.
18	Pacific Ave June Edmonds <i>We Know Who We Are</i> Glass mosaic medallions	1995	Conduct detailed annual artwork inspection and cleaning. Document conditions. Biennial application of sealant along grout. Specialized or minor repairs when needed.	Artwork medallions require cleaning.	Perform annual artwork inspections. Document artwork and produce detailed condition and corrective action report. Clean and apply sealant to grout.
19	Artesia Lynn Aldrich <i>Blue Line Oasis</i> Stainless steel and ceramic sculpture; glass mosaic tile, painted steel wishing well; glass mosaic panels	1996	Conduct detailed annual artwork inspection and cleaning. Document conditions. Biennial application of sealant along grout. Specialized or minor repairs when needed.	Ceramic, glass mosaic panels and sculpture are damaged.	Perform annual artwork inspections. Document artwork and produce detailed condition and corrective action report. Implement minor repairs, clean and apply sealant to grout.
20	Washington Elliot Pinkney <i>Running for the Blue Line</i> Painted steel panels; painted columns	1997	Conduct detailed annual artwork inspection and cleaning. Document conditions. Biennial application of coatings. Specialized or minor repairs when needed.	Paint has failed at artwork panels. Painted columns incorrectly painted system color.	Perform annual artwork inspections. Document artwork and produce detailed condition and corrective action report. Clean and re-coat sculptures.
21	Del Amo Colin Gray <i>Del Amo Wheel</i> Glass fiber reinforced concrete sculpture	1999	Conduct detailed annual artwork inspection, documentation and cleaning. Biennial application of coatings and sealant. Specialized or minor repairs when needed.	Visible graffiti and minor cracking at artwork surface.	Perform annual artwork inspections. Document artwork and produce detailed condition and corrective action report. Implement minor repairs, clean and apply sealant.

Metro Blue Line						
Station	Artist / Artwork Title / Components	Year Installed	Annual Maintenance Requirements	Condition Status	FY18 Action Plan	
22	7th Street / Metro Center	Rotating Artist <i>Rotating Photo Installations</i> Anodized aluminum, plexiglass, duratrans film	2001	Conduct detailed annual artwork inspection, documentation and cleaning. Annual cleaning and replacement of bulbs at the time of artwork rotation.	Ballast and polycarbonate require replacement.	Perform annual artwork inspections. Document artwork and produce detailed condition and corrective action report. Clean, replace polycarbonate facing, replace light bulbs, rotate artwork.
23	7th Street / Metro Center	K. Kobayashi, N. Korten & M. Perlas <i>Plantings</i> Pigmented concrete benches; cast aluminum, painted steel, gobos and electrical components	2002	Conduct detailed annual artwork inspection and cleaning. Document conditions. Specialized cleaning of gobos and electrical components, replacement of lighting. Biennial application of sealant. Minor repairs when needed.	All projection units are broken. Electrical is outdated and not functioning as intended. Expo Rail Line impacts altered artwork location.	Perform annual artwork inspections. Document artwork and produce detailed condition and corrective action report. Implement minor repairs, clean and apply sealant to grout.
24	Willowbrook / Rosa Parks	<i>Michael Massenburg, Robin Strayhorn</i> <i>Pathways To Freedom</i> Glass mosaic, ceramic tile and concrete benches	2002	Conduct detailed annual artwork inspection and cleaning. Document conditions. Biennial application of sealant along grout. Specialized or minor repairs when needed.	Benches are damaged.	Perform annual artwork inspections. Document artwork and produce detailed condition and corrective action report. Implement minor repairs, clean and apply sealant to grout.
25	Firestone	Ricardo Mendoza <i>The Will to Progress</i> Ceramic tile mural panels	2004	Conduct detailed annual artwork inspection and cleaning. Document conditions. Biennial application of sealant along grout. Specialized or minor repairs when needed.	Ceramic artwork tile is damaged.	Perform annual artwork inspections. Document artwork and produce detailed condition and corrective action report. Implement minor repairs, clean and seal grout.
26	Florence	Ricardo Duffy <i>A Florence Moment</i> Ceramic tile murals	2005	Conduct detailed annual artwork inspection and cleaning. Document conditions. Biennial application of sealant along grout. Specialized or minor repairs when needed.	Ceramic artwork tile requires cleaning.	Perform annual artwork inspections. Document artwork and produce detailed condition and corrective action report. Clean and seal grout.
27	Willow	Merge Conceptual Design <i>Out of Sight</i> Glass canopy with laminated imagery, GFRC bench	2006	Conduct detailed annual artwork inspection, documentation and cleaning. Biennial application of sealant. Specialized or minor repairs when needed.	Bench is damaged.	Perform annual artwork inspections. Document artwork and produce detailed condition and corrective action report. Implement minor repairs, clean and seal.
28	Willowbrook / Rosa Parks	Judy Baca <i>Metate Bench</i> GFRC benches with ceramic tile	2008	Conduct detailed annual artwork inspection, documentation and cleaning. Biennial application of sealant. Specialized or minor repairs when needed.	Bench is damaged.	Perform annual artwork inspections. Document artwork and produce detailed condition and corrective action report. Implement minor repairs, clean and seal.

Metro Red Line					
Station	Artist / Artwork Title / Components	Year Installed	Annual Maintenance Requirements	Condition Status	FY19 Proposed Action Plan
29	Union Station Christopher Sproat <i>Union Chairs</i> Granite benches	1993	Conduct detailed annual artwork inspection and develop condition report. Document conditions and develop Maintenance Requirements. Specialized or minor repairs when needed.	Graffiti etchings at granite benches. Artwork is grimy, in need of cleaning.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.
30	Union Station Terry Schoonhoven <i>Traveler</i> Ceramic tile mural	1993	Conduct detailed annual artwork inspection, documentation and cleaning. Biennial application of coatings and sealant. Specialized or minor repairs when needed.	Artwork is grimy, in need of cleaning.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.
31	Union Station Cynthia Carlson <i>LA: City of Angels</i> Hand painted mural with reliefs	1993	Conduct detailed annual artwork inspection and cleaning. Document conditions. Biennial application of gel-coat and wax at fiberglass and bronze elements. Specialized or minor repairs when needed.	Artwork mural requires lighting.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.
32	Civic Center / Grand Park Johnathan Borofsky <i>I Dreamed I Could Fly</i> Hand painted fiberglass sculpture; audio playback system; spotlights	1993	Conduct detailed annual artwork inspection, documentation and cleaning. Biennial application of coatings and software update at audio component. Specialized or minor repairs when needed.	Artwork is grimy, in need of cleaning and lighting replacement. Audio component requires software update.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.
33	Pershing Square Stephen Antonakos <i>Neons for Pershing Square</i> Neon sculptures	1993	Conduct detailed annual artwork inspection, documentation and cleaning. Biennial replacement of Neon Transformers. Specialized or minor repairs when needed.	Artwork is grimy, in need of cleaning. Neon transformers are in need of replacement.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.
34	Westlake / MacArthur Park Francisco Letelier <i>El Sol/La Luna</i> Ceramic tile murals	1993	Conduct detailed annual artwork inspection, documentation and cleaning. Biennial application of coatings and sealant. Specialized or minor repairs when needed.	Water intrusion at station at walls impacting Artwork mural. Artwork is grimy, in need of cleaning and sealant.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.
35	Westlake / MacArthur Park Therman Statom <i>Into the Light</i> Glass skylight; acrylic, aluminum, stainless steel and painted steel sculptures; ceramic tile	1993	Conduct detailed annual artwork inspection, documentation and cleaning. Biennial replacement of lighting. Specialized or minor repairs when needed.	Artwork is grimy, in need of cleaning and lighting replacement.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.
36	Vermont / Santa Monica Robert Millar <i>Untitled</i> Text painted on walls throughout; aluminum and polycarbonate panels; colored lighting	1993	Conduct detailed annual artwork inspection, documentation and cleaning. Biennial application of coatings and sealant. Specialized or minor repairs when needed.	Lighting component (entrance lighting) is outdated and requires complete renovation. Artwork is grimy, in need of cleaning.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.
37	Wilshire / Vermont Peter Shire <i>Los Angeles Seen</i> Painted steel and stainless steel sculptures	1996	Conduct detailed annual artwork inspection, documentation and cleaning. Biennial application of coatings and sealant. Specialized or minor repairs when needed.	Kinetic motorized component not working. Artworks in need of major cleaning.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.

Metro Red Line					
Station	Artist / Artwork Title / Components	Year Installed	Annual Maintenance Requirements	Condition Status	FY19 Proposed Action Plan
38	Vermont / Beverly George Stone <i>Untitled</i> Glass fiber reinforced concrete sculptural rock formations	1999	Conduct detailed annual artwork inspection, documentation and cleaning. Biennial application of coatings and sealant. Specialized or minor repairs when needed.	Graffiti damage. Artwork is grimy, in need of cleaning and lighting replacement.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.
39	Vermont / Sunset Michael Davis <i>Ecliptic/Illume</i> Porcelain, stainless steel, illumination	1999	Conduct detailed annual artwork inspection, documentation and cleaning. Biennial application of coatings and sealant. Specialized or minor repairs when needed.	Lighting component is not functioning. Artwork is grimy, in need of cleaning.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.
40	Hollywood / Western May Sun <i>Untitled</i> Painted aluminum and polycarbonate sculptures; lighting; terrazzo and copper paving murals; etched granite; patinated bronze; ceramic tile throughout	1999	Conduct detailed annual artwork inspection, documentation and cleaning. Biennial replacement of lighting and application of coatings and sealant. Specialized or minor repairs when needed.	Graffiti damage. Artwork is grimy, in need of cleaning and lighting replacement.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.
41	Hollywood / Vine Gilbert "Magu" Lujan <i>Hooray for Hollywood</i> Painted fiberglass and pigmented concrete benches, hand painted ceramic tiles	1999	Conduct detailed annual artwork inspection, documentation and cleaning. Biennial replacement of lighting and application of coatings and sealant. Specialized or minor repairs when needed.	All platform sculptural elements damaged and removed.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.
42	Hollywood / Highland Sheila Klein <i>Underground Girl</i> Painted aluminum fixtures, electrical; aluminum and stainless sculpture	2000	Conduct detailed annual artwork inspection, documentation and cleaning. Biennial replacement of lighting and application of coatings and sealant. Specialized or minor repairs when needed.	Electronic artwork not working. Artwork is grimy, in need of cleaning and lighting replacement.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.
43	Universal City / Studio City Margaret Garcia <i>Tree of Califas</i> Carved ceramic tile; stainless steel, painted steel and granite benches; laminated imagery	2000	Conduct detailed annual artwork inspection, documentation and cleaning. Biennial application of coatings and sealant. Specialized or minor repairs when needed.	Artwork is grimy, in need of cleaning and sealant.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.
44	North Hollywood Anne Marie Karlsen <i>Kaleidoscope Dreams</i> Ceramic tile	2000	Conduct detailed annual artwork inspection, documentation and cleaning. Biennial replacement of lighting and application of coatings and sealant. Specialized or minor repairs when needed.	Graffiti damage. Artwork is grimy, in need of cleaning and lighting replacement.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.
45	7th Street / Metro Center Rotating Artist <i>Rotating Photo Installations</i> Anodized aluminum, plexiglass, duratrans film	2001	Conduct detailed annual artwork inspection, documentation and cleaning. Annual cleaning and replacement of bulbs at the time of artwork rotation.	Ballast and polycarbonate require replacement.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.
46	Vermont / Beverly Rotating Artist <i>Rotating Photo Installations</i> Anodized aluminum, plexiglass, duratrans film	2001	Conduct detailed annual artwork inspection, documentation and cleaning. Annual cleaning and replacement of bulbs at the time of artwork rotation.	Ballast and polycarbonate require replacement.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.

Metro Red Line					
Station	Artist / Artwork Title / Components	Year Installed	Annual Maintenance Requirements	Condition Status	FY19 Proposed Action Plan
47	Hollywood / Highland Rotating Artist <i>Rotating Photo Installations</i> Anodized aluminum, plexiglass, duratrans film	2001	Conduct detailed annual artwork inspection, documentation and cleaning. Annual cleaning and replacement of bulbs at the time of artwork rotation.	Ballast and polycarbonate require replacement.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.
48	Universal City / Studio City Rotating Artist <i>Rotating Photo Installations</i> Anodized aluminum, plexiglass, duratrans film	2001	Conduct detailed annual artwork inspection, documentation and cleaning. Annual cleaning and replacement of bulbs at the time of artwork rotation.	Ballast and polycarbonate require replacement.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.
49	7th Street / Metro Center K. Kobayashi, N. Korten & M. Perlas <i>Plantings</i> Pigmented concrete benches; cast aluminum, painted steel, gobos and electrical components	2002	Conduct detailed annual artwork inspection, documentation and cleaning. Annual cleaning and replacement of bulbs at the time of artwork rotation.	Ballast and polycarbonate require replacement.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.
50	Civic Center / Grand Park Peter Requam <i>Civic Center Benches</i> Granite benches	2004	Conduct detailed annual artwork inspection and develop condition report. Document conditions and develop Maintenance Requirements. Specialized or minor repairs when needed.	Graffiti etchings at granite benches. Artwork is grimy, in need of cleaning.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.
51	Civic Center / Grand Park Samm Kunce <i>In the Living Rock</i> Glass mosaic and granite murals	2004	Conduct detailed annual artwork inspection and develop condition report. Document conditions and develop Maintenance Requirements. Specialized or minor repairs when needed.	Graffiti etchings at granite artwork. Artwork is grimy, in need of cleaning.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.
52	Vermont / Santa Monica George Legrady <i>Kinetic Flow</i> Porcelain enamel mural	2006	Conduct detailed annual artwork inspection and develop condition report. Document conditions and develop Maintenance Requirements. Specialized or minor repairs when needed.	Minor damage at artwork face. Artwork is grimy, in need of cleaning.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.
53	Civic Center Station Faith Ringgold <i>People Portraits: in Creativity, Performing, Sports &amp; Fashion</i> Glass mosaic panels	2010	Conduct detailed annual artwork inspection and develop condition report. Document conditions and develop Maintenance Requirements. Specialized or minor repairs when needed.	Artwork is grimy, in need of cleaning and sealant.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.
54	Westlake / MacArthur Park Sonia Romero <i>MacArthur Park, Urban Oasis</i> Hand carved porcelain mosaic panels	2010	Conduct detailed annual artwork inspection and develop condition report. Document conditions and develop Maintenance Requirements. Specialized or minor repairs when needed.	Water intrusion at station at walls impacting Artwork mural. Artwork is grimy, in need of cleaning and sealant.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.
55	Vermont / Beverly Tyree Guyton <i>People in Motion</i> Glass mosaic mural	2010	Conduct detailed annual artwork inspection and develop condition report. Document conditions and develop Maintenance Requirements. Specialized or minor repairs when needed.	Artwork is grimy, in need of cleaning and sealant.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.
56	Universal City / Studio City Stephen Johnson <i>Untitled</i> Glass mosaic mural	2010	Conduct detailed annual artwork inspection and develop condition report. Document conditions and develop Maintenance Requirements. Specialized or minor repairs when needed.	Artwork is grimy, in need of cleaning and sealant.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.

Metro Red/Purple Line						
	Station	Artist / Artwork Title / Components	Year Installed	Annual Maintenance Requirements	Condition Status	FY19 Proposed Action Plan
57	Wilshire / Normandie	Frank Romero <i>Festival of Masks Parade</i> Painted aluminum mural	1996	Conduct detailed annual artwork inspection and develop condition report. Document conditions and develop Maintenance Requirements. Specialized or minor repairs when needed.	Artwork is grimy, in need of cleaning and sealant.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.
58	Wilshire / Western	Richard Wyatt <i>People Coming People Going</i> Ceramic tile murals	1996	Conduct detailed annual artwork inspection and develop condition report. Document conditions and develop Maintenance Requirements. Specialized or minor repairs when needed.	Artwork is grimy, in need of cleaning and sealant.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.
59	Wilshire / Normandie	Rotating Artist <i>Rotating Photo Installations</i> Anodized aluminum, plexiglass, duratrans film	2001	Conduct detailed annual artwork inspection, documentation and cleaning. Annual cleaning and replacement of bulbs at the time of artwork rotation.	Ballast and polycarbonate require replacement.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.
60	Wilshire / Western	Pae White <i>The Beppins</i> Pigmented concrete stools; seeded lithocrete paving	2003	Conduct detailed annual artwork inspection and develop condition report. Document conditions and develop Maintenance Requirements. Specialized or minor repairs when needed.	Artwork is grimy, in need of cleaning and sealant.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.
61	Wilshire / Vermont	Bob Zoell <i>No Title</i> Ceramic tile murals	2004	Conduct detailed annual artwork inspection and develop condition report. Document conditions and develop Maintenance Requirements. Specialized or minor repairs when needed.	Broken tile and graffiti etchings at granite artwork. Artwork is grimy, in need of repair and cleaning.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Red Line art assets.

Metro Green Line					
Station	Artist / Artwork Title / Components	Year Installed	Annual Maintenance Requirements	Condition Status	FY21 Proposed Action Plan
62	Redondo Beach Carl Cheng <i>The Museum of Space Information</i> Painted steel satellite towers and satellite; painted steel TV Monitor cabinets and monitors; painted steel, glass and mixed media windscreens, concrete, glass, stone and stainless steel benches; concrete and resin planet formations; glass and mixed media illuminated diorama; glass, stone and steel inlays; porcelain enamel mural	1995	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Structural elements appear in poor condition, damaged, artwork satellite feed not working. Currently with Metro Engineering for review. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Green Line art assets.
63	Douglas Renee Petropoulos <i>Untitled</i> Painted steel medallions; painted steel and galvanized steel tower, painted steel fencing; painted steel and concrete stools and benches; bronze inlays; bronze and painted steel telescopes; anodized aluminum panels; stamped text in concrete; porcelain enamels murals; terrazzo and bronze mural paving; ceramic tiles; glass with laminated imagery	1995	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Sculpted artwork medallions appear damaged. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Green Line art assets.
64	El Segundo Daniel J. Martinez <i>For Your Intellectual Entertainment</i> Painted steel and galvanized steel structures, painted steel fencing; painted steel and concrete stools and benches; bronze inlays; bronze and painted steel telescopes; clocks; stamped text in concrete; porcelain enamels murals; terrazzo and bronze mural paving	1995	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Artwork electronic element not working. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Green Line art assets.
65	Mariposa Charles Dickson <i>Divine Order: the Manifestation of the Soaring Spirit</i> Painted, pigmented concrete benches; ceramic tiles; glass and laminated imagery; terrazzo and bronze mural paving; ceramic tile cutouts; concrete relief mural; ceramic tile columns	1995	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Broken glass windscreen removed from the platform in the Winter of 2016 .Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Green Line art assets.
66	Aviation / LAX Richard Turner <i>Untitled</i> Glass and laminated imagery; terrazzo and bronze mural paving; pigmented concrete and steel chairs, tables and benches; painted steel panels	1995	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Artwork sculptures require paint touch up, minor cracking at terrazzo artwork paving. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Green Line art assets.
67	Hawthorne / Lennox Mineko Grimmer <i>Companions</i> Patinated bronze sculptures; black granite benches	1995	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Etchings at granite benches. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Green Line art assets.

Metro Green Line					
Station	Artist / Artwork Title / Components	Year Installed	Annual Maintenance Requirements	Condition Status	FY21 Proposed Action Plan
68	Crenshaw Buzz Spector <i>Crenshaw Stories</i> Ceramic tile murals; concrete benches; terra cotta tile paving; concrete impressions	1995	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Minor damage at artwork paving. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Green Line art assets.
69	Vermont / Athens Kim Yasuda <i>Real Green</i> Ceramic tile murals; terrazzo and bronze mural paving; painted steel and wood benches; wood, painted aluminum and steel sculptural buckets	1995	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Minor cracking at artwork terrazzo paving. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Green Line art assets.
70	Harbor Fwy Steve Appleton <i>Locus: City Imprints</i> Granite benches; pigmented concrete and steel benches; glass fiber reinforced concrete sculptures; pigmented concrete mural paving	1995	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Artwork sculpture vandalized. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Green Line art assets.
71	Avalon Willie Middlebrook <i>Portrait of My People #619</i> Porcelain enamel murals	1995	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Artwork sculpture vandalized. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Green Line art assets.
72	Avalon John Outterbridge <i>Pyramid</i> Concrete and ceramic tile sculptures; pigmented concrete mural paving	1995	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Artwork sculpture vandalized. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Green Line art assets.
73	Avalon Stanley C. Wilson <i>Bridge of Culture</i> Pigmented and ceramic tile benches; ceramic tile mural paving, painted steel panels	1995	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Artwork vandalized. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Green Line art assets.
74	Long Beach Blvd Sally Weber <i>Celestial Chance</i> Terra cotta tile mural paving; pigmented concrete and steel paving, painted steel sculptures; perforated steel and acrylic sculpture	1995	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Minor damage at artwork paving. Painted elements have faded. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Green Line art assets.
75	Lakewood Blvd Erika Rothenberg <i>Wall of (Un)Fame</i> Pigmented concrete panels; pigmented concrete benches; pigmented concrete receptacles; painted steel grills; bronze plaque	1995	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Artworks vandalized. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Green Line art assets.



Metro Green Line					
Station	Artist / Artwork Title / Components	Year Installed	Annual Maintenance Requirements	Condition Status	FY21 Proposed Action Plan
76	Norwalk Meg Cranston <i>Suka: Place of Bees</i> Ceramic tile; bronze tile; painted stainless steel sculptures; laminated imagery; painted steel and fiberglass sculptures	1995	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Minor damage at artwork paving. Painted elements have faded. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Green Line art assets.

Metro Gold Line					
Station	Artist / Artwork Title / Components	Year Installed	Annual Maintenance Requirements	Condition Status	FY23 Proposed Action Plan
77	Chinatown Chusien Chang <i>The Wheels of Change</i> Painted aluminum benches; etched granite, glass and stainless steel compass; bronze bell; etched granite tile pavers	2003	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Benches are etched (vandalized), require painting. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Gold Line art assets.
78	Lincoln / Cypress Cheri Gualke <i>Water Street: River of Dreams</i> Patinated copper, lexan and stainless steel panels; patinated bronze sculpture; stone boulders and seeded glass arroyo; concrete impressions	2003	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Artwork is etched (vandalized), require patina and wax. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Gold Line art assets.
79	Heritage Square Roberto L. Delgado <i>El Quetzalcoatl de Xochicalco and La Gente del Pueblo</i> Ceramic tile paving; carved volcanic stone sculpture with rebar attachments	2003	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Minor damage at artwork paving. Painted elements have faded. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Gold Line art assets.
80	Southwest Museum Teddy Sandoval <i>Highland Park Gateway</i> Glass fiber reinforced concrete and ceramic tile benches; glass fiber reinforced concrete, aluminum and glass mosaic sculptures; painted steel chairs; glass seeded arroyo paving	2003	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Minor damage at artwork paving. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Gold Line art assets.
81	Highland Park Jud Fine <i>Stone Tree Inverted Post (Bound Water Light)</i> Pigmented illuminated acrylic domes; concrete benches; pigmented glass fiber reinforced concrete and bronze sculpture	2003	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Artwork is etched (vandalized), require patina and wax. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Gold Line art assets.
82	South Pasadena Michael Stutz <i>Astride-Aside</i> Patinated bronze, painted steel sculpture; stone pedestals	2003	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Artwork is etched (vandalized), require patina and wax. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Gold Line art assets.

Metro Gold Line					
Station	Artist / Artwork Title / Components	Year Installed	Annual Maintenance Requirements	Condition Status	FY23 Proposed Action Plan
83	Fillmore Michael C. McMillen <i>Geologica 42</i> Patinated bronze sculptures	2003	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Artwork is etched (vandalized), require patina and wax. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Gold Line art assets.
84	Del Mar Ries Niemi <i>Kinetic Energy</i> Stainless steel fencing	2003	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Minor damage at artwork fencing. Painted elements have faded. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Gold Line art assets.
85	Memorial Park John Valadez <i>The First Artist in Southern California: A Short Story</i> Painted steel sculpture	2003	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Artwork is fading. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Gold Line art assets.
86	Lake Pat Ward Williams <i>Everyday People</i> Laminated imagery within glass panels	2003	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Artwork panel damaged and removed. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Gold Line art assets.
87	Allen Michael Amescua <i>Rider's Dream</i> Stainless steel sculpture; glazed terra cotta paving; painted steel and stainless steel panels	2003	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Artwork is fading. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Gold Line art assets.
88	Sierra Madre Villa Tony Gleaton <i>Untitled</i> Porcelain enamel panels	2003	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Artwork is fading. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Gold Line art assets.
89	Sierra Madre Villa Beth Thielen <i>Images of Commonality / Nature and Movement</i> Concrete reliefs; glass mosaic and concrete mural paving; painted steel, acrylic and electrical light box	2003	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Artwork is etched (vandalized), require paint and renovation. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Gold Line art assets.
90	Union Station Roy Nicholson <i>Solar Shift: San Bernardino and Santa Monica</i> Glass mosaic murals, painted walls	2006	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Gold Line art assets.

Metro Gold Line					
Station	Artist / Artwork Title / Components	Year Installed	Annual Maintenance Requirements	Condition Status	FY23 Proposed Action Plan
91	Little Tokyo / Arts District Hirokazu Kosaka <i>Buffer Zone</i> Granite benches	2009	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Etching at artwork granite (vandalism). Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Gold Line art assets.
92	Pico / Aliso Rob Nielson <i>About Place About Face</i> Cast iron sculptures	2009	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Artwork is rusting. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Gold Line art assets.
93	Mariachi Plaza Alejandro de la Loza <i>El Nino Perdido</i> Cast bronze sculptures; granite panels	2009	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Artwork is etched (vandalized), requires minor repairs and waxing. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Gold Line art assets.
94	Soto Nobuho Nagasawa <i>Landings</i> Aluminum panels of imagery and text; Glass curtain wall; Stainless steel, acrylic and LED sculpture	2009	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Artwork is grimy and lighting is out. In need of cleaning and sealant. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Gold Line art assets.
95	Indiana Paul Botello <i>Syncretic Manifestations</i> Stainless steel panels	2009	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Gold Line art assets.
96	Maravilla Jose Lopez <i>Maravilla Hearts of Tokens</i> Stainless steel sculptures; aluminum panels	2009	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Gold Line art assets.
97	East LA Civic Center Clement Hanami <i>Through the Looking Glass or Traveling at the Speed of Light (Rail)</i> Painted steel sculpture; pigmented concrete paving	2009	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Gold Line art assets.
98	Atlantic Adobe LA <i>Blissful Interiors</i> Painted steel sculpture; GFRC pigmented benches; ceramic tile paving	2009	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Gold Line art assets.

Metro Gold Line					
Station	Artist / Artwork Title / Components	Year Installed	Annual Maintenance Requirements	Condition Status	FY23 Proposed Action Plan
99	Arcadia Michael Davis <i>Arcadian Zephyr</i> Perforated stainless steel panels, painted steel and kinetic bronze weathervane, etched granite bench backs, glass canopy. Lithocrete paving at adjacent parking garage.	2016	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Gold Line art assets.
100	Monrovia Cha-Rie Tang <i>River of Time</i> Hard carved ceramic tiles at platform paving and columns. Hand carved ceramic tiles at adjacent parking garage.	2016	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Gold Line art assets.
101	Duarte / City of Hope Andrea Myklebust and Stanton Gray Sears <i>Spirit of the San Gabriel River</i> Sculptural painted steel and stone columns, bronze pavers at platform.	2016	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Gold Line art assets.
102	Inwindale Robin Brailsford <i>Pioneros De La Rivera De San Gabriel</i> Painted steel panels and lithocrete pavers at platform. Lithocrete pavers at adjacent parking garage.	2016	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Gold Line art assets.
103	Azusa Downtown Jose Antonio Aguirre <i>A Passage Through Memory</i> Glass fiber reinforced concrete entrance portals with painted steel and glass mosaic. Glass mosaic at columns.	2016	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Gold Line art assets.
104	APU/Citrus College Lynn Goodpasture <i>Azusa Horticultural Paradise</i> Mosaic glass murals at benches, glass canopy. Etched concrete at adjacent parking garage.	2016	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Perform detailed annual artwork inspection and documentation, develop a condition and corrective action report, and manage implementation of specialized cleaning, repairs and conservation. Will require new FTE to manage Gold Line art assets.

Metro Orange Line					
Station	Artist / Artwork Title / Components	Year Installed	Annual Maintenance Requirements	Condition Status	Action Plan
105	Alignment Jud Fine <i>Seven Spots and a Path</i> Alignments landscaping	2005	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
106	North Hollywood Caryl Davis <i>Dramatic Local</i> Porcelain enamel steel panel; terrazzo mural paving	2005	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Abatement film at artwork panel requires replacement, minor cracking at terrazzo artwork paving. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.

Metro Orange Line					
Station	Artist / Artwork Title / Components	Year Installed	Annual Maintenance Requirements	Condition Status	Action Plan
107	Laurel Canyon Phung Huynh <i>Lucky California</i> Porcelain enamel steel panels; terrazzo mural paving	2005	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Minor etching at artwork panels (vandalism), minor cracking at terrazzo artwork paving. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
108	Valley College Laura London <i>Former Location/Contemporary Portrait</i> Porcelain enamel steel panels; terrazzo mural paving	2005	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Minor etching at artwork panels (vandalism), minor cracking at terrazzo artwork paving. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
109	Valley College, Van Nuys, Sepulveda, Balboa, Reseda Renee Petropoulos <i>14 Miles</i> Terrazzo benches	2005	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Minor cracking / chipping at terrazzo artwork. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
110	Woodman Daniel Marlos <i>Journey to California</i> Porcelain enamel steel panels; terrazzo mural paving	2005	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Minor etching at artwork panels (vandalism), minor cracking at terrazzo artwork paving. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
111	Van Nuys Roxene Rockwell <i>VAN NUYS, The New Town</i> Porcelain enamel steel panels; terrazzo mural paving	2005	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Minor etching at artwork panels (vandalism), minor cracking at terrazzo artwork paving. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
112	Sepulveda Michele Martinez <i>Todos Vuelven</i> Porcelain enamel steel panels; terrazzo mural paving	2005	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Minor etching at artwork panels (vandalism), minor cracking at terrazzo artwork paving. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
113	Woodley John Roloff <i>Valley Scan</i> Porcelain enamel steel panels; terrazzo mural paving	2005	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Minor etching at artwork panels (vandalism), minor cracking at terrazzo artwork paving. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.

Metro Orange Line						
Station	Artist / Artwork Title / Components	Year Installed	Annual Maintenance Requirements	Condition Status	Action Plan	
114	Balboa	John O'Brien <i>OverSite</i> Porcelain enamel steel panels; terrazzo mural paving	2005	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Minor etching at artwork panels (vandalism), minor cracking at terrazzo artwork paving. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
115	Reseda	Jody Zellen <i>Now and Then</i> Porcelain enamel steel panels; terrazzo mural paving	2005	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Minor etching at artwork panels (vandalism), minor cracking at terrazzo artwork paving. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
116	Tampa	Sandow Birk <i>Tarzan and Tarzana</i> Porcelain enamel steel panels; terrazzo mural paving	2005	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Minor etching at artwork panels (vandalism), minor cracking at terrazzo artwork paving. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
117	Pierce College	Pat Warner <i>What We See</i> Porcelain enamel steel panels; terrazzo mural paving	2005	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Minor etching at artwork panels (vandalism), minor cracking at terrazzo artwork paving. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
118	De Soto	John Divola <i>Images From Dogs Chasing My Car in the Desert</i> Porcelain enamel steel panels; terrazzo mural paving	2005	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Minor etching at artwork panels (vandalism), minor cracking at terrazzo artwork paving. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
119	Canoga	Roy Dowell <i>Constructed Histories</i> Porcelain enamel steel panels; terrazzo mural paving	2005	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Minor etching at artwork panels (vandalism). Artwork inspection and condition report required. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
120	Canoga	Ken Gonzales-Day <i>Western Imaginary</i> Porcelain enamel steel panels; stone and glass mosaic mural paving	2012	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Minor etching at artwork panels (vandalism). Artwork inspection and condition report required. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.

Metro Orange Line					
Station	Artist / Artwork Title / Components	Year Installed	Annual Maintenance Requirements	Condition Status	Action Plan
121 Sherman Way	Margaret Lazzari  <i>Ovensmouth / Canoga Park</i>  Porcelain enamel steel panels; stone and glass mosaic mural paving	2012	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Minor etching at artwork panels (vandalism). Artwork inspection and condition report required. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
122 Roscoe	Sam Erenberg  <i>Liquid Light: Flowing Into The Future</i>  Porcelain enamel steel panels; stone and glass mosaic mural paving	2012	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Minor etching at artwork panels (vandalism). Artwork inspection and condition report required. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
123 Nordhoff	Anne Marie Karlsen  <i>Strati</i>  Porcelain enamel steel panels; stone and glass mosaic mural paving	2012	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Minor etching at artwork panels (vandalism). Artwork inspection and condition report required. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
124 Chatsworth	Lisa Adams  <i>A Glimpse of Stoney Point</i>  Porcelain enamel steel panels; stone and glass mosaic mural paving	2012	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Minor etching at artwork panels (vandalism). Artwork inspection and condition report required. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.

Metro Expo Line					
Station	Artist / Artwork Title / Components	Year Installed	Annual Maintenance Requirements	Condition Status	Action Plan
125 LATTC / Ortho Institute	Christofer C. Dierdorff  <i>The Intimacy of Place</i>  Porcelain enamel steel panels	2012	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Failed paint system on Expo 1 station structures may compromise artwork. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
126 Jefferson / USC	Samuel Rodriguez  <i>Urban Dualities</i>  Hand-glazed, hand-cut ceramic mosaic pane	2012	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Failed paint system on Expo 1 station structures may compromise artwork. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.

Metro Expo Line					
Station	Artist / Artwork Title / Components	Year Installed	Annual Maintenance Requirements	Condition Status	Action Plan
127	Expo Park / USC Robbert Flick <i>On Saturdays</i> Photographic porcelain tile panels	2012	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Failed paint system on Expo 1 station structures may compromise artwork. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
128	Expo / Vermont Jessica Polzin McCoy <i>Neighborhood Portrait: Reconstructed</i> Hand-glazed, hand-cut ceramic mosaic panels	2012	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Failed paint system on Expo 1 station structures may compromise artwork. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
129	Expo / Western Ronald J. Llanos <i>Ephemeral Views: A Visual Essay</i> Hand-glazed, hand-cut ceramic mosaic panels	2012	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Failed paint system on Expo 1 station structures may compromise artwork. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
130	Expo / Crenshaw Willie Robert Middlebrook Jr. <i>Wanderers</i> Glass mosaic panels	2012	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Failed paint system on Expo 1 station structures may compromise artwork. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
131	Farmdale Michael Massenburg <i>All in a Day</i> Glass mosaic panels	2012	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
132	Expo / La Brea Jose Lozano <i>LA Metro Loteria</i> Commercial tile, ink sublimation panels	2012	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Failed paint system on Expo 1 station structures may compromise artwork. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
133	La Cienega / Jefferson Daniel Gonzales <i>Engraved in Memory</i> Hand-glazed, hand-cut ceramic porcelain mosaic panels	2012	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Failed paint system on Expo 1 station structures may compromise artwork. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.



Metro Expo Line					
Station	Artist / Artwork Title / Components	Year Installed	Annual Maintenance Requirements	Condition Status	Action Plan
134	Culver City Tom LaDuke <i>Unknowable Origins</i> Glass mosaic panels	2012	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Failed paint system on Expo 1 station structures may compromise artwork. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
135	Palms Shizu Saldamando <i>Artist Educators</i> Glass mosaic and hand-cut ceramic mosaic panels	2016	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Failed paint system on Expo 1 station structures may compromise artwork. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
136	Westwood / Rancho park Abel Alejandro <i>Panoramas</i> Photographic porcelain tile panels	2016	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
137	Expo / Sepulveda Susan Logoreci <i>Right Above the Right-of-Way</i> Hand-glazed, hand-cut ceramic mosaic panels	2016	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
138	Expo / Bundy Nzuji de Magalhães <i>And Here I Will Stay</i> Glass mosaic and hand-cut ceramic mosaic panels	2016	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
139	26th St / Bergamot Constance Mallinson <i>Local Color</i> Photographic porcelain tile panels	2016	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
140	17th St / SMC Carmen Argote <i>What you wore, What you wear</i> Photographic porcelain tile panels	2016	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
141	Downtown Santa Monica Judithe Hernández <i>L.A. Sonata</i> Glass mosaic panels	2016	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.

Metro Silver Line					
Station	Artist / Artwork Title / Components	Year Installed	Annual Maintenance Requirements	Condition Status	Action Plan
142	Cal State LA Merge Conceptual Design <i>Overcoat - CSULA</i> Painted steel; painted concrete; Ceramic tile	2009	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
143	LAC + USC Medical Center Merge Conceptual Design <i>Untitled</i> Painted steel; painted concrete; Ceramic tile	2009	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
144	El Monte Transit Center Donald Lipski <i>Time Piece</i> Stainless steel sculpture; painted steel and electronic sculpture	2012	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Corrosion present. Artwork inspection and condition report required. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
145	Harbor Gateway Transit Center Alison Saar <i>Paraje</i> Stainless steel sculpture	2012	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Corrosion present. Artwork inspection and condition report required. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
146	El Monte Transit Center Eloy Torrez <i>The Steps We Take</i> Powder coated sublimation murals	2014	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
147	El Monte Transit Center Martin Durazo <i>Vamos Juntos/Juntas</i> Powder coated sublimation murals	2014	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
148	El Monte Transit Center Phung Huynh <i>In The Meadow</i> Powder coated sublimation murals	2014	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
149	El Monte Transit Center Vincent Ramos <i>El Monte Legion Stadium</i> Powder coated sublimation murals	2014	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.

Metro Facilities					
Station	Artist / Artwork Title / Components	Year Installed	Annual Maintenance Requirements	Condition Status	Action Plan
150	Union Station: Gateway Transit Center James Doolin <i>Los Angeles Circa 1870, 1910, 1950 and after 2000</i> Painted murals	1995	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
151	Union Station: Gateway Transit Center Margaret Nielsen <i>LA Dialogs</i> Painted mural	1995	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
152	Union Station: Gateway Transit Center Patrick Nagatani <i>Epoch</i> Painted mural	1995	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
153	Union Station: Gateway Transit Center May Sun and Richard Wyatt <i>City of Dreams, River of History</i> Pigmented concrete, glass, steel and ceramic tile fountain; stone, patinated bronze paving; ceramic tile	1995	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Water issues at soffit. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
154	Union Station: Gateway Transit Center Richard Wyatt <i>City of Dreams, River of History</i> Painted mural	1995	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Artwork is dirty. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
155	Union Station: Gateway Transit Center Bill Bell <i>A Train</i> LED light sticks, audio and video components	1995	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
156	Union Station: Gateway Transit Center East Los Streetscapers <i>La Sombra del Arroyo</i> Painted bronze sculpture; ceramic tile; stone tile	1995	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
157	Union Station: Gateway Transit Center Kim Yausda & Noel Korten <i>ReUnion</i> Stainless steel, glass and copper bus shelters	1995	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Broken glass panel. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
158	Union Station: Gateway Transit Center Michael Amescua <i>Guardians of the Track</i> Painted steel panels; anodized aluminum panels	1995	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Artwork is in need of corrosion mitigation, cleaning and paint. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.

Metro Facilities					
Station	Artist / Artwork Title / Components	Year Installed	Annual Maintenance Requirements	Condition Status	Action Plan
159	Union Station: Gateway Transit Center Peter Shire <i>Paseo Cesar Chavez</i> Fountain, ceramic tile benches	1995	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
160	Union Station: Gateway Transit Center Elsa Flores <i>Paseo Cesar Chavez</i> Fountain, ceramic tile benches	1995	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
161	Union Station: Gateway Transit Center Roberto Gil de Montes <i>Paseo Cesar Chavez</i> Fountain, ceramic tile benches	1995	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
162	Union Station Passageway Rotating Artist <i>Rotating Photo Installations</i> Anodized aluminum, plexiglass, duratrans film	2001	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Artwork requires new polycarbonate sheeting. Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
163	Metro Customer Service Center (former) Jim Isermann <i>Untitled (Tilfords)</i> Powder coated aluminum panels	2006	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Artwork removed as part of Purple Line Extension. Artwork to be relocated /re-purposed.	Will request dedicated staff and resources in future years.
164	Division 9 Facility Raul de la Sota <i>Forward to the Past</i> Painted honey comb aluminum mural	2007	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
165	Division 9 Facility Mark Lere <i>The Metro Machine</i> Terrazzo mural paving	2007	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
166	Division 24 Facility Christine Beniston <i>Field of Poppies</i> Powder coated steel laced into fencing	2015	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
167	Division 13 Facility Christine Ulke <i>El Aliso de Los Angeles</i> Illuminated polycarbonate panels with graphic PVB film layers, LEDs	2015	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.
168	Union Station: Gateway Transit Center and Pedestrian Drop Off Area (POV) Michael Amescua <i>Guardians of the Rail</i> Painted steel panels; Painted aluminum panels	2016	Inspections will result in the development of a Maintenance Plan identifying environmental and deferred maintenance impacts and Action Plan. Resources are needed to conduct detailed artwork inspection and condition report.	Will require resources to perform artwork inspections and condition report. In addition, possible professional conservator report identifying recommendations, as well as implementation of specialized cleaning, repairs and conservation.	Will request dedicated staff and resources in future years.

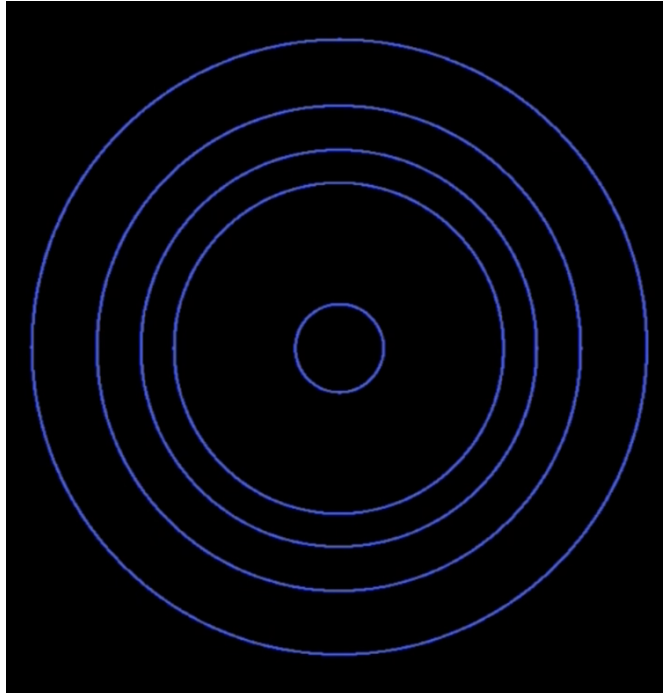
Examples



Metro Blue Line – Artworks impacted as part of Blue Line Refurbishment Project, require renovation



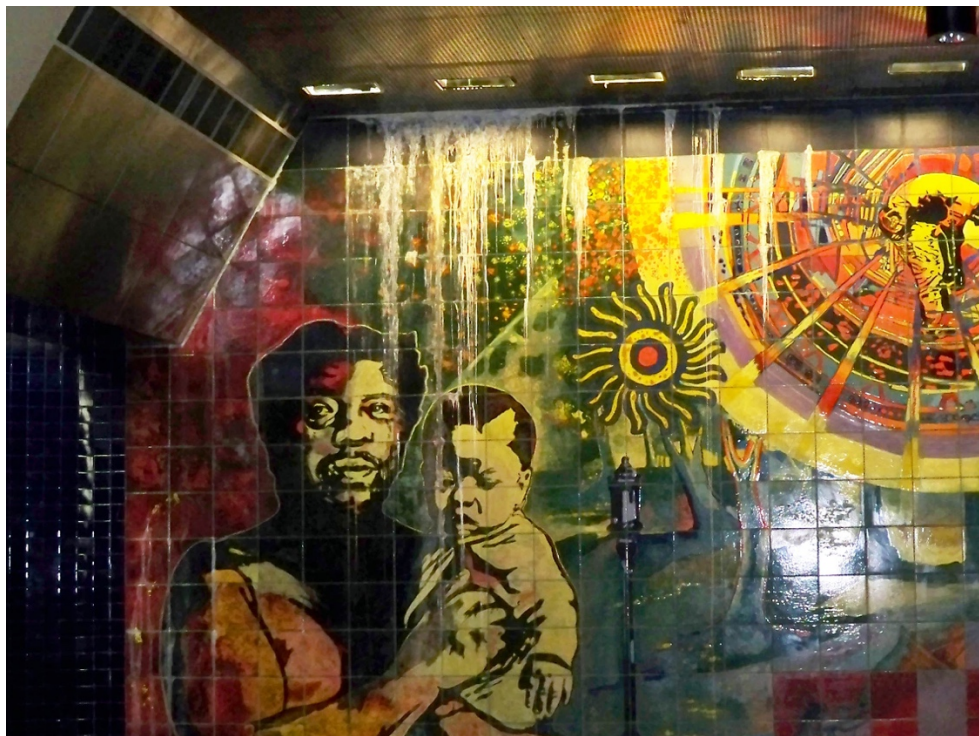
Metro Blue Line – Damaged artwork mosaic tile requires specialized repairs



Original artwork (1 of 82)



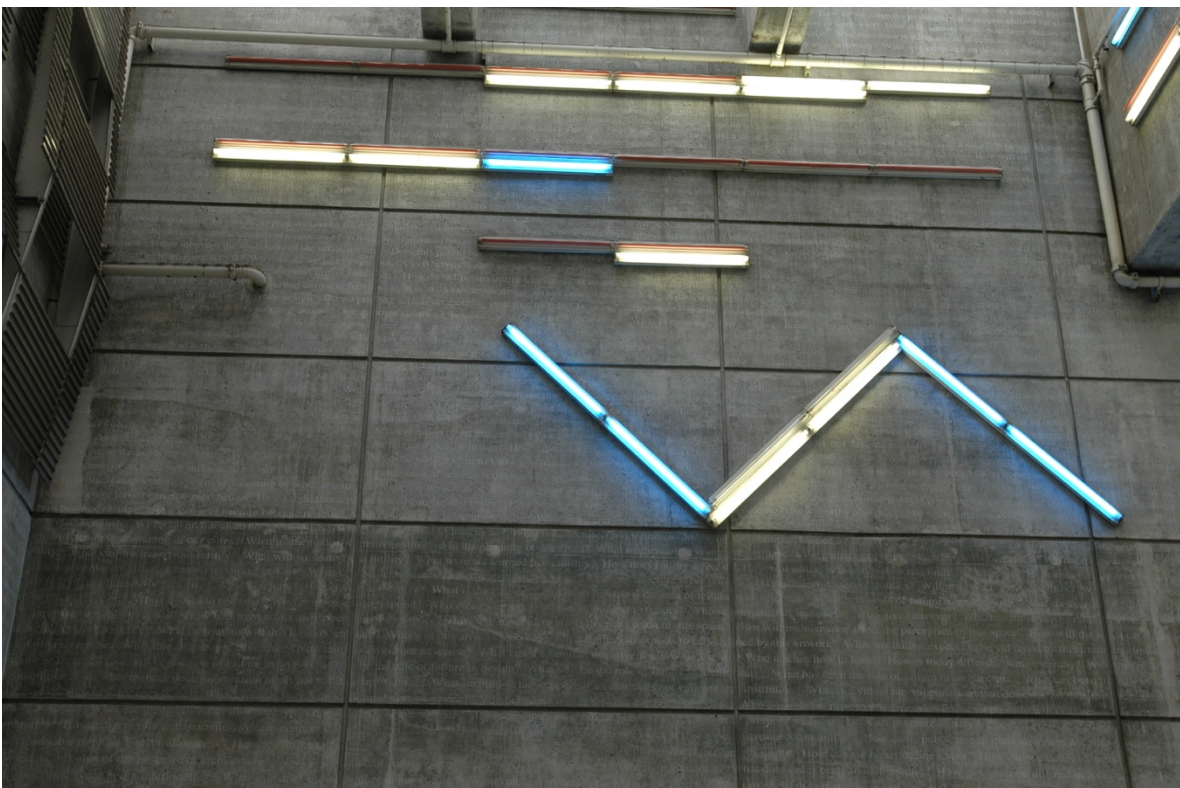
Metro Blue/Expo Tunnel – Outdated electrical artworks not functioning as intended



Metro Red Line – Artworks require specialized repair

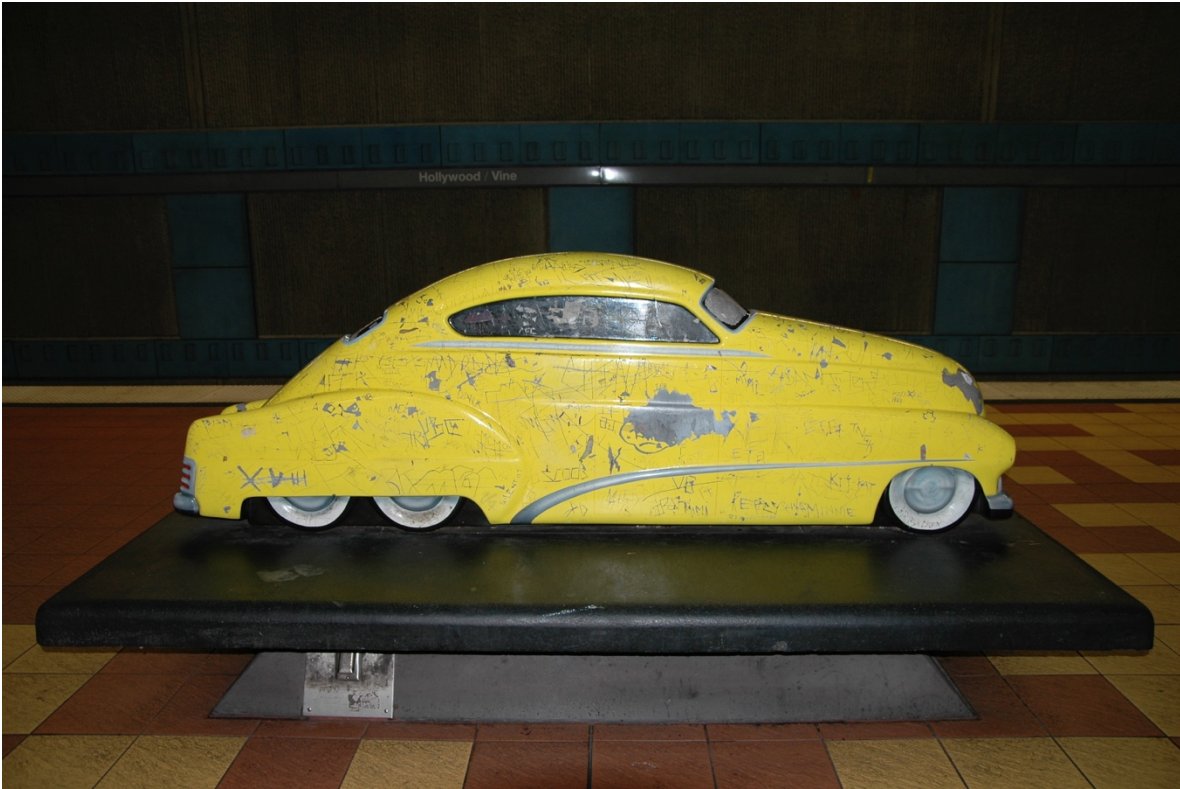


Metro Red Line – Damaged artwork tile requires specialized repairs



Metro Red Line – Outdated electrical artworks require renovation





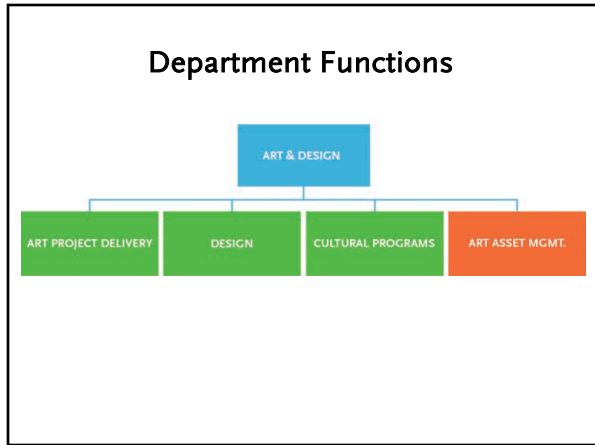
**Metro Red Line – Artworks require renovation and relocation**



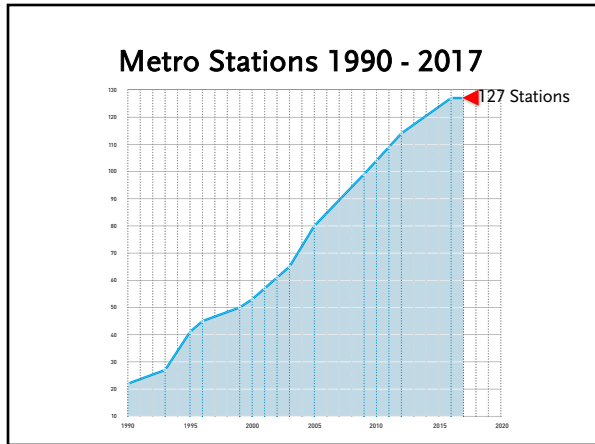
**Metro Red Line – Artworks require specialized cleaning**



- ### Board Motion
- A. Provide Annual Report
  - B. Dedicate resources
  - C. Include in future refurbishment projects
  - D. Budget as new artworks completed
  - E. Create maintenance plan for each artwork
  - F. Develop action plan



- ### Metro Public Art Assets
- Growing (and aging) system
  - 168 permanent artworks
  - Many artworks are now 25+ years old
  - Wear and tear impacts
  - Facility modification impacts
  - Deferred care becoming increasingly visible
  - Unique assets require specialized approach



“Los Angeles may have some of the most innovative integration of art and architecture in the country.”

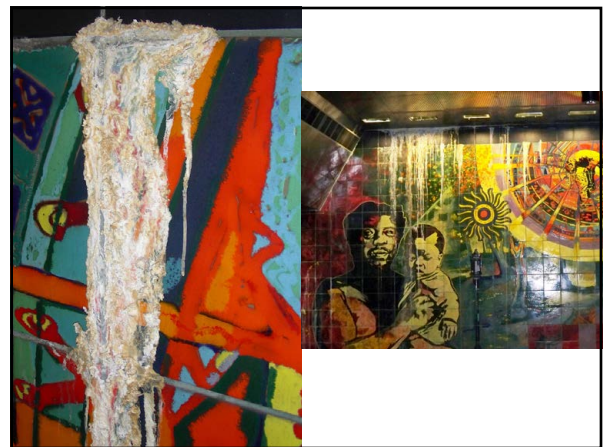
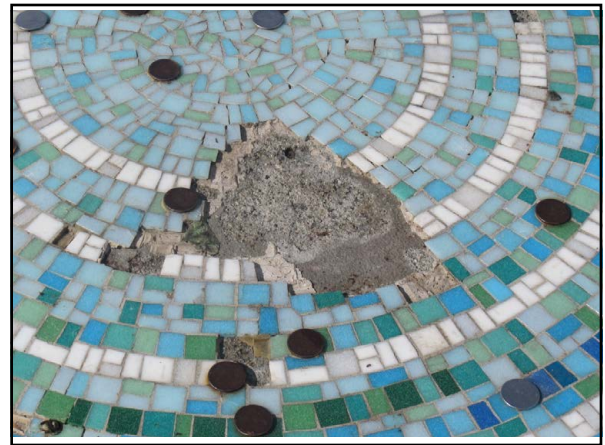
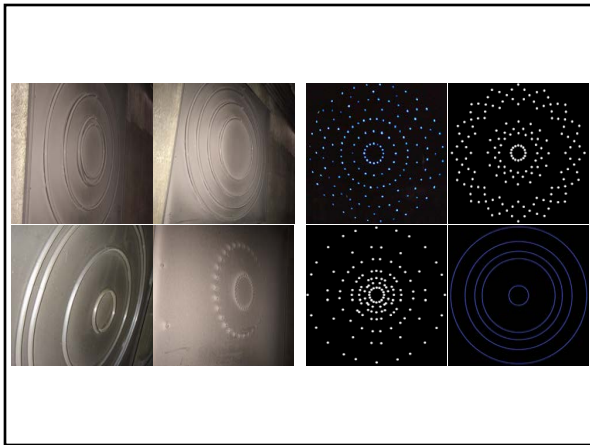
Los Angeles Times

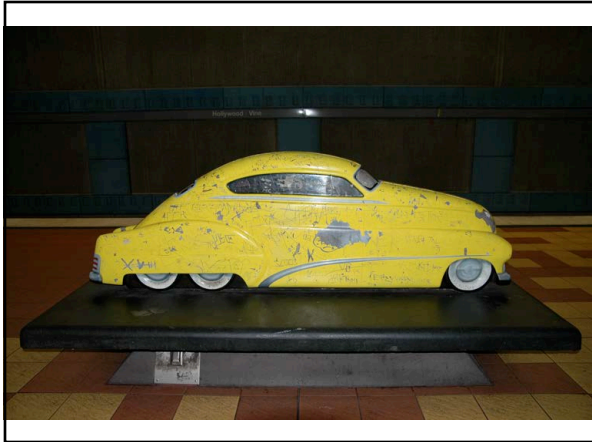
“Fascinating artwork...artwork worth seeing... Beautiful and breathtaking in its ambition and Execution.”

Washington Post

“...one of the most imaginative public art programs in the country.”

New York Times





### Operations Start Up Currently Includes

Operators & Mechanics	Yes
Traction Power	Yes
Facilities Maintenance	Yes
Custodial Services	Yes
Landscape Maintenance	Yes
Graffiti Abatement	Yes
Art Asset Management	No

### Phased Approach to Art Asset Mgmt.

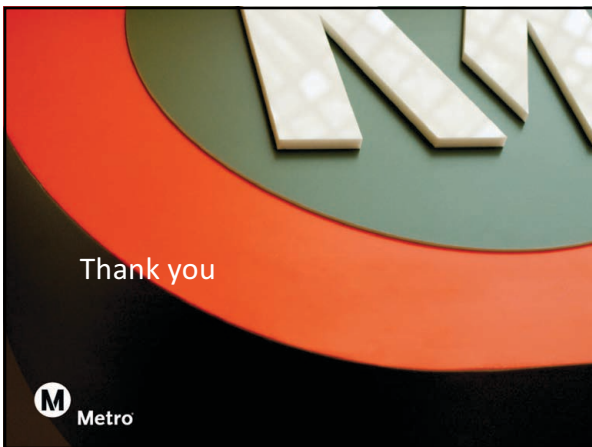
Existing Lines:

- Line by line as each reaches 20 to 25 years

New Lines:

- Apply lessons learned
- Include art asset management in start up plans

FY18	FY19	FY21	FY23
Blue (28)	Blue (28)	Blue (28)	Blue (28)
	Red (33)	Red (33)	Red (33)
		Green (15)	Green(15)
		Crenshaw(14)	Crenshaw(14)
			Gold (28)





## Board Report

File #: 2017-0245, File Type: Project

Agenda Number: 21

### EXECUTIVE MANAGEMENT COMMITTEE MAY 18, 2017

**SUBJECT: FEDERAL FUNDING EXCHANGE WITH LOS ANGELES COUNTY ON STATE ROUTE 126/COMMERCE CENTER DRIVE INTERCHANGE**

**ACTION: AMEND EXISTING REPAYMENT SCHEDULE WITH COUNTY OF LOS ANGELES OF FEDERAL FUNDS EXCHANGED WITH NON-FEDERAL FUNDS**

#### **RECOMMENDATION**

**APPROVE amendment of the existing repayment schedule agreement between the County of Los Angeles (County) and the Los Angeles County Metropolitan Transportation Authority (LACMTA) for the State Route 126/Commerce Center Drive Interchange Improvement Project STP-L fund exchange, as shown in Attachment A.**

#### **ISSUE**

The County is requesting to amend the repayment schedule for the balance remaining from the exchange of federal Surface Transportation Program-Local (STP-L) funds with non-federal funds for the State Route 126/Commerce Center Drive Interchange Project. Board approval is required in order to amend the existing agreement repayment schedule.

#### **DISCUSSION**

On October 27, 2011, the Board approved an agreement (Agreement) between the County and LACMTA for the exchange of STP-L funds with non-federal funds. The Agreement (Attachment B) allowed the County to use up to \$41 million of STP-L funds for the State Route 126/Commerce Center Drive Interchange Improvement Project. This in turn allowed Metro to negotiate agreements to exchange the non-federal funds as they become available with participating local agencies. This Agreement was developed to benefit smaller local agencies that can more efficiently and expeditiously utilize more flexible non-federal transportation funding, and to ensure that the County is able to draw down as much of the available STP-L funding as possible. The County agreed to repay \$13 million on July 1, 2014 and up to \$28 million on July 1, 2016.

On June 18, 2014, due to a project delay resulting from bird nesting season, the Board approved the County's request to amend the repayment schedule for the \$13 million from July 1, 2014 to June 30, 2015, and up to \$28 million from July 1, 2016 to June 30, 2017. To date, the County has remitted \$13 million and carries a balance of up to \$28 million. Due to delays encountered during the construction

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phase including the contractor's need to replace a steel rebar subcontractor, the County may not incur all costs by June 30, 2017 as described in the Exchange Agreement. The County subsequently requests to split the remaining payment of up to \$28 million into a \$16 million payment due by July 1, 2017 and a payment up to \$12 million due by July 1, 2018.

The State Route 126/Commerce Center Drive Interchange Improvement Project is designed to improve the flow of traffic at the intersection of State Route 126 and Commerce Center Drive, located northwest of the City of Santa Clarita in unincorporated Los Angeles County. The project includes a grade-separated interchange with on-ramps and off-ramps at Commerce Center Drive and Henry Mayo Drive, installation of new traffic signals, widening of SR-126, and realignment of Henry Mayo Drive along the Santa Clara River. Construction began in August 2013; completion is expected in April 2017, to be followed by project closeout. The project is constructed in partnership with the Los Angeles County, Metro, and Caltrans.

### **DETERMINATION OF SAFETY IMPACT**

Amending the Agreement will not have any adverse safety impacts on Metro's employees or patrons.

### **FINANCIAL IMPACT**

Federal STP-L funds are suballocated funds based on population and are administered through Caltrans. The funds are not part of the LACMTA budget nor are they available for LACMTA capital or operating uses. As federal funds, STP-L dollars are subject to strict programming and administrative requirements from the Federal Highway Administration and Caltrans.

Funds received from the County are placed in an interest-bearing account for pass-through allocations to participating local agencies for STP-L-eligible projects, with a two percent (2%) administrative fee assessed by LACMTA. If no funds are received, no exchanges are made. Accordingly, slower repayment by the County will simply defer LACMTA's ability to offer pass-through allocations to participating local agencies. No other impacts are expected.

### **Impact to Budget**

Amending the Agreement will have no impact to the current Metro budget. The 2% administrative fee budgeted for staff allocation in the fiscal year 2018 requested budget will draw down existing administrative fees accrued from past exchanges.

### **ALTERNATIVES CONSIDERED**

The Board of Directors may choose not to approve the recommended funding exchange. However, we do not recommend that alternative because that would bring the County of Los Angeles into default with outstanding payments subject to withholding by LACMTA from the County's Proposition A local return funds, then from Proposition C local return funds, then from Measure R local return funds, and then from any unobligated STP-L balance funds, as per the Agreement. We also do not recommend that alternative because local agency transportation projects would not be expedited with non-federal funds, and local agencies may run the risk of having their STP-L funds lapse.

## **NEXT STEPS**

With Board approval, staff will execute an Amendment to the Agreement with the County for the balance of exchanged STP-L funds. The County will take the Agreement to the County Board of Supervisors for approval.

As the County funds are repaid, staff will also continue to negotiate and execute agreements with eligible participating local agencies, so as to ensure that the unrestricted funds being made available are properly administered and used on STP-L-eligible projects in a timely fashion.

## **ATTACHMENTS**

Attachment A - Amendment to Exchange Agreement

Attachment B - 2011 Exchange Agreement for the SR-126/Commerce Center Drive Interchange Project

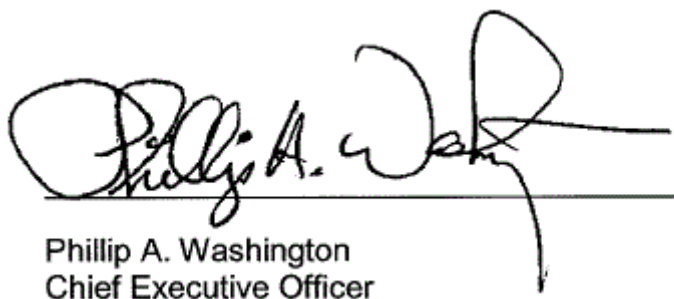
Prepared by: Doreen Morrissey, Principal Transportation Planner, Countywide Planning & Development, (213) 922-3704

Kalieh Honish, DEO, Countywide Planning & Development, (213) 922-7109

Wil Ridder, EO, Countywide Planning & Development, (213) 922-2887

David Yale, SEO, Countywide Planning & Development, (213) 922-2469

Reviewed by: Therese W. McMillan, Chief Planning Officer, (213) 922-7077



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Phillip A. Washington  
Chief Executive Officer

AMENDMENT NO. 1 TO  
EXCHANGE AGREEMENT

This AMENDMENT NO. 1 to EXCHANGE AGREEMENT (this "AMENDMENT"), is dated as of May \_\_, 2017 by and between County of Los Angeles, a political subdivision of the State of California (hereinafter referred to as "COUNTY"), and the Los Angeles County Metropolitan Transportation Authority ("LACMTA").

## RECITALS:

A. COUNTY and LACMTA entered into an Exchange Agreement dated October 31, 2011 (the "Existing Agreement"), which Existing Agreement provides for the exchange of federal funds for non-federal funds in connection with the State Route 126/Commerce Center Drive Interchange Improvement Project ("the Project"). COUNTY's repayment of the exchanged funds would occur on two specified dates: July 1, 2014 and June 30, 2016.

B. In June 2014, the LACMTA Board approved amending the repayment schedule so the first payment would be changed from July 1, 2014 to June 30, 2015, and the second payment would be changed from July 1, 2016 to June 30, 2017, however this was not documented in an amendment.

C. To Date, COUNTY has remitted and LACMTA received the first payment of \$13 million due under the Existing Agreement.

D. COUNTY and LACMTA desire to amend the Existing Agreement for the new payment dates as provided herein.

## AGREEMENT:

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the parties hereby agree as follows:

1. Section 2d is hereby amended by deleting it in its entirety and replacing it with the following:

In consideration for the \$41 million in STP-L funds provided by LACMTA, to pay LACMTA an amount equal to the total amount of STP-L funds used by COUNTY as follows: on June 30, 2015, payment of the sum of \$13.0 million, on July 1, 2017, payment of the sum of \$16.0 million and on July 1, 2018, an amount to make up the remaining balance owing up to \$12.0 million. The final payment of up to \$12.0 million on July 1, 2018 to LACMTA will be equal to the total Federal funding utilized and reimbursed from the \$41.0 million in STP-L funds less the \$13.0 million payment made by the COUNTY on June 30, 2015 and the \$16.0 million payment made by the COUNTY on July 1, 2017.



2. Except as set forth above, the terms and conditions of the Agreement will remain unchanged.

IN WITNESS WHEREOF, the parties have caused this Amendment No.1 to be duly executed and delivered as of the above date.

LOS ANGELES COUNTY  
METROPOLITAN TRANSPORTATION AUTHORITY

By: \_\_\_\_\_  
Phillip A. Washington  
Chief Executive Officer

Date: \_\_\_\_\_

APPROVED AS TO FORM:

MARY C. WICKHAM  
County Counsel

By: \_\_\_\_\_  
Deputy

Date: \_\_\_\_\_

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

By: \_\_\_\_\_  
Name  
Title

Date: \_\_\_\_\_

MOU.STPL8099

**EXCHANGE AGREEMENT**

This Exchange Agreement ("AGREEMENT"), made and entered into as of October 31, 2011 by and between the County of Los Angeles, a political subdivision of the State of California (hereinafter referred to as "COUNTY") and the Los Angeles County Metropolitan Transportation Authority, the regional transportation planning authority for the County of Los Angeles (herein after referred to as "LACMTA").

**WITNESSETH**

WHEREAS, COUNTY desires to perform the grade-separated interchange at the SR-126/Commerce Center Drive intersection, widening of SR-126, and realignment of Henry Mayo Drive (hereinafter referred to as "PROJECT"); and

WHEREAS, COUNTY is willing to perform or cause to be performed, all work necessary to construct PROJECT; and

WHEREAS, COUNTY is further willing to administer PROJECT with federal funds, in accordance with all requirements and restrictions related to those funds; and

WHEREAS, PROJECT total construction cost is currently estimated to be \$55,000,000, of which \$9,200,000 is funded with a Proposition C 25% grant through the LACMTA Call for Projects (Project ID 8099) and the remaining \$45,800,000 will be ultimately financed with Westside Bridge and Major Thoroughfare Construction Fee (B&T) District funds as fees are collected; and

WHEREAS, COUNTY desires to exchange \$41,000,000 of COUNTY funds for \$41,000,000 of Federal Surface Transportation Program-Local (STP-L) funds to be programmed by LACMTA for transportation purposes; and

WHEREAS, the LACMTA Board has authorized the transfer of STP-L funds with COUNTY in exchange for an equal amount of COUNTY funds; and

WHEREAS, In exchange for the STP-L funds, the COUNTY has agreed to pay to LACMTA an amount equal to the total amount of STP-L funds used by COUNTY as follows: \$13.0 million on July 1, 2014, and a final payment to make up the remaining balance owing up to \$28.0 million on July 1, 2016.

WHEREAS, COUNTY's final payment on July 1, 2016 to LACMTA will be equal to the total Federal funding utilized and reimbursed from \$41.0 million in STP-L funds towards the eligible construction costs of the PROJECT less \$13.0 million payment made by the COUNTY on July 1, 2014. ; and

WHEREAS, current PROJECT schedule estimates advertising for construction bids in November 2011. The construction is anticipated to take approximately two years to complete; and

WHEREAS, an exchange of funds as proposed herein is beneficial to and in the general interest of COUNTY and LACMTA, as well as other local agencies within the County of Los Angeles.

NOW THEREFORE, in consideration of the mutual benefits to be derived by COUNTY and LACMTA and of the promises contained herein contained, it is hereby agreed as follows:

(1) LACMTA AGREES:

To program STP-L funds to the COUNTY in the amount of \$41,000,000 in exchange for the COUNTY's payment to LACMTA of an amount equal to the amount of STP-L funds County actually receives under this Agreement ("COUNTY Funds"). LACMTA shall program the COUNTY Funds for transportation purposes. LACMTA shall complete such programming upon full execution of this AGREEMENT.

- a. To accept COUNTY's payment of COUNTY Funds, in the manner specified in Paragraph (2) below.
- b. To make the COUNTY Funds available to agencies for qualifying transportation projects and administrative expenses.

(2) COUNTY AGREES:

- a. To accept LACMTA's programming of STP-L funds, to take all steps necessary to draw down on the STP-L funds, and to expend the STP-L funds in accordance with the STP-L expenditure guidelines pursuant to Title 23, Section 133 of the SAFETEA-LU or subsequent reauthorizations, including STP-L fund lapsing policy. COUNTY understands the STP-L funds can only be used towards eligible construction costs of the PROJECT. COUNTY understands that STP-L funds are contingent upon availability from the Federal Government.
- b. To notify LACMTA of the obligation of STP-L funds by means of submitting a copy of the State of California Department of Transportation (Caltrans) approval (E76 form, or other official Caltrans notification of approval and obligation) upon receipt from Caltrans.
- c. To notify LACMTA of the actual amount of STP-L funds used by COUNTY. If COUNTY does not use the entire \$41 million STP-L fund allocation, COUNTY shall "timely deobligate" such unused portion so that LACMTA can reprogram such unused allocation to other project sponsors. For purposes of this Agreement, "timely deobligate" shall mean the FHWA date of deobligation, as documented and reported by Caltrans, is at least nine (9) months before the date such funds are scheduled to lapse or otherwise expire.

d. In consideration for the \$41 million in STP-L funds provided by LACMTA, to pay LACMTA an amount equal to the total amount of STP-L funds used by COUNTY as follows: on July 1, 2014, payment of the sum of \$13.0 million and on July 1, 2016, an amount to make up the remaining balance owing up to \$28.0 million. The final payment of up to \$28 million on July 1, 2016 to LACMTA will be equal to the total Federal funding utilized and reimbursed from the \$41.0 million in STP-L funds less \$13.0 million payment made by the COUNTY on July 1, 2014.

(3) IT IS MUTUALLY UNDERSTOOD AND AGREED AS FOLLOWS:

a.. DEFAULT: A Default under this Agreement is defined as any one or more of the following: (i) COUNTY fails to pay the scheduled payments described in section 2(d) above, ; (ii) COUNTY fails to cause Caltrans to “timely deobligate” any unused portion of the STP-L funds; or (iii) COUNTY fails to otherwise perform its obligations set forth in this Agreement.

b. REMEDIES: In the event of a default by COUNTY, LACMTA shall provide written notice of such Default to COUNTY with a 30-day period to cure the Default. In the event COUNTY fails to cure the Default, or commit to cure the Default and commence the same within such 30-day period the satisfaction of LACMTA, LACMTA shall follow the remedy procedure set forth in Section 3(i) below, and if, after following such procedure, LACMTA still has not received the full annual payment due in a fiscal year, LACMTA and Authority shall have any and all rights and remedies against COUNTY which may now or hereafter be available to it in law or in equity as set forth in Section 3(ii) below.

(i). In the event of a default by COUNTY, then COUNTY authorizes that such outstanding payments due to LACMTA (either the amount due from County’s failure to meet the payment schedule set forth in Section 2(d) or the amount COUNTY has failed to “timely deobligate” calculated at the time of default) shall be paid from and hereby authorizes LACMTA to withhold the following COUNTY funds in the following priority: First, from the COUNTY’s Proposition A local return funds, then from Proposition C local return funds, then from Measure R local return funds, and then from any unobligated STP-L balance funds. After LACMTA has withheld and offset the applicable amount of funds to satisfy COUNTY’s outstanding obligation, LACMTA shall transfer the balance of such local return funds and/or unobligated STP-L balance funds to the COUNTY in accordance with the applicable state laws or ordinances.

(ii) The remedies described herein are non-exclusive. LACMTA and COUNTY shall have the right to enforce any and all rights and remedies herein or which may be now or hereafter available at law or in equity.

c. In the event that there is any legal court (e.g., Superior Court of the State of California, County of Los Angeles, or the U.S. District Court for the Central District of California) proceeding between the parties to enforce or interpret this AGREEMENT, to protect or establish

any rights or remedies hereunder, the prevailing party shall be entitled to its costs and expenses, including reasonable attorney's fees.

d. COUNTY shall fully indemnify, defend and hold LACMTA and its officers, agents and employees harmless from and against any liability and expenses, including, without limitation, defend costs, any costs or liability on account of bodily injury, death or personal injury of any person or for damage to or loss of risk of property and environmental obligations, any legal fees and any claims for damages of any nature whatsoever arising out of (i) a breach of COUNTY's obligations under this Agreement or (ii) any act or omission of COUNTY or its officers, agents, employees, contractors or subcontractors in the performance of the Project or the work described herein;

e. LACMTA shall fully indemnify, defend and hold COUNTY and its officers, agents and employees harmless from and against any liability and expenses, including, without limitation, defend costs, any costs or liability on account of bodily injury, death or personal injury of any person or for damage to or loss of risk of property and environmental obligations, any legal fees and any claims for damages of any nature whatsoever arising out of (i) a breach of LACMTA's obligations under this Agreement or (ii) any act or omission of LACMTA or its officers, agents, employees, contractors or subcontractors in the performance of the Project or the work described herein;

f. This AGREEMENT may be amended or modified only by mutual written consent of LACMTA and COUNTY.

g. Any correspondence, communication, or contact concerning this AGREEMENT shall be directed to the following:

COUNTY:

Ms. Gail Farber  
Director of Public Works  
County of Los Angeles  
P.O. Box 1460  
Alhambra, CA 91802-1460

LACMTA:

Mr. Arthur T. Leahy  
Chief Executive Officer  
Los Angeles County Metropolitan Transportation Authority  
One Gateway Plaza  
Los Angeles, CA 90012-2952  
ATTN: FRANK FLORES

Executive Officer

h. This AGREEMENT constitutes the entire understanding between the parties with respect to the subject matter herein.

i. This AGREEMENT shall be governed by California law.

IN WITNESS WHEREOF, the parties hereto have caused this AGREEMENT to be executed by their respective officers, duly authorized, by the Los Angeles County Metropolitan Authority on October 31, 2011, 2011, and by the County of Los Angeles on 10/19/11, 2011.

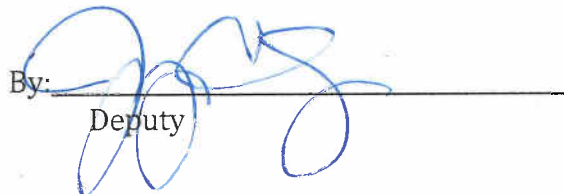
LACMTA:

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY

By:   
Arthur T. Leahy  
Chief Executive Officer


APPROVED AS TO FORM:

Andrea Sheridan Ordin  
County Counsel

By:   
Deputy

COUNTY:

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

By:   
Patrick V. DeChellis  
Deputy Director

**Board Report**

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**File #:** 2017-0260, **File Type:** Contract**Agenda Number:** 22

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**EXECUTIVE MANAGEMENT COMMITTEE  
MAY 18, 2017****SUBJECT: LEASE OF INDUSTRIAL PROPERTY TO CALIFORNIA DROP FORGE, INC.****ACTION: APPROVAL OF 5-YEAR LEASE AGREEMENT****RECOMMENDATION**

AUTHORIZE the Chief Executive Officer to execute a **five-year lease agreement (Lease Agreement) for the property located at 203 E. College Street, Los Angeles (Property, APN# 5409-014-906) with California Drop Forge, Inc.** (Lessee) in the amount of \$7,890.84 monthly with an annual increase of four percent.

**ISSUE**

Lessee and Metro desire to enter into a new lease that will replace and supersede all prior agreements and understandings between the parties. The existing lease, with a current rent of \$2,904 monthly, expired at which time the agreement reverted to a month-to-month tenancy and the new rent of \$7,890.84 was put in place during the negotiation.

**DISCUSSION**

On June 9, 1970, Fansteel, Inc. entered into a lease for the then vacant Property with lessor, Catellus, Inc., Metro's predecessor in interest. Over the interceding years, Fansteel and Catellus amended and supplemented their lease. Fansteel constructed certain improvements to the Property, including without limitation, a building, parking lot and fencing (Existing Improvements). After Fansteel declared bankruptcy in November 2003, California Drop Forge was assigned the existing lease in bankruptcy proceedings, thereby assuming the lease obligations of Fansteel. California Drop Forge has been using the Property and Existing Improvements since then.

The Property is used to support the foundry next door and is located adjacent to the Los Angeles Union Station rail yard. The Property was included in Metro's purchase of Union Station from Catellus, Inc. It consists of approximately 21,919 square feet of land, improved with a metal industrial building containing approximately 5,200 square feet and fully enclosed by fencing. (See Attachment A)

**Findings and Considerations**

Based on the Metro appraisal report, Metro staff and consultants have negotiated a new base rent for

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the land of \$7,890.84 monthly with annual increases of 4%. This lease payment is consistent with the results of a fair market value land appraisal prepared for the negotiations by Integra Realty Resources.

### **DETERMINATION OF SAFETY IMPACT**

The proposed lease will have no impact on safety.

### **FINANCIAL IMPACT**

Adoption of the proposed lease would generate \$512,872 in general fund revenue over the five-year term of the lease.

#### **Impact to Budget**

Adoption of the recommended action will have no impact on the FY18 budget for bus or rail operations.

### **ALTERNATIVES CONSIDERED**

The Board may choose to disapprove the Lease Agreement. Staff does not recommend this since it would leave the Property vacant with no income. The Board may instead decide to go to the open market to find an alternate tenant. This is not recommended for a couple of reasons. The Property is a small, irregularly configured parcel in a secondary location. Its highest value is for continued use by the adjacent Drop Forge site. Also, this Property may be needed for the proposed Link US Project in the future which precludes offering a more lucrative long-term lease.

### **NEXT STEPS**

The proposed terms and conditions of the Lease Agreement have been negotiated, approved by County Counsel and approved by Lessee. The remaining step is approval by the Metro Board of Directors.

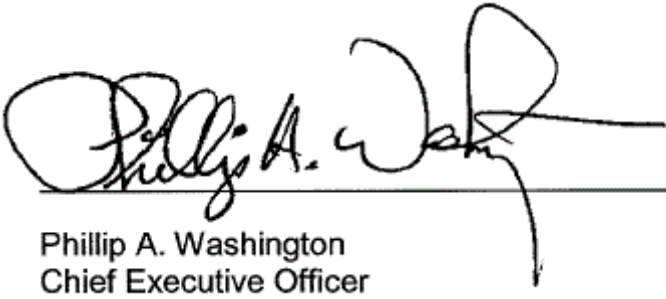
### **ATTACHMENTS**

Attachment A - Drop Forge, Inc. Plat Map and Aerial Photo

Prepared by: Ken Pratt, DEO, Countywide Planning & Development, (213) 922-6288  
Cal Hollis, SEO, Countywide Planning & Development, (213) 922-7319

Reviewed by: Therese W. McMillan, Chief Planning Officer, (213) 922-7077

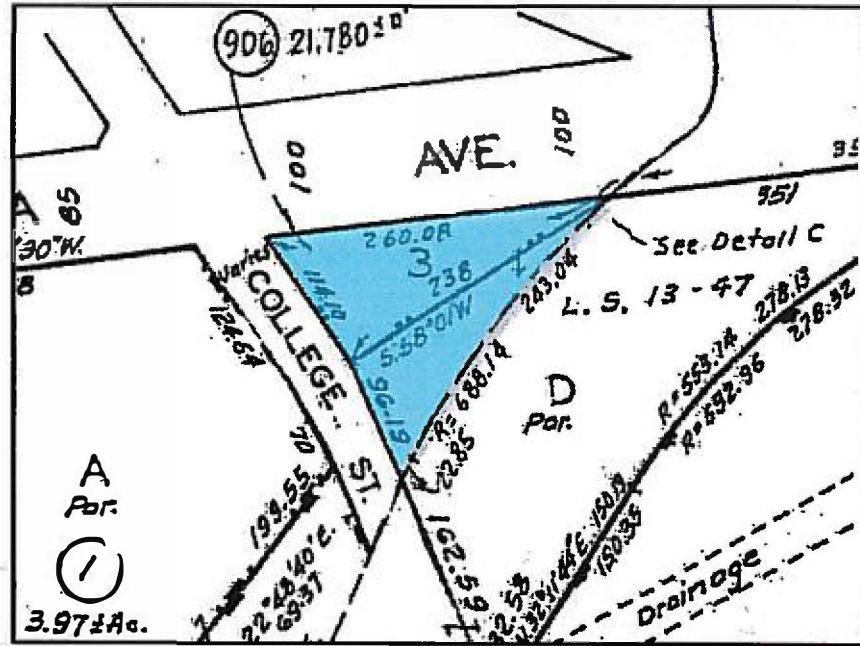




Phillip A. Washington  
Chief Executive Officer

DROP FORGE, INC. PLAT MAP AND AERIAL PHOTO

Plat Map



Subject Aerial Photo





**Board Report**

**File #:** 2017-0302, **File Type:** Federal Legislation / State Legislation (Position)

**Agenda Number:** 24

..Meeting\_Body

**REVISED**  
**EXECUTIVE MANAGEMENT COMMITTEE**  
**MAY 18, 2017**

**SUBJECT: STATE LEGISLATION**

**ACTION: ADOPT STAFF RECOMMENDED POSITIONS**

**RECOMMENDATION**

ADOPT staff recommended positions:

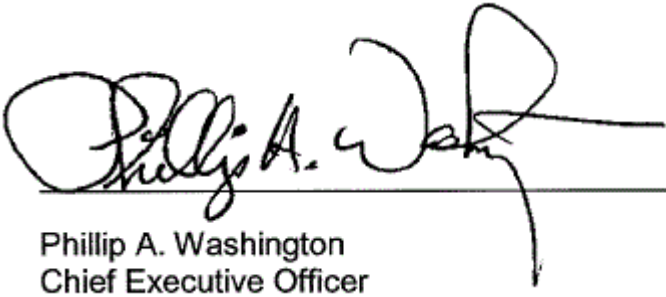
- A. **SB 268 (Mendoza)** - Los Angeles County Metropolitan Transportation Authority **OPPOSE**
- B. **SB 775 (Wieckowski)** - ~~California Global Warming Solutions Act of 2006: Market-Based Compliance Mechanisms~~ **WORK WITH AUTHOR**
- C. **SB 657 (Bates)** - ~~California Public Records Act: Reverse Public Records Actions~~ **OPPOSE**
- D. **AB 1479 (Bonta)** - Public Records: Custodian of Records: Civil Penalties **OPPOSE**
- E. **AB 302 (Gipson)** - ~~South Coast Air Quality Management District: Fleets~~ **WORK WITH AUTHOR**

**ATTACHMENTS**

- Attachment A - SB 268 (Mendoza) Legislative Analysis
- ~~Attachment B - SB 775 (Wieckowski) Legislative Analysis~~
- ~~Attachment C - SB 657 (Bates) Legislative Analysis~~
- Attachment D - AB 1479 (Bonta) Legislative Analysis
- ~~Attachment E - AB 302 (Gipson) Legislative Analysis~~

Prepared by: Michael Turner, DEO, Government Relations, (213) 922-2122  
Desarae Jones, Government Relations Administrator, (213) 922-2230

Reviewed by: Pauletta Tonilas, Chief Communications Officer, (213) 922-3777



Phillip A. Washington  
Chief Executive Officer

**BILL:** SENATE BILL 268  
AS AMENDED MAY 1, 2017

**AUTHOR:** SENATOR TONY MENDOZA (D-ARTESIA)

**SUBJECT:** LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION  
AUTHORITY BOARD COMPOSITION

**STATUS:** SENATE APPROPRIATIONS COMMITTEE

**ACTION:** OPPOSE

**RECOMMENDATION**

Staff recommends that the Board of Directors adopt an OPPOSE position on Senate Bill 268 (Mendoza).

**ISSUE**

Senator Tony Mendoza has recently amended Senate Bill 268, which would make substantial changes to the Metro Board of Directors governance structure.

Specifically the bill would:

- Delete the requirement for Metro to submit a plan to the Legislature for revising the composition of the authority, if the number of members of the Board of Supervisors is increased, within 60 days of the increase;
- Add the county auditor as a non-voting member;
- Reduce the members of the Board of Supervisors from 5 to 2 members;
- Require that one Supervisor represent the largest population in the unincorporated area of the County of Los Angeles;
- Delete the appointment of two public members;
- Require the Mayor of the City of Los Angeles to appoint five members of the City Council who represent contiguous clusters of 3 council districts;
- Require the City Council to determine the contiguity;
- Remove the City Selection Committee's authority to shorten the term-limits to ensure staggered terms;
- Remove the mechanism that exists in current law for transferring the City of Los Angeles appointment to the City Selection Committee should the population of the City of Los Angeles change drastically; and
- Impose a state-mandated local program.

## **DISCUSSION**

The structure of the Board of Directors was originally negotiated at the local level by local stakeholders. The Board has long maintained that there should be no changes to the Board unless there is a locally derived consensus to do so. We are concerned that legislation on this subject, without such a consensus, is not productive and will not further the agency's goals of improving mobility for the 10 million residents of Los Angeles County.

During the 2015-2016 Legislative Session, Senator Mendoza introduced three unique proposals to restructure Metro's Board, SB 1472, SB 1379 and SB 522. Pursuant to Board Direction, Metro advocated in opposition to the measures and the measures did not achieve passage. The impetus behind last year's effort was in opposition to Measure M and to change composition of the Board to achieve greater representation for the cities outside of the City of Los Angeles. The author has also stated that the intent of this restructuring is to reallocate Measure M despite Measure M being approved by 71% of the voters.

SB 268 represents yet another attempt to restructure the Metro Board of Directors without any significant discussion with local stakeholders. While Senator Mendoza has conducted meetings with certain local representatives, that process has not been open, transparent and inclusive. We remain concerned that as with last year's attempts to mandate a Board structure from Sacramento rather than through a bottoms-up, consensus driven process, this bill would only perpetuate conflicts rather than seek compromise.

SB 268 could have serious unintended consequences. Since only two of the County Board of Supervisors would be represented on the board, people who live in the unincorporated areas of the three unrepresented Supervisorial districts would be completely unrepresented on our Board. Additionally, the cities in those 3 Supervisorial Districts would only have one vote on the Board while under the current structure they are represented by both their corridor representative and the County Supervisor.

The proposal would designate the County Auditor as a non-voting appointee. Staff finds this to be duplicative and unnecessary. Metro has an independent Inspector General and is required to maintain an independent procurement department, all of which is unique to transportation agencies in California. Metro is subject to multiple audit requirements including annual independent audits, independent audits of sales tax expenditures, and regular audits by the federal government.

Staff recommends that the Board adopt a formal OPPOSE position on the measure SB 268 (Mendoza).

## **DETERMINATION OF SAFETY IMPACT**

There is no determined safety impact due to the enactment of the proposed legislation.

## **FINANCIAL IMPACT**

The estimated financial impact has yet to be determined.

## **ALTERNATIVES CONSIDERED**

Adopting a support position on the bill would be counter to the Board approved position as outlined in the 2017 State Legislative Program goals that direct staff to oppose any legislation that seeks to restructure the Board of Directors. The staff recommended position on this measure supports the Board's policy to maintain the locally-derived process for determining the board governance structure.

## **NEXT STEPS**

Should the Board decide to adopt an OPPOSE position on this measure; staff will communicate the Board's position to the author and work vigorously oppose the bill and future iterations of the measure by the author. Staff will continue to keep the Board informed as this issue is addressed throughout the legislative session.

**BILL:** ASSEMBLY BILL 1479

**AUTHOR:** ASSEMBLYMEMBER ROB BONTA (D- ALAMEDA)

**SUBJECT:** PUBLIC RECORDS: CUSTODIAN OF RECORDS: CIVIL PENALTIES

**STATUS:** ASSEMBLY APPROPRIATIONS COMMITTEE  
HEARING SCHEDULED: MAY 10, 2017

**ACTION:** OPPOSE

**RECOMMENDATION**

Staff recommends that the Board of Directors adopt an OPPOSE position on Assembly Bill 1479 (Bonta).

**ISSUE**

Assemblymember Rob Bonta has recently amended Assembly Bill 1479, which would make substantial changes to the California Public Records Act related to civil penalties.

Specifically the bill would:

- Require public agencies to designate a person or office to act as the agency's custodian of records who is responsible for responding to any request made pursuant to the California Public Records Act and any inquiry from the public about a decision by the agency to deny a request for records; and
- Authorize a court that finds that an agency or the custodian improperly withheld from a member of the public, public records which were clearly subject to public disclosure, unreasonably delayed providing the contents of a record subject to disclosure in whole or in part, assessed an unreasonable or unauthorized fee upon a requester, or otherwise did not act in good faith to comply with these provisions, to assess a civil penalty against the agency in an amount not less than \$1,000, nor more \$5,000.

**DISCUSSION**

This bill was recently amended and, in its current form, aims to impose a civil penalty on public agencies that act in response to California Public Records Act requests. The bill classifies that in the event that an "unreasonable delay" occurs in responding to CPRA requests, penalties should be assessed. These provisions could cause an increase in costs relative to how Metro process public records requests. The County of Los Angeles and the League of California Cities oppose the bill.



Due to the nature of some records requests, a significant amount of staff time and resources may be required to prepare the request, review the contents of the request and respond to the requestor. The civil penalties as outlined in the proposed in the bill would be assessed if the court finds that the agency: (1) improperly withheld a public record that was clearly subject to disclosure, (2) unreasonably delayed providing the contents of a record subject to disclosure in whole or in part, (3) assessed an unreasonable or unauthorized fee upon a requester. Or (4) otherwise did not act in good faith to comply with the PRA.

Supporters of the measure argue that public agencies have impeded the public's right to public information. Opposition to the measure cite that authorizing the courts to assess civil penalties does not rightly address the author's intent of expanding access to public records, it incentivizes individuals to seek damages in the event that they believe their records request was, in fact, delayed.

LA Metro, as an agency aims to be transparent and responsive in adhering to the provisions of the PRA. Metro receives a voluminous number of public records each year, and each request is evaluated thoroughly. Staff has concerns with the potential civil actions and associated civil penalties that would be assessed should this measure go into law as currently drafted. Staff has additional concerns with the statute's lack of clarity relating to the definition of an "unreasonable delay." Under existing law, public agencies are required to comply with strict provisions under the PRA. The PRA also provides the ability for the public to seek a court opinion and litigation under specific circumstances.

Staff recommends that the Board adopt an OPPOSE position on AB 1479 (Bonta).

### **DETERMINATION OF SAFETY IMPACT**

There is no determined safety impact due to the enactment of the proposed legislation.

### **FINANCIAL IMPACT**

The estimated financial impact has yet to be determined.

### **ALTERNATIVES CONSIDERED**

Adopting a support position on the bill would be counter to balancing the need to protect individual privacy rights and agency goals related to transparency in meeting California Public Records Act requirements.

### **NEXT STEPS**

Should the Board decide to adopt an OPPOSE position on this measure; staff will communicate the Board's position to the author and work to oppose the measure. Staff will continue to keep the Board informed as this issue is addressed throughout the legislative session.



## Board Report

File #: 2017-0255, File Type: Contract

Agenda Number: 25

### EXECUTIVE MANAGEMENT COMMITTEE MAY 18, 2017

**SUBJECT: LABOR COMPLIANCE MONITORING BENCH**

**ACTION: APPROVE CONTRACT MODIFICATION**

#### RECOMMENDATION

AUTHORIZE:

- A. the Chief Executive Officer to execute Modification No. 2 to the **Labor Compliance Bench (the Bench) Contracts Numbers PS-21307700 A-J, for labor compliance monitoring services**, to exercise the second and third year options, extending the contract term from July 1, 2017 to June 30, 2019, increasing the total authorized not-to-exceed amount by \$4,000,000 (\$2,000,000 for each option year) from \$15,056,648 to \$19,056,648; and
- B. the Chief Executive Officer to award and execute task orders for a not-to-exceed total authorized amount of \$19,056,648.

#### ISSUE

On June 16, 2011, the Board of Directors authorized the Chief Executive Officer to establish a qualified list of candidates to perform labor compliance monitoring activities for Metro construction projects under RFIQ No. PS-2130-7700 to the attached list of consultants (Attachment B), for a period of five years with five, one-year options. The expiration date for the base period and first option year for the Labor Compliance Monitoring Bench is June 30, 2017.

Over the last eight years, the Labor Compliance Monitoring Bench (Bench) continues to be an effective compliance tool for Metro. The Bench Consultants monitor and enforce Public Works projects by ensuring the payment of prevailing wages; their expertise and extensive knowledge of the California Labor Code and Federal Davis Bacon and Related Acts, coupled with investigative and auditing skills, have helped to prevent wage violations and in other cases, collect back wages due to workers.

Board authorization is requested to exercise the second and third year options. The approval of this action is required to continue monitoring labor compliance services to ensure that workers on Metro's projects are being paid the correct prevailing wage rates.

## **DISCUSSION**

The California Labor Code and Davis Bacon and Related Acts require Metro to ensure that all construction workers employed to work on Metro funded construction projects are compensated according to the state and federal prevailing wage laws and regulations. The Consultants on the labor compliance monitoring bench are responsible for evaluating, monitoring, and enforcing prevailing wage requirements on assigned construction projects. This includes maintaining all required records, providing assistance to field personnel, conducting field interviews and investigations, and any other duties in accordance with applicable laws and regulations governing public works projects.

Since the inception of the Bench, Vendor/Contract Management has issued 59 task orders (See Attachment D), totaling \$14,410,842.83. The Bench has been an effective tool, specifically on Metro's Mega, high profile projects. Metro's Small Business Enterprise (SBE) Program, Small Business Prime Program, or Disadvantaged Business Enterprise (DBE) Program are applied to the task order solicitations based on funding sources and estimated task order value. Currently, nine of the ten prime Bench consultants are certified as DBE's and SBE's and have been awarded \$12,769,912.07 of the \$14,410,842.83 awarded to date (approximately 89% of the total awarded value).

As new capital projects are approved by the Board, the funds for labor compliance monitoring are included in the approved life-of-project budgets for each capital project. The not-to-exceed amounts cover the project's construction and professional service contracts (new and continued) identified during the FY18 budget process. The not-to-exceed amount does not cover Measure M and/or Mega projects; those will be brought to the Board for consideration and approval individually.

The Bench has been successful in providing DBE/SBE opportunities, meeting established goals, maintaining effective monitoring based on state and federal regulations and ensuring that workers on Metro's project are being paid the correct prevailing wage rates.

## **DETERMINATION OF SAFETY IMPACT**

The approval of this recommended action will not have any direct impact on the safety of our customers and employees.

## **FINANCIAL IMPACT**

Labor Compliance funding for capital projects have been included in the life of project (LOP) budget for new projects from inception.

### Impact to Budget

A not-to-exceed amount of \$2,000,000.00 has been budgeted for FY18 for new task orders. Funding for this contract will parallel the funding sources for various major construction projects to be charged during the life of this contract. This may include a mixture of Federal, State, and local sources, some of which are eligible for bus and rail operations and/or capital.

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**ALTERNATIVES CONSIDERED**

1. One alternative is to perform the duties using Metro staff by adding additional FTEs. A minimum of 4 FTEs are forecasted to perform prevailing wage monitoring. The cost for this option is estimated at \$724,583.04 per year. This alternative is not recommended because the volume of capital construction work is constantly changing making this activity subject to peak periods alternating with periods of low activity.
2. Another alternative is to utilize existing DEOD Labor and Retention Programs Unit staff to provide labor compliance monitoring on the currently active task orders, in addition to their current workload. This alternative is not recommended due to the delay in service and compliance monitoring efforts that this would cause.

**NEXT STEPS**

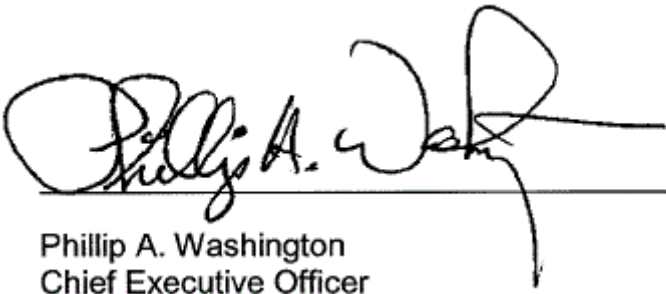
- Upon approval by the Board, staff will execute amendments to the bench contracts and continue to award individual task orders for prevailing wage compliance monitoring, using budgeted funds identified for FY18.
- Staff will continue to provide oversight on the active task orders that will remain under the existing bench contracts.
- Staff will begin the procurement process to issue a new solicitation for Labor Compliance Monitoring Services. The process for the new solicitation will begin in the first quarter of FY19.

**ATTACHMENTS**

- A. Procurement Summary
- B. List of Consultants
- C. Contract Modification/Change Order Log
- D. List of Project Task Orders & Paid-to-Date Values
- E. DEOD Summary

Prepared by: Miguel Cabral, Executive Officer  
Diversity & Economic Opportunity (213) 922-2232

Reviewed by: Debra Avila, Chief Vendor/Contract Management Officer, (213) 418-3051



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Phillip A. Washington  
Chief Executive Officer

## PROCUREMENT SUMMARY

## LABOR COMPLIANCE MONITORING BENCH / PS21307700 A-J

1.	<b>Contract Number:</b> PS21307700 A-J		
2.	<b>Contractor:</b> Multiple Firms (Labor Compliance Bench Firms)		
3.	<b>Mod. Work Description:</b> Exercise Options Year 2 and Year 3		
4.	<b>Contract Work Description:</b> Conduct labor compliance monitoring services for all construction projects that require contractor to pay prevailing wages under California State Labor Code.		
5.	<b>The following data is current as of:</b> April 13, 2017		
6.	<b>Contract Completion Status</b>		<b>Financial Status</b>
	<b>Contract Awarded:</b>	June 16, 2011	<b>Contract Award Amount:</b> \$13,478,064
	<b>Notice to Proceed (NTP):</b>	June 16, 2011	<b>Total of Modifications Approved:</b> \$1,578,584
	<b>Original Complete Date:</b>	June 30, 2017	<b>Pending Modifications (including this action):</b> \$4,000,000
	<b>Current Est. Complete Date:</b>	June 30, 2019	<b>Current Contract Value (with this action):</b> \$19,056,648
7.	<b>Contract Administrator:</b> Barbara A. Gatewood		<b>Telephone Number:</b> (213) 922-7317
8.	<b>Project Manager:</b> Wendy White		<b>Telephone Number:</b> (213) 922-2648

**A. Procurement Background**

This Board Action is to approve Contract Modification No. 2, issued in support of exercising option years two and three, which extends the contract term from July 1, 2017 to June 30, 2019 for the Labor Compliance Bench (the Bench) contract numbers PS21307700 A-J, to perform labor compliance monitoring services.

This Contract Modification and future Task Orders will be processed in accordance with Metro's Acquisition Policy and the contract type is a firm fixed price.

On June 16, 2011, the Board of Directors authorized the Chief Executive Officer to establish a qualified list of candidates to perform labor compliance monitoring activities for Metro construction projects under RFIQ No. PS-2130-7700 to the attached list of consultants (Attachment B), for a period of five years with five, one year options. The expiration date for the current labor Compliance Monitoring Bench is June 30, 2017.

**B. Cost/Price Analysis**

The recommended increase in funding for this action has been determined to be fair and reasonable based on fact finding and negotiations in accordance with Metro's Acquisition Policy. All future task orders and modifications will be determined to be fair and reasonable in accordance with Metro's Acquisition Policy at the time of issuance and award.

**ATTACHMENT B**

**LIST OF CONSULTANTS**

**LABOR COMPLIANCE MONITORING BENCH / PS21307700 A-J**

<b>AVANT GARDE, INC.</b>
<b>CASAMAR GROUP</b>
<b>GAIL CHARLES CONSULTING</b>
<b>METRO COMPLIANCE SERVICES</b>
<b>OPPORTUNITY MARKETING GROUP</b>
<b>PADILLA &amp; ASSOCIATES</b>
<b>PARSONS</b>
<b>PERCEPTIVE ENTERPRISES, INC.</b>
<b>THE "G" CREW</b>
<b>THE SOLIS GROUP</b>

## CONTRACT MODIFICATION/CHANGE ORDER LOG

## LABOR COMPLIANCE MONITORING BENCH / PS21307700 A-J

<b>Mod No.</b>	<b>Description</b>	<b>Status (approved or pending)</b>	<b>Date</b>	<b>\$ Amount</b>
1	Exercise Option No. 1 of the Labor Compliance Monitoring Bench from June 30, 2016 to June 30, 2017	Approved	06/23/2016	\$1,578,584
2	Exercise Options 2 & 3 increasing contract authorization and extending period of performance	Pending	05/25/2017	\$4,000,000
	<b>Modification Total:</b>			<b>\$5,578,584</b>
	<b>Original Contract:</b>			<b>\$13,478,064</b>
	<b>Total:</b>			<b>\$19,056,648</b>



## ATTACHMENT D

**LABOR COMPLIANCE BENCH MONITORING  
LIFE OF PROJECT & PAID TO DATE VALUES**

A	B	C	D	E	F	F
	Task Order #	Contract Number	Project Description	LC Bench Consultant	Life of Task Order Total Amount	Amount Paid to Date
1	6	C0-940	Division 3 Master Plan	Avant Garde	\$ 14,856.00	\$ 14,856.00
2	9	OP-3344-2103	Trash & Vegetation Removal	Avant Garde	\$ 39,319.00	\$ 39,319.00
3	18	C0-983	I-405 Soundwall Package 5&7	Avant Garde	\$ 105,898.00	\$ 105,898.00
4	22	C-1016	Lighting Upgrade @ Maintenance Building	Avant Garde	\$ 4,350.00	\$ 4,350.00
5	24	C-1022	Bus Stop Amenity Improvements @ Locations Along Slauson Ave.	Avant Garde	\$ 2,285.00	\$ 2,285.00
6	38	C-1037R	Bus Div. Generators (Div. 1, 7 & 8 w/options @ Div. 3)	Avant Garde	\$ 18,701.00	\$ 18,701.00
7	49R	C-1056	Westside Subway Ext. Advance Utility Relocation (LaCienga Station)	Avant Garde	\$ 62,680.00	\$ 62,680.00
				<b>Avant Garde Subtotals:</b>	\$ 248,089.00	\$ 248,089.00
8	2	C0-943	Metro Orange Line Extension	Casamar Group	\$ 151,825.80	\$ 151,825.80
9	46	C-1043	Universal City Pedestrian Bridge	Casamar Group	\$ 50,562.23	\$ 50,562.23
10	39	OP-8380-3019	Division 13 CNG Fueling Facility D/B	Casamar Group	\$ 16,042.50	\$ 16,042.50
11	58	C-1086	Metro Blue Line Pedestrian and Swing Gates Installation	Casamar Group	\$ 25,500.00	\$ 4,203.90
				<b>Casamar Group Subtotals:</b>	\$ 243,930.53	\$ 222,634.43
12	40	C-0981	Regional Connector Advance Utilities Relocation	Gail Charles Consulting Services (GCCS)	\$ 30,847.65	\$ 30,847.65
				<b>GCCS Subtotals:</b>	\$ 30,847.65	\$ 30,847.65
13	14	C-1000	Div.2 Cyclone Replacement	Metro Compliance Services, JV (MCS)	\$ 7,064.25	\$ 7,064.25
14	48R	C-1045	Westside Subway Extension Section 1 Design/Build	MCS	\$ 3,952,560.03	\$ 371,634.96
15	3	C0-958	El Monte Transit Center	MCS	\$ 130,144.80	\$ 130,144.80
16	44	C-1067	Pavement Replacement @ Divison 8	MCS	\$ 10,601.73	\$ 10,601.73
17	41	C-1020	MRL Union Station West Entrance Skylight Ventilation Modification	MCS	\$ 7,180.03	\$ 7,180.03
18	34	C-1038R	Vault House Relocation Div. 2, 8, 10 & 15 (Phase 1)	MCS	\$ 8,626.00	\$ 8,626.00
19	35	C-1058	Division 9 Transportation Building Addition and Renovation	MCS	\$ 44,558.00	\$ 44,558.00
20	57	C-1101R	Sound Enclosures at Slauson & Manchester Busway Stations	MCS	\$ 15,720.33	\$ -
				<b>MCS Subtotals:</b>	\$ 4,176,455.17	\$ 579,809.77
21	11	C0-990	Crenshaw Advanced Utilities Project	Padilla & Associates	\$ 22,698.95	\$ 22,698.95
22	12	C0-985R	Lankershim Depot Rehabilitation	Padilla & Associates	\$ 4,846.52	\$ 4,846.52
23	13	C0-986	Harbor Transit Video Surveillance	Padilla & Associates	\$ 3,970.67	\$ 3,970.67

**LABOR COMPLIANCE BENCH MONITORING  
LIFE OF PROJECT & PAID TO DATE VALUES**

A	B	C	D	E	F	F
	Task Order #	Contract Number	Project Description	LC Bench Consultant	Life of Task Order Total Amount	Amount Paid to Date
24	27	C-1042	Re-Roofing @ Div. 10 Tranp. Bldg.	Padilla & Associates	\$ 8,000.00	\$ 8,000.00
25	31	C-1048	Westside Subway Extension Project - Advanced Utility Relocations (La Brea Station)	Padilla & Associates	\$ 19,028.02	\$ 19,028.02
26	33	C0-973A	Sound Wall Package 6 & 8	Padilla & Associates	\$ 19,869.07	\$ 19,869.07
27	47	C0-991	Division 16 Southwestern Yard Design/ Build	Padilla & Associates	\$ 772,575.87	\$ 248,149.40
				<b>Padilla &amp; Associates Subtotals:</b>	\$ 850,989.10	\$ 326,562.63
28	1	C0-882	I-405 Sepulveda Pass Widening Project	Parsons	\$ 1,640,930.76	\$ 1,640,930.76
				<b>Parsons Subtotals:</b>	\$ 1,640,930.76	\$ 1,640,930.76
29	4	C0-938	In Ground Hoist Replacement	Perceptive Enterprises, Inc.	\$ 12,750.00	\$ 12,750.00
30	7	OP-3340-2480	Red Line Civic Center Station Escalator Replacement	Perceptive Enterprises, Inc.	\$ 40,795.00	\$ 40,795.00
31	19	C0-963	D/B Metro Green Line Storage Bldg @ Division 22	Perceptive Enterprises, Inc.	\$ 9,553.47	\$ 9,553.47
32	20	C0-999R	Division 10 Pavement Replacement (Employee Parking)	Perceptive Enterprises, Inc.	\$ 4,584.98	\$ 4,584.98
33	23	C-1017	Landscape Improvements	Perceptive Enterprises, Inc.	\$ 4,145.11	\$ 4,145.11
34	30	C0-998R	Pasadena Goldline Repairs D/B	Perceptive Enterprises, Inc.	\$ 34,097.71	\$ 34,097.71
35	45	C-0980	Regional Connector Transit Corridor	Perceptive Enterprises, Inc.	\$ 2,915,465.43	\$ 901,740.15
36	42	C-1013R	MOL to MRL North Hollywood Station West Entrance	Perceptive Enterprises, Inc.	\$ 63,651.64	\$ 63,651.64
37	50	C-1122	Pavement Replacement at Division 15	Perceptive Enterprises, Inc.	\$ 5,938.56	\$ 5,938.56
38	52	C-1131	Pavement Replacement at Division 8	Perceptive Enterprises, Inc.	\$ 8,907.84	\$ 7,237.62
39	53	C-1073	Pershing Square Canopy Addition and Escalator	Perceptive Enterprises, Inc.	\$ 44,869.12	\$ 20,708.83
40	54	C-1110	Patsaouras Plaza Privately Owned Vehicle and Storm Drain Repair (Design Build)	Perceptive Enterprises, Inc.	\$ 12,701.92	\$ 12,701.92
41	55	C-17118	Environmental Graphics at Harbor Gateway Transit Center and Harbor Freeway Stations	Perceptive Enterprises, Inc.	\$ 9,416.80	\$ -
				<b>Perceptive Enterprises, Inc. Subtotals:</b>	\$ 3,166,877.58	\$ 1,117,904.99
42	5	C0-975	Harbor Transit Improvements	The "G" Crew	\$ 21,209.00	\$ 21,209.00
43	8	OP-3344-2235	Anti-Graffiti Film	The "G" Crew	\$ 32,218.41	\$ 32,218.41
44	10	OP-3344-2634	Roll-Up Door Maintenance	The "G" Crew	\$ 79,812.27	\$ 79,812.27
45	16	OP-8380-2788R	Automated Portable Toilet	The "G" Crew	\$ 10,423.60	\$ 10,423.60
46	17	C0-974	Div.13 Bus Maint. & Oper. Facility	The "G" Crew	\$ 122,502.56	\$ 122,502.56
47	21	C-1015R	Division 1 Cyclone Replacement	The "G" Crew	\$ 5,512.83	\$ 5,512.83

**LABOR COMPLIANCE BENCH MONITORING  
LIFE OF PROJECT & PAID TO DATE VALUES**

A	B	C	D	E	F	F
	Task Order #	Contract Number	Project Description	LC Bench Consultant	Life of Task Order Total Amount	Amount Paid to Date
48	25	C-1026	Pavement Replacement @ Blue Line	The "G" Crew	\$ 15,282.31	\$ 15,282.31
49	26	C-1033	Pavement Replacement @ Blue Line Artesia Station Bus Terminal & Terminal 26	The "G" Crew	\$ 5,512.83	\$ 5,512.83
50	28	C-1051	Radiant Heater Replacement @Div. 7 (Incl. Amend. #1)	The "G" Crew	\$ 5,974.17	\$ 5,974.17
51	29	C-1031	Div. 9 & 18 Water Recycling System	The "G" Crew	\$ 5,974.17	\$ 5,974.17
52	36	C-1046	Vault House Relocation @ Div. 1,5,9 & 18 (Phase 1)	The "G" Crew	\$ 17,686.61	\$ 17,686.61
53	37	C-1030R	Div 8, 10 & 15 Metal Bin Canopies & Building Awnings (Phase 1)	The "G" Crew	\$ 17,686.61	\$ 17,686.61
54	43	PS-12-6430-306R	Gateway Building Carpet Replacement	The "G" Crew	\$ 23,994.96	\$ 23,994.96
55	51	C-1124	Hollywood-Vine Bike Hub	The "G" Crew	\$ 8,670.65	\$ 8,670.65
56	56	C-1126	Floor Coating System at Division 3,5,7,8,10 Maintenance Buildings	The "G" Crew	\$ 9,777.73	\$ 5,140.00
				The "G" Crew Subtotals:	\$ 382,238.71	\$ 377,600.98
57	15	C-1018	Div. 3 Maintenance Pit Waste Oil	The Solis Group	\$ 5,039.30	\$ 5,039.30
58	32	C0-988	Crenshaw / LAX	The Solis Group	\$ 3,646,745.00	\$ 1,572,753.46
59	59	C-1123	Hoist Replacement at Divisions 8 & 18	The Solis Group	\$ 18,700.03	\$ 1,934.31
				The Solis Group Sutotals:	\$ 3,670,484.33	\$ 1,579,727.07
GRAY INDICATES CLOSED TASK ORDERS				<b>Totals</b>	\$ 14,410,842.83	\$ 6,124,107.28
				<b>SBE Total</b>	\$ 12,769,912.07	

## DEOD SUMMARY

## LABOR COMPLIANCE MONITORING BENCH / PS-21307700 A-J

**A. Small Business Participation**

The Diversity & Economic Opportunity Department established a 35% goal for this Task Order/Bench contract for the participation of Disadvantaged Business Enterprise (DBE), and Small Business Enterprise (SBE) certified firms.

Small business participation is based on the funding source, which determines the applicable Disadvantaged Business Enterprise (DBE), or Small Business Enterprise (SBE) Programs for each task order award. DBE and SBE participation is based on the aggregate value of all task orders issued.

There are nine DBE/SBE Primes on the Bench (eight of which have current participation of 100%). Parsons Constructors, Inc., the only non-DBE/SBE Prime, is exceeding its commitment with current DBE participation of 47.92%. One firm has not received task awards to date.

	DBE/SBE Primes & Subcontractors	Current Participation	
		DBE	SBE
<b>1</b>	<b>Padilla &amp; Associates (DBE/SBE Prime)</b>	<b>100%</b>	<b>0%</b>
	<b>TOTAL</b>	<b>100%</b>	<b>0%</b>
<b>2</b>	<b>Parsons Constructors, Inc. (non-DBE/SBE Prime)</b>		
	DBE Subcontractors		
	CVL Consulting	47.92%	0%
	The G crew	0	0%
	<b>TOTAL</b>	<b>47.92%</b>	<b>0%</b>
<b>3</b>	<b>The Solis Group (DBE/SBE Prime)</b>	<b>94.6%</b>	<b>0%</b>
	CS & Associates (CS&A)	5.4%	0%
	<b>TOTAL</b>	<b>100%</b>	<b>0%</b>
<b>4</b>	<b>Perceptive Enterprises (DBE/SBE Prime)</b>	<b>95.6%</b>	<b>0%</b>
	Gail Charles Consulting Services	4.4%	0%
	GCAP Services	0%	0%
	Diana Ho Consulting Services	0%	0%
	<b>TOTAL</b>	<b>100%</b>	<b>0%</b>
<b>5</b>	<b>Metro Compliance Services (DBE/SBE Prime)</b>	<b>100%</b>	<b>100%</b>
	<b>TOTAL</b>	<b>100%</b>	<b>100%</b>

<b>6</b>	<b>Avant Garde (DBE/SBE Prime)</b>	<b>100%</b>	<b>100%</b>
	<b>TOTAL</b>	<b>100%</b>	<b>100%</b>
<b>7</b>	<b>Casamar Group, LLC (DBE/SBE Prime)</b>	<b>100%</b>	<b>100%</b>
	<b>TOTAL</b>	<b>100%</b>	<b>100%</b>
<b>8</b>	<b>The G Crew (DBE/SBE Prime)</b>	<b>100%</b>	<b>100%</b>
	<b>TOTAL</b>	<b>100%</b>	<b>100%</b>
<b>9</b>	<b>Gail Charles Consulting Serv (DBE/SBE Prime)</b>	<b>100%</b>	<b>100%</b>
<b>10</b>	<b>Opportunity Marketing Services (DBE/SBE Prime)</b>	<b>0%</b>	<b>0%</b>
	E.W. Moon, Inc.	0%	0%
	Administration Rescue, Inc.	0%	0%
	Vahishta, Inc.	0%	0%
	<b>TOTAL</b>	<b>0%</b>	<b>0%</b>

**B. Living Wage and Service Contract Worker Retention Policy Applicability**

The Living Wage and Service Contract Worker Retention Policy is not applicable to this modification.

**C. Prevailing Wage Applicability**

Prevailing wage is not applicable to this modification.

**D. Project Labor Agreement/Construction Careers Policy**

Project Labor Agreement/Construction Careers Policy is not applicable to this contract.



**Board Report**

**File #:** 2017-0279, **File Type:** Public Hearing

**Agenda Number:** 30

**REVISED**  
**BUDGET PUBLIC HEARING**  
**FINANCE, BUDGET AND AUDIT COMMITTEE**  
**MAY 17, 2017**

**SUBJECT: FISCAL YEAR 2018 (FY18) BUDGET**

**ACTION: ADOPT THE FY18 BUDGET**

**RECOMMENDATION**

CONSIDER:

- A. ADOPTING the **proposed FY18 Budget** as presented in the budget document (provided in a separate transmittal and posted on metro.net); and
- B. APPROVING the addition of 129 positions, including 22 contract and 107 non-contract full-time equivalent positions, as presented in Attachment A; and
- C. APPROVING the Life of Project (LOP) budgets for new capital projects with LOP exceeding \$5 million, included in the proposed FY18 Budget and presented in Attachment B; and
- D. ADOPTING Life of Project (LOP) budget of \$118.9 million for Blue Line Signaling Rehabilitation and Operational State of Good Repair Improvements that incorporates system compatibility, safety features, and new technology to improve headways during service interruptions, further described in Attachment B; and
- E. AMENDING the proposed budget to add \$8.2 million for engineering support and advanced utility relocation designs on Metro Orange Line Grade Separation (project submitted after proposed budget was published); and
- F. AMENDING the proposed budget to add \$1 million for the Comprehensive Operational Analysis (COA), which is a comprehensive service restructuring study; and
- G. APPROVING the Reimbursement Resolution declaring Metro’s intention to issue debt in FY17 18 for capital projects, as shown in Attachment C, with the provision that actual debt issuance will

require separate Board approval.

## **ISSUE**

California Public Utilities Code Section 130105 requires Metro to adopt an annual budget to manage the revenues and expenses of the agency's projects and programs. The budget is the legal authorization to obligate and spend funds and to implement Board policy. It includes all operating, capital, planning and programming, subsidy funds, debt service requirements, and general fund activities for the fiscal year. Budget detail is a management plan for financial activity and is prepared at the fund, project, department, and expenditure level. The legal level of control is at the fund level. Total annual expenditures cannot exceed the final appropriation by the Board except for capital expenditures, which is authorized on a life-of-project basis.

Copies of the proposed budget were made available to the public on May 3, 2017, both electronically at [www.metro.net](http://www.metro.net) and through the Records Management Center (RMC) at [RMC@metro.net](mailto:RMC@metro.net). Printed copies of the budget document were made available at the RMC on the plaza level of the Gateway building on the same day. The public hearing is scheduled for May 17, 2017. Advance public notification of this hearing was issued through advertisements posted in over two dozen news publications.

## **DISCUSSION**

The proposed FY18 budget is balanced at \$6.1 billion in total agency expenditures, an increase of \$83.1 million, or 1.4%, from the \$6.0 billion FY17 budget. This increase of less than the Consumer Price Index (CPI), which is a measure of cost inflation, demonstrates the agency's commitment to fiscal discipline and tight budget controls as we continue to deliver on the agency goals:

1. Advance safety and security for our customers, the public, and Metro employees
2. Exercise fiscal discipline to ensure financial stability
3. Plan and deliver capital projects on time and on budget while increasing opportunities for small business development and innovation
4. Improve the customer experience and expand access to transportation options
5. Increase transit use and ridership
6. Implement an industry-leading state of good repair program
7. Invest in workforce development
8. Promote extraordinary innovation
9. Contribute to the implementation of agencywide and departmental Affirmative Action and Equal Employment Opportunity goals

## **Assumptions Summary**

The FY18 budget is built on the following assumptions:

- Proposition A, Proposition C, Measure R, and TDA sales tax revenue growth of 2.8% over the FY17 budget, based on forecasting sources as well as actual receipts for FY17 YTD through

Q2

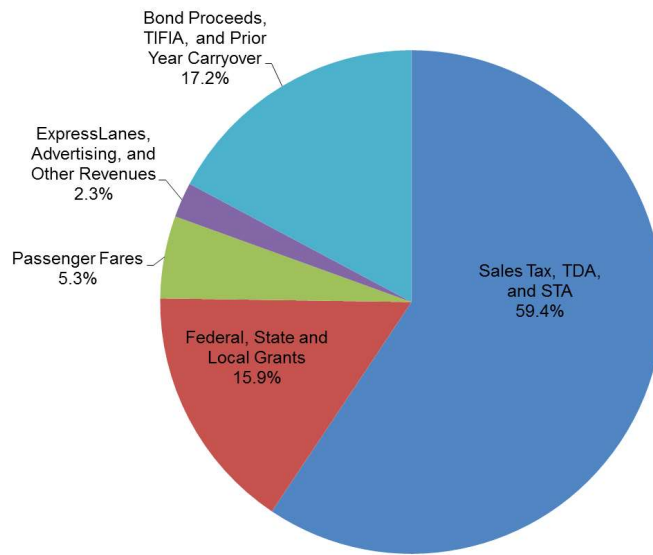
- Measure M revenues are budgeted at 95% of the estimated annual receipts based on past history for new sales tax inaugural years
- State Transit Assistance (TDA) revenues are based on estimates from the State Controller’s Office
- CPI of +1.75% based on Beacon Economics forecast
- No change in Bus Revenue Service Hours (RSH), with RSH reallocated to:
  - Improve reliability on the Owl network
  - Augment and right-size service in order to increase peak frequencies on priority bus lines
  - Incorporate service support for rail line maintenance and special events
- Rail Revenue Service Hours increase by 129,000 RSH, or 11.6%, due to:
  - Availability of more rail cars to meet growing demand on the Expo Line and Gold Line
  - Providing necessary service to meet growing demand for service to sports venues and special events
- Wage/salary increases and health/welfare benefits for represented employees are based on Board adopted contracts
  - Labor negotiations continue for collective bargaining agreements
- With labor negotiations ongoing, results will be reflected under separate action
- 107 new non-represented FTEs requested
- 22 represented FTEs requested

Resources Summary

The table below summarizes the budgeted resources available for FY18.

		FY18	
Resources (\$ in millions)		Proposed	% of Total
1	Sales Tax, TDA, and STA	\$ 3,628.9	59.4%
2	Federal, State and Local Grants	969.0	15.9%
4	Passenger Fares	323.4	5.3%
5	ExpressLanes, Advertising, and Other Revenues	137.7	2.3%
6	Bond Proceeds, TIFIA, and Prior Year Carryover	1,052.6	17.2%
7	<b>Total</b>	<b>\$ 6,111.6</b>	<b>100.0%</b>





### FY18 vs FY17 Expense Summary

For the proposed FY18 budget, every dollar has been linked to one of our nine agency goals as listed on the second page of this report. This new practice enables us to track our ongoing costs in relation to our objectives, which will result in a quantifiable measure of the efforts expended to move toward specific achievements. This approach is designed to further reinforce the agency’s commitment to strategic monitoring of performance and the improvement of accountability.

Due to our focused adherence to tight budget controls, the FY18 budget represents an increase of only 1.4%, which is less than CPI. The main cause of the variance within each program type category are listed below.

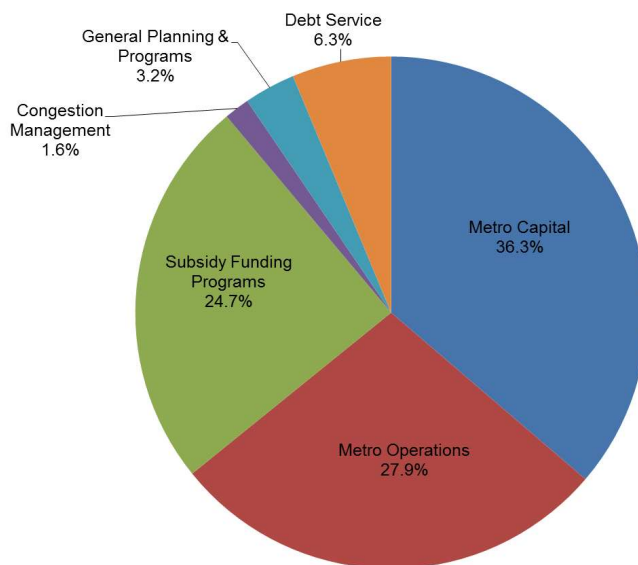
- Metro Capital is decreasing by 11.8%, primarily due to the offsetting impact of the I-405 contract closeout.
- Metro Operations is increasing slightly by 6.1% due to two main factors:
  - Restructuring of Transit Security efforts, including the new law enforcement contracts and an increase in private security.
  - Increase in unit costs for purchased transportation, due to the inclusion of living wage increases in the new contracts.
- Subsidy Funding Programs will increase by 15.7%, primarily due to increased subsidies paid to local jurisdictions, municipal operators, Metrolink, and Access Services, which is a direct

result of additional funding from the growth in sales tax revenues plus new revenues from Measure M.

- Congestion Management will decrease by 13.5% due to improved cash flow management.
- General Planning & Programs will increase by 17.2%, due to planning and administration for new Measure M projects, as well as efforts to secure Public-Private Partnerships to facilitate acceleration of new construction.
- Debt Service will increase by 19.7%, due to year-over-year changes in the debt repayment schedule as approved by the Board at the time of debt authorization.

The chart below shows the summary of expenditures for FY18 compared to FY17.

Expenditures by Program Type (\$ in millions)		FY17 Budget	FY18 Proposed	\$ Variance	% Variance
1	Metro Capital	\$ 2,512.9	\$ 2,216.5	\$ (296.4)	-11.8%
2	Metro Operations	1,607.8	1,706.0	98.2	6.1%
3	Subsidy Funding Programs	1,304.9	1,509.9	205.0	15.7%
4	Congestion Management	112.9	97.7	(15.2)	-13.5%
5	General Planning & Programs	169.2	198.3	29.1	17.2%
6	Debt Service	320.1	383.2	63.1	19.7%
7	<b>Total</b>	<b>\$ 6,027.8</b>	<b>\$ 6,111.6</b>	<b>\$ 83.8</b>	<b>1.4%</b>



FTE Summary

The FY18 proposed budget includes requests for 107 non-contract FTE additions and 22 represented FTE additions. These positions address new Measure M planning, funding, and oversight needs, as well as the Transit Project delivery schedule and piloting of new programs to improve the customer experience on Metro systems. A summary of the requested FTEs is shown in the table below, and a detailed listing of the requested FTEs is presented in Attachment A.

Department	FY18		FY18		FY18		FY18
	FY17	Request	Proposed	FY17	Request	Proposed	Proposed
	Non-Represented			Represented			Total
1 Board of Directors	38		38	0		0	38
2 Chief Executive Office	252	16	268	299	3	302	570
3 Communications	116	8	124	184	1	185	309
4 Congestion Reduction	20	3	23	0		0	23
5 Finance & Budget	144	10	154	67		67	221
6 Information Technology	94	2	96	50	1	51	147
7 Operations	275	11	286	7,532	15	7,547	7,833
8 Planning & Development	151	13	164	0		0	164
9 Program Management	234	36	270	0		0	270
10 Vendor/Contract Management	160	8	168	162	2	164	332
11 <b>Total</b>	<b>1,484</b>	<b>107</b>	<b>1,591</b>	<b>8,294</b>	<b>22</b>	<b>8,316</b>	<b>9,907</b>

Capital Program

The proposed budget includes the capital program life-of-project (LOP) budgets for all capital projects. Projects that are under \$1 million, projects that are unchanged from the prior year, and new projects that are less than \$5 million are identified in the proposed budget and approved with Board action on the proposed budget. Projects that are greater than \$1 million with LOP budget increases and new projects in excess of \$5 million must be approved by the Board in separate Board actions.

Attachment B includes a detailed listing of new capital projects for FY18 with LOP in excess of \$5 million. These projects are included in the proposed FY18 budget but do require LOP approval by the Board, as requested by Recommendation C of this report.

Blue Line Signaling Rehabilitation and Operational Improvements

After renewed review of the state of good repair needs and as directed by the Board to focus on the oldest Metro Rail Line, Blue Line, Metro is combining three Board approved Blue Line improvement projects of \$81.6 million and adding \$37.4 million for a total of \$118.9 million. This LOP is a result of the expanded scope that takes advantage of the new technologies for the signals and relays just now available to improve the reliability of train control. The LOP for this project scope revision is included in the FY18 New Capital Projects listing (Attachment B).

Budget Amendments Since Proposed Budget Was Published

Subsequent to the preparation of the FY18 proposed budget, a modification to increase the total budget by \$8.2 million has been submitted to provide engineering support and advanced utility relocation designs on the Metro Orange Line Grade Separation. This project remains in the planning phase during FY18 for environmental clearance.

Another modification to the FY18 proposed budget is the addition of \$1 million for the Comprehensive Operational Analysis, which is a systemwide bus restructuring study. The purpose of this effort is to restructure the bus network given the changes to the region's travel demand, travel markets, and transportation options, and to set a foundation for future investment in transportation from Measure M.

The total impact of amendments to the proposed budget is shown in the table below.

<b>Amendment Items to FY18 Proposed</b>		<b>\$ (in millions)</b>
<b>1</b>	<b>FY18 Proposed</b>	<b>\$ 6,111.6</b>
	<u>Amendment Items</u>	
2	Metro Orange Line Grade Separation	8.2
3	Comprehensive Operational Analysis	1.0
<b>4</b>	<b>FY18 Proposed with Amendment Items</b>	<b>\$ 6,120.8</b>
<b>5</b>	<b>FY18 Proposed with Amendment Items vs FY17</b>	<b>1.5%</b>

Reimbursement Resolution

Federal tax law requires that bond proceeds can only be used for expenses incurred after the issuance of bonds. In order to be reimbursed for expenses incurred before the bond issue, Metro must pass a resolution indicating the intent to issue bonds at a later date for the expenditures described in the reimbursement resolution. The attached resolution (Attachment C) is included in the budget board report as a matter of course, to tie expenditures anticipated in the budget to proceeds from future bond issuance, and it must be approved as an item separate from the budget document.

Public Outreach

The comprehensive outreach program for the FY18 budget development process represents the most extensive efforts to date, ensuring the greatest level of engagement from the public and key stakeholders. To encourage greater participation, the times and locations of public workshops were advertised through multiple channels, including the Metro website, “take-ones” on board buses and rail vehicles and at customer centers, newspaper advertising, messages on hold, Metro Briefs, and social media channels. Expanded outreach efforts for FY18 included a Telephone Town Hall and an interactive Online Budget Tool, making it convenient for LA County residents to participate in the

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budget process and resulting in more responses from the general public compared with prior years. A summary of public outreach efforts and comments received is shown in Attachment D.

### **FINANCIAL IMPACT**

The proposed FY18 budget (provided in a separate transmittal), plus the amendments in Recommendations E-F, is \$6.1 billion, which is a 1.5% increase from FY17. The budget includes expenditures and appropriates the resources necessary to fund them. The proposed budget demonstrates Metro's ongoing commitment to meeting its capital and operating obligations, which is a requirement necessary in order to continue to receive subsidies from the state and federal governments and to administer regional transportation funding to local cities and municipal operators.

### **NEXT STEPS**

The FY18 Adopted Budget will be published by September 2017 and will be modified as necessary to include all Board actions subsequent to budget adoption, inclusive of Recommendations D-F in this report. Monitoring the FY18 budget performance will be a year-round ongoing effort. Staff will conduct quarterly variance analysis and track performance metrics to reinforce accountability and budgetary control. There will be a mid-year budget assessment to evaluate the budget's alignment to agency priorities and actual performance. In addition, continuous improvements will be implemented to the process and regular updates will be reported to the Board.

### **ATTACHMENTS**

Attachment A - FY18 FTE Requests by Department

Attachment B - FY18 New Capital Projects

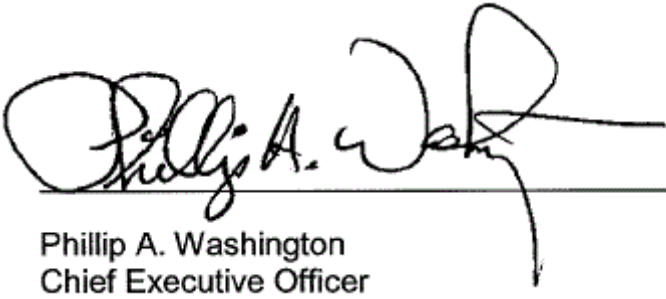
Attachment C - Reimbursement Resolution of Metro for FY18

Attachment D - FY18 Public Outreach

Prepared by: Office of Management & Budget Staff

Melissa Wang, Executive Officer, Finance, (213) 922-6204

Reviewed by: Nalini Ahuja, Chief Financial Officer, (213) 922-3088



Phillip A. Washington  
Chief Executive Officer

**ATTACHMENT A**

**FY18 FTE Requests by Department**

Department		FY17	FY18 Request	FY18 Proposed	Description of New Positions
<b>Non-Represented</b>					
1	Board of Directors	38		38	
2	Chief Executive Office				
3	CEO	2		2	
4	Chief Policy Officer	5		5	
5	OEI	8	2	10	Screening and market research, for unsolicited proposals
6	Risk Management	99	3	102	2 for Construction Safety, 1 for Enterprise Transit Asset Management
7	Human Capital Services	86	7	93	1 for Training, 2 for Employee/Labor Relations, 4 for Human Resources: 1 for Medical Standard and Compliance Administration, 1 for Class and Compensation, 2 for Recruitment
8	MASD	23	1	24	1 for direct support of Measure M related audit requirements
9	Civil Rights	14	1	15	1 for concurrences to FTA audit findings
10	Safety & Security	15	2	17	1 for community coordination for new law enforcement contracts, 1 for administrative support
11	<b>Total Chief Executive Office</b>	<b>252</b>	<b>16</b>	<b>268</b>	
12	Communications	116	8	124	1 for social media research, 2 for U-Pass, 3 for Purple Line, 1 in Community Relations, and 1 for Metro Art asset management
13	Congestion Reduction	20	3	23	Toll road strategic plan for various highways
14	Finance & Budget	144	10	154	For increased responsibility from Measure M and other directives
15	Information Technology	94	2	96	2 for cyber security
16	Operations	275	11	286	1 to improve the customer experience on Blue and Expo Lines; 8 for sufficient coverage of new rail services, Division Management, and 24/7 bus service; 2 for Measure M planning of integration of new lines into existing system
17	Planning & Development	151	13	164	13 for various Measure M related planning functions, including Active Transportation, First/Last Mile, parking studies, Union Station, real estate, systemwide planning, financial and regional grants management
18	Program Management	234	36	270	24 for Purple Line Sections 2 & 3, 3 for highways, 9 for department infrastructure - succession planning and reorganization
19	Vendor/Contract Management	160	8	168	2 for Workforce Initiative Now, 5 for Purple Line Extension, 1 to streamline the procurement process
20	<b>Total</b>	<b>1,484</b>	<b>107</b>	<b>1,591</b>	
<b>Represented</b>					
21	Board of Directors	0		0	
22	Chief Executive Office	299	3	302	1 Human Resources clerk, 2 for General Services
23	Communications	184	1	185	Customer Service Representative
24	Congestion Reduction	0		0	
25	Finance & Budget	67		67	
26	Information Technology	50	1	51	Increased IT support
27	Operations	7,532	15	7,547	3 training instructors, 3 to improve customer experience on Blue and Expo Lines, 3 Electronic Communication Technicians for State of Good Repair support, 6 for Park & Ride lots maintenance
28	Planning & Development	0		0	
29	Program Management	0		0	
30	Vendor/Contract Management	162	2	164	Truck drivers to transport inventory to Divisions
31	<b>Total</b>	<b>8,294</b>	<b>22</b>	<b>8,316</b>	
32	<b>Grand Total</b>	<b>9,778</b>	<b>129</b>	<b>9,907</b>	

## FY18 New Capital Projects

### Measure M Projects

1	<b>PROJECT: Airport Metro Connector: Construction (860303)</b>
	PROJECT OWNER: Program Management - Transit
	LOP: <i>to be adopted at a future date</i> <span style="float: right;">FY18: \$69,685,149</span>
	SCOPE: Connects Metro Green Line Rail, Crenshaw/LAX Line Rail, and Metro and municipal bus service to the Los Angeles International Airport (LAX) via the LAX Automated People Mover.
	JUSTIFICATION: Airport Metro Connector project will integrate the Metro Green Line Rail, Crenshaw/LAX Line Rail, and Metro and municipal bus service to the Los Angeles International Airport (LAX) via the LAX Automated People Mover. This project will provide reliable, fast and convenient access between LAX and the regional bus and rail transit system.
	ELIGIBLE FUNDING SOURCE: Measure M, Measure R; will seek federal monies if available
2	<b>PROJECT: Gold Line Foothill Extension 2B: Construction (865202)</b>
	PROJECT OWNER: Program Management - Transit / Foothill Gold Line Authority
	LOP: <i>to be adopted at a future date</i> <span style="float: right;">FY18: \$2,675,731</span>
	SCOPE: FY18 is focused on engineering design to support the environmental phase and prepare for transition to construction phase.
	JUSTIFICATION: Measure R funds were used for the environmental clearance on the Foothill Gold Line extension to Claremont. Passage of Measure M in Nov-16 allows for the construction of this extension. Foothill Gold Line Authority is responsible for the delivery of the extension to Claremont.
	ELIGIBLE FUNDING SOURCE: Measure M, Measure R as authorized per Funding Agreement

### Operating Capital - Bus

3	<b>PROJECT: New Flyer 60 foot Articulated Zero Emission Bus (201075)</b>
	PROJECT OWNER: Operations - Bus Vehicle Acquisitions
	LOP: <i>to be adopted at the time of contract award</i> <span style="float: right;">FY18: \$10,650,000</span>
	SCOPE: Procure five 60' articulated New Flyer battery electric buses and charging equipment for deployment on the Metro Orange Line
	JUSTIFICATION: Project was awarded a Federal LoNo grant to purchase five buses and related charging equipment.
	ELIGIBLE FUNDING SOURCE: LoNo grant, Measure M



## FY18 New Capital Projects

4	<b>PROJECT: Connected Buses with Wi-Fi (207152)</b>
PROJECT OWNER: ITS - Business Applications	
LOP: \$7,967,000	FY18: \$1,146,990
SCOPE: Install data communications equipment to the bus fleet to enable a real time network connection between the bus and our Metro network for monitoring of onboard systems such as security cameras, fareboxes, GPS and vehicle health monitoring. Secondly to provide Internet access via Wi-Fi to passengers to improve the customer experience.	
JUSTIFICATION: Since July 2013, several board motions have directed staff to pursue the installation of Wi-Fi and other technologies on buses and trains to improve the customer experience. Proof of concept and initial pilot tests have indicated this is a feasible investment for Metro. Once a bus is "connected" to the Metro network there are operations and security benefits due to staff's ability to connect to these buses on a real time basis.	
ELIGIBLE FUNDING SOURCE: local funds; will seek grant funds when available	

### Operating Capital - Rail

5	<b>PROJECT: Blue Line Emergency Trip System Replacement (205108)</b>
PROJECT OWNER: Operations - Wayside	
LOP: \$8,306,000	FY18: \$600,000
SCOPE: Replacement of the existing Emergency Trip System on the Blue Line.	
JUSTIFICATION: The existing system is unreliable and when it fails, causes loss of power to trains, and subsequent bus bridging negatively impacts patrons.	
ELIGIBLE FUNDING SOURCE: Prop A 35%, TDA Article 4, Measure R 2%	

6	<b>PROJECT: Correct Door Enable on Light Rail Train (214002)</b>
PROJECT OWNER: Risk Management - Safety	
LOP: \$9,061,000	FY18: \$16,888
SCOPE: Install system to prevent rail car doors from opening on the opposite side of the platform while in service by modifying existing train control system.	
JUSTIFICATION: Preventing non-platform side door from opening when train is berthed at a station allows for patrons to disembark onto the platform safely.	
ELIGIBLE FUNDING SOURCE: Prop A 35%, TDA Article 4, Measure 2%	

7	<b>PROJECT: P2550 Light Rail Vehicle Mid-Life Overhaul (214003)</b>
PROJECT OWNER: Operations - Rail Vehicle Acquisitions	
LOP: <i>to be adopted at a future date</i>	FY18: \$615,000
SCOPE: P2550 Light Rail Vehicle (LRV) Mid-Life Overhaul Program	
JUSTIFICATION: Maintain the State of Good Repair on the 50 Ansaldo-Breda P2550 LRV by performing a Mid-Life Overhaul	
ELIGIBLE FUNDING SOURCE: Prop A 35%, TDA Article 4, Measure R 2%	

## FY18 New Capital Projects

### Operating Capital - Other

<b>8 PROJECT: Enterprise Telephone &amp; Unified Messaging System (207149)</b>
PROJECT OWNER: ITS - Systems Architecture
LOP: \$10,146,000 <span style="float: right;">FY18: \$625,630</span>
SCOPE: Replace the existing analog telephone system with a unified communications system which consists of VOIP, email messaging, video conferencing, video presence, and interoperability with radio and telephone communications. This replacement affects approximately 3,500 phones located at USG building and all Metro bus and rail divisions.
JUSTIFICATION: To enhance and improve Metro's business communications, to simplify the networking architecture by converging data and voice onto the same platform, and to reduce telecommunication leased line expenses.
ELIGIBLE FUNDING SOURCE: local funds

## Revised Project Scope

### Operating Capital - Rail

<b>9 PROJECT: MBL Signaling Rehabilitation and Operational Improvements (211005)</b>
PROJECT OWNER: Program Management - Engineering
LOP: \$118,990,580 <span style="float: right;">FY18: \$19,936,216</span>
SCOPE: Upgrade existing signal and overhead catenary systems along the Blue Line track alignment and Blue Line yard. Upgrade includes additional interlockings and enhanced control mechanisms for the relays and circuits. This project encompasses the 3 existing projects - signal rehabilitation along the track and yard (211005 and 205073, respectively), overhead catenary system rehabilitation (211002) - as part of its broadened scope.
JUSTIFICATION: Much of the Blue Line's signal and overhead catenary systems have aged and is in need of rehabilitation. The yard operations in particular provide a challenge to staff as the system is obsolete and relies heavily on manual controls. This upgrade will take advantage of the latest technology to bring efficiency and stability to system controls thus providing reliable and safer operation. The enhance technology will also make the Blue Line compatible with Regional Connector system. The additional interlockings will improve the headways when single tracking and allow for improved service to the Blue Line patrons.
ELIGIBLE FUNDING SOURCE: TIRCP, Prop A 35%, TDA Article 4 and other local funds

*NOTE: Funding sources identified for each of the projects are the most likely source available for respective projects. Should other sources be available (i.e. grants), those will be used to fund the project(s), with the identified local funds being the source of the match.*

## ATTACHMENT C

### REIMBURSEMENT RESOLUTION OF THE LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY FOR FISCAL YEAR 2018

WHEREAS, the Los Angeles County Metropolitan Transportation Authority (the "Metro") desires and intends to finance certain costs relating to (i) the design, engineering, construction, equipage and acquisition of light rail lines including the Crenshaw/LAX line, (ii) the design, engineering, construction, equipage and acquisitions for the Rail State of Good Repair Program including station improvements and rail gating installations; (iii) design, engineering, construction, equipage related to Purple Line Subway Sections 1, 2, and 3, and Regional Connector projects (iv) the design, engineering and other related close out costs of the I-405 Car Pool Lanes project, (v) the engineering, construction, renovation, maintenance, and/or acquisition of various capital facilities and equipment, including buses and rail cars, related to service operation, (vi) the engineering, construction, renovation, maintenance, and/or acquisition of various highway/surface transportation assets, and (vii) to other transit related projects (each a "Project" and collectively, the "Projects");

WHEREAS, to the extent that federal and/or state grant funding budgeted to be received during FY18 is delayed or reduced, the Los Angeles County Metropolitan Transportation Authority desires and intends to finance certain costs relating to the Projects.

WHEREAS, Metro expects to issue debt through the issuance of tax-exempt bond issues to pay for these expenditures, which bond issues will have three separate security sources, Proposition A, Proposition C and Measure R sales tax revenues, respectively, or grant revenues to finance the costs of the Project on a permanent basis (the "Debt");

WHEREAS, Metro expects to expend moneys of the Enterprise Fund (other than moneys derived from the issuance of bonds) on expenditures relating to the costs of the Projects prior to the issuance of the Debt, which expenditures will be properly chargeable to a capital account under general federal income tax principles;

WHEREAS, Metro reasonably expects to reimburse certain of such capital expenditures with the proceeds of the Debt;

WHEREAS, Metro expects that the amount of Debt that will be issued to pay for the costs of the Projects will not exceed \$100 million for Proposition A, and \$325 million for Proposition C, and \$300 million for Measure R;

WHEREAS, at the time of each reimbursement, Metro will evidence the reimbursement in writing, which identifies the allocation of the proceeds of the Debt to Metro, for the purpose of reimbursing Metro for the capital expenditures made prior to the issuance of the Debt;

WHEREAS, Metro expects to make reimbursement allocations no later than eighteen (18) months after the later of (i) the date on which the earliest original expenditure for the

Project is paid or (ii) the date on which the Project is placed in service (or abandoned), but in no event later than three (3) years after the date on which the earliest original expenditure for the Project is paid;

WHEREAS, Metro will not, within one (1) year of the reimbursement allocation, use the proceeds of the Debt received by way of a reimbursement allocation in a manner that will result in the creation of replacement proceeds of the Debt or another issue (e.g., Metro will not pledge or use the proceeds received as reimbursement for the payment of debt service on the Debt or another issue, except that the proceeds of the Debt can be deposited in a bona fide debt service fund); and

WHEREAS, this Resolution is intended to be a " declaration of official intent" in accordance with Section 1.150-2 of the Treasury Regulations.

NOW THEREFORE, BE IT RESOLVED, that (i) all of the foregoing recitals are true and correct and (ii) in accordance with Section 1.150-2 of the Treasury Regulations, Metro declares its intention to issue Debt in an amount not to exceed \$100 million for Proposition A, and \$325 million for Proposition C; and \$300 million for Measure R; the proceeds of which will be used to pay for the costs of the Projects, including the reimbursement to Metro for certain capital expenditures relating to the Projects made prior to the issuance of the Debt.

## ATTACHMENT D

### FY18 PUBLIC OUTREACH

#### Summary of FY18 Proposed Budget Public Outreach Efforts and Comments Received

Events	Participation
<b>Workshops &amp; Meetings</b>	Covering all Service Councils and key stakeholders throughout LA County
<b>Telephone Town Hall</b>	3,075
<b>Interactive Budget Tool</b>	4,935
<b>Web page visits</b>	1,452
<b>All Comments (Email/mail)</b>	4,852

Comments received from the public during Metro’s FY18 budget outreach process are summarized below. This summary includes comments received through April 28, 2017. Please note that there were thousands of comments received and therefore not all can be included in this summary. However, the summary presented below is a fair representation of the types of comments received across all outreach efforts. Comments received during the workshops and meetings have been addressed, while the written, email, and budget survey comments will be forwarded to relevant departments for consideration in the development of their programs.

A recap of the comments received during the budget outreach process is shown in the table below. As evidenced by the range of subjects in the summary, the public provided input on virtually every Metro function, from transit service to highways and active transportation. In addition, the range of perspectives on each issue varied greatly by individual.

Key Topics	Synopsis of Comments
<b>Active Transportation</b>	<ul style="list-style-type: none"> <li>• Add more protected bike lanes and visible crosswalks</li> <li>• Connect biking and walking with buses and trains</li> <li>• Pedestrians should be the highest first/last mile priority</li> <li>• Increase capacity for bicycles on the transit system</li> <li>• Improve east-west bicycle options</li> <li>• Expand the bikeshare program across the County</li> <li>• Do not add bicycle lanes, as they cause more traffic</li> <li>• Increase the number of bike lockers and associated security measures</li> <li>• Build a high quality bikeway network with access to the rail system</li> <li>• Do not remove vehicle lanes and replace with bike lanes</li> </ul>
<b>Bus Service</b>	<ul style="list-style-type: none"> <li>• Acquire more buses and run more frequent trips</li> <li>• Run 12 minute headways on all major routes all day long</li> <li>• Headways should be 3 minutes maximum</li> <li>• The number of bus stops should be reduced to decrease travel time</li> </ul>

Key Topics	Synopsis of Comments
	<ul style="list-style-type: none"> <li>• Bus stops and buses should be cleaned more often</li> <li>• Buses are the most common form of travel on transit,</li> <li>• Increase the bus lines feeding into the rail network</li> <li>• Prioritize dedicated bus lanes on all major bus corridors</li> <li>• Do not convert car lanes into bus-only lanes</li> <li>• More express bus services</li> <li>• Bus service should run from 3am to 1am</li> <li>• Rapid buses should have under 15 minute headways from 6am to 9pm, 7 days a week</li> <li>• All-night bus service should be run along rail routes throughout the night</li> <li>• Buy only 100% electric buses</li> <li>• Deploy autonomous buses</li> <li>• Provide more bus service in underserved areas</li> <li>• Eliminate bus service and prioritize rail</li> <li>• Add bus shelters systemwide</li> <li>• Coordinate better connections between Metro and municipal operators</li> <li>• Run 24 hour bus service</li> <li>• Provide more frequent service during off-peak hours</li> </ul>
<b>Rail Service</b>	<ul style="list-style-type: none"> <li>• Rail service should be 24 hours</li> <li>• Provide more frequent service, especially in the evening</li> <li>• Increase train capacity at peak hours</li> <li>• Trains need to be cleaned more effectively and often</li> <li>• Add a side track for maintenance in order to avoid delays caused by single track service due to breakdowns</li> <li>• Reduce commute times by giving rail signal priority</li> <li>• More trains that are shorter, during non-peak hours</li> <li>• Improve light rail service in downtown LA to 7<sup>th</sup>/Metro</li> <li>• Headways should be 8 minutes maximum</li> <li>• Rail service should run until 2am every night with consistent headways of 10 minutes or less</li> <li>• Rail service should be faster than driving</li> <li>• Longer late night service supports local night life and reduces risks of DUI</li> <li>• Use hydrogen powered trains that emit only water</li> <li>• Overcrowding on trains is an issue</li> <li>• Stop rail service at midnight</li> <li>• Use automated trains, not drivers</li> </ul>
<b>Customer Information</b>	<ul style="list-style-type: none"> <li>• Improve real-time arrival information</li> <li>• Provide clear signage for access to public transit</li> <li>• TVs with arrival information at stations are often broken for long periods</li> <li>• Multiple marquees report different arrival times, which is inconsistent and unhelpful</li> <li>• Add real-time arrival information for the bus system</li> <li>• Use electronic boards for arrival information only, and</li> </ul>

Key Topics	Synopsis of Comments
	<ul style="list-style-type: none"> <li>stop including other messages</li> <li>• Improve the trip planner on the Metro website</li> <li>• Need to update all Metro apps</li> <li>• Rail stations should have maps and information about bus transfers</li> <li>• Add lighting to bus stops and rail stations as they are unreadable at night</li> </ul>
<b>ExpressLanes</b>	<ul style="list-style-type: none"> <li>• All freeways should have toll lanes</li> <li>• Eliminate all toll lanes, as most can't afford it</li> <li>• Get rid of all toll lanes and convert to carpool lanes requiring 3+ passengers</li> <li>• Increase tolls to decrease congestion in the toll lanes</li> <li>• Decrease tolls, as they are too expensive</li> <li>• ExpressLanes need more entrances/exits</li> <li>• Tolls should be offset for low income individuals</li> <li>• Non-passenger vehicles should be banned from ExpressLanes</li> <li>• Put in dividers to prevent people from crossing over the double lines</li> <li>• Toll lanes are just as congested as normal lanes and do not improve traffic</li> <li>• Toll lanes should be opened at peak time to all traffic without charge</li> <li>• Do not charge the \$1 maintenance fee on transponders that are not used</li> </ul>
<b>Fare Evasion</b>	<ul style="list-style-type: none"> <li>• Put barriers in place so all riders have to pay</li> <li>• Better enforcement of validating paying passengers</li> <li>• Fare enforcement should be first priority</li> <li>• Do not use law enforcement officers to check fares</li> <li>• Decriminalize fare evasion</li> <li>• Stop checking fares at turnstiles or station entrances; this should be done onboard trains</li> </ul>
<b>Fares</b>	<ul style="list-style-type: none"> <li>• Make public transportation free</li> <li>• Implement distance based fares</li> <li>• Weekly/monthly passes do not provide a discount for the average commuter ineligible for discounts</li> <li>• TAP takes too long to renew online</li> <li>• Add more TAP machines outside of rail stations, such as at bus hubs</li> <li>• Customers should be able to use smart phones as transit passes</li> <li>• Allow non-TAP transfers from bus to rail</li> <li>• Charge the senior/disabled reduced fare for everyone</li> <li>• Fare is too expensive for people who do not fall into the discount categories</li> </ul>
<b>Streets &amp; Highways</b>	<ul style="list-style-type: none"> <li>• Improve the condition of streets and highways</li> <li>• Add more regular lanes to freeways</li> </ul>

Key Topics	Synopsis of Comments
	<ul style="list-style-type: none"> <li>• Do not add more regular lanes to freeways as this does not improve congestion</li> <li>• Convert lanes into bus-only lanes to incentivize bus ridership</li> <li>• Enforce carpool lane use and consider adding cameras to various locations to catch carpool lane cutters and single drivers breaking the law</li> <li>• Increase the minimum number of riders for carpool lane use</li> <li>• Implement congestion pricing on every freeway</li> <li>• Stop building more freeways and put all money into public transit</li> <li>• Highways should be the first priority, as this is the main mode of travel in the County</li> <li>• Carpool-to-carpool interchanges are needed</li> <li>• Widen freeways or make them two levels</li> <li>• Remove double lines from carpool lanes to allow entry and exit anytime</li> </ul>
<b>New Rail</b>	<ul style="list-style-type: none"> <li>• Need a quick option for travel to LAX</li> <li>• Add a rail line along Western</li> <li>• Extend the Gold Line to Ontario Airport</li> <li>• Add a rail line along every freeway</li> <li>• Expand rail to Palm Springs</li> <li>• Bring rail to West Hollywood</li> <li>• Need rail options from Orange County to LA</li> <li>• Build rail between Pasadena and Woodland Hills</li> <li>• Extend rail to the South Bay</li> <li>• All rail should be grade separated</li> <li>• Extend the Red Line to Burbank Airport</li> <li>• Replace all bus lines with rail lines</li> <li>• Accelerate the Purple Line extension and use autonomous vehicles</li> <li>• Grade separate existing lines before building new lines</li> <li>• Increase the number of rail stations</li> <li>• Bring rail to La Mirada</li> <li>• Add north-south light rail to connect Expo, Purple and Red Lines</li> </ul>
<b>Parking</b>	<ul style="list-style-type: none"> <li>• More parking at rail stations, as many lots are routinely full</li> <li>• Require proof of ridership at parking lots, and make it free</li> <li>• Provide more parking and do not charge</li> <li>• Do not spend funds on parking facilities</li> <li>• Crack down on parking by non-transit users</li> <li>• Add visible cameras to parking lots to deter theft</li> </ul>
<b>Safety &amp; Security</b>	<ul style="list-style-type: none"> <li>• More policing on the transit system to prevent crime and illegal vending</li> <li>• Never seen security presence on the system</li> </ul>



Key Topics	Synopsis of Comments
	<ul style="list-style-type: none"> <li>• Eliminate all security contracts</li> <li>• Focus more on safety than fare enforcement</li> <li>• Include undercover law enforcement on buses and trains</li> <li>• Increase security on the bus system</li> <li>• Increase security on the rail system</li> </ul>
<b>Station Amenities</b>	<ul style="list-style-type: none"> <li>• Add eateries, newsstands, and coffee shops to rail stations to generate revenue and provide services</li> <li>• Add restrooms to all stations</li> <li>• Do not add restrooms, as they are a safety risk</li> <li>• Add bathrooms to bus stops</li> <li>• Approve permits for local vendors to sell near stations</li> </ul>
<b>Technology</b>	<ul style="list-style-type: none"> <li>• Build bus shelters that include phone chargers</li> <li>• Install a button at bus stops that would alert the driver that someone is waiting, so they don't get passed up</li> <li>• Go renewable with solar panels and electrical buses</li> <li>• Provide seamless WiFi and cell coverage systemwide</li> </ul>

### Interactive Budget Tool

An interactive Online Budgeting Tool was introduced this year to engage the public by asking a series of questions on transportation priorities to develop a customized Metro budget. Respondents were able to see the budgetary impact for their choices interactively and include narrative comments to more specifically express their feedback and concerns. The budget tool allowed Metro to receive comments from a larger portion of the general public, including those who are not Metro riders.

The “Online Budget” focused on five key areas: Transportation Priorities, First/Last Mile, Bus and Rail Service, Security & Customer Experience, and Highway & Congestion Improvements. Below are general results of the survey are:

- 27% of the respondents favored Metro parking facilities (Park & Ride Lots) to improve first/last mile strategy
- 43% of the respondents were willing to walk ½ mile to a bus stop if the route was shorter and more frequent
- 47% of the respondents selected “Improving real time arrival information” and “adding Wi-Fi and cellular service to rail stations” as their priorities for station amenities.
- 33% of the respondents wanted less routes that run frequently and later at night

When asked about converting regular lanes to toll/carpool lanes to reduce commute time or increase highway speed, 48% of the respondents selected: do not replace regular lanes

The results of this survey helps Metro get an idea of what the public’s priorities are and is just one tool that is being used to gather this information. Comments and feedback are being gathered and evaluated to help shape the budget and Metro’s priorities.

**Board Report**

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**File #:** 2017-0272, **File Type:** Contract**Agenda Number:** 32

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**FINANCE, BUDGET AND AUDIT COMMITTEE****MAY 17, 2017****EXECUTIVE MANAGEMENT COMMITTEE****MAY 18, 2017**

**SUBJECT: DEVELOPMENT OF NEXTLINK SOFTWARE FOR INTEGRATION OF THE SALESFORCE ACCOUNT-BASED SYSTEM WITH THE TAP SMART-CARD SYSTEM TO IMPLEMENT TAP MOBILE PAYMENT APP, BIKE SHARE, FARE SUBSIDY PROGRAMS AND RETAIL SALES TABLET SOFTWARE**

**ACTION: NEGOTIATE AND EXECUTE PERFORMANCE-BASED CONTRACT MODIFICATION**

**RECOMMENDATION**

AUTHORIZE the Chief Executive Officer to negotiate and execute a performance-based Contract Modification to **Cubic Transportation Systems Inc. Contract No. OP02461010** to extend the base contract through **December 2024** for no upfront cost of development for Nextlink, a cloud-based connection system that will link the legacy TAP system to programs and services such as the TAP mobile payment app, Bike Share, fare subsidy programs, parking, ride-hailing services and more, in exchange for sales transaction fees of 0.5-3.0%, based on use of mobile app and retail fare sales for five (5) years of operation after development.

**ISSUE**

Metro currently lacks an open payment system which limits the ability to provide a more seamless experience for TAP customers, including enabling such features as a mobile app. Metro is currently building an open, hybrid, cloud-based payment system with Salesforce that will enable connectivity with various programs. In order to accomplish full integration, this cloud-based system needs to link with the Cubic smart card TAP system. Nextlink will provide this connectivity and link with Bike Share in Summer 2017. The mobile payment app will begin phased implementation in Fall 2017, fare subsidy programs in Winter 2017, parking, ride-hailing services and electric vehicle car sharing in Spring 2018.

**DISCUSSION**

Metro has been rapidly working to diversify and move toward a fare payment system that has a more open architecture and that is less proprietary. In December 2016, the Board approved a cloud-based

Salesforce Customer Service and Information platform, developed by Vertiba, which can be integrated with the current TAP system. The proposed contract modification for Nextlink will provide the ability to link new, open, account-based programs with the legacy TAP system. This will enable competitive bidding for fare collection and validation hardware such as fare boxes and TAP vending machines and foster seamless future program integration. To integrate TAP payment with separate and unique systems, the current Salesforce system is being modified to include various new applications and functions. Plans include integration with retail fare sales software, Bike Share, fare subsidy programs, gift card programs, parking, ride-hailing services, electric vehicle car sharing, a mobile app and more (see diagram in Attachment A).

### Open Source Procurements

The development of the Nextlink system will enable hardware such as retail fare sales tablets, TAP vending machines, bus mobile validators and other hardware to be open-sourced procurements that can securely link to the legacy TAP system.

### Customer Service Enhancements

#### *Payment Options for the Unbanked and More*

The new Nextlink system not only provides open architecture, but it also allows the unbanked to participate in TAP-enabled programs. Customers will be able to link their TAP payment accounts to credit and debit cards, internet services like PayPal and mobile wallets (Google Pay and Apple Pay), as well as load cash at convenience stores and TAP vending machines.

Qualified fare subsidy customers will no longer have to carry paper coupons because their TAP card will store the necessary subsidy information. Elimination of coupons will also eliminate the need for costly printing, distribution and inventory.

Customizable rewards and discounts can be configured across and within programs (e.g., a customer that rides a bike three times might get to choose a ride on some other transit service as a reward). Behaviors can be incentivized; for example, on bad air days, discounts could be quickly configured and implemented to incentivize riding transit and help reduce cars on the freeways.

#### *Mobile Application Features*

This negotiated contract modification will include the ability to tap and load your TAP card within an app on select smart phones and tablets. As early as 7-9 months from the start of development, the mobile app will be deployed. Planned future phases include the ability for phones to be used as virtual TAP cards to open gates and interact with other fare payment devices. The mobile app will also include bar code technology and other visual ticketing capabilities that will support the Olympics and other major sports and entertainment events beginning as early as Winter 2017. Other features

include trip planning, rewards and discounts, a TAP vendor locator, notifications and alerts. Plans call for the app to feature all 24 TAP partner agencies' fares to ensure regional connectivity.

No Upfront Cost, Transaction Based

The mobile app and retail fare sales software will be developed with no-upfront cost. The contractor will only derive revenue from fees of from 0.5% to 3.0% of TAP sales transactions. This model ensures that the contractor will have a strong incentive to create and operate a highly successful and popular app, since the contractor only profits if customers are actually using it and buying fares.

Planned Services Implementation Schedule

Planned services include phased development as outlined in TABLE 1.

TABLE 1  
Phase 1 Integration

Project	Description	Planned Launch Date	Progress
<b>Bike Share</b>	Payment integration with TAP account.	Summer 2017	Strategy sessions with integrator complete. Project plan and roadmap in development.
<b>Mobile App Iteration 1</b>	Buy/reload TAP cards, search for vendors, apply for reduced fares and ability for flash pass and bar code technology.	7-9 months from beginning of development	In planning stages.
<b>Fare Subsidy Programs</b> (Immediate Needs and Rider Relief Programs)	Remove paper coupons as part of the new consolidated Low Income Subsidy Programs. Discounts applied on TAP.	December 2017	Architecture and design underway.

Phase 2 Integration efforts will be completed between January 2018 and December 2018. Planned efforts include the ability to tap a phone on a fare gate/farebox, integrate with account-based entities such as ride-hailing services, retail gift cards, parking services, mobility hubs, and electric vehicle car sharing.

**DETERMINATION OF SAFETY IMPACT**

Implementing the enhanced TAP System will not have any adverse safety impacts on Metro patrons or employees.

**FINANCIAL IMPACT**

There are no upfront costs for development of the Nextlink system, the mobile application and the retail fare sales software. The apps are built on a transaction fee-based model. Transaction fees will be charged of 0.5-3.0% of mobile fare sales on the TAP app and 0.75% of in-store sales on the retail vendor app. These fees are in line with industry standards and are less in comparison with our cash collection fees of 6.5% on TAP vending machines and fareboxes. There is a tiered model for mobile fees that enables a lower fee percentage as sales increase. The tiered model is detailed in TABLE 2.

TABLE 2  
Yearly Sales and Tiered Fee Percentages

Tiers		
\$0	\$25,000,000	3.00%
\$25,000,001	\$50,000,000	2.50%
\$50,000,001	\$100,000,000	2.00%
>=\$100,000,001		0.50%

Impact to Budget

There is no impact to Budget. The payment is based on transaction fees and will be deducted from fare sales on the mobile app and retail vendor tablets. Appropriate monthly payments will be paid back to Cubic Transportation Systems, Inc. after sales from mobile and retail fare sales from vendors are generated. If new ridership is generated as a result of the convenience of the mobile app, a revenue increase will occur. If cash riders switch to the mobile app, a savings could occur in future years, based on a reduction in farebox and TAP vending machine cash counting operations.

Responding to Technology

If technology changes, Cubic will adapt with updated software in adherence with trends. For example, if Apple decides to provide access to their iPhones for fare payment, the vendor will make the necessary changes to the mobile app at no additional cost to Metro. As a standard with any Metro procurement, the contract will include options to end the work, such as for non-performance or an opt-out for convenience on a declining scale of cost. The modification is performance-based and not prescriptive: the contractor is incentivized to make the technology changes necessary to remain state-of-the-art.

Due to the high level of customized development of Cubic’s proprietary system, and to keep costs as low as possible, staff recommends Cubic Transportation Systems, Inc. to perform this work.

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## **ALTERNATIVES CONSIDERED**

The Board may choose not to approve recommendation of Cubic for no-upfront-cost and transaction-fee based implementation of Nextlink, mobile and retail fare sales software development. This choice is not recommended due to the urgent need for integration with new technologies and systems. If not approved, the TAP card-based fare collection system will not be able to integrate with new account-based systems such as Bike Share, parking, gift card programs, ride-hailing companies, mobility hubs, electric vehicle car-sharing, low-income subsidy programs and others.

The Board may direct staff to competitively bid this effort, but this is not recommended, as it will result in delays of up to two years and additional costs. In this scenario, the selected contractor would ultimately have to integrate with the Cubic proprietary back end, which is estimated to cost up to \$1-2 million plus additional transaction fees. Metro would have to run two systems which would result in duplication of efforts and of patron data and create customer service issues.

The Board may direct the procurement of an entirely new fare collection system, but this is not recommended based on experiences in other large regions. For example, Chicago has spent hundreds of millions of dollars on their new open payment system and New York has taken over 5 years for procurement alone for their new system.

The Board may direct staff to competitively bid only the mobile and retail sales software as standalone products. A Metro 2015 RFP for a mobile app resulted in a Cubic recommendation because they offered the lowest bid of the finalists. However, the procurement was stopped because of rapid changes in technology and the need to connect with many programs and services. Since then, staff has continued to negotiate with Cubic for better terms and to include proprietary Nextlink and the retail fare sales software.

### **Justification of Non-Competitive Contract**

To accommodate full integration of outside programs with the current fare payment system, reading and writing to customers' TAP cards is necessary. Cubic Transportation Systems, Inc. is the architect of our TAP infrastructure. This complex system holds TAP rider information for 26 TAP-enabled agencies. If Metro were to choose another vendor to do a mobile app, there would still be substantial charges for integration into the existing and complex back end. Building completely new fare payment infrastructure independent of Cubic is likely to take several years, further delaying the incorporation of critical new technologies.

Development of the mobile app, retail pass sales software and the new Nextlink system will not require future change notices or upfront costs to the contractor for outside program or hardware connection. This will enable Metro to compete future outside hardware purchases that were formerly

proprietary, such as TAP vending machines, fareboxes, bus mobile validators, retail fare sales devices and more.

### **NEXT STEPS**

Upon Board approval, staff will negotiate and execute the contract modification with Cubic Transportation Systems, Inc. for Nextlink and TAP will begin work in May 2017.

### **ATTACHMENTS**

Attachment A - Regional Account Integration Architecture

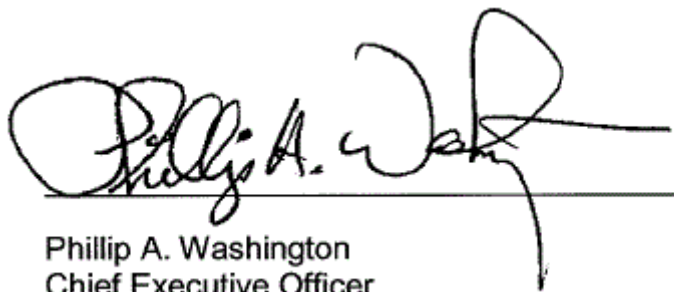
Attachment B - Procurement Summary

Attachment C - Contract Modification/Change Order Log

Attachment D - DEOD Summary

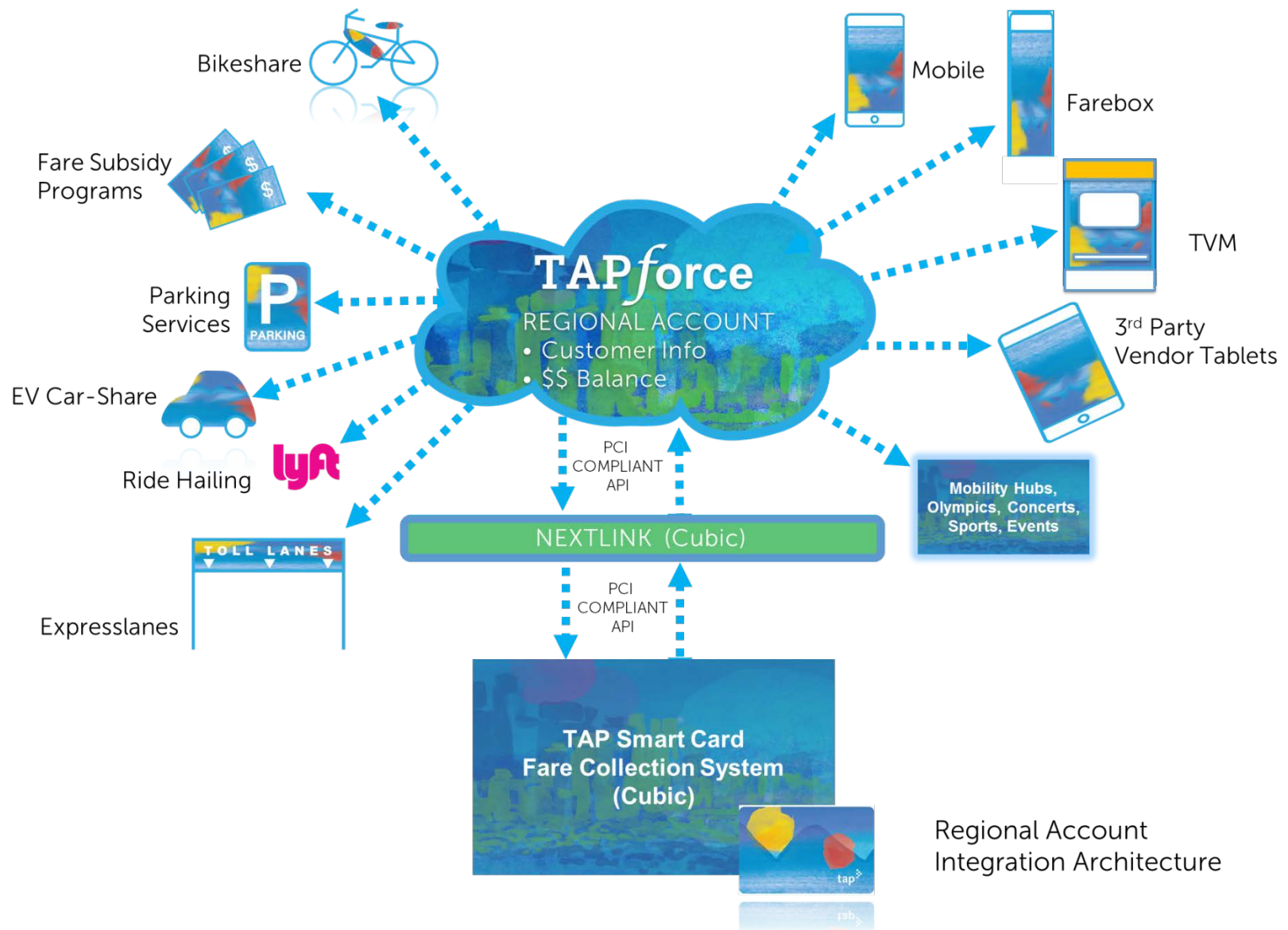
Prepared by: Robin O'Hara, Deputy Executive Officer, (213) 922-2411  
David Sutton, Executive Officer, (213) 922-5633

Reviewed by: Nalini Ahuja, Chief Financial Officer, (213) 922-3088  
Debra Avila, Chief Vendor/Contract Management Officer,  
(213) 418-3051



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Phillip A. Washington  
Chief Executive Officer





## PROCUREMENT SUMMARY

## UNIVERSAL FARE SYSTEM / OP02461010

1.	<b>Contract Number:</b> OP02461010		
2.	<b>Contractor:</b> Cubic Transportation Systems, Inc.		
3.	<b>Mod. Work Description:</b> Sales, Use, Activate, Initialize and Read Transactions into NextFare		
4.	<b>Contract Work Description:</b> Universal Fare System		
5.	<b>The following data is current as of:</b> May 9, 2017		
6.	<b>Contract Completion Status</b>		<b>Financial Status</b>
	<b>Contract Awarded:</b>	2/20/2002	<b>Contract Award Amount:</b> \$84,003,444
	<b>Notice to Proceed (NTP):</b>	3/7/2002	<b>Total of Modifications Approved:</b> \$175,481,369
	<b>Original Complete Date:</b>	9/1/2007	<b>Pending Modifications (including this action):</b> \$0
	<b>Current Est. Complete Date:</b>	7/1/2020	<b>Current Contract Value (with this action):</b> \$259,484,813
7.	<b>Contract Administrator:</b> Anush Beglaryan		<b>Telephone Number:</b> (213) 418-3047
8.	<b>Project Manager:</b> Robin O'Hara		<b>Telephone Number:</b> (213) 922-2411

**A. Procurement Background**

This Board Action is to approve Contract Modification No. [232-145](#) issued to extend the base contract through December 2024, for no upfront cost of development for Nextlink, a cloud-based connection system, that will link the legacy TAP system to programs and services such as the TAP mobile payment app, Bike Share, fare subsidy programs, parking, ride-hailing services and more, in exchange for sales transaction fees of 0.5% to 3.0%, based on public transit customers' use of mobile app and retail fare sales for five years of operation after development.

This Contract Modification will be processed in accordance with Metro's Acquisition Policy and the contract type is a Firm Fixed Price.

On February 20, 2002, Contract No. OP02461010 was awarded by the Metro Board to Cubic Transportation Systems, Inc. The Contract provides a countywide fare collection system to serve Metro's public transit customers.

Please refer to Attachment C – Contract Modification/Change Order Log.

## **B. Cost/Price Analysis**

The recommended transaction fee range of between 0.5% to 3.0% of total sales transaction has been determined to be fair and reasonable as this is within industry standards.

Although this is a no cost Contract Modification, Cubic Transportation Systems, Inc. will earn transaction fees on purchases of TAP fares through the use of the mobile app and retail vendor fare sales software.

## CONTRACT MODIFICATION/CHANGE ORDER LOG

### UNIVERSAL FARE SYSTEM / OP02461010

Mod. No.	Description	Status	Date	Amount
1	Table X-1 Milestone Changes	Approved	8/19/2002	\$0.00
2	Ticket Vending Machine Soft Keys	Approved	9/4/2002	\$0.00
3	San Fernando Valley BRT, Additional Quantities	Approved	4/13/2004	\$7,454,844
4	Modification to General Conditions	Approved	10/8/2002	\$0.00
5	TVM Third Coin Hopper	Approved	8/22/2003	\$416,858
6	Stand Alone Validator Video Clips	Approved	3/3/2003	\$0.00
7	Gold Line Functional Test Waiver	Approved	2/13/2003	\$0.00
8	Languages Supported	Approved	2/13/2004	\$0.00
9	Modifications to Compensation & Payment	Approved	2/20/2003	\$0.00
10	Smart Card to Smart Card Value Transfer	Approved	3/3/2003	\$0.00
11	SCADA Cable Installation on Gold Line	Approved	3/3/2003	\$48,476
12	Gold Line Functional Test Waivers	Approved	4/8/2003	\$0.00
13	Farebox Coin Dejam	Approved	4/8/2003	\$0.00
14	Change in Milestone Schedule	Approved	4/16/2003	\$0.00
15	Time Extension, Gold Line	Approved	7/1/2003	\$0.00
16	Change from Datastream MP5 to Express Metrix	Approved	7/1/2003	\$0.00
17	Final Design Review, changes in CDRLS	Approved	7/18/2003	\$0.00
18	Deletion of Printer from Hand Held Validator	Approved	1/6/2004	-\$35,252
19	Variable Message Sign	Approved	2/19/2004	\$243,828
20	Changes to Compensation and Payment	Approved	4/7/2004	\$0.00
21	PCMCIA Card Slot use for WAN	Approved	4/13/2004	\$0.00
22	Data Transmission System	Approved	6/22/2004	\$675,000
23	Mifare Card Initialization and Verification	Approved	6/8/2004	\$9,629
24	Farebox Mounting Adapter for NABI Buses	Approved	7/9/2004	\$32,485
25	Provide Regional CDCS	Approved	2/25/2005	\$5,348,335
25.01	Regional CDCS Overhead Rate Adjustment	Approved	1/17/2007	-\$31,621
25.02	Regional CDCS Acceptance Test Participants	Approved	8/7/2008	\$0.00
26	Remove Requirement for Focus	Approved	12/20/2004	-\$111,704

	Groups			
27	Farebox Rotation	Approved	1/4/2005	\$74,967
28	Metro Gold Line Eastside Extension, Fare Equipment	Approved	7/25/2006	\$3,808,722
29	Stainless Steel Panels for TVM Alcoves	Approved	4/25/2005	\$45,521
30	Data Communication Cabling for Orange Line	Approved	6/10/2005	\$41,560
31	(Not Used)			
32	Additional Spare Part Quantities for Eastside Ext.	Approved	7/25/2005	\$15,480
33	Mifare Card Functionality on UFS	Approved	8/15/2005	\$33,105
34	Revisions to Project Schedule	Approved	10/26/2000	\$0.00
35	OCU Mount	Approved	11/15/2005	\$87,634
36	(Not Used)			
37	Deductive Change for Line 1.36	Approved	4/6/2007	-\$33,116
38	Installation of Third TVM and Relocation of Two SAVs and Blue Line Willow Station	Approved	7/6/2006	\$10,084
39	Upgrade the CDCS System from IB SSA Disk Storage Subsystem to Fiber Disk	Approved	10/2/2006	\$20,000
40	UFS Equipment for Expo Line	Approved	2/16/2007	\$5,197,204
41	(Not Used)			
42	(Not Used)			
43	HHV, PMOS and CPOS Interim Maintenance Deductive Change	Approved	2/16/2007	-\$162,628
44	UFS Additional Quantities for Contracted Services	Approved	2/16/2007	\$2,499,916
45	Replace Go-Cards with Mi-Fare Cards	Approved	2/16/2008	-\$1,157,850
46	Relocation of Data Probes and Receive Vaults at Division 7	Approved	4/9/2007	\$29,787
47	Revisions to US Base and Regional Manuals for Release to ACS	Approved	4/23/2007	\$46,000
48	Expo Line, Pico Station Infrastructure	Approved	7/18/2007	\$18,542
49	Relocation of UFS Lab Equipment	Approved	6/2/2008	\$106,905
50	Expo 7 <sup>th</sup> and Metro Additional Infrastructure	Approved	8/30/2007	\$81,719
50.01	Expo 7 <sup>th</sup> and Metro Infrastructure Deductive change	Approved	8/30/2007	-\$30,173
51	Handheld Validator Holster	Approved	10/16/2007	\$6,184
52	Installation and Testing of Farebox at Transportation Concepts	Approved	3/6/2008	\$16,091
53	Relocate OCUs on Ford Cutaways and MST Buses at Contracted Services	Approved	5/14/2008	\$79,170
54	Installation of one Farebox and Testing for two Fareboxes at Contracted Services	Approved	5/27/2008	\$18,842
55	UFS Quantity Adjustments	Approved	10/9/2008	\$0.00

56	Contracted Bus Service Equipment Change	Approved	12/3/2008	\$36,704
57	Installation and Acceptance Testing of One Farebox at First Transit	Approved	12/19/2008	\$3,040
58	Provide UFS Equipment for Expo from Culver City to Venice/Robertson Aerial Station	Approved	3/4/2009	\$304,246
59	Regional CDCS Electrical Power Reconfiguration	Approved	2/9/2009	\$17,186
60	Rail Equipment Warranty and Bus Equipment Warranty	Approved	2/19/2009	\$0.00
61	TAP Enables Turnstile Fare Gates for Rail Stations	Approved	4/9/2009	\$10,000,000
62	Provide UFS Equipment for Expo Truesdale Station	Approved	3/4/2009	\$284,167
63	System Support Services	Approved	6/8/2010	\$33,988,558
63.01	SSS, Additional Costs	Approved	3/22/2013	\$677,631
63.02	SSS, Orange Line Credits	Approved	3/22/2013	-\$58,243
63.03	SSS, One-year Extension	Approved	3/22/2013	\$8,148,263
64	\$5 Dollar Bill handling Unit for Fareboxes and TVMs	Approved	7/27/2009	\$304,658
65	Installation of Additional SAVs for Eastside Extension	Approved	1/4/2010	\$34,077
66	Relocation of Wing Gate at MRL Wilshire/Normandie Station	Approved	2/2/2010	\$18,905
67	(Not Used)	Approved		
68	UFS Equipment for Orange Line Extension	Approved	11/2/2010	\$2,749,476
68.01	Transfer Maintenance Dollars to 63.01	Approved	1/25/2013	-\$677,631
68.02	UFS Equipment for Orange Line Extension, Credits	Approved	3/22/2013	-\$10,982
69	Additional TVM at Aviation Greenline Station	Approved	4/2/2010	\$13,031
70	TAP Card Physical Testing	Approved	4/28/2010	\$41,844
70.01	TAP Card Physical Testing	Approved	3/22/2013	\$12,658
71	Concession Light Functionality	Approved	6/30/2010	\$96,726
72	(Not Used)	Approved		
73	API Test Server Imaging	Approved	9/9/2010	\$45,024
74	Contract Services Relocation	Approved	11/1/2010	\$33,854
75	Limited Function Sales Office Terminals, Increase Quantity	Approved	2/15/2011	\$993,795
76	CISCO ASA Acquisition and Implementation for API Test and Production Servers	Approved	2/28/2011	\$59,209
77	Cubic LU Key Installation	Approved	3/3/2011	\$69,097
78	Updates Farebox Configuration to Support ARUB Wireless Security Data	Approved	3/3/2011	\$40,204

	Transfer			
79	Relocation of UFS Test Lab Equipment	Approved	4/25/2011	\$80,911
80	7 Byte UID Support	Approved	4/20/2011	\$362,069
81	Fare Gate Fencing Installation Modifications, North Hollywood and Avalon Stations	Approved	4/25/2011	\$24,004
82	Additional TVM at Hollywood/Western Redline Station	Approved	4/25/2011	\$15,531
83	Purchase Drive Control Unit Light Validators DCU-LV	Approved	4/25/2011	\$363,492
84	Install TVMs at Three Metro customer Centers	Approved	6/6/2011	\$386,680
85	Cubic Modification to Gate Software/Locking Commands	Approved	6/29/2011	\$111,188
86	UFS Equipment for Expo Phase I Farmdale Station	Approved	7/26/2011	\$415,184
87	Relocation of TVMs at the Green Line Long Beach Station	Approved	8/25/2011	\$15,909
88	Mobile Validator Non-Recurring Engineering System Development	Approved	10/12/2011	\$611,677
89	Expo Pico Station North Platform TVM/SAV Work	Approved	3/5/2012	\$17,592
90	Deletion of Contract Line Items 1.03, 1.04 & 1.33	Approved	2/15/2012	-\$20,622
91	Orange Line Installation of 12 Metro Provided SAVs	Approved	2/15/2012	\$34,483
92	(Not Used)			
93	(Not Used)			
94	System Support Services, Six Year Extension	Approved	7/1/2013	\$55,000,000
94.01	(Not Used)			
94.02	System Support Services for Expo II and Foothill Extension	Approved	3/2/2015	\$1,152,749
94.03	Maintenance Support Services for 54 TVMs	Approved	4/14/16	\$838,211
95	UFS Equipment Storage Costs	Approved	6/13/2012	\$4,129
96	Faregating, Three Additional Swing Gates	Approved	2/4/2013	\$44,611
97	Green Line Faregating Additional Fire Key Switches at Vermont Station	Approved	4/1/2013	\$8,392
98	Emergency Swing Gate Upgrades	Approved	4/15/2013	\$252,145
99	Removal of TVM from Wilshire/LaBrea Customer Center	Approved	10/8/2013	\$4,883
100	Supplying and Supporting a Turn Key Mobile Validator System	Approved	7/1/2013	\$2,996,113
101	Bus Division Vault Relocation	Approved	8/1/2013	\$995,940
102	Install One TVM at East Portal	Approved	10/8/2013	\$252,905

	Customer Service Center and One at Culver City Station			
103	El Monte Bus Facility TVMs	Approved	10/15/2013	\$474,753
104	Fare Gate Consoles for Expo 2, Colorado/4 <sup>th</sup> Street Station	Approved	5/26/2014	\$380,000
105	TVM and SAV Relocations	Approved	12/16/2013	\$1,456,632
106	Modification to Nextfare to Allow For Segregation of Facility Specific Data	Approved	1/29/2014	\$647,869
107	Passback Modification	Approved	2/18/2014	\$70,301
108	UFS PCI Compliance	Approved	10/23/2014	\$9,015,319
109	Service Provider Support	Approved	6/14/2014	\$66,777
110	Autoload Segregation by Muni	Approved	6/30/2014	\$111,707
111	SAV Three Distinct Tones	Approved	8/4/2014	\$46,634
112	Modify TAP Vending Machine to Improve Purchases	Approved	8/4/2014	\$250,000
113	ADA TVM Upgrades for CN No. 162 and 150 Replacement TVMs	Approved	8/5/2014	\$416,815
114 A	UFS Equipment for Gold Line Foothill Extension	Approved	8/25/2014	\$1,878,756
114 B	UFS Equipment for Expo Phase	Approved	8/25/2014	\$3,783,200
115	FBX External Interface Spec Changes	Approved	8/19/2014	\$20,488
116	Willowbrook Station Blue Line SAVs	Approved	11/19/2014	\$62,882
117	TAP-In, TAP-In, Transfer Gate	Approved	11/19/2014	\$88,598
118	Virtual Gate Arrangement of SAVs at Gold Line Union Station Entrance	Approved	11/19/2014	\$84,964
119	Conversion of Expo 1 Aerial Stations to Fare Gates	Approved	3/2/2015	\$3,077,952
120	Change in Service Level Agreement for TVM & GC Network Additions at No Cost	Approved	3/2/2015	\$0
121	Emergency Swing Gate External Alarm Mode	Approved	11/19/2014	\$0
122	Installation of Colorado & 4 <sup>th</sup> Faregates & ESGs	Approved	3/2/2015	\$163,143
123	OCDC Replacement Equipment Software and Installation	Approved	5/12/2015	\$681,068
124	Expo One Claim No. 1 Settlement	Approved	5/26/2015	\$19,648
125	UFS Global Network, Change for Credit/Debit Processing at TVM	Approved	5/12/2015	\$52,735
126	Metrolink Integration Support	Approved	5/12/2015	\$56,073
127	Metro Network Assistance	Approved	5/12/2015	\$48,758
128	Division 13 Bus Operations TVMs	Approved	5/12/2015	\$99,401
129	Fare Equipment Changes at MRL North Hollywood Station	Approved	5/12/2015	\$577,401
130	Installation of Additional TVM at MRL Civic Center Station North Entrance	Approved	7/15/2015	\$21,593
131	Relocate One TVM From Hawthorne	Approved	9/2/2015	\$31,983

	to Hollywood			
132	Service Provider Support – Deductive Change (Mod 109)	Approved	6/13/2015	-\$66,777
133	Additional Emergency Swing Gate for Expo 2	Approved	6/3/2015	\$10,970
134	Metrolink Support for LU Encoding	Approved	10/7/2015	\$13,666
135	Emergency Swing Gate Hinge Post Substitution at Expo 2 Bundy Station – No Cost Change	Approved	10/21/2015	\$0
136	Relocation of TVMs at MGL Artesia Station	Pending		\$0
137	(Not Used)			
138	Vertiba Support (Salesforce – CRM)	Approved	8/20/2015	\$9,671
139	Regional Inter Agency Transfer Policy Change	Approved	1/21/2015	\$435,000
139.01	Regional Inter Agency Transfer (IAT) Policy Change	Approved	7/15/16	\$480,000
140	54 TVMs, purchase and install	Approved	4/14/16	\$5,194,834
141	(Not Used)			
142	Network, back office station configuration and IAT support	Approved	4/25/17	\$14,578
143	Reduction in monthly PM services	Approved	5/8/17	(\$404,550)
144	20 BMV Install Kits	Approved	5/8/17	\$10,310
145	Sales, Use, Activate, Initialize and read transactions into Nextfare	Pending		\$0
	<b>Modification Total:</b>			<b>\$175,481,369</b>
	<b>Original Contract:</b>			<b>\$84,003,444</b>
	<b>Total:</b>			<b>\$259,484,813</b>



## DEOD SUMMARY

## UNIVERSAL FARE SYSTEM / OP02461010

**A. Small Business Participation**

Cubic Transportation Systems, Inc. made a 5.65% Disadvantaged Business Enterprise (DBE) commitment. The project is 86% complete and the current DBE participation is 8.92%, which exceeds their DBE commitment.

<b>Small Business Commitment</b>	<b>DBE 5.65%</b>	<b>Small Business Participation</b>	<b>DBE 8.92%</b>
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	<b>DBE Subcontractors</b>	<b>Ethnicity</b>	<b>% Committed</b>	<b>Current Participation<sup>1</sup></b>
1.	American Alloy Fabrication	Caucasian Female	0.25%	0.39%
2.	Lows Enterprise	African American Female	0.13%	0.04%
3.	TechProse	Hispanic American Female	0.41%	0.08%
4.	Robnett Electrical	African American	2.53%	7.91%
5.	Priority Manufacturing (GFI)	Caucasian Female	0.93%	0.05%
6.	J-Tec Metal Products	Hispanic American	0.13%	0.04%
7.	KLI, Inc.	Asian Pacific American Female	0.25%	0.11%
8.	Kormex Metal Craft	Asian Pacific American Female	1.02%	0.30%
	<b>Total</b>		<b>5.65%</b>	<b>0</b>

<sup>1</sup>Current Participation = Total Actual amount Paid-to-Date to DBE firms ÷ Total Actual Amount Paid-to-date to Prime.

**B. Living Wage and Service Contract Worker Retention Policy Applicability**

The Living Wage and Service Contract Worker Retention Policy is not applicable to this Modification.

**C. Prevailing Wage Applicability**

Prevailing Wage requirements are applicable to this project. DEOD will continue to monitor contractors' compliance with the State of California Department of Industrial Relations (DIR), California Labor Code, and, if federally funded, the U S Department of Labor (DOL) Davis Bacon and Related Acts (DBRA). Trades that may be covered include: surveying, potholing, field, soils and materials testing, building construction inspection and other support trades.

**D. Project Labor Agreement/Construction Careers Policy**

Project Labor Agreement/Construction Careers Policy is not applicable to this Contract.

**Board Report**

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**File #:** 2017-0137, **File Type:** Contract**Agenda Number:** 33

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**CONSTRUCTION COMMITTEE  
MAY 18, 2017****SUBJECT: METRO RED LINE (MRL) METRO ORANGE LINE (MOL) NORTH HOLLYWOOD  
STATION WEST ENTRANCE****ACTION: AUTHORIZATION FOR CONTRACT MODIFICATION****RECOMMENDATION**

AUTHORIZE the Chief Executive Officer (CEO) to execute a final Modification to Contract C1013R, with Skanska USA Civil West California District Inc., for the **design and construction of the west entrance at the North Hollywood Station on the Metro Red Line**, in the amount \$1,261,770, adjusting the total current contract price from \$15,743,901.61 to \$17,005,671.61 within the life of project budget.

**ISSUE**

This action is necessary to execute a final Contract Modification with Skanska USA. This final Modification represents staff's efforts through negotiations to settle various unforeseen field conditions and construction changes encountered on the project that impacted both scope and schedule. This Contract Modification is required to close-out the Contract, and does not affect the Life of Project (LOP) budget. Through aggressive management and partnership with the contractor, staff delivered this project on-time and under the LOP budget.

**DISCUSSION****Findings**

Metro issued the Notice to Proceed (NTP) for Design-Build (DB) Contract No. C1013R for the Metro Red Line - Metro Orange Line North Hollywood West Entrance on February 11, 2014. The west entrance was opened to public on August 15, 2016.

During the course of construction, the Contractor requested numerous design and construction changes. Significant changes included design provisions and inclusion of a knock out panel for future escalator expansion, additional communications or SCADA system design and construction

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required to improve the safety functions of the existing North Hollywood system, increase in scope for procurement and installation of Metro Furnished Equipment, differing site conditions encountered during excavation, and time extension and related overhead due to compensable delays encountered.

### Considerations

Staff has evaluated the merit of the requested changes and has followed Metro processes and procedures to validate and negotiate the change requests. A list of executed (approved) and unexecuted (pending) modifications is included in Attachment B.

There is no change in the approved LOP amount of \$23,077,401.

### **DETERMINATION OF SAFETY IMPACT**

There is no safety impact associated with this action.

### **FINANCIAL IMPACT**

This action requires an additional \$1.26 million in FY17 for the Metro Orange Line to Metro Red Line Hollywood Pedestrian Underpass in project 204122 due to staff closing out the contract earlier than expected. Upon Board approval, staff will re-allocate funds from a project with fungible funding source underutilizing its FY17 budget. No increase to the Agency's FY17 budget is sought at this point. This increase in the yearly project cashflow does not impact the approved project LOP for 204122 of \$23,077,401.

#### Impact to Budget

Prop A 35% bond will be used to fund the Contract Modification. This source is appropriate, and is eligible for capital improvements to rail operations.

### **ALTERNATIVES CONSIDERED**

The Board may choose not to authorize the increase in contract price. This alternative is not recommended, as staff would be unable to issue the final Contract Modification and close out the contract.

### **NEXT STEPS**

Upon obtaining Board approval, Metro will issue the final Contract Modification and proceed with Contract closeout.

### **ATTACHMENTS**

Attachment A - Procurement Summary  
Attachment B - Contract Modification/Change Order Log  
Attachment C - DEOD Summary

Prepared by:

Milind Joshi, Sr. Director, Project Engineering, (213) 922-7985

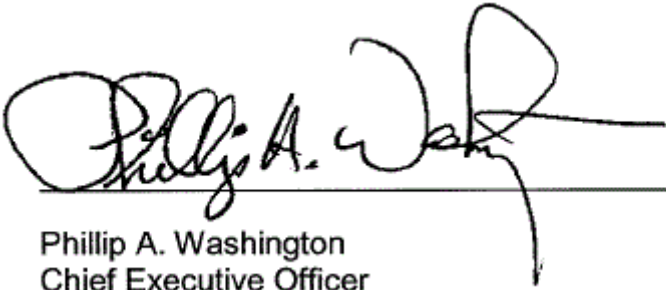
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Reviewed by:

Debra Avila, Chief Vendor/Contract Management Officer, (213) 418-3051

Richard Clarke, Chief Program Management Officer, (213) 922-7557



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Phillip A. Washington  
Chief Executive Officer

## PROCUREMENT SUMMARY

MRL/MOL NORTH HOLLYWOOD STATION WEST ENTRANCE  
CONTRACT NO. C1013R

1.	<b>Contract Number:</b> C1013R		
2.	<b>Contractor:</b> Skanska USA Civil West California District Inc.		
3.	<b>Mod. Work Description:</b> Settlement of various Requests for Change, Change Notices, Change Orders, and Time Related Overhead, for close-out of Contract.		
4.	<b>Contract Work Description:</b> Provide the final design and construction of an approximately 150-foot underground pedestrian passage (under Lankershim Boulevard) from the west mezzanine level of the existing Metro Red Line North Hollywood subway station at Lankershim Boulevard to the platform of the existing Orange Line BRT station west of Lankershim Boulevard.		
5.	<b>The following data is current as of:</b> 3/2/17		
6.	<b>Contract Completion Status:</b>		
	<b>Bids/Proposals Opened:</b>	10/14/13	<b>% Completion \$s:</b> 99.68%
	<b>Contract Awarded:</b>	12/30/13	<b>% Completion time:</b> 100%
	<b>NTP:</b>	2/11/14	<b>Original Contract Days:</b> 730
	<b>Original Complete Date:</b>	2/11/16	<b>Change Order Days:</b> 243
	<b>Current Est. Complete Date:</b>	10/11/16	<b>Suspended Days:</b> 0
	<b>Total Revised Days:</b>		973
7.	<b>Financial Status:</b>		
	<b>Contract Award:</b>	\$14,825,000	
	<b>Total Contract Modifications Approved:</b>	\$918,901.61	
	<b>Current Contract Value:</b>	\$15,743,901.61	
	<b>Contract Administrator:</b> Diana Sogomonyan	<b>Telephone Number:</b> 213.922.7243	
8.	<b>Project Manager:</b> Milind Joshi	<b>Telephone Number:</b> 213.922.7985	

**A. Contract Action Summary**

This Board Action is to approve authorization for Metro Chief Executive Officer (CEO) to execute Modification No. 20 to Contract No. C1013R, for the settlement of various Requests for Change, Change Notices, Change Orders, and Time Related Overhead, for closing out the subject contract. This Contract Modification will be processed in accordance with Metro's Acquisition Policy. This is a firm fixed price Contract.

On September 22, 2011, the Board of Directors authorized the CEO to solicit and award design-build contracts for renovation, repair and construction at Metro rail facilities, pursuant to Public Utilities Code Section 130242. On December 12, 2013, Metro CEO authorized the award of firm fixed price Contract No. C1013R to

Skanska USA Civil West California District Inc., the lowest price, responsive and responsible bidder, for the period of performance of 730 calendar days after Notice to Proceed, in the total contract amount of \$14,825,000. Notice to Proceed was issued on February 11, 2014.

Seventeen Contract Modifications and three Contract Change Orders have been executed on the Contract to date. Modification No. 20, in the amount of \$1,261,770 will allow the settlement of various issues on the Contract and close-out the Contract. Refer to Attachment B for further details on modifications issued to date adding work, and the proposed Modification currently pending authorization.

**B. Cost/Price Analysis**

The recommended price has been determined to be fair and reasonable based upon a cost analysis, technical analysis, fact finding, and negotiations. This recommendation is a settlement agreement of various Requests for Change, Change Notices, Change Orders, and Time Related Overhead, for closing out the subject contract where no one item was greater than the audit threshold requirements of \$1,000,000 for construction changes.

<b>Item No.</b>	<b>Changes</b>	<b>Proposal amount</b>	<b>Metro ICE</b>	<b>Negotiated amount</b>
1	Mod No. 20	\$1,317,280	\$803,825	\$1,261,770

## CONTRACT MODIFICATION/CHANGE ORDER LOG

MRL/MOL NORTH HOLLYWOOD STATION WEST ENTRANCE  
CONTRACT NO. C1013R

Mod./CO No.	Description	Status (approved or pending)	Cost		
			Contract Value	Mods.	Board Approved CMA
N/A	Initial Contract Award	Approved	\$14,825,000		\$1,482,500
Mod 1	Removal of Lead Abatement	Approved	\$14,837,736	\$12,736	
Mod 2	Additional Excavation Decking	Approved	\$14,883,352	\$45,616	
Mod 3	Artwork Removal and Reinstallation	Approved	\$14,955,575	\$72,223	
Mod 4	Additional "Down" Escalator Design Options	Approved	\$15,129,961.61	\$174,386.61	
Mod 5	Design Directive Drawings for CSS	Approved	\$15,164,498.61	\$34,537	
Mod 6	Additional Spec Sections to be Added to the Contract	Approved	\$15,167,090.61	\$2,592	
Mod 7	Milestone Revision	Approved	\$15,198,590.61	\$31,500	
Mod 8	Revise DEOD Contract Compliance Manual (RC-FTA)	Canceled	\$15,198,590.61	\$0.00	
Mod 9	Additional Existing Coupler Testing Program at KOP	Approved	\$15,209,308.61	\$10,718	
Mod 10	Milestone Revision Due to Critical Days for Mods 2 and 4	Approved	\$15,222,808.61	\$13,500	
Mod 11	Reinstallation of Art Mural at New Location	Approved	\$15,258,493.61	\$35,685	
Mod 12	Milestone Revision Due to LADWP and DSC (CN #00016.1)	Approved	\$15,314,695.61	\$56,202	
Mod 13	Location of Condensing Unit 1	Approved	\$15,396,722.61	\$82,027	
Mod 14	Revised Metro Grand Pylon (Station Marker) to Metro Pin	Approved	\$15,429,949.61	\$33,227	
Mod 15	Additional Design Work for Support of Excavation due to Addnl. LABOE Comments	Approved	\$15,441,360.61	\$11,411	
Mod 16	Contract Mod to SP (Exhibit SA-1 and SA-2) and GC (Sections GC 33.4, 34.7.3, and 34.10)	Approved	\$15,441,360.61	\$0.00	
Mod 17	Differing Site Conditions Due to Location of KOP Formsavers and Conduit (CN #00022)	Approved	\$15,551,335.61	\$109,975	
Mod 18	Add Abrasive Striping on Nosings for Granite Stairs	Approved	\$15,562,001.61	\$10,666	
Mod 19	Haul Off Excess Soil Material	Canceled	\$15,622,001.61	\$0.00	
CO 3	Additional SCADA Point Connections	Approved	\$15,622,001.61	\$60,000	



CO 4	Additional Intersection Improvements	Approved	\$15,623,901.61	\$1,900	
CO 5	Added Scope - Contractor to Furnish/Install Equipment Identified as Metro Furnished Items	Approved	\$15,743,901.61	\$120,000	
Mod 20	Settlement of Various Issue Leading to Close Out	Pending	\$17,005,671.61	\$1,261,770	
Subtotal – Approved Modifications				\$918,901.61	
Subtotal – Pending Changes/Modifications				\$1,261,770	
<b>Subtotal Totals: Mods. + Pending Changes/Modifications</b>			<b>\$2,180,671.61</b>		
Subtotal – Pending Claims			\$0.00		
<b>Total: Mods + Pending Changes/Mods + Possible Claims</b>			<b>\$2,180,671.61</b>		
Previous Authorized CMA			\$1,482,500		
CMA Necessary to Execute Pending Changes/Mods + Possible Claims			\$698,172		
<b>Total CMA including this Action</b>			<b>\$2,180,672</b>		
<b>CMA Remaining for Future Changes/Mods after this Action</b>			<b>\$0.00</b>		

**DEOD SUMMARY**

**MRL/MOL NORTH HOLLYWOOD STATION WEST ENTRANCE / C1013R**

**A. Small Business Participation**

Skanska West made a 10.57% Disadvantaged Business Enterprise (DBE) commitment. The project is 92% complete. Skanska is exceeding their goal commitment with a current DBE participation of 11.78%.

<b>Small Business Commitment</b>	<b>10.57% DBE</b>	<b>Small Business Participation</b>	<b>11.78% DBE</b>
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	DBE Subcontractors	Ethnicity/Gender	% Committed	Current Participation <sup>1</sup>
1.	Anil Verma	Asian Subcontinent/Male	0.27%	0.27%
2.	LIN Consulting	Asian Pacific/Male	0.54%	0.47%
3.	Coast Surveying	Hispanic/Male	0.06%	0.16%
4.	Morgner Construction	Hispanic/Female	0.64%	0.74%
5.	The Solis Group (TSG)	Hispanic/Female	0.49%	0.45%
6.	MTGL, Inc.	Hispanic/Female	1.82%	2.82%
7.	Excelsior Elevator	Asian Pacific/Female	5.07%	4.70%
8.	Lucas Builders	Asian Subcontinent/Female	0.24%	0.59%
9.	CGO Construction	African American/Male	0.12%	0.10%
10.	Clean Up America	African American/Male	0.08%	0.19%
11.	ACE Fence Company	Asian Pacific/Female	0.11%	0.14%
12.	Hammer Down Transp.	African American/Male	0.30%	0.31%
13.	Pre-Con Products	Hispanic/Male	0.00%	0.02%
14.	Coleman Construction	African American/Female	0.60%	0.59%
15.	Force 1 & Associates	Hispanic/Male	0.23%	0.23%
	<b>Total</b>		<b>10.57%</b>	<b>11.78%</b>

<sup>1</sup>Current Participation = Total Actual amount Paid-to-Date to DBE firms ÷ Total Actual Amount Paid-to-date to Prime.

**B. Project Labor Agreement / Construction Careers Policy (PLA/CCP)**

PLA/CCP reporting shows the 40% Targeted Worker attainment at 57.79%, the 20% Apprentice Worker attainment at 24.28% and the 10% Disadvantaged Worker attainment at 15.78%.

**C. Prevailing Wage Applicability**

Prevailing Wage requirements are applicable to this project. DEOD will continue to monitor contractors' compliance with the State of California Department of Industrial Relations (DIR), California Labor Code, and, if federally funded, the U S Department of Labor (DOL) Davis Bacon and Related Acts (DBRA).

**D. Living Wage Service Contract Worker Retention Policy Applicability**

The Living Wage and Service Contract Worker Retention Policy (LW/SCWRP) is not applicable to this Contract.



## Board Report

File #: 2017-0154, File Type: Project

Agenda Number: 35

**REGULAR BOARD MEETING  
MAY 25, 2017**

**SUBJECT: EASTSIDE TRANSIT CORRIDOR PHASE 2**

**ACTION: APPROVE TECHNICAL STUDY RECOMMENDATIONS**

**RECOMMENDATION**

CONSIDER:

- A. APPROVING an updated Project Definition for Environmental Clearance, including three alternatives:
1. SR 60 North Side Design Variation Alternative;
  2. Washington Boulevard Alternative with Atlantic Below-Grade Option; and
  3. Combined Alternative with both SR 60 and Washington Boulevard via Atlantic Segments; and
- B. RECEIVING AND FILING the **Eastside Phase 2 Technical Study Report**. Attachment D contains the Executive Summary. The full report is available upon request.

**ISSUE**

In November 2014, the Board received the Eastside Transit Corridor Phase 2 Draft Environmental Impact Statement/Report (EIS/EIR) and approved carrying forward to further study two build alternatives: the SR 60 North Side Design Variation (NSDV) Alternative and the Washington Boulevard Alternative. Staff was directed to address comments received from Cooperating and Public Agencies, identify an alternative to the Washington Boulevard Garfield Alternative aerial alignment, and analyze the feasibility of operating both alternatives.

At the July 2015 meeting, the Board approved a Contract Modification for the Metro Eastside Transit Corridor Phase 2 Project to undertake this work including community outreach to support the Technical Study. The Board also approved a motion (Attachment A) directing staff to provide bi-monthly updates on the project covering:

- analysis and refinement of project alternatives,
- project schedule and milestones,
- status reports on work with third-party agencies, and
- community outreach.

The Eastside Phase 2 Technical Study is now complete, and includes findings and recommendations for Board consideration. Specifically, Board approval is being sought to adopt the updated Project Definition, which includes a slightly revised SR 60 North Side Design Variation Alternative and the Atlantic Boulevard Underground Option as the new Washington Boulevard Alternative. The updated Project Definition also includes a 'Combined' Alternative, which is recommended for further study in the next phase of work. Board selection of a Locally Preferred Alternative (LPA) will be made upon the completion of the revised draft environmental documents.

## **DISCUSSION**

### **Project Schedule and Milestones**

The major work elements described above for this project had several key milestones. The Technical Study incorporated extensive stakeholder feedback into the screening analysis which informed the technical recommendation made herein. Attachment B summarizes the completed milestones. The project team undertook numerous investigations and design studies to address comments received from the Cooperating agencies and the November 2014 Board direction. Based on the findings of these technical investigations and consultation with Resource Agencies, there are no significant outstanding issues otherwise preventing the re-initiation of the environmental process on the updated Project Definition.

### **Status Report**

#### **SR 60 North Side Design Variation (NSDV) Alternative**

The project team undertook a coordinated design refinement effort to address potential conflicts with other plans and existing facilities. Much of the effort focused on the NSDV segment between Greenwood Avenue and Paramount Boulevard, which was modified to address several areas of concern. The City of Monterey Park and the Monterey Park Market Place developer expressed concerns that the original NSDV might block the view of the Market Place development just north of the proposed NSDV alignment limits. The project team modified the alignment geometry, lowered the grade profile in front of the proposed Market Place development, and relocated the proposed NSDV eastern flyover further east. Also, the guideway over the Paramount Boulevard on-ramp was slightly realigned to avoid conflicts with the widened on-ramp currently in construction, per request of California Department of Transportation (Caltrans). In unincorporated East Los Angeles, to minimize visual obstruction to the AltaMed's PACE facility on Pomona Boulevard at Hillview Avenue, the study team refined the guideway alignment by shifting the proposed beginning of the retaining wall further east by approximately 350 feet.

In addition, the project team completed numerous technical investigations to address issues arising from comments received from Cooperating Agencies, including:

- subsurface investigation along the western portion of the NSDV guideway alignment to document soil conditions, per request by United States Environmental Protection Agency (EPA);
- field surveys to confirm the height of Southern California Edison (SCE) transmission lines crossing SR 60 just east of Paramount Boulevard and inform the development of a preliminary plan to raise the SCE transmission lines to a height sufficient to remove the clearance conflict;
- sensitive species, rare plants and jurisdictional waters surveys, per request by EPA and the California Department of Fish and Wildlife (CDFW); and
- advancement of concept design of the proposed Santa Anita Station and Park and Ride facility

to address issues related to flood management operational flexibility, per request by the United States Army Corps of Engineers (ACE)

This effort included extensive consultation with each of the key Cooperating Agencies that included a review of work plans, incorporation of technical feedback and disclosure of preliminary findings. Based on the results of the technical investigations, design refinements and feedback received from Cooperating Agencies and key stakeholders, it is recommended that the Project Definition be updated to include the revised SR 60 NSDV Alternative. The technical work performed on the SR 60 NSDV Alternative has addressed Cooperating Agency comments to a degree sufficient to justify the study of this updated Alternative in a re-initiated environmental document.

#### **Washington Boulevard Alternative: Route Options Screening Results**

The project team completed an evaluation of potential Washington Boulevard connection options. The process started with 27 potential connection options to Washington Boulevard, including 17 options from the 2009 Alternatives Analysis (AA) study and 10 new options not previously considered. These 27 route options were evaluated based on physical constraints such as street widths, utilities and existing structures. In addition, the assessment considered factors such as ridership, cost, travel time, access to major activity centers, economic development opportunities, Transit-Oriented Communities (TOC) potential, and consistency with community goals. Based on the analysis and the feedback provided from the study area key stakeholders, three route options - Garfield, Atlantic and Arizona - stood out as most promising and were the subject of more detailed technical analysis (Attachment C). These three north-south connection options were shared at community meetings held in March 2016, June 2016 and February 2017.

The following highlights key findings and recommendations, which are informed both by technical analysis and feedback received from the communities and stakeholders:

- **Garfield Route Option:** The design of an underground configuration along Garfield Avenue would require a tight horizontal curve just west of Via Campo and Wilcox Avenue, which could potentially impact the existing commercial site and the Ford dealership. South of this location, an underground tunnel would require the relocation of storm drains and sewer lines along Garfield Avenue. From a ridership standpoint, the catchment area around a proposed Metro station at Garfield Avenue and Whittier Boulevard lacks the intensity of activity typically associated with a subway station. Moreover, the alignment misses the Commerce Citadel and Casino area, which has the study area's highest ridership potential. With an underground tunnel, there would also be significant impacts during construction, including property acquisition, business disruption and traffic/circulation impacts near SR 60. As a result, the Garfield Underground Option is not recommended for further consideration as a potential north-south connection to Washington Boulevard.
- **Arizona Route Option:** Although Arizona Avenue is a wide street (108" curb to curb), it is located in a low-density residential district where on-street parking is an important community asset. A median-running at-grade light-rail transit (LRT) would necessitate the removal of on-street parking. This would create a significant hardship to residents along Arizona Avenue. From an operational standpoint, there are also significant challenges associated with a junction at 3<sup>rd</sup> Street and Mednik Avenue, which is just west of the existing East LA Civic Center Station and the intersection where Griffith Middle School is located. A junction on Arizona Avenue would necessitate demolishing and shifting the LA Civic Center Station east of its current location with potential property impact to the northwest corner of the Griffith Middle







School.

A below-grade configuration on Arizona Avenue would avoid the on-street parking loss impacts associated with at-grade LRT, but would require the taking of numerous residences in the vicinity of 3<sup>rd</sup> Street and Mednik Avenue, where there would be need to be a large construction site to launch or extract a tunnel boring machine (TBM) and a permanent tunnel portal. It is determined that an underground LRT portal on Arizona Avenue could not be constructed and operated without permanent residential property displacements. While there is some potential for economic development around a proposed Metro station at Arizona Avenue and Whittier Boulevard, the existing catchment area lacks the intensity of activity typically needed to justify the investment in an underground Metro station. Based on the preponderance of factors considered above, any LRT extension along Arizona Avenue would not be consistent with community priorities and goals. As a result, Arizona is not recommended for further consideration as a potential north-south corridor connection to Washington Boulevard.

- **Atlantic Route Option:** Atlantic Boulevard possesses land use characteristics and activity levels best suited for premium Metro rail service. It is a medium density commercial/retail corridor that is narrower than Arizona Avenue, but intersects with the historic Whittier Boulevard corridor. The catchment area around Atlantic Boulevard and Whittier Boulevard is a vibrant hub of retail activity, and has strong economic development potential. Because Atlantic Boulevard is a major arterial corridor with heavy traffic, it is not a viable corridor for at-grade LRT, especially given the presence of numerous sensitive uses (schools and churches). A grade crossing analysis was conducted which indicated that at-grade LRT would produce significant traffic/circulation and access impacts that could not be mitigated. The project team investigated the feasibility of a below-grade configuration that would connect the Atlantic Station to the thriving Whittier Boulevard commercial corridor and the regional-serving Commerce Citadel and Hotels complex in the City of Commerce. The Atlantic below-grade option would offer the benefit of avoiding numerous physical obstacles, including: the Mixmaster (the junction of Atlantic Boulevard, Triggers Street, Telegraph Rd., and Union Pacific Railroads), the AltaMed's Headquarters facilities on Camfield Avenue, the SCE transmission towers east of Tubeway Avenue and a number of BNSF rail spurs in the eastern part of the City of Commerce.

The study team explored several potential methods of constructing a rail tunnel, including launching a TBM from the south in the City of Commerce and extracting it from the north near Atlantic Boulevard and 3<sup>rd</sup> Street where a portal is needed to allow trains to daylight from a tunnel. This construction approach could significantly reduce the footprint needed for tunnel construction staging in East Los Angeles. In addition, the City of Commerce has expressed openness to exploring joint development opportunities made possible through the acquisition of parcels needed for a maintenance facility in the eastern part of the City of Commerce north of Washington Boulevard. For these reasons, the Atlantic Underground Option is the most promising north-south connection to Washington Boulevard, and is recommended for Board approval as the new Washington Boulevard Alternative.

The table below summarizes the screening results of the Washington Boulevard route options - Arizona, Atlantic and Garfield (underground) - and compares them to the Washington Boulevard Alternative in the Draft EIS/EIR.

Factors	Draft EIS/EIR Washington Blvd LRT Alternative	Arizona		Atlantic		Garfield
		At-Grade	Underground	At-grade	Underground	Underground
Fundamentally Consistent with Community Goals/Priorities?	NO	NO	NO	NO	YES	NO
Operationally Feasible?	YES	NO	NO	YES	YES	YES
Ridership (Daily Boardings)*	19,920	17,280 to 18,680	18,270 to 19,770	17,950 to 19,280	19,610 to 21,070	19,120
Rough Order-of-Magnitude (ROM) Capital Costs (in 2010 \$)*	\$1.4 to 1.7 billion	+10% to +20%	+60% to +70%	+10% to +20%	+90% to +100%	+80% to +90%
Preliminary Travel Time (In minutes)	18-19 min.	20-21 min	18-19 min.	20-21 min.	17-18 min.	18-19 min.
Potential Traffic/Circulation Impacts	Minimal	Significant	Minimal	Significant	Minimal	Minimal
Recommendation						

\*Cost and ridership data is subject to change as design refinement and more detailed technical work continues.

The Arizona and Garfield Route Options are not recommended for further consideration as they are fundamentally inconsistent with community goals. The Atlantic Underground Option provides the most benefits when compared to other options studied for the Washington Alternative. The Atlantic Underground Option performs well on a number of key measures including projected high ridership (19,610 to 21,070 boardings), faster travel time (17-18 minutes), best meets community goals by minimizing surface operational disruptions and providing connectivity to local and regional destinations and activity centers in unincorporated East Los Angeles and the City of Commerce. The cost estimate for the Washington Boulevard Alternative via Garfield Avenue from the 2014 Draft EIS/EIR was approximately \$1.4 to \$1.7 billion (in 2010 dollars). The cost differential between the Draft EIS/EIR Baseline Alternative and the other route options is attributable to several factors, the most significant of which is the inclusion of below-grade segments. The length of the new Washington Boulevard Alternative is about 8.8 miles, of which one-third of the alignment could be an underground segment along Atlantic Boulevard in unincorporated East Los Angeles and then along Smithway Street in the City of Commerce. The cost of the underground segment would include elements such as underground stations and right-of-way acquisition near portal construction sites. Other factors include inflation adjustments and higher LRT construction costs in Los Angeles County, per recent construction bid prices reflecting more current market conditions. For these reasons, the cost of the Atlantic Underground Option is higher than those of the original Draft EIS/EIR Baseline Alternative.

**SR 60 and Washington Blvd ‘Combined’ Operations**

Measure M funding for the Eastside Phase 2 project includes a total of \$6 billion, of which \$3 billion is not identified to be available until after 2052. Initial funds to start construction of the initial segment of the project are currently scheduled to commence in 2029. Based on preliminary cost estimates, the total commitment of \$6 billion could be enough to cover the cost of both alternatives. The Technical



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Study explored the feasibility of operating both alternatives (SR 60 and Washington Boulevard), and it has been determined that operating both segments is feasible, but would require infrastructure and operational elements that would not be required if only one or the other alternative were operated as a 'stand-alone' line.

If both the SR 60 and Washington segments were built, there would only be one maintenance facility needed to service rail vehicles operating on both lines. The exact location of the maintenance facility will be determined in the next phase of work. In order to move all Eastside 2 trains serving both branches to that maintenance facility, a potential three-way junction concept (similar to the planned operations at the Crenshaw Line/Green Line merge junction) would be needed. The provision of a three-way junction, potentially underground, would allow patrons to travel to points along either the SR 60 branch or the Washington branch, therefore offering greater connectivity with the project area and to/from the greater Los Angeles region. Another benefit of a three-way junction is that it could support a third line from South El Monte to Whittier, potentially allowing for 5-minute service on each branch.

Based on the analysis performed, a 'Combined' Alternative, which includes both the SR 60 and Washington Boulevard segments, has sufficient technical merit to be included as a new Alternative in the updated Project Definition. The inclusion of a Combined Alternative in the re-initiated environmental process would be the only way to environmentally clear the three-way underground junction, which would not be needed if only SR 60 or Washington were built. In the next phase, the Eastside Phase 2 project team would develop and advance the design of a three-way junction, define the associated operating plan and determine its physical footprint.

### **Community Outreach**

The study team undertook an extensive outreach effort with numerous project stakeholders throughout the study area to provide project updates, receive feedback on the north-south connection options development process and seek feedback on the overall community engagement strategy.

Over 110 outreach meetings were held during the course of the technical study, including:

- 10 community meetings (including East Los Angeles (3 meetings), Whittier (2 meetings), Montebello (2 meetings), South El Monte (2 meetings), and Commerce (1 meeting))
- 30 briefings with SR 60 Coalition and Washington Boulevard Coalition, both on monthly basis
- 70 stakeholder briefings with East Los Angeles residents, businesses, neighborhood and community groups, local city staff or city council members, federal and state elected officials, chambers and business associations, major property owners/developers, Councils of Government and Service Councils in the San Gabriel Valley and Gateway Cities.
- Two tours of Metro maintenance facilities in Santa Monica and Monrovia

Of the 10 community meetings held, five were recently completed in early-mid February 2017 in the communities of Whittier, Montebello, South El Monte, City of Commerce, and East Los Angeles. A total of 318 persons attended the five meetings, and provided a valuable opportunity to receive critical feedback on Technical Study findings and recommendations. In general, there is strong support for the Eastside Phase 2 project and re-initiation of the environmental process, based on the recommended Project Definition.

Several key areas of consensus and themes emerged based on survey results and comments made. First, there was strong support expressed for the Atlantic Underground Option as the new Washington Boulevard Alternative. Of 235 respondents surveyed at the February 2017 community meetings, 63% agreed that the Atlantic Underground Option has sufficient merit to be recommended as the new Washington Boulevard Alternative. This result was strongly corroborated by sentiments

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expressed at the Community Meetings, particularly from attendees who made comments at the East Los Angeles meeting on February 16. Second, there was openness to studying the 'Combined' Alternative in the next phase of work, as evidenced by the 50% of respondents who felt that the 'Combined' Alternative had enough merit to study in the next phase plus an additional 16% of the respondents who expressed the 'Combined' Alternative maybe have some merit to be further studied. There was also support for SR 60 NSDV Alternative, which several attendees felt could serve a robust east-west commuter market and has lesser impacts to residential community/businesses during and after construction. While there is strong support for the Eastside Phase 2 project overall, participants shared concerns regarding the potential impacts during the construction, especially as it relates to traffic and business disruption and/or relocation. Participants also highlighted the importance of designing the stations with ease of access for pedestrians, bike riders and park and ride.

The study team has received positive feedback from the key stakeholders indicating their general support of the technical study findings and recommendations. Through April 2017, the study team will continue to provide briefings with study area stakeholder groups. A complete report of all outreach activities will be provided at Metro committee meetings as requested.

### **DETERMINATION OF SAFETY IMPACT**

This Board action will not have any adverse safety impacts on Metro's employees and patrons.

### **FINANCIAL IMPACT**

The FY 2017 budget includes \$1,990,600 for Professional Services in Cost Center 4350, Project 460232 (Eastside Transit Corridor Phase 2). Since this is a multi-year program, the Cost Center Manager and Chief Planning Officer will be responsible for budgeting in future years.

#### **Impact to Budget**

The source of funds is Repayment of Capital Project Loans Fund 3562. These funds are eligible for bus and/or rail operating and capital expenses.

### **ALTERNATIVES CONSIDERED**

The Board could choose to direct staff to proceed with environmental clearance for only one of the two alternative routes that have been studied in the Technical Study. This is not recommended as it could preclude future opportunities to connect both the northern (Route 60) and southern (Washington Boulevard) branches of this corridor.

### **NEXT STEPS**

Upon approval, staff will procure professional services to prepare a revised draft environmental document and conduct advanced conceptual engineering through final environmental clearance. Upon completion of procurement, staff will return to the Board to seek approval on the negotiated contract budget amounts for the aforementioned professional services.

### **ATTACHMENTS**

Attachment A - July Board Motion

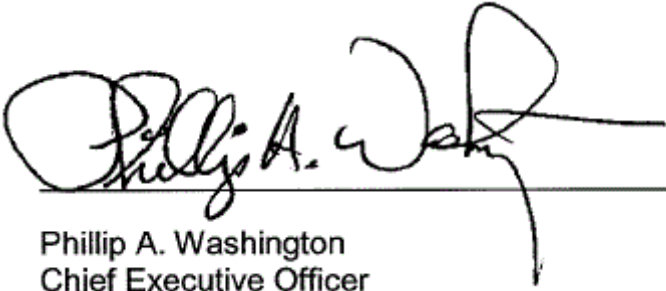
Attachment B - Project Schedule

Attachment C - Map of North/South Route Options for Washington Boulevard

Attachment D - Eastside Phase 2 Route Options Screening Analysis and Community Outreach Executive Summary

Prepared by: Jill Y. Liu, Transportation Planning Manager, Countywide Planning & Development, (213) 922-7220,  
Eugene Kim, Deputy Executive Officer, Countywide Planning & Development, (213) 922-3080,  
David Mieger, Interim Senior Executive Officer, Countywide Planning & Development, (213) 922-3040

Approved by: Therese W. McMillan, Chief Planning Officer, (213) 922-7077



Phillip A. Washington  
Chief Executive Officer

## Metro

Los Angeles County  
Metropolitan Transportation  
Authority  
One Gateway Plaza  
3rd Floor Board Room  
Los Angeles, CA



## Board Report

File #:2015-1105, File Type:Motion / Motion  
Response

Agenda Number:27.1

**PLANNING AND PROGRAMMING COMMITTEE  
JULY 15, 2015**

**Motion by:**

**MAYOR ERIC GARCETTI, SUPERVISOR DON KNABE,  
SUPERVISOR HILDA SOLIS, DIRECTOR DIANE DuBOIS,  
DIRECTOR JOHN FASANA AND DIRECTOR JACQUELYN DUPONT-WALKER**

July 15, 2015

**Relating to Item 27: File ID 2015-0706  
Gold Line Eastside Extension Phase 2**

At the November regular MTA Board meeting, the Board voted to proceed with and continue study on ~~two~~ all alternatives for the Gold Line Eastside Extension Phase 2.

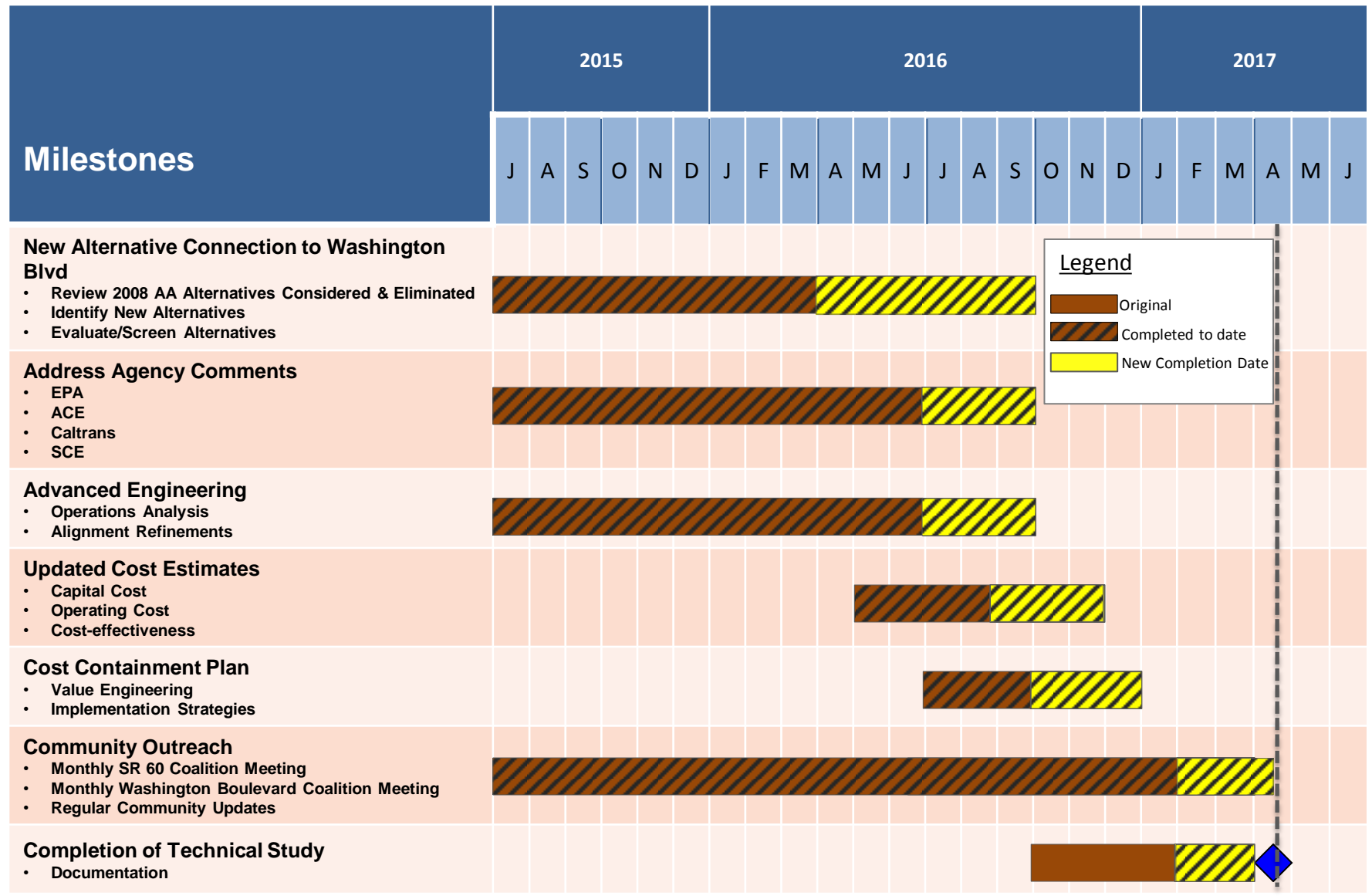
The communities and stakeholders for both alternatives under evaluation should understand and receive updates on the technical studies on a regular basis.

PLANNING AND PROGRAMMING COMMITTEE RECOMMENDED (3-0) approving amending **Motion by Directors Garcetti, Knabe, Solis, DuBois, Fasana and Dupont-Walker** that the Board instruct the CEO to provide quarterly updates every 60 days starting with the September 2015 Board cycle as follows:

- A. Report on the project contractual scope of work and provide a description of the task orders for the technical study;
- B. Provide the project schedule and related milestones for both the technical analysis and environmental planning process for all the alternatives under consideration and study; and
- C. In the regular quarterly updates, provide, at a minimum, the following:
  1. Project schedule updates;
  2. Progress reports with third-party agencies on the local, state, and federal level; and
  3. Community outreach schedule and meeting results, including any concerns raised by

**stakeholders.**

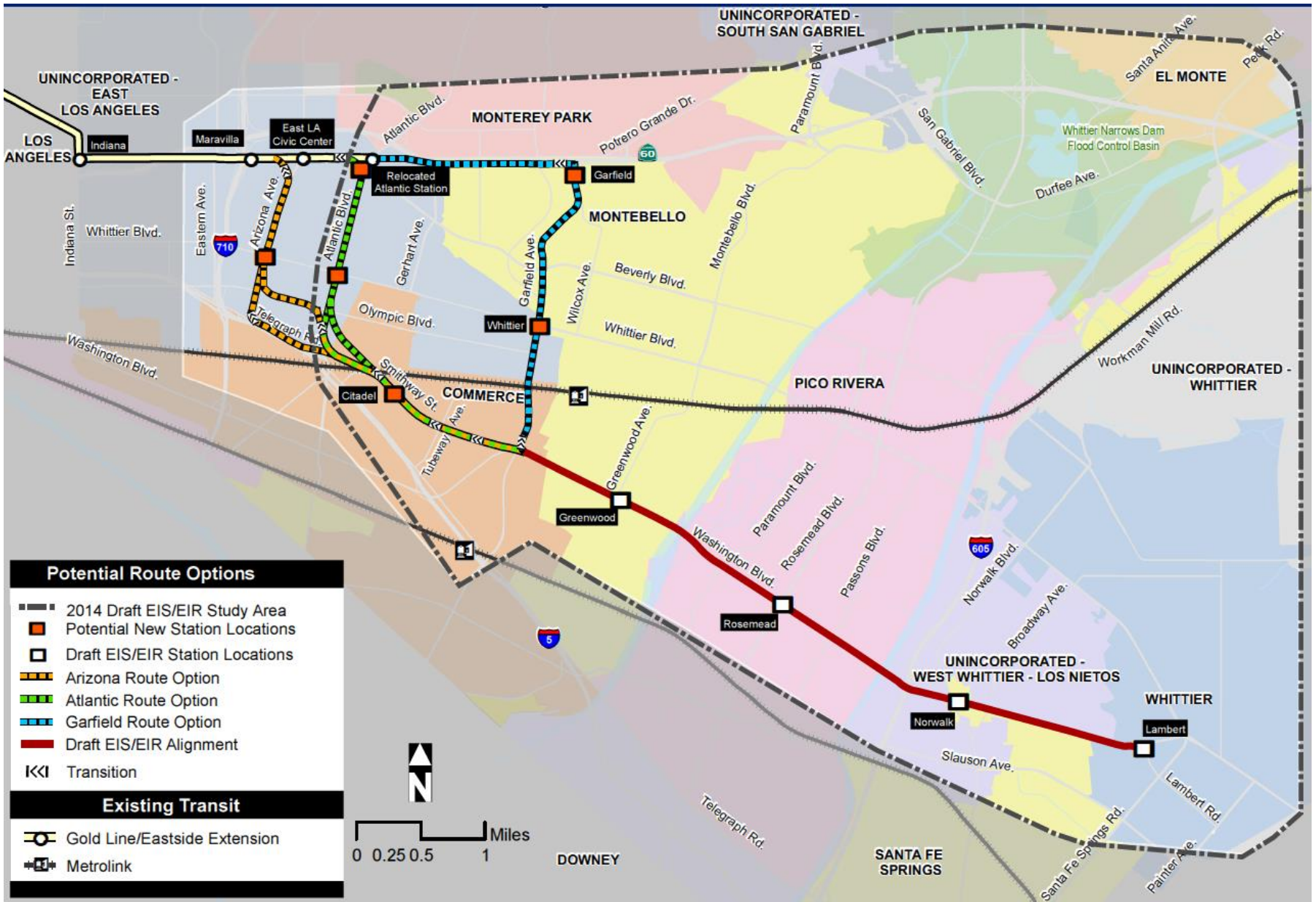
# Milestone Schedule



**Legend**

- Original
- Completed to date
- New Completion Date

Board Approval of Technical Study



# Attachment D

## Eastside Transit Corridor Phase 2 Technical Study

### Route Options Screening Analysis and Community Outreach

Executive Summary – April 2017



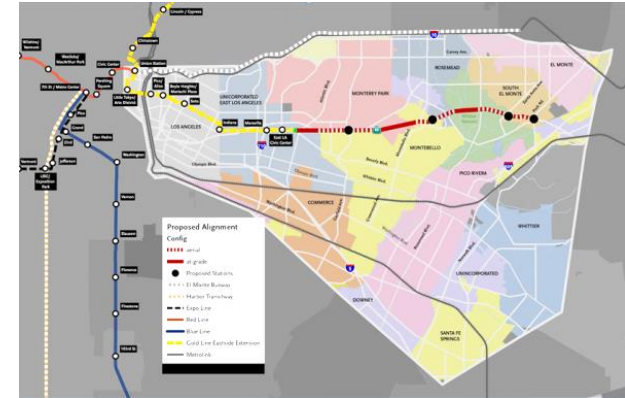


# Technical Study Scope

## □ Nov 2014: Board-directed Technical Study to:

### ✓ Address Agency Comments regarding the SR 60 North Side Design Variation (NSDV) LRT Alternative

- US Environmental Protection Agency (USEPA)
- US Army Corps of Engineers (USACE)
- California Department of Transportation (Caltrans)
- California Department of Fish and Wildlife (CDFW)
- Southern California Edison (SCE)

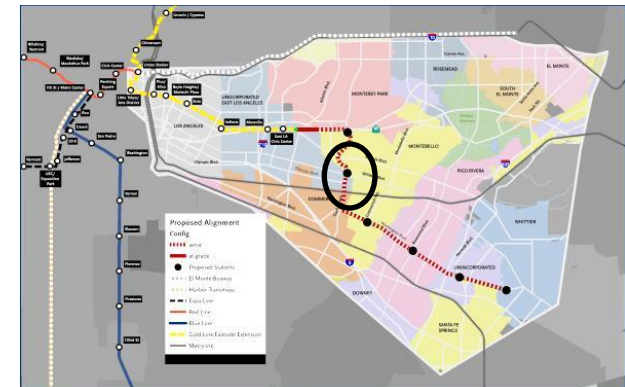


SR 60 NSDV Alternative

### ✓ Eliminate Aerial on Garfield Ave between Via Campo and Whittier Bl.

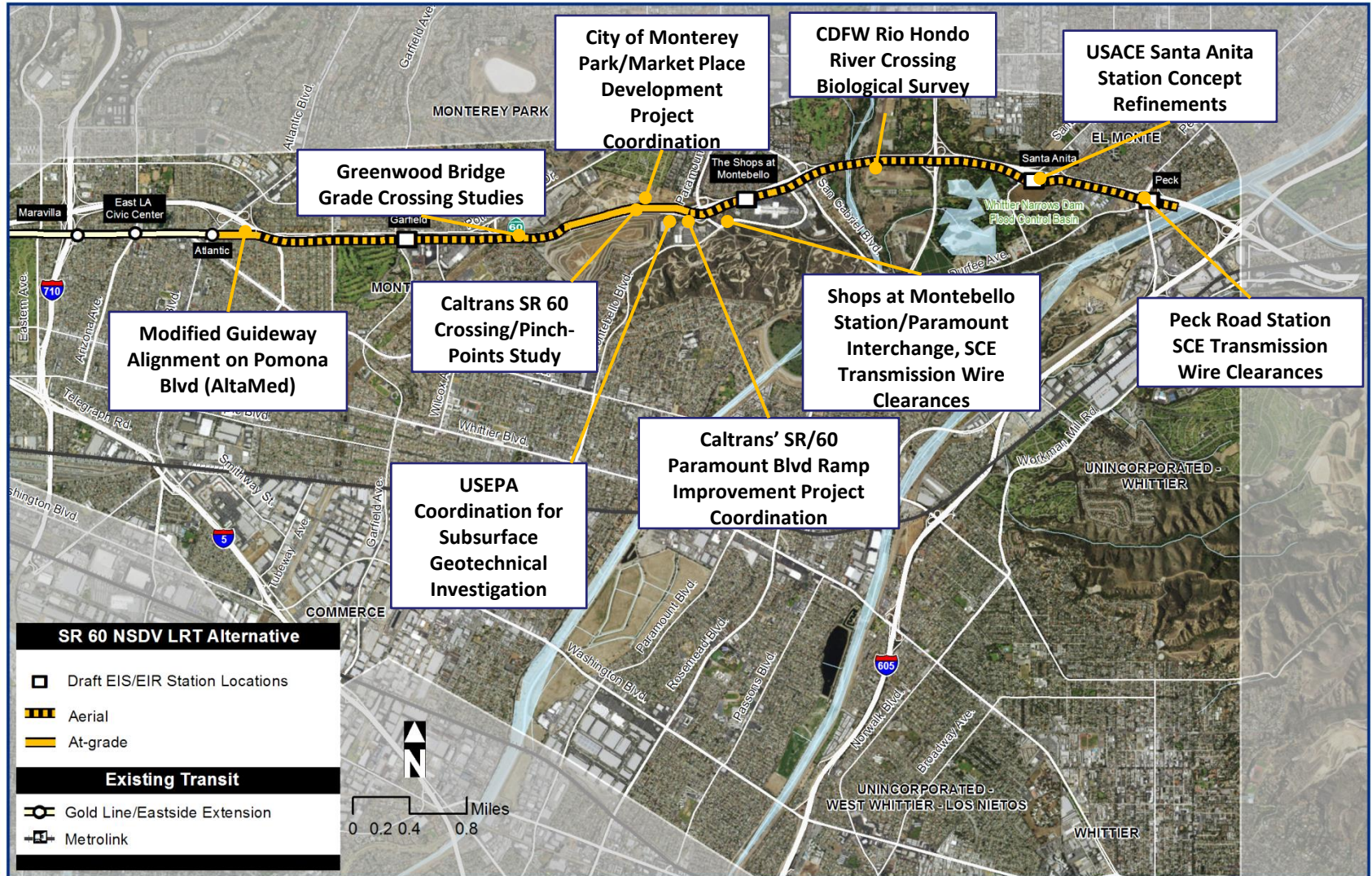
### ✓ Identify a New North/South Connection to Washington Blvd.

### ✓ Explore Feasibility of Operating Both SR 60 and Washington Blvd. Alternatives



Washington Blvd Alternative via Garfield Aerial

# SR 60 NSDV LRT Alternative technical investigations addressed numerous resource agency comments



# Caltrans requested additional design studies to resolve potential conflicts on SR 60 NSDV LRT Alternative

## Caltrans Comment:

- NSDV flyover structures may impose non-standard Caltrans design elements and impact their feasibility for future widening of the SR-60 Freeway
- The proposed flyover structure (west of Paramount Blvd.) would conflict with the new SR 60 ramps at Paramount Blvd.

## Metro Actions:

- Developed NSDV cross-sections within the limits of the NSDV to list any existing non-standard Caltrans design features and all non-standard design features which may be imposed with the construction of NSDV
- Modified NSDV to place columns of aerial structure in locations that do not conflict with new SR 60 Ramps at Paramount Boulevard.
- Additional coordination with Caltrans will be required in the next study phase to refine the NSDV concept.



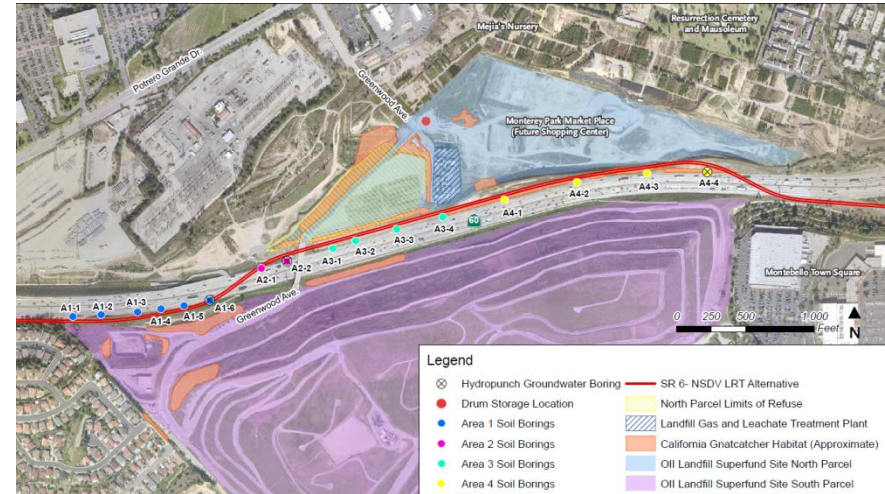
# USEPA requested additional studies at Oil Superfund Site

## USEPA Comments:

- Construction of the NSDV alignment may result in possible hazardous materials release, potential impact to the remedy, operating perimeter liquids control systems and fill integrity, and concerns for landslide risk and seismic stability

## Metro Actions:

- Conducted field survey activities from July 25 - August 4, 2016, which indicated:
  - ✓ Fill is reasonably adequate
  - ✓ Would not pose significant issue for design of NSDV segment
- Conducted grade crossing analysis and underpass study for Greenwood Bridge
- During next environmental process, additional geotechnical borings to assess presence of landslide deposits and slope stability analysis



# The City of Monterey Park expressed concern that the SR 60 NSDV LRT Alternative may block the view of the Marketplace development

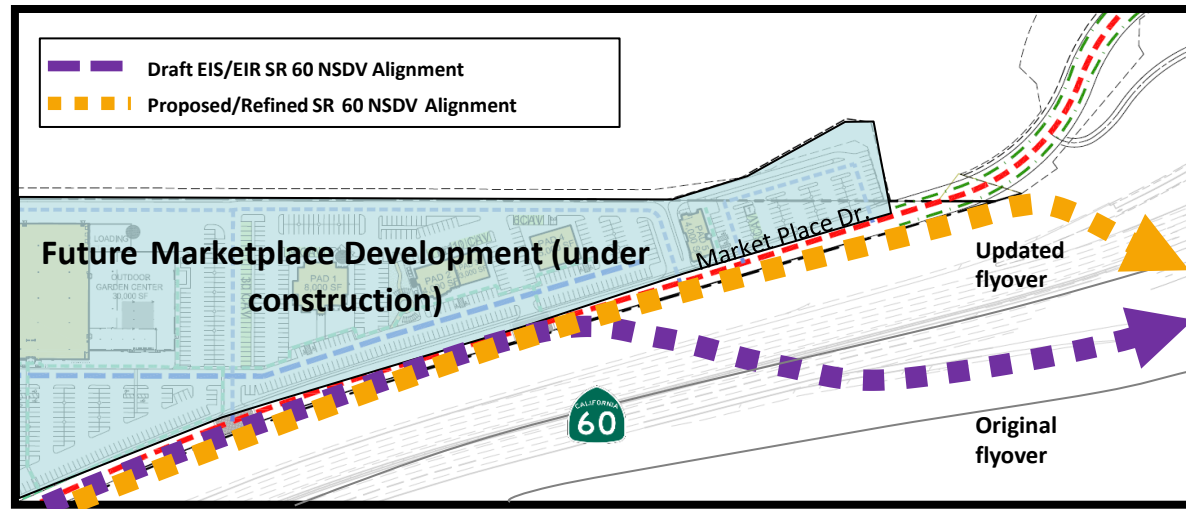
## City of Monterey Park Comment:

- The proposed flyover structure (west of Paramount Blvd.) would result in visual and physical impacts to the 500,000 square-foot Monterey Park Marketplace Development (under construction)



## Metro Actions:

- Modified the design of the SR 60 NSDV LRT Alternative (Draft EIS/EIR Concept 2) by shifting the proposed guideway and flyover structure further east to avoid visual and physical conflicts with the Marketplace Development



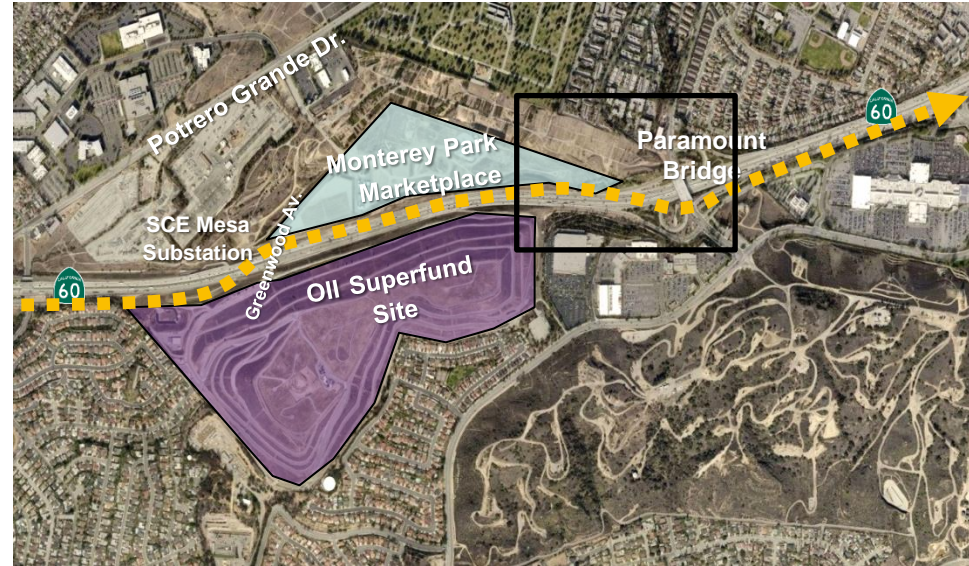
# SCE expressed concerns over insufficient clearances at SR 60 NSDV LRT Alternative crossings with SCE transmission lines

## SCE Comment:

- The proposed design would not provide sufficient clearance between the top of the LRT catenary wire and the existing SCE transmission lines

## Metro Actions:

- Conducted a new wire survey to confirm the height of the existing wires at Paramount Interchange
- Confirmed the wire clearance requirements and identified potential crossing conflicts at Paramount Blvd and at Peck Road
- Developed a preliminary plan to raise the SCE tower heights to provide sufficient clearance at Paramount Interchange
- Revised the Peck Road Station Concept to remove the conflict with SCE wires



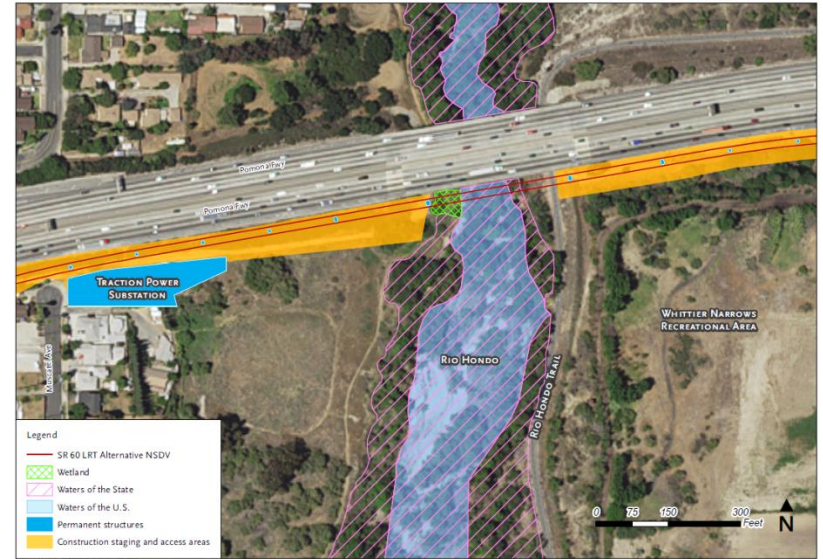
# California Department of Fish and Wildlife (CDFW) requested additional biological surveys

## CDFW Comments:

- Define areas of potential effects for biological resources in the study area
- Conduct surveys for rare natural communities and sensitive species
- Prepare vegetation mapping
- Define areas and conduct jurisdictional delineations

## Metro Actions:

- Conducted additional biological surveys of rare natural communities and sensitive species for Whittier Narrows Basin and river crossings, conducted jurisdictional delineations, and vegetation mapping, in Spring 2016:
  - ✓ Based on the delineation and construction information known, no temporary impacts on wetlands or waters as a result of construction
  - ✓ Additional biological studies, mapping and surveys will be conducted in the next study phase



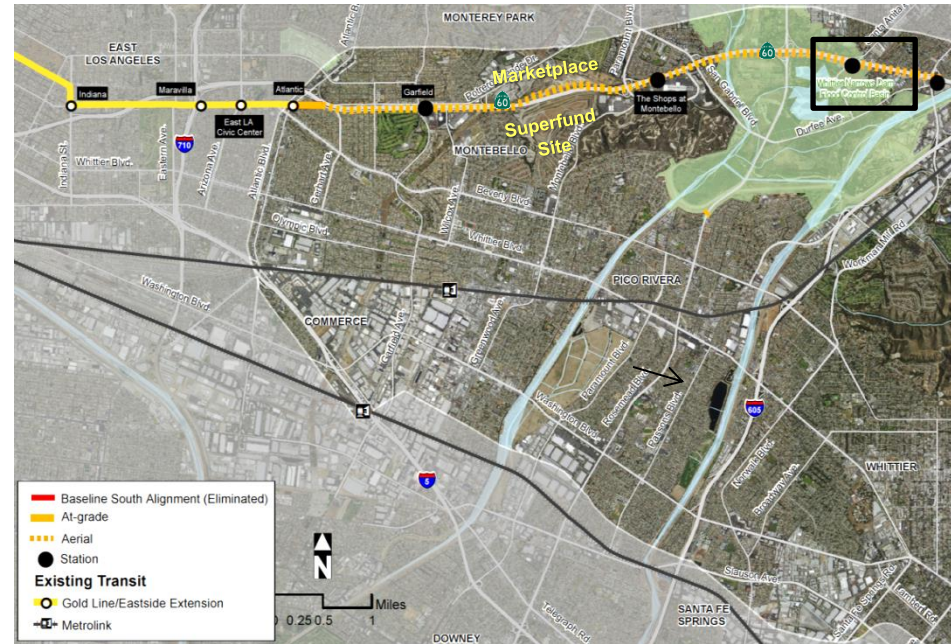
# USACE requested additional information on the Santa Anita Station Design Concept in Whittier Narrows Flood Control Basin

## USACE Comment:

- Concerns with potential flooding and emergency evacuation routes at the Santa Anita Station and parking structure in the event of a 100-year flood event
- Request for additional analysis regarding the identification of a practicable alternative outside the floodplain
- Additional explanation of the necessary approvals required from USACE

## Metro Actions:

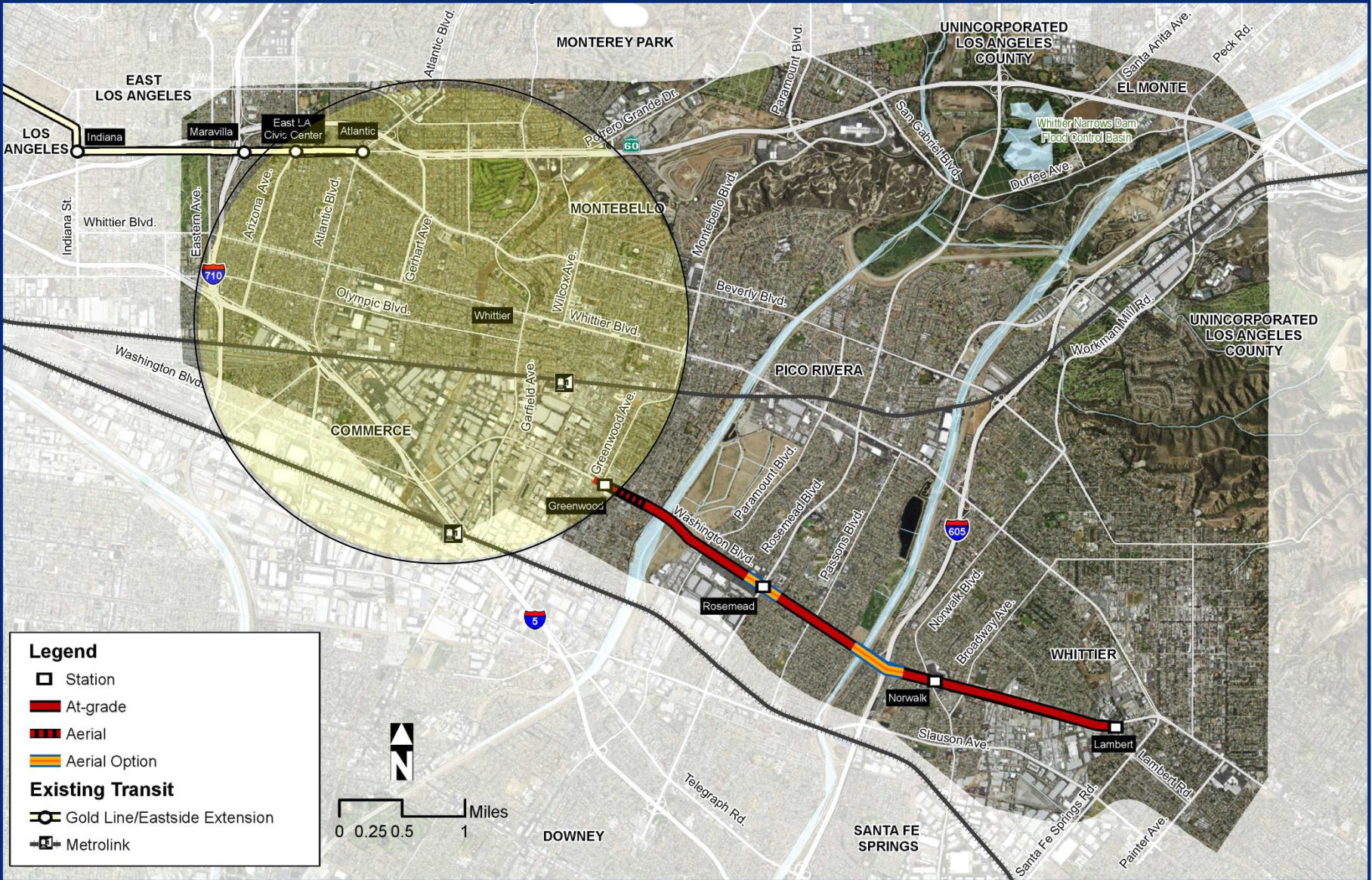
- Developed more detailed exhibits demonstrating a raised station and parking structure included in the Draft EIS/EIR.
- Modified the configuration of the station access and circulation to not preclude the City of South El Monte's vision for a potential Transit-Oriented-Development (TOD) footprint
- Supplemented the E.O. 11988 alternatives analysis
- Prepared additional permit and approval process information



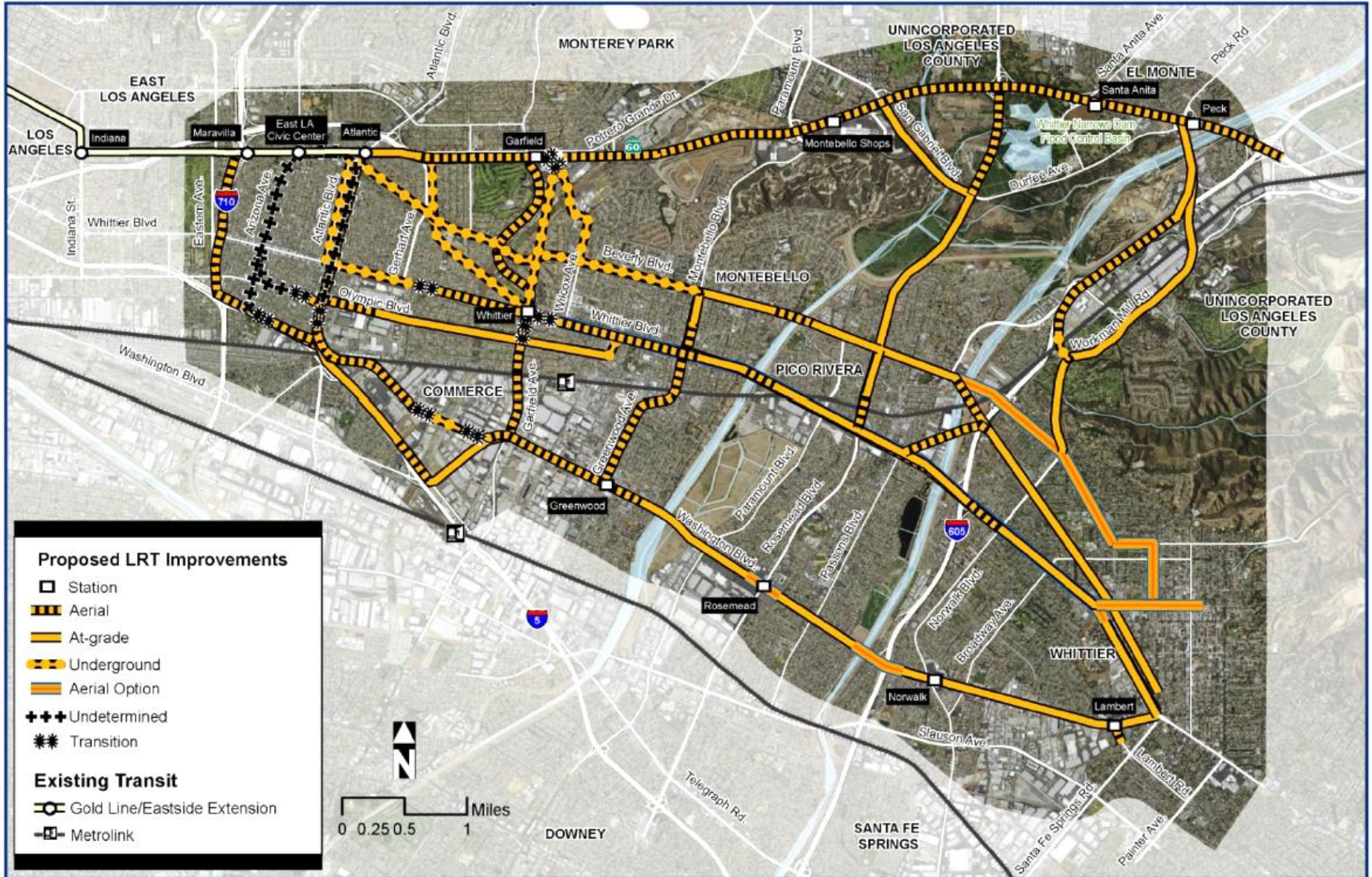
\*Station location and park-and-ride structure design concept are subject to change as technical analysis continues



# The Board requested a study to identify a new north-south connection to Washington Blvd.



# The Washington Alternative north-south connection study started with 27 LRT route options



# Several initial screening criteria were used to narrow down north-south route options



## TRANSIT BENEFITS

Improve transit access and attract riders



## ROM CAPITAL COST

Rough -order-of-magnitude cost estimates of total capital cost



## COMMUNITY PLANS & GOALS

Consistency with adopted city, community land use plans and policies



## TOC POTENTIAL

Rough -order-of-magnitude cost estimates of total capital cost



## TRANSPORTATION & CIRCULATION

Potential traffic and ROW impacts to the transportation system



## ENVIRONMENTAL EFFECTS

Effects on communities & sensitive receptors



## OPERATIONAL

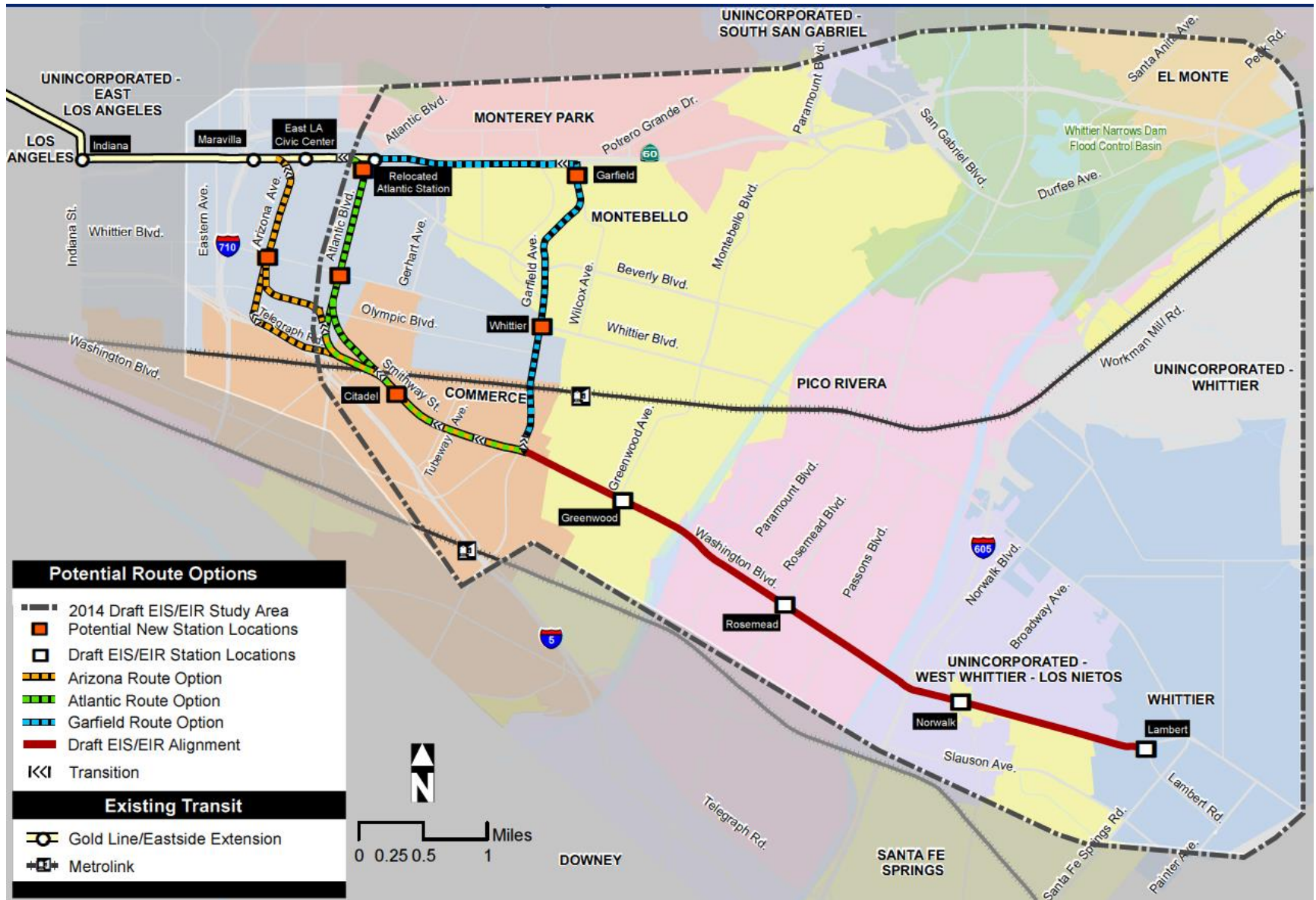
Improve transit access and attract riders









## CONSTRUCTABILITY

Improve transit access and attract riders

# Three (3) north-south route options were carried into detailed technical analysis – Garfield (below-grade), Atlantic and Arizona

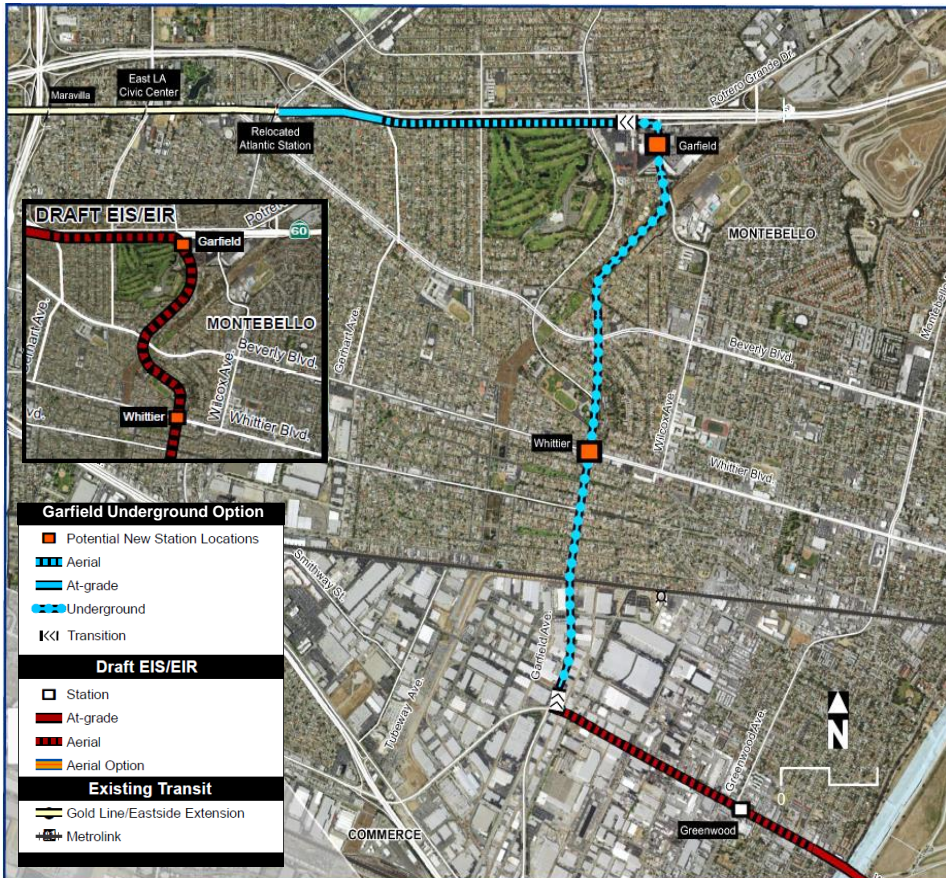


# The Atlantic Underground Route Option performed the best

Factors	Draft EIS/EIR Washington Blvd LRT Alternative	Arizona		Atlantic		Garfield
		At-Grade	Underground	At-grade	Underground	Underground
Fundamentally Consistent with Community Goals/Priorities?	NO	NO	NO	NO	<b>YES</b>	NO
Operationally Feasible?	YES	NO	NO	YES	<b>YES</b>	YES
Ridership (Daily Boardings)*	19,920	17,280 to 18,680	18,270 to 19,770	17,950 to 19,280	<b>19,610 to 21,070</b>	19,120
Rough Order-of-Magnitude (ROM) Capital Costs (in 2010 \$)*	\$1.4 to 1.7 billion	+10% to 20%	+60% to 70%	+10% to 20%	<b>+90% to +100%</b>	+80% to +90%
Preliminary Travel Time (in minutes)	18-19 min.	20-21 min	18-19 min.	20-21 min.	<b>17-18 min.</b>	18-19 min.
Potential Traffic/Circulation Impacts	Minimal	Significant	Minimal	Significant	<b>Minimal</b>	Minimal
Recommendation						

\*Cost and ridership data is subject to change as design refinement and more detailed technical work continues.

# There were several reasons for eliminating the Garfield Underground Option



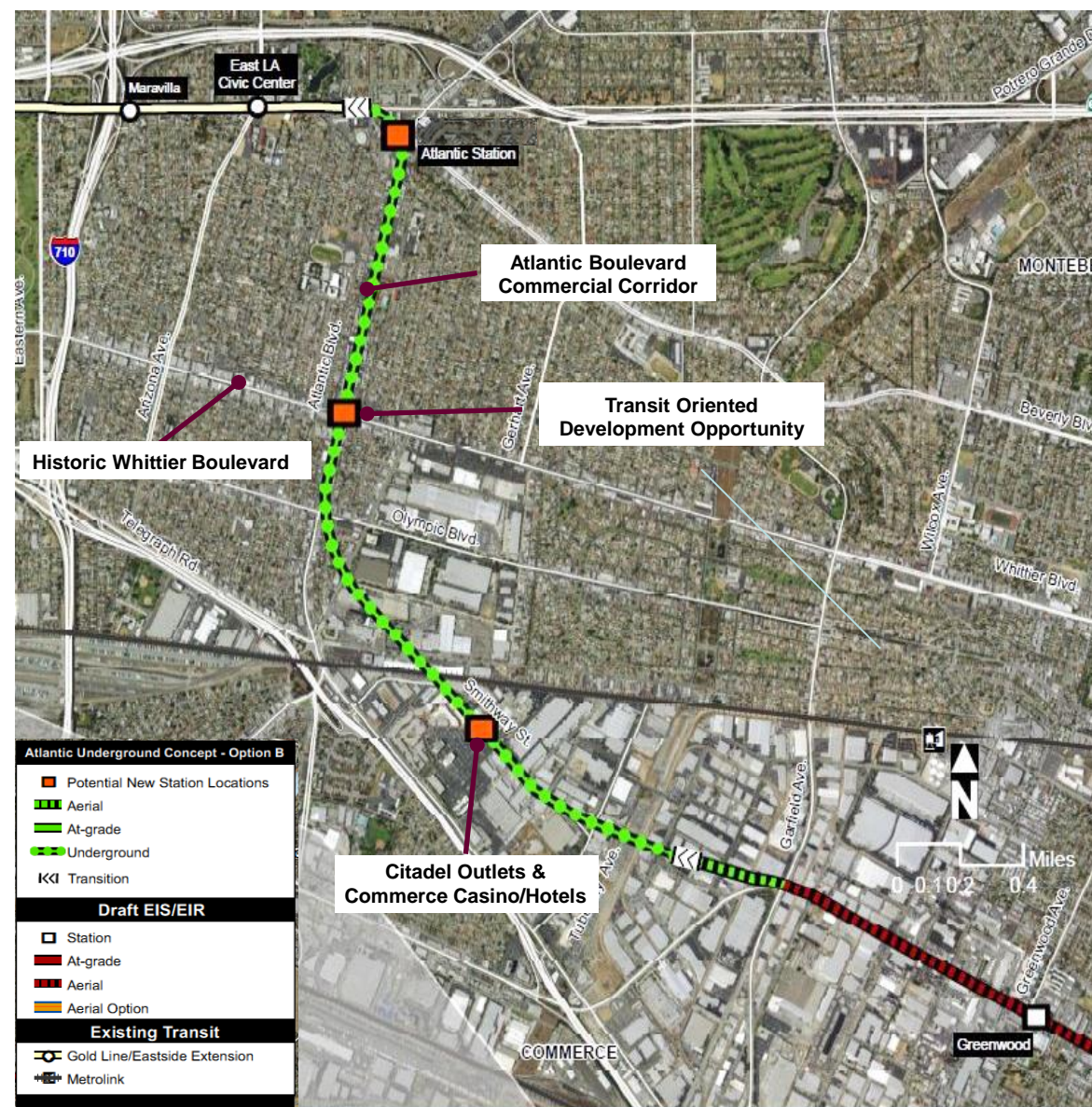
1. Operational challenge for a guideway structure with a tight horizontal curve just west of Via Campo and Wilcox Ave in the City of Montebello
2. Construction challenge to relocate complex storm drains and sewer lines along Garfield Ave.
3. A proposed Metro station at Garfield Ave. and Whittier Blvd. lacks the intensity of activity typically associated with a subway station.
4. The Garfield Underground Route Option misses the Commerce Citadel and Casino area, which would attract the study area's highest ridership potential.
5. Significant impacts during construction, including property acquisition, business disruption and traffic/circulation impacts to sensitive uses near SR 60

# The Arizona Route Option had several fundamental flaws and issues that render it infeasible



1. Any LRT extension along Arizona Ave. is wholly inconsistent with community priorities and goals.
2. Any LRT extension (regardless of the configuration) would create potentially significant impacts to the following:
  - Existing Civic Center Station and Gold Line operations
  - Residential properties
  - Sensitive uses
  - Traffic, access and parking
  - Pedestrian and bicycle safety
3. Arizona Route Option was not recommended for further consideration

# The Atlantic Underground Concept offers several benefits / opportunities and is recommended as the new Washington Alternative



1. Best meets community goals by minimizing surface operational disruptions
2. Provides connectivity to local and regional destinations and activity centers in unincorporated East Los Angeles and the City of Commerce
3. Provides opportunity for Transit Oriented Community (TOC) development opportunities near proposed station locations
4. Performs well on a number of key measures, including projected high ridership (19,610-21,070 boardings) and faster travel time (17-18 minutes)
5. Serves transit dependent communities



# The next step for the new Washington Alternative is to advance the design of the Atlantic Underground Option

Further study is recommended to develop conceptual design plans and identify right-of-way (ROW) need in the re-initiated Environmental Document:

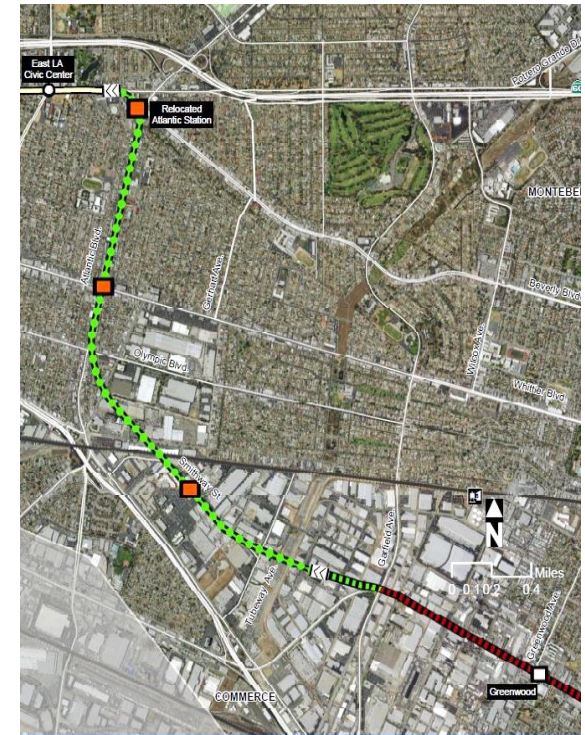
1. Identify two locations to launch and extract a Tunnel Boring Machine (TBM), one north and the other south
2. Identify locations for excavation of station and construction staging areas



Tunnel Boring Machine



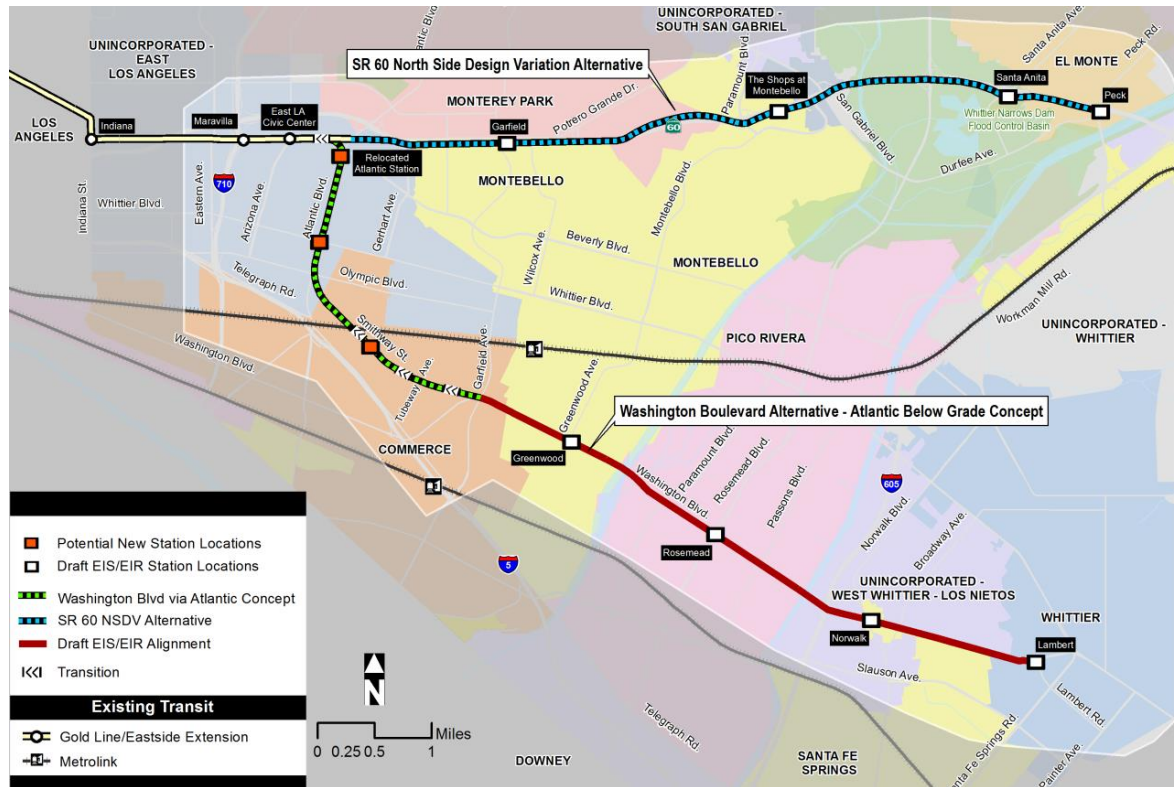
Example of a Construction Staging Site



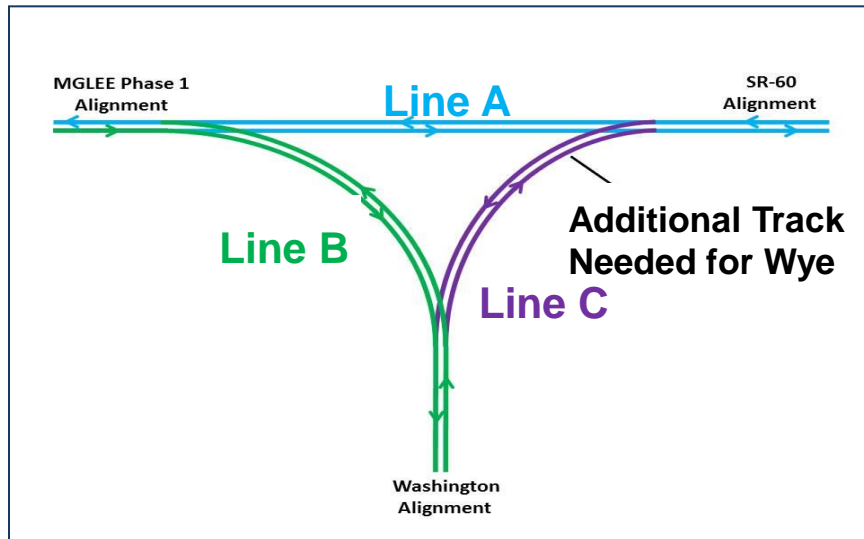
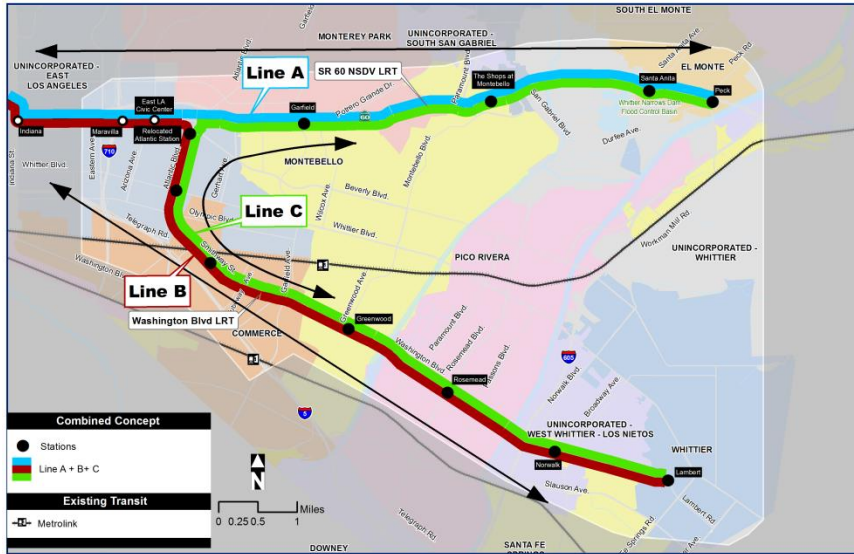
Atlantic Underground Route Option

# Operating both segments (SR 60 and Washington Blvd.) is feasible, but will require additional infrastructure

1. Provision of one maintenance facility to service rail vehicles
2. Provision of infrastructure and operational elements that would not be required if only one or the other alternative were operated as a 'stand-alone' line.
3. Provision of a potential underground three-way junction merge



# The Combined Concept Alternative can support 5-minute headways with a third line



- MGLEE trains will operate in an east-west direction using Regional Connector to allow train movements between MGLEE and Expo Line, to Downtown Santa Monica**
  - ✓ Line A (SR 60 Branch Line): Extend MGLEE Line, East LA Civic Center Station through underground wye at Atlantic Station, to terminus of SR 60 NSDV LRT Alignment
  - ✓ Line B (Washington Branch Line): Extend MGLEE Line, East LA Civic Center Station and stop at Atlantic Station, to terminus of Washington LRT Alignment
- A three-way junction could support a third line from South El Monte to Whittier (C line), potentially allowing for 5-minute service on each branch.**
  - ✓ Line C (SR 60 to Washington Loop Line): Originate at SR 60 Peck Rd Station, traveling west through the underground wye, then south to terminus of Washington LRT Alignment

# Metro conducted extensive outreach to provide updates and receive feedback



## Community Meetings (10)

March 2016 – February 2017

- East Los Angeles (3)
- Whittier (2)
- Montebello (2)
- South El Monte (2)
- Commerce (1)



## Monthly Coalition Briefings (30)

- SR-60 Coalition
- Washington Blvd Coalition

## Tours (2)

Tours of Maintenance Facilities

- Santa Monica
- Monrovia



## Other Stakeholder Briefings (70)

- Councils of Government and Service Councils
  - San Gabriel Valley
  - Gateway Cities
- City Council members and staff
- State and Local Elected Officials
- Chambers/Business Associations
- Major Property Owners/Developers
- East Los Angeles residents, businesses, neighborhood and community groups

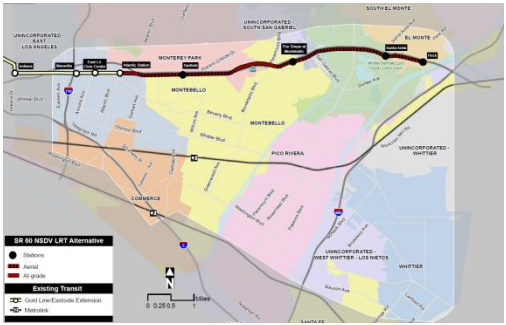
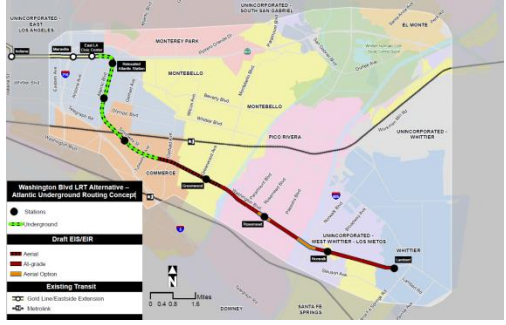

**Over 110 meetings or briefings were held between August 2015 and March 2017**

# Community Outreach Meeting: What We've Heard

1. Overwhelming support for the Eastside Phase 2 project, including Washington Alternative via Atlantic underground, SR-60 NSDV Alternative, and the Combined Alternative
2. Interest in connecting communities and improving access to employment centers and Metro's regional transit system
3. Concerns regarding impacts to businesses during construction
4. Interest in potential economic development opportunities along the corridor
5. Emphasized the importance of station accessibility and safety



# Recap of updated Project Definition

Alternative	Map	Key Features (Post Draft EIS/R)
SR 60 NSDV LRT	 <p>The map shows the SR 60 NSDV LRT Alternative alignment in red. It starts in Los Angeles, passes through Monterey Park, Monterey, and Pico Rivera, and ends in Whittier. The map includes a legend for stations, guideway types (at-grade and elevated), and existing transit lines. A scale bar indicates 0 to 1 mile.</p>	<ol style="list-style-type: none"> <li>1. Modified the guideway eastern flyover alignment between Greenwood Bridge and Paramount Bridge to avoid visual conflicts with Monterey Park Marketplace development</li> <li>2. Shifted the guideway alignment at Paramount to avoid conflicts with Caltrans' redesigned ramps</li> <li>3. Developed a preliminary plan to raise the SCE transmission wires at Paramount Interchange</li> <li>4. Raised Santa Anita Station concept and parking structure by 100 feet to address USACE concerns with potential flooding</li> </ol>
Washington Boulevard LRT Alternative (Atlantic Underground Option)	 <p>The map shows the Washington Boulevard LRT Alternative (Atlantic Underground Option) alignment. It features a green line for the underground segment along Atlantic Blvd and a red line for the at-grade segment. The map includes a legend for stations, guideway types, and existing transit lines. A scale bar indicates 0 to 1 mile.</p>	<ol style="list-style-type: none"> <li>1. Developed the new north-south connection along Atlantic Blvd</li> <li>2. One-third of the alignment could be an underground segment along Atlantic Blvd and Smithway St</li> <li>3. Two new underground stations <ul style="list-style-type: none"> <li>• Atlantic/Whittier</li> <li>• Commerce Citadel</li> </ul> </li> <li>4. May require potential relocation of existing Atlantic Station</li> </ol>
Combined Alternative	 <p>The map shows the Combined Alternative, which integrates the SR 60 NSDV LRT and Washington Boulevard LRT alternatives. It features a red line for the SR 60 NSDV LRT and a green line for the Washington Boulevard LRT. The map includes a legend for potential new station locations, SR 60 NSDV LRT station locations, Washington Blvd via Atlantic Concept, SR 60 NSDV LRT station locations, SR 60 NSDV LRT guideway alignment, SR 60 NSDV LRT guideway alignment, SR 60 NSDV LRT guideway alignment, and SR 60 NSDV LRT guideway alignment. A scale bar indicates 0 to 1 mile.</p>	<ol style="list-style-type: none"> <li>1. Operating the combined alternative is feasible, yet requires a new three-way junction</li> <li>2. Only one Maintenance Yard to serve all lines</li> <li>3. Provide 5-minute service on each branch by allowing for a third line between South El Monte and Whittier</li> </ol>

# The Eastside Phase 2 Technical Refinement Study presents the following staff recommendations

- ❑ APPROVE an updated Project Definition for Environmental Clearance, including three alternatives:
  - ✓ SR 60 North Side Design Variation LRT Alternative
  - ✓ Washington Boulevard Alternative with Atlantic Below Grade Option
  - ✓ Combined Alternative with both SR 60 and Washington Boulevard via Atlantic Segments
  
- ❑ RECEIVE AND FILE the Eastside Phase 2 Technical Study Report. The full report is available upon request.

# Eastside Transit Corridor Phase 2 Technical Study Planning and Programming Committee Presentation April 19, 2017

Item #25





# Technical Study Scope

## □ Nov 2014: Board-directed Technical Study to:

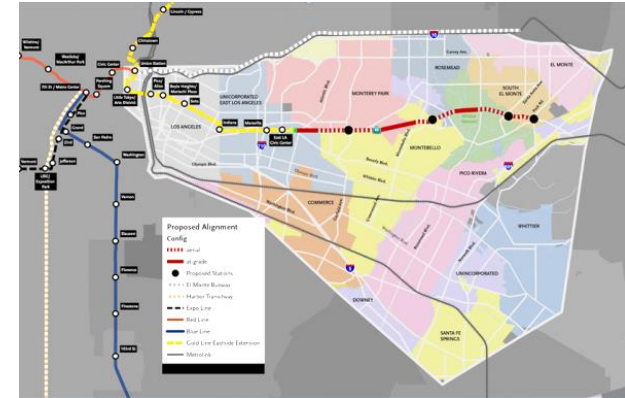
### ✓ Address Agency Comments regarding the SR 60 North Side Design Variation (NSDV) LRT Alternative

- US Environmental Protection Agency (USEPA)
- US Army Corps of Engineers (USACE)
- California Department of Transportation (Caltrans)
- California Department of Fish and Wildlife (CDFW)
- Southern California Edison (SCE)

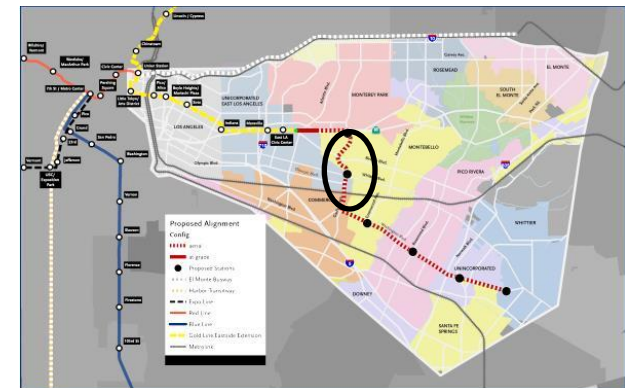
### ✓ Eliminate Aerial on Garfield Ave between Via Campo and Whittier Bl.

### ✓ Identify a New North/South Connection to Washington Blvd.

### ✓ Explore Feasibility of Operating Both SR 60 and Washington Blvd. Alternatives

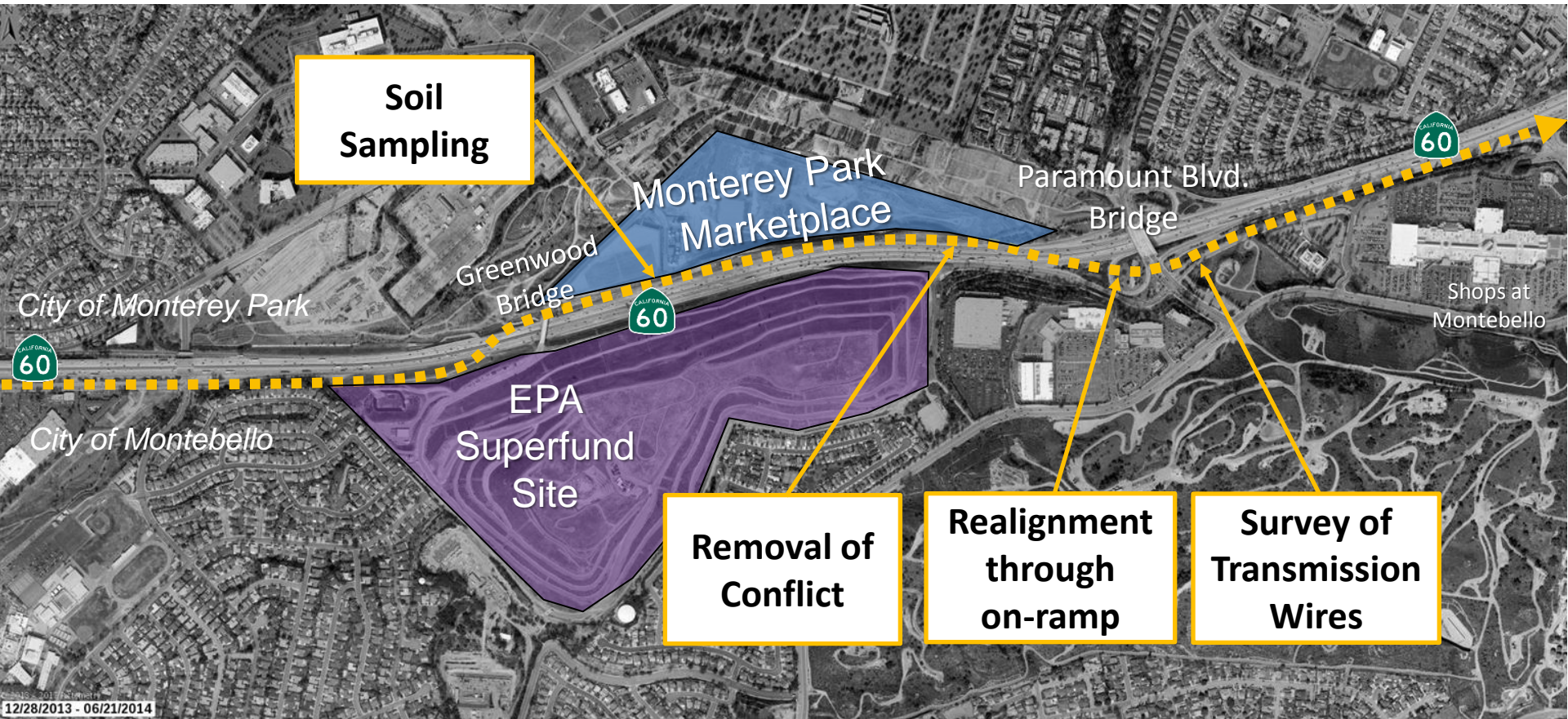


SR 60 NSDV Alternative

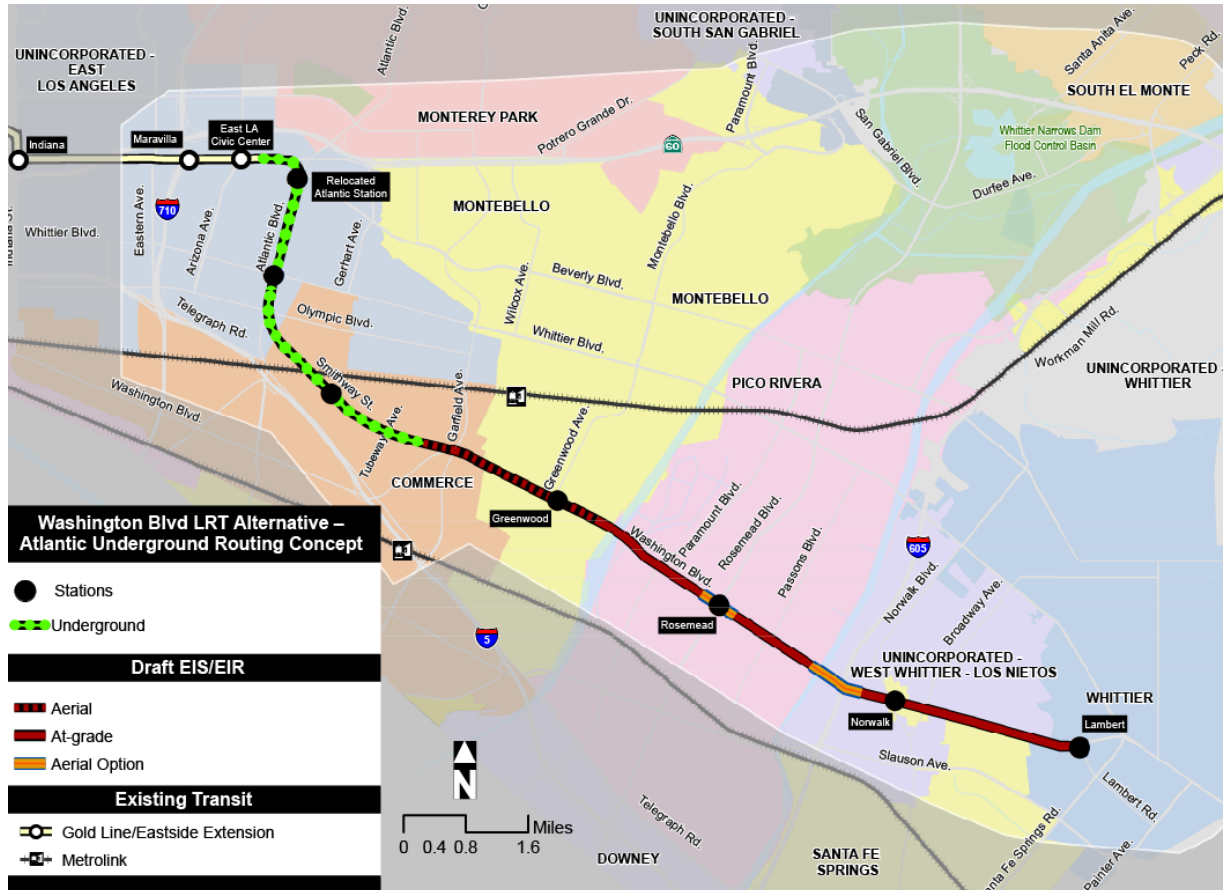


Washington Blvd Alternative via Garfield Aerial

# SR-60 NSDV Alternative: No major Resource Agency issues with resuming environmental review

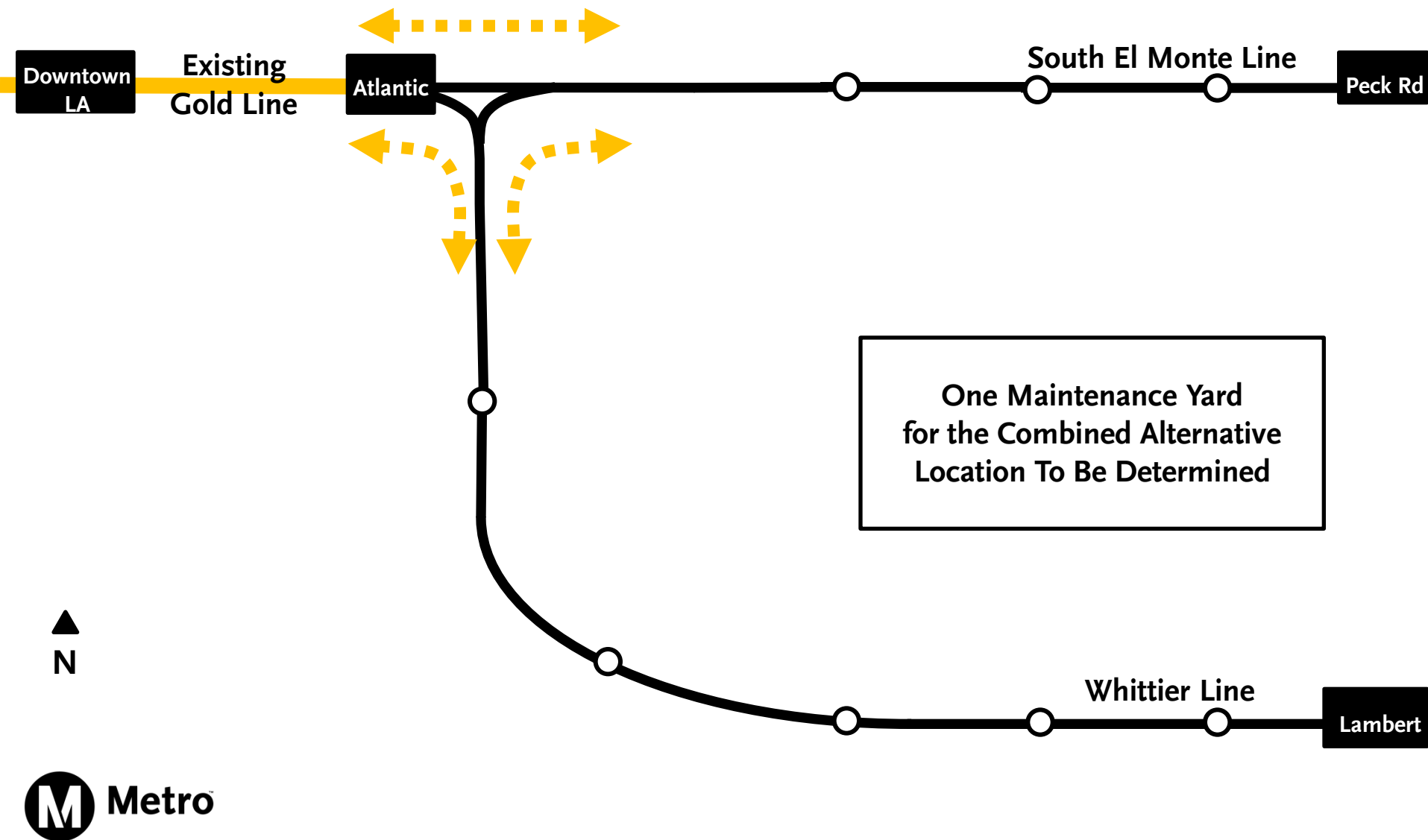


# Atlantic Below Grade is recommended as the new Washington Alternative



- 2.8 mile below grade
- Metro Stations
  - Atlantic/Whittier
  - Commerce Citadel
- Potential Maintenance site in eastern Commerce
- **Strong Community Support**

Operating both segments (SR 60 and Washington Blvd.) is feasible, but will require additional infrastructure



# The Eastside Phase 2 Technical Study presents the following recommendations

- APPROVE an updated Project Definition for Environmental Clearance, including three alternatives:**
  - ✓ SR 60 North Side Design Variation LRT Alternative
  - ✓ Washington Boulevard Alternative with Atlantic Below Grade
  - ✓ Combined Alternative with both SR 60 and Washington Boulevard via Atlantic Segments
- Environmental clearance to be re-initiated following Board approval of updated Project Definition.**



## Board Report

File #: 2017-0150, File Type: Contract

Agenda Number: 36

**REVISED**  
**REGULAR BOARD MEETING**  
**MAY 25, 2017**

**SUBJECT: BIOMETHANE PROVIDER**

**ACTION: AWARD BIOMETHANE SUPPLIER CONTRACT**

**RECOMMENDATION**

AUTHORIZE the Chief Executive Officer to:

- A. AWARD five (5) year, Indefinite Delivery/Indefinite Quantity Contract No. OP7396000 for a **Biomethane Gas Provider to Clean Energy Renewables**, the lowest responsive and responsible bidder for a not-to-exceed amount of \$1,240,520 for the base year (for one bus division as a pilot) and a not-to-exceed amount of \$54,808,110 for a four (4) year option, for a total contract amount of \$56,048,630 (for all bus divisions if the pilot is successful), subject to resolution of protest(s), if any; and
- B. EXECUTE individual Task Orders (Transaction Confirmations) and changes within the Board approved contract amount.

**ISSUE**

Metro became the largest compressed natural gas bus fleet in the nation after retiring its last diesel bus in 2011. However, the transit industry is already looking ahead to new technologies and cleaner fuel sources that offer improved efficiency and environmental benefits. Metro's long-term plan to achieve California's ambitious air quality and greenhouse gas (GHG) goals is to explore and procure for Zero Emission Buses (ZEBs). The recent ZEB procurement and testing continue to be used by our agency to gain first-hand experience through the rapidly growing space of electric vehicle and battery technology. While this occurs, our agency's immediate term strategy includes the use of Low Nitrogen Nitrogen Oxides (NOx) "Near Zero" CNG engines and procuring for renewable natural gas (i.e., biomethane). Based on our modeling efforts, this short-term strategy yields significant regional air quality benefits and greenhouse gas emissions reductions in a timely and cost-effective manner.

**DISCUSSION**

Biomethane is natural gas derived from landfills, dairies, and wastewater treatment plants rather than being extracted or mined from the ground. Therefore, biomethane has a much lower carbon intensity

(CI) when compared to traditional forms of natural gas (i.e., “fossil natural gas”). The CI of a fuel is a measure of its GHG emissions over the lifecycle of that fuel’s production, including extraction, refinement, transportation, and consumption. Regardless of extraction or production, natural gas is already considered a lower carbon fuel than diesel or gasoline. Alternative sourcing, such as those associated with biomethane, reduce natural gas’ carbon intensity with improved greenhouse gas benefits.

In June 2013, the Board adopted the Biomethane Implementation Plan (Attachment C). This is staff’s comprehensive analysis of the technical, environmental, and financial merits of transitioning to a renewable source of natural gas for Metro’s bus fleet. In May 2014, the Board approved a staff recommendation to pursue Pathway 2 of the Biomethane Implementation Plan whereby Metro would contract with an energy provider as a means of achieving a transition to biomethane. In the same report, staff demonstrated that the use of biomethane in our CNG buses would not need any new fueling infrastructure or fleet retrofits.

As a fuel, biomethane will be delivered in the same quality and grade for immediate use by our fleet. Biomethane suppliers will deliver the fuel to Metro bus divisions using existing natural gas pipelines. Metro’s current natural gas provider, Southern California Gas Company (Gas Company) allows for Core Aggregation Transportation (CAT) services whereby Core Transport Agents (CTAs) provide procurement services to Gas Company Customers such as Metro. In this arrangement, CTAs are responsible for balancing natural gas delivery and quality meeting stringent California Public Utilities Commission (CPUC) guidelines. Many transit agencies are already using biomethane under this or similar models including Santa Monica’s Big Blue Bus (BBB), Orange County Transportation Authority (OCTA), San Diego Metropolitan Transportation System (MTS), and Torrance Transit.

Transitioning to biomethane provides enormous GHG emissions reduction benefits for Metro’s bus emissions and overall carbon footprint. Reducing greenhouse gas emissions is not only an important goal for Metro but a substantial component of California’s climate change policies. Pending ZEB rules from the California Air Resources Board (CARB) will mandate a shift in bus technology in coming years. The attached report (Attachment D) from Ramboll/Environ outlines different fleet technology options for Metro including high-level cost assessments and emissions impacts for electric buses, fuel cell buses, and Low NOx CNG with biomethane. Highlights of the report particularly relevant to this document include:

- Low NOx CNG engines fueled with biomethane reduces fleet emissions by two-thirds when compared to the current baseline over the next 40 years; and
- Compared with the Electric Buses scenarios, Low NOx CNG with biomethane achieves approximately 39% greater reductions in GHG emissions at half the cost.

In addition to improving the agency’s sustainability performance, a biomethane short-term strategy is an excellent example of exercising fiscal discipline in the area of energy supply. According to Metro’s

2016 Energy and Resource Report, the agency spends over \$22M each year on natural gas for its bus fleet. While this expense is susceptible to price volatility outside of the agency’s control, there are measures Metro can take in order to reduce risk and manage future costs. One such measure is to procure for a long-term supply contract for natural gas under The Gas Company’s CAT service. Under such a contract, Metro can secure a competitive rate tied to a natural gas index. Tying natural gas prices to the natural gas index provides rate transparency for Metro’s natural gas hedging initiatives.

Finally, Metro’s use of biomethane makes our agency eligible for accumulating additional carbon credits under state and federal programs. These credits can be sold in open credit markets. Revenues from these sales have already funded additional cost-saving and value creating projects under our sustainability capital program, providing additional value to our agency.

**DETERMINATION OF SAFETY IMPACT**

This Board action will not have an adverse impact on safety standards for Metro.

**FINANCIAL IMPACT**

If Contract no. OP84203485 is awarded, Metro will realize two distinct financial benefits summarized in the table below. It should be noted that these figures utilize current (March 2017) projections for natural gas pricing and consumption, environmental commodity pricing, and credit generation rates.

<b>Case</b>	<b>Natural Gas Costs</b>	<b>Environmental Commodities</b>
Business-As-Usual (BAU)	\$64,325,174	\$7,044,474
OP84203485	\$56,048,630 (1)	\$\$29,436,460 (2)
<i>Value Added</i>	\$8,276,544	\$22,391,985
	<b>Total Value Added</b>	<b>\$30,668,529</b>

Notes:

- (1) Cost savings for shifting to natural gas index vs. Gas Company average cost of gas pricing
- (2) Additional carbon credits available due to shift to less carbon intensive natural gas product



Natural Gas Cost Savings

Moving away from The Gas Company’s procurement services affords a number of financial benefits to Metro. In addition to securing a competitive rate, Metro requires under the new award that the price the agency pays for natural gas is tied to a natural gas index rather than The Gas Company’s average cost of gas. Further, this move provides for additional savings and transparency for Metro’s natural gas hedging program. In total, Metro is projected to realize over \$8M in reduced costs for natural gas over the term of the contract.

Optimized Environmental Commodities

Under CARB’s Low Carbon Fuel Standard (LCFS) program, Metro is currently generating credits through the dispensing of natural gas for bus fueling and use of electricity for light and heavy rail propulsion. Natural gas that comes from renewable sources have substantially lower CI value compared to fossil natural gas, and our use of biomethane provides us with the opportunity to get many more credits than those from fossil natural gas use. Our agency will get a competitive share of these credits for our part in the transaction as a transportation fuel end-user. Additional credits will also be generated under the federal Renewable Fuel Standard (RFS) program. In total, these credits have been valued at over \$29M over the term of the contract, if awarded.

These environmental commodities can be sold in respective credit markets. Our agency has been participating in the LCFS credit market since 2014, selling over 290,000 credits bringing in nearly \$28M in revenue used in value-creating and cost-saving projects. Part of our optimization plan for these credits is a key performance indicator (KPI) to monitor the success of the carbon credits program:

Key Performance Indicator	Metric	Current Performance	Goal
Portfolio-wide average	\$/credits sold	\$96.54	Above Market Average (\$81)

The FY17 adopted budget includes \$19,329,625 for the purchase of compressed natural gas under Project 306002 Bus Operations Maintenance, cost center 3365, and Account 50402 Fuel CNG - Revenue Equipment. Since this is a multi-year contract, the Project Manager and Cost Center Manager will be responsible for budgeting in future fiscal years. Upon approval of Recommendation A, future gas costs will be budgeted against this project. Anticipated natural gas cost savings of \$8,276,544 are based on the natural gas index pricing at the time of bid.

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Impact to Budget

Metro will realize a reduction in annual natural gas costs over the duration of this Contract. Based on index projections, these savings will total over \$8M over the term of the Contract. Further, Metro will generate additional environmental commodities valued at over \$22M over the term of the contract. Together, the execution of Contract No. OP84203485 will add over \$30M in value for our agency.

This contract will be funded by project number 306002 - Bus Operations, which is funded by Operations eligible sources such as Prop C40%, Measure R 20%, TDA 4, STA and other local sources. No other funding sources were considered.

**ALTERNATIVES CONSIDERED**

If Contract No. OP84203485 is not awarded, Metro will continue to receive natural gas procurement services from The Gas Company. As a result, Metro will not have the opportunity to get a competitive rate for natural gas nor choose the source of its natural gas until The Gas Company offers their own biomethane service. We do not anticipate The Gas Company to offer a biomethane service any time soon. If not awarded, we will also not realize the short-term greenhouse gas gains we anticipate from a Low NOx and biomethane strategy. This is key to our continued clean air success during a possible transition towards a zero emissions fleet.

**NEXT STEPS**

After the recommended Board Action is approved, staff will execute the contract and commence biomethane delivery at one bus division. Staff will evaluate the performance of the contract over the next year and determine whether to exercise the four-year option.

**ATTACHMENTS**

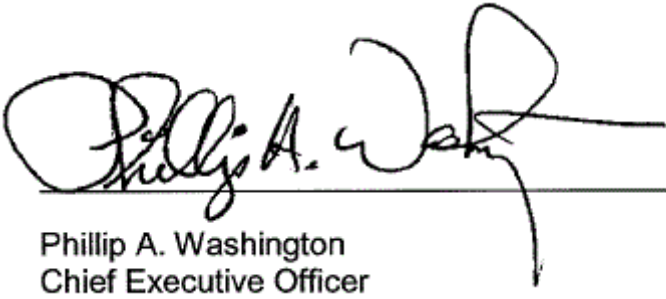
- Attachment A - Procurement Summary
- Attachment B - DEOD Summary
- Attachment C - Biomethane Implementation Plan April 2013
- Attachment D - Ramboll Environ Report September 29, 2016

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Phillip A. Washington  
Chief Executive Officer

## PROCUREMENT SUMMARY

## BIOMETHANE PROVIDER / OP7396000

1.	Contract Number: OP7396000	
2.	Recommended Vendor(s): Clean Energy Renewables	
3.	Type of Procurement (check one): <input checked="" type="checkbox"/> IFB <input type="checkbox"/> RFP <input type="checkbox"/> RFP-A&E <input type="checkbox"/> Non-Competitive <input type="checkbox"/> Modification <input type="checkbox"/> Task Order	
4.	Procurement Dates:	
	A. Issued: 5/13/15	
	B. Advertised/Publicized: 5/11/15	
	C. Pre-proposal/Pre-Bid Conference: 5/20/15	
	D. Proposals/Bids Due: 2/13/17	
	E. Pre-Qualification Completed: 3/15/17	
	F. Conflict of Interest Form Submitted to Ethics: 2/17/17	
	G. Protest Period End Date: 4/21/17	
5.	Solicitations Picked up/Downloaded: 24	Bids/Proposals Received: 2
6.	Contract Administrator: Nathan Jones III	Telephone Number: (213) 922-6101
7.	Project Manager: Evan Rosenberg	Telephone Number: (213) 922-7326

**A. Procurement Background**

This Board Action is to approve a Contract No. OP739600 for the procurement of a Biomethane Provider of Renewable Natural Gas (RNG) to support Metro's bus fleet.

IFB No. OP84203485 was issued in accordance with Metro's Acquisition Policy and the contract type is a Fixed Unit Price, Indefinite Delivery, Indefinite Quantity (IDIQ).

Eight amendments were issued during the solicitation phase of this IFB:

- Amendment No. 1, issued on May 19, 2015, to revise the Instructions to Bidders, Insurance Requirements, Pre-Qualification Application, and the Required Certifications;
- Amendment No. 2, issued on May 27, 2015, to revise the Statement of Work;
- Amendment No. 3, issued on December 18, 2015, to revise the bid due date;
- Amendment No. 4, issued on January 7, 2016, to revise Exhibit C, Bid Form, Schedule of Quantities and Prices;
- Amendment No. 5, issued on February 3, 2016, to change the bid due date;
- Amendment No. 6, issued on January 4, 2017, to revise the Contract, Bid Forms, and the bid due date;
- Amendment No. 7, issued on January 4, 2017, to revise the due date for Bidders' comments and questions; and
- Amendment No. 8, issued on January 27, 2017, to revise the due date for Metro's formal responses to Bidders' questions, Bid Forms and revise the bid due date.

The Two Step Seal Bid process, as defined in Metro’s Acquisition Policy, was used for this acquisition. Step 1 required potential bidders to submit a technical proposal for Metro to evaluate and to make a determination on whether the bidder was technically qualified. In response to Step 1, Metro received three formal technical proposals, and Metro evaluated each technical proposal and made individual final determinations that each bidder was technically qualified to furnish RNG. A formal notification was issued to each bidder advising them that they were deemed technically qualified and were invited to participate in Step 2 by submitting a formal bid price.

Prior to the public bid opening due date, Metro received a formal letter from one of the technically qualified bidders advising Metro that it had elected to No Bid. A total of two bids were received on the bid due date, February 13, 2017. One of the bids was rejected for material changes to the IFB requirements.

**B. Evaluation of Bids**

The firm recommended for award is Clean Energy Renewables (Clean Energy) which was found to be in full compliance with the IFB requirements.

<b>Bidder Name</b>	<b>Base</b>	<b>Option</b>	<b>Total Contract Price</b>
Clean Energy	\$1,240,520.00	\$54,808,110.00	\$56,048,630.00

The Base period is for one year and to cover supplying RNG for all buses at one Metro bus division. The Option is for four years to supply RNG for all buses at all Metro bus divisions.

**C. Price Analysis**

The recommended total bid price was determined to be fair and reasonable based upon adequate price competition and selection of the lowest responsive and responsible bidder. There are three components to this price analysis: gas commodity price, environmental commodities value, and total bid price. The IFB required the vendor to supply the total bid price that is the net of the gas commodity price and environmental commodities value. The lowest total bid price gets awarded the contract. The table below provides these information.

While the lowest total bid price is the basis for award, the contract value to be awarded is based on the gas commodity price.

<b>Low Bidder Name</b>	<b>Bid Amount</b>	<b>Metro ICE</b>
Clean Energy	\$26,612,169 (1)	\$34,414,674

<b>Bid Breakdown</b>	<b>Bid Amount</b>	<b>Metro ICE</b>
Gas Commodity Price	\$56,048,630 (2)	\$57,008,630
Environmental Commodities Value	\$29,436,460	\$22,593,956
Total Bid Price	\$26,612,169	\$34,414,674

Notes:

- (1) Basis for award
- (2) Contract value

#### **D. Background on Recommended Contractor**

The recommended firm, Clean Energy, has over seven years of experience in biomethane industry, including biomethane production, marketing, sales and distribution. Clean Energy is the only company that has built, owns and operates biomethane production facilities and is a registered Energy Service Provider with SoCalGas. Since 2009, Clean Energy has delivered biomethane to customers at customer owned stations as well as Clean-Energy owned public access stations. The firm meets and exceeds Metro's specified IFB minimum technical qualification requirements for supplying biomethane. Some of Clean Energy's customers include Foothill Transit, City of Santa Monica (Big Blue Bus), Sacramento Municipal Utilities District, City of Sacramento, and University of California, San Diego, and Atlas Refuel. Clean Energy has been a Metro supplier of natural gas products and commodities for over 20 years and their services to Metro have been satisfactory.

DEOD SUMMARY

BIOMETHANE PROVIDER / OP7396000

**A. Small Business Participation**

The Diversity and Economic Opportunity Department (DEOD) did not recommend a Disadvantaged Business Enterprise (DBE) goal for this solicitation, which involves the purchase of a commodity (natural gas), to be delivered via existing pipelines to Metro. DEOD explored subcontracting opportunities and determined that opportunities for subcontracting were not apparent. It is expected that Clean Energy Renewables will perform the scope of work with their own workforce.

**B. Living Wage and Service Contract Worker Retention Policy Applicability**

The Living Wage and Service Contract Worker Retention Policy is not applicable to this Contract.

**C. Prevailing Wage Applicability**

Prevailing wage is not applicable to this Contract.

**D. Project Labor Agreement/Construction Careers Policy**

Project Labor Agreement/Construction Careers Policy is not applicable to this Contract.

**UPDATED DRAFT**

Intended for

**Advanced Transit Vehicle Consortium  
Los Angeles, California**

Prepared by

**Ramboll Environ US Corporation  
Los Angeles, California**

**M.J. Bradley & Associates, LLC  
Concord, Massachusetts**

Date

**September 29, 2016**

# **ZERO EMISSION BUS OPTIONS: ANALYSIS OF 2015-2055 FLEET COSTS AND EMISSIONS**

**NEW TRANSIT VEHICLE TECHNOLOGIES AND  
ADVANCED TECHNOLOGY IMPLEMENTATION  
(OP33203093)**





Date **09/29/2016**

Authors **Dana Lowell and David Seamonds**  
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**Varalakshmi Jayaram, Julia Lester, and Lit Chan**  
**Ramboll Environ**

Acknowledgements: This report was developed with significant assistance from staff of the Los Angeles County Metropolitan Transportation Authority, without whose help it could not have been completed. The authors would like to acknowledge and thank John Drayton, Kwesi Annan, Philip Rabottini, Steven Schupak, Evan Rosenberg, and Scott Page. We would also like to thank the California Air Resources Board, American Public Transportation Association, and transit bus manufacturers for their valuable data and comments.

Ref 06-35843D

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## EXECUTIVE SUMMARY

The Los Angeles County Metropolitan Transportation Authority (LACMTA) currently operates an active fleet of 2,194 urban transit buses in fixed-route service throughout the Los Angeles metropolitan area. All of LACMTA's buses are compressed natural gas (CNG) buses which operate on standard natural gas procured from the local natural gas utility. LACMTA fuels these buses at eleven CNG fuel stations located on LACMTA property at various locations throughout the city.

LACMTA continually renews their bus fleet by purchasing new buses and retiring their oldest buses. Their general policy is to keep buses in service for 14 years; as such approximately 7% of the fleet is replaced each year with new buses.

This report summarizes the results of modeling to estimate capital and operating costs, as well as exhaust emissions, for the LACMTA bus fleet over the period 2015 – 2055 under five different future bus technology/fuel purchase scenarios:

- 1) **BASELINE:** Continue to purchase standard CNG buses to replace retiring buses, and continue to purchase conventional natural gas.
- 2) **RENEWABLE NATURAL GAS:** Beginning in 2016 start to phase in the purchase of renewable natural gas (RNG), with 100% of natural gas use by the bus fleet renewable gas after 2017. Continue to purchase standard CNG buses to replace retiring buses.
- 3) **RENEWABLE NATURAL GAS PLUS LOW NO<sub>x</sub> BUSES:** In addition to phasing in the use of renewable natural gas, in 2019 begin to purchase new CNG buses with "Low NO<sub>x</sub>" engines (LNO<sub>x</sub>), certified to have NO<sub>x</sub>, CH<sub>4</sub>, and PM emissions 92%, 72% and 50% lower, respectively, than emissions from "standard" natural gas engines that meet California Air Resources Board new engine standards. In addition, beginning in 2018 begin to repower old buses with new Low NO<sub>x</sub> engines during their mid-life overhaul. Under this scenario the entire fleet will turn over to Low NO<sub>x</sub> natural gas engines by 2028.
- 4) **ELECTRIC BUSES:** Starting in 2025 replace all retiring buses with battery-electric buses. Under this scenario the entire bus fleet will turn over to electric buses by 2039. There are two options for battery charging under this scenario: 1) charging at the bus depot only, and 2) charging at the bus depot and in-route throughout the day.
- 5) **FUEL CELL BUSES:** Starting in 2025 replace all retiring buses with hydrogen fuel cell buses. Under this scenario the entire bus fleet will turn over to fuel cell buses by 2039. There are two options for producing the necessary hydrogen fuel under this scenario: 1) produce hydrogen on-site at LACMTA depots using steam reformation of natural gas (SMR), and 2) produce hydrogen on-site at LACMTA depots using electrolysis of water.

Scenarios four and five represent current options available to transit agencies under the California Air Resources Board's (CARB) proposed Zero Emission Bus (ZEB) rule. Scenario three is an alternative approach to reducing both GHG and NO<sub>x</sub> emissions that could be considered as an alternative method to meet the intent of CARB's ZEB rule.

This September 2016 updated draft report is a revision to a Draft report released by LACMTA/ATVC in February 2016 ("draft analysis"). It incorporates updated assumptions based on newly available information. The major differences between this revised analysis and the draft analysis include:

- Fuel costs for electricity used to power battery buses, and hydrogen used to power fuel cell buses, presented in this revised analysis, are net of credits that LACMTA could generate under California's Low Carbon Fuel Standard (LCFS). LCFS credits for electricity and hydrogen were

not included in the draft analysis. Commercial providers of Renewable Natural Gas can also generate credits under LCFS, and these credits were implicitly included in LACMTA's projected cost of RNG in the draft analysis, as well as in this revised analysis.

- Projected purchase and overhaul costs for battery-electric and fuel cell buses were revised downward based on feedback from bus manufacturers. The revised prices reflect recent, significant reductions in near-term battery prices (2017 – 2020) as well as recent projections of continued, significant battery cost reductions through 2030.
- Revised assumptions for projected average energy use (kWh/mi) for electric buses in LACMTA service. The revised assumptions are based on the average energy use from a fleet of five 40-ft electric buses recently put into service by LACMTA, which has accumulated approximately 30,000 in-service miles to date. In this revised analysis, electric buses are projected to use approximately 20% more energy per mile than was assumed in the draft analysis.
- Revised assumptions for projected average range per charge for electric buses, based on the revised assumptions for average energy use, as well as revised assumptions about the battery capacity of commercially available electric buses after 2025. Based on feedback from bus manufacturers, and recent developments, this analysis assumes that future electric buses will have approximately 20% larger battery packs than was assumed in the draft analysis, thus increasing their expected range per charge. The effect of the larger projected battery packs on range is, however, offset by projected greater energy use per mile.
- Revised assumptions about the practical replacement ratio of in-service CNG buses with battery-electric buses. The revised assumptions are based on an analysis of all of LACMTA's week-day scheduled bus assignments (time and mileage in-service), compared to the revised assumptions for practical battery bus range per charge. This analysis is summarized in Section 2.1 and 2.2. This analysis determined that lower replacement ratios would be required in the 2025 – 2035 time frame than was assumed in the draft analysis (i.e. fewer electric buses would be required to replace CNG buses).

Note that on 9/12/16 one electric bus manufacturer (Proterra) released preliminary information about an extended range version of their 40-ft transit bus, which can carry up to 660 kWh of batteries, potentially extending practical electric bus range beyond that estimated in this analysis. Significant questions remain unanswered about this bus, including its purchase cost, its in-use energy use in LACMTA service, its passenger capacity, and the manufacturer's production capability and timing. As such, this updated draft report does not incorporate the potential effect of this bus on future electric bus costs.

LACMTA currently has an active solicitation for purchase of 40-ft and 60-ft buses, including electric buses, with bids due in January 2017. It is expected that this solicitation will yield better information about the near-term purchase costs and technical capabilities of electric buses from several manufacturers, including the Proterra extended range bus.

When this information is available, this analysis will be updated again, with revised assumptions that reflect the new information. It is expected that this next update will be available in late January 2017.

## SUMMARY OF RESULTS

Table 1 summarizes the net present value of total estimated fleet costs from 2015 – 2055 under each scenario in 2015 dollars. As shown, the use of RNG by itself is not projected to increase total fleet costs. The use of RNG and the transition to LNOx buses is projected to increase total fleets costs by \$173 million over the next 40 years, an increase of \$0.001 per revenue seat-mile, which is 1.1% greater than projected baseline costs.

The transition to electric buses is projected to increase total fleets costs by \$376 - \$768 million over the next 40 years, an increase of \$0.003 - \$0.006 per revenue seat-mile, which is 2.3% - 4.7% greater than projected baseline costs. Exclusive depot charging is projected to be more expensive than depot and in-route charging.

The transition to fuel cell buses is projected to increase total fleets costs by \$1.4 - \$1.7 billion over the next 40 years, an increase of \$0.012 - \$0.014 per revenue seat-mile, which is 8.5% - 10.3% greater than projected baseline costs. Production of hydrogen fuel for fuel cell buses using electrolysis is projected to be more expensive than hydrogen production using SMR.

**Table 1. LACMTA Zero Emission Bus NPV Estimated Total Fleet Costs 2015 - 2055 (2015 \$ million)**

Cost Element		BASILINE	RENEW NG	LOW NOx CNG BUS & REPOWER		ELECTRIC BUS		FUEL CELL BUS	
		Std CNG Bus Conv NG	Std CNG Bus RNG	LNOx Bus Conv NG	LNOx Bus RNG	Depot Charging	Depot & In- Route Charging	H <sub>2</sub> by SMR	H <sub>2</sub> by Electrolysis
Capital	Bus Purchase	\$2,299.1	\$2,299.1	\$2,332.0	\$2,332.0	\$3,031.6	\$2,931.4	\$3,133.2	\$3,133.2
	Bus Repower			\$100.3	\$100.3				
	Bus mid-life OH	\$164.2	\$164.2	\$173.2	\$173.2	\$307.3	\$280.8	\$609.1	\$609.1
	Depot Mods					\$61.1	\$36.0	\$49.8	\$49.8
	Fuel Infra	\$0.0	\$0.0	\$0.0	\$0.0	\$49.3	\$63.6	\$165.2	\$165.2
	<i>sub-total</i>	<i>\$2,463.3</i>	<i>\$2,463.3</i>	<i>\$2,605.5</i>	<i>\$2,605.5</i>	<i>\$3,449.3</i>	<i>\$3,311.7</i>	<i>\$3,957.4</i>	<i>\$3,957.4</i>
Operating	BO Labor	\$10,441.4	\$10,441.4	\$10,441.4	\$10,441.4	\$10,663.5	\$10,441.4	\$10,441.4	\$10,441.4
	Fuel	\$1,244.4	\$1,244.4	\$1,248.3	\$1,248.3	\$862.5	\$844.9	\$1,071.4	\$1,372.3
	Maintenance	\$2,128.6	\$2,128.6	\$2,155.6	\$2,155.6	\$2,070.3	\$2,055.9	\$2,186.9	\$2,186.9
	<i>sub-total</i>	<i>\$13,814.4</i>	<i>\$13,814.4</i>	<i>\$13,845.3</i>	<i>\$13,845.3</i>	<i>\$13,596.3</i>	<i>\$13,342.2</i>	<i>\$13,699.7</i>	<i>\$14,000.5</i>
<b>TOTAL</b>		<b>\$16,277.7</b>	<b>\$16,277.7</b>	<b>\$16,450.8</b>	<b>\$16,450.8</b>	<b>\$17,045.6</b>	<b>\$16,653.9</b>	<b>\$17,657.1</b>	<b>\$17,957.9</b>
<b>INCREASE</b>		<b>NA</b>	<b>\$0.00</b>	<b>\$173.03</b>	<b>\$173.03</b>	<b>\$767.85</b>	<b>\$376.14</b>	<b>\$1,379.33</b>	<b>\$1,680.15</b>
<b>AVG \$/mile</b>		\$4.18	\$4.18	\$4.22	\$4.22	\$4.27	\$4.28	\$4.53	\$4.61
<b>AVG \$/revenue seat-mile</b>	<b>Value</b>	\$0.138	\$0.138	\$0.139	\$0.139	\$0.144	\$0.141	\$0.150	\$0.152
	<b>% diff to baseline</b>	NA	100.0%	101.1%	101.1%	104.7%	102.3%	108.5%	110.3%

Table 2 summarizes total estimated fleet emissions from 2015 – 2055 under each scenario. This data is also shown in Figure 1.

As shown, compared to the baseline the use of RNG is estimated to increase NOx emitted within the South Coast Air Basin<sup>1</sup> over the next 40 years by 1% and reduce PM emitted within the basin by 128%. The use of RNG will also reduce NOx and PM emitted outside of the South Coast Air Basin over

<sup>1</sup> The South Coast Air basin encompasses Orange County and parts of Los Angeles, San Bernardino, and Riverside counties in southern California, including the entire city of Los Angeles.

the next 40 years by 82% and 600% respectively. PM emissions decrease by more than 100% because both in-basin and out-of-basin upstream PM emissions from production of RNG are negative due to credits, more than offsetting all tailpipe PM emissions from CNG buses.

The use of RNG will reduce CH<sub>4</sub> emissions by 2%, reduce CO<sub>2</sub> emissions by 81% and reduce total CO<sub>2</sub>-equivalent GHG emissions by 70%.

**Table 2. LACMTA Zero Emission Bus Estimated Total Fleet Emissions (tons) 2015 - 2055**

Pollutant	BASELINE	RENEW NG	LOW NOx CNG BUS & REPOWER		ELECTRIC BUS		FUEL CELL BUS	
	Std CNG Bus	Std CNG Bus	LNOx Bus	LNOx Bus	Depot Charging	Depot & In-Route Charging	H <sub>2</sub> by SMR	H <sub>2</sub> by Electrolysis
	Conv NG	Renew NG	Conv NG	Renew NG				
<b>NOx (in-basin)</b>	6,296	6,385	3,483	3,573	3,444	3,431	6,228	3,792
<b>PM (in-basin)</b>	81.1	-22.8	79.0	-25.4	40.0	39.7	723.5	49.1
<b>CH<sub>4</sub></b>	89,590	87,421	76,590	74,414	41,124	40,965	59,292	45,651
<b>CO<sub>2</sub></b>	13,637,506	2,618,086	13,681,149	2,624,750	6,537,416	6,486,030	11,106,350	8,011,017
<b>GHG (CO<sub>2</sub>-e)</b>	15,877,260	4,803,609	15,595,906	4,485,096	7,565,519	7,510,164	12,588,639	9,152,286
<b>NOx (Out-of-basin)</b>	10,157	1,785	10,190	1,789	4,954	4,910	6,410	6,228
<b>PM (out-of-basin)</b>	110.4	-551.7	110.7	-553.5	70.1	68.3	73.0	117.5

Compared to the baseline the use of RNG and the transition to LNOx buses is projected to reduce NOx and PM emitted within the South Coast Air Basin over the next 40 years by 43% and 131%, respectively, and to reduce NOx and PM emitted outside of the South Coast Air Basin over the next 40 years by 82% and 602%, respectively. PM emissions decrease by more than 100% because upstream PM emissions from production of RNG are negative due to credits, more than offsetting all tailpipe PM emissions from LNOx CNG buses. The use of RNG and LNOx CNG buses will reduce CH<sub>4</sub> emissions by 17%, will reduce CO<sub>2</sub> emissions by 81% and will reduce total CO<sub>2</sub>-equivalent GHG emissions by 72%.

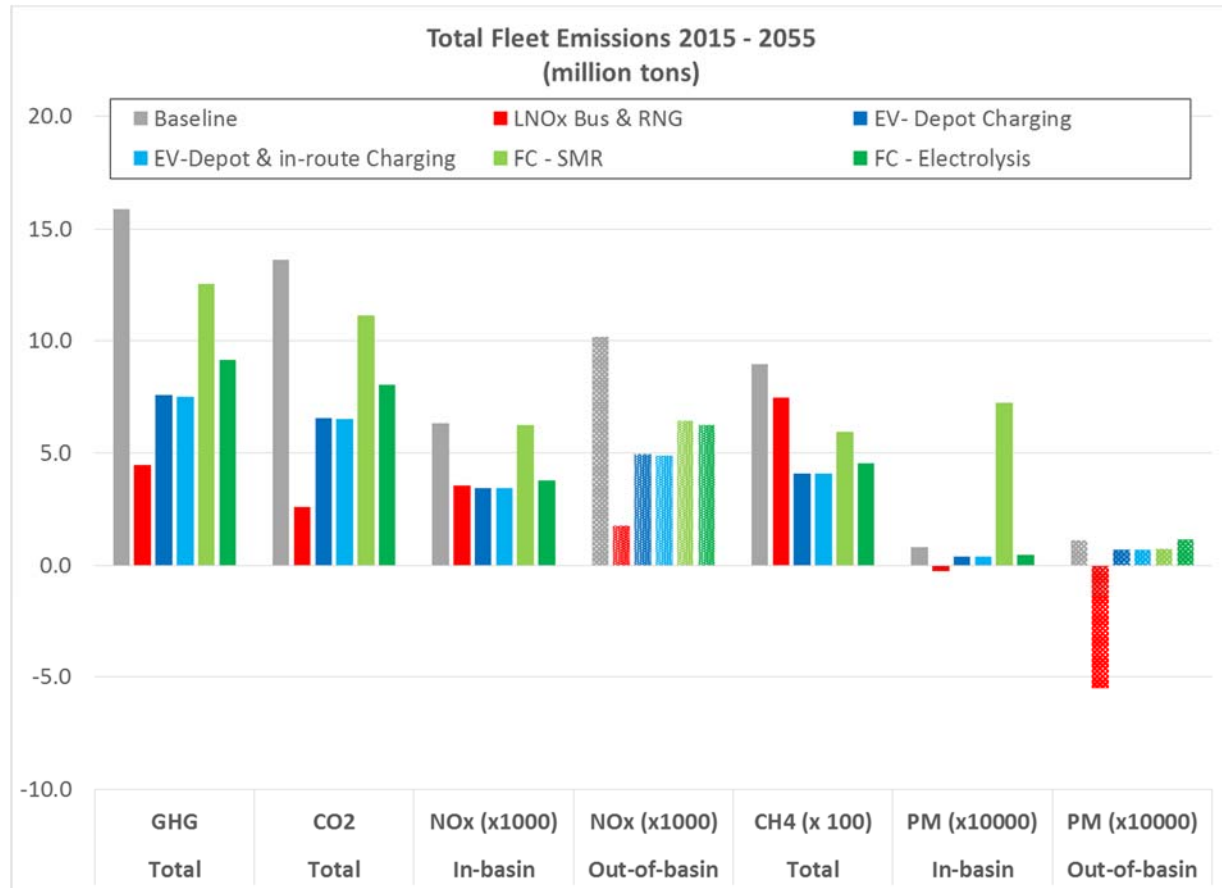
Compared to the baseline the transition to electric buses is projected to reduce NOx emitted within the South Coast Air Basin over the next 40 years by 45% -46%, and to reduce NOx emitted outside of the South Coast Air Basin over the next 40 years by 51% - 52%. It will also reduce PM emitted within the South Coast Air Basin over the next 40 years by 51%, and reduce PM emitted outside of the South Coast Air Basin over the next 40 years by 51% -52%. The transition to electric buses will reduce CH<sub>4</sub> emissions by 54%, reduce CO<sub>2</sub> emissions by 52%, and reduce total CO<sub>2</sub>-equivalent GHG emissions by 52% - 53%. The use of depot and in-route charging will reduce emissions slightly more than the use of depot charging only, due to fewer in-service bus miles.

Compared to the baseline, the transition to fuel cell buses is projected to reduce NOx emitted within the South Coast Air Basin over the next 40 years by 1% - 40%, and to reduce NOx emitted outside of the South Coast Air Basin over the next 40 years by 37% - 39%. The transition to fuel cell buses will also reduce CH<sub>4</sub> emissions by 34% - 39%, reduce CO<sub>2</sub> emissions by 19% - 41%, and reduce total CO<sub>2</sub>-equivalent GHG emissions by 21% - 42%.

Production of hydrogen using electrolysis will reduce NOx and GHG emissions significantly more than production of hydrogen using SMR. In addition, compared to the baseline, production of hydrogen using electrolysis will reduce PM emitted within the South Coast Air basin by 39%, but will increase PM emitted outside of the South Coast Air Basin by 6%. Production of hydrogen using SMR will increase

PM emitted within the South Coast Air Basin by 792% while reducing PM emitted outside of the South Coast Air Basin by 34%.

Figure 1. LACMTA Zero Emission Bus Estimated Total Fleet Emissions 2015 – 2055



The modeling summarized here indicates that Scenario 3, the use of RNG and transition to LNOx buses, will be more effective at reducing in-basin PM, total CO<sub>2</sub>, total GHGs, and total NOx from the LACMTA fleet over the next 40 years than transition to either electric or fuel cell buses, but will be slightly less effective at reducing in-basin NOx.

This approach will also be less expensive than transition to either electric or fuel cell buses. Table 3 presents a summary of the cost-effectiveness of emission reductions under each scenario.

If all incremental costs (above baseline) are attributed to GHG reduction, the use of RNG and transition to LNOx buses will cost \$15/ton of GHG reduced over the next 40 years. The transition to electric buses will cost \$46 - \$94/ton of GHG reduced, and the transition to fuel cell buses will cost \$250 - \$419/ton of GHG reduced.

If all incremental costs (above baseline) are attributed to NOx reduction, the use of RNG and transition to LNOx buses will cost \$64 thousand/ton of in-basin NOx reduced over the next 40 years. The transition to electric buses will cost \$133 - \$272 thousand/ton of in-basin NOx reduced, and the transition to fuel cell buses will cost \$0.67 - \$20 million/ton of in-basin NOx reduced.



**Table 3. Zero Emission Bus Options Cost Effectiveness of Emission Reductions (\$/ton)**

		LNOx Bus & RNG	Electric Bus		Fuel Cell Bus	
			Depot Charging	Depot & In-route Charging	SMR	Electrolysis
<b>Compared to Baseline</b>	<b>Increased Cost (NPV \$ million)</b>	\$173.0	\$767.8	\$376.1	\$1,379.3	\$1,680.2
	<b>GHG Reduction (million ton)</b>	11.4	8.2	8.2	3.3	6.7
	<b>In-basin NOx Reduction (ton x000)</b>	2.72	2.83	2.84	0.07	2.50
<b>Cost effectiveness of Emission Reductions</b>	<b>\$/ton GHG</b>	\$15.19	\$93.71	\$45.69	\$419.43	\$249.84
	<b>\$/ton IB NOx</b>	\$63,530	\$271,638	\$132,667	\$20,247,155	\$670,849

## 1. FLEET COST & EMISSIONS MODEL DESCRIPTION

Both the fleet cost model and the fleet emissions model are based on a fleet assignment of 2,500 40-ft buses, which provides equivalent total passenger capacity (seat-miles) to LACMTA's current mixed fleet of 1,212 40-ft, 626 45-ft, and 356 60-ft buses. This fleet assignment is held constant throughout the analysis period; the models assume no growth (or reduction) in LACMTA service during the 40-year analysis period.

The starting fleet in calendar year 2015 is assumed to be composed of 625 buses with engines built prior to model year 2007, and 1,875 buses with model year 2007 – 2014 engines, consistent with LACMTA's current fleet<sup>2</sup>. The model assumes that 178 older buses will be retired each year and replaced by new buses, to maintain 7% annual fleet turnover. For all scenarios other than electric buses charged exclusively at the depot, the model assumes that old buses will be replaced one-for one with new buses, so that total fleet size and total annual fleet miles will stay constant from year-to-year.

Due to daily range restrictions the model assumes that one retiring bus will need to be replaced with more than one electric bus, if the electric buses are charged only at the depot; the replacement ratio is based on assumed daily range between charging events relative to the minimum required daily range for current buses based on actual week-day bus assignments (see section 2.2). For this scenario this results in a slight increase in fleet size over time, as well as an increase in annual fleet miles, because dead-head mileage is also assumed to increase due to the need to make more daily bus-swaps in service.

For electric buses charged both at the depot and in-route using route-based chargers, the model assumes that the in-route charging will increase daily bus range above the minimum requirement, so that retiring buses can be replaced one-for one with new electric buses, and fleet size and annual fleet mileage will stay constant over time.

As the fleet composition changes over time, the model calculates for each scenario total mileage and fuel use each year by all buses of each type (CNG, Low NOx CNG, Electric, Fuel Cell) in each of the following model year bins: Pre-MY2007, MY2007 - MY2014, MY2015 - MY2024, MY2025 – MY2034, MY2035 – MY2044, MY2045 – MY2054. The model then applies cost and emission factors to calculate total costs and emissions associated with the buses of each type in each model year bin that year, and sums the costs and emissions across the bins to get the calendar year annual fleet totals.

The cost and emission factors used by the model are specific to each bus type and each model year bin. In that way, the model accounts for changes in technical capability and purchase and operating costs, as well as changes in emissions performance, for the different technologies as they mature over time. For example, range between charging events is assumed to be greater for MY2035 – MY2044 electric buses than for MY2025 – MY2034 buses, resulting in a smaller replacement ratio. Similarly, purchase and maintenance costs for electric and fuel cell buses (in 2015\$) are assumed to be lower for MY2035 – MY2044 buses than they are for MY2025 – MY2034 buses.

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<sup>2</sup> The current fleet has a larger number of older buses, but for the past few years LACMTA has been repowering older buses with new engines during mid-life overhauls. Engines built in model year 2007 and later have significantly lower nitrogen oxide (NOx) emissions than earlier model year engines.

## 1.1 Fleet Cost Model

The fleet cost model includes capital and operating costs associated with each bus and fuel purchasing scenario. The included capital cost elements are: bus purchase, bus repower (Low NOx CNG scenario only), bus mid-life overhaul, depot upgrades and expansion, and new fueling infrastructure.

Fueling infrastructure costs include purchase of battery chargers (electric bus scenarios), and purchase of hydrogen production and fueling stations (fuel cell bus scenarios). The model does not directly include any future costs associated with renewal or replacement of existing LACMTA CNG fueling stations. These stations are currently operated under contract by a third party, and the contract requires that the operator maintain these stations in full working order at all times. In effect, the future cost of upgrade and overhaul for these stations is included in the contract price of natural gas (dollars per therm<sup>3</sup>) and is therefore captured indirectly in the model for all scenarios as part of natural gas fuel costs.

Depot expansion is only required for the electric bus scenarios. For the depot-only charging scenario, in which fleet size increases, expansion of existing depots or construction of new depots is required to accommodate the larger fleet. Expansion of depot parking areas is also required for both electric bus scenarios to accommodate the installation of depot-based chargers in bus parking areas.

Other depot upgrades include investments related to high voltage safety and diagnostic equipment (electric bus and fuel cell scenarios) and investments in hydrogen sensors and improved ventilations systems (fuel cell scenario). Neither the baseline nor Low NOx CNG bus scenarios require any depot upgrades.

The included operating cost elements are: bus operator labor (including direct fringe benefits), bus maintenance (labor and material), and fuel purchase (including commodity costs and operating costs for fueling infrastructure). For all bus technologies, the fuel costs used in the model are net of projected financial credits that could be generated under California's Low Carbon Fuel Standard (LCFS). For natural gas (baseline) and renewable natural gas these LCFS credits would accrue to the fuel provider under LCFS rules; they are implicitly included in the model based on projected LACMTA costs to purchase natural gas or RNG. For electricity used to power battery-electric buses, and for hydrogen produced on-site at LACMTA depots to power fuel cell buses, LCFS credits would accrue directly to LACMTA. The model explicitly calculates these credits and deducts them from projected electricity purchase and hydrogen production costs.

The fleet cost model does not include original purchase costs associated with any existing LACMTA fueling, maintenance, or bus storage facilities; operating costs associated with maintenance and bus storage facilities; overhead costs for maintenance and transportation supervision or management; or overhead costs associated with operations planning, marketing, and revenue collection activities. All of these costs are assumed to be substantially similar regardless of which future bus technology and fuel purchase scenario is followed.

## 1.2 Fleet Emissions Model

The fleet emissions model estimates, for each future bus technology/fuel purchase scenario, total annual emissions of carbon dioxide (CO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), particulate matter (PM), and methane (CH<sub>4</sub>). Using the global warming potential of methane over a 100-year period (GWP<sub>100</sub>) the model also uses estimated CO<sub>2</sub> and CH<sub>4</sub> emissions to estimate total annual greenhouse gas (GHG) emissions in terms of CO<sub>2</sub>-equivalent emissions (CO<sub>2</sub>-e). For both NO<sub>x</sub> and PM emissions the model

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<sup>3</sup> A therm is an amount of natural gas with 100,000 British thermal units (BTU) heat content

estimates separately the amount emitted under each scenario within the South Coast Air Basin, as well as the amount emitted outside of this air basin. The South Coast Air Basin encompasses Orange County and parts of Los Angeles, San Bernardino, and Riverside counties in southern California.

The fleet emissions model estimates total emissions associated with each bus technology/fuel purchase scenario on a “wells-to-wheels” life cycle basis. In addition to direct tail-pipe emissions from the engine of each in-service bus, the model estimates “upstream” emissions associated with the production and delivery of the fuel used by the buses each year.

For CNG buses upstream emissions include those associated with natural gas production, processing, pipeline transport, and compression. For electric buses upstream emissions include stack emissions from electricity generation, as well as emissions associated with production, processing, and transport of the hydrocarbon fuel(s) (i.e. coal and natural gas) used for electricity generation. For fuel cell buses upstream emissions include emissions generated directly during production, storage, transport, and compression of hydrogen; these emissions come mostly from generating the electricity used for both water electrolysis and SMR. For the SMR production path upstream emissions also include emissions associated with production, processing, and transport of the natural gas used to produce the hydrogen.

All tailpipe NO<sub>x</sub> and PM emissions are assumed to be emitted within the South Coast Air Basin, as are upstream emissions from facilities and processes conducted within the basin (i.e. emissions from power plants located within the basin and from fuel production and transport activities that occur within the basin). Other upstream emissions (i.e. from natural gas extraction and processing, and from power plants located outside of the basin) are assumed to be out-of-basin emissions.

Emission factors used for upstream emissions vary by calendar year, to account for expected changes in the energy mix over time. For example, it is assumed that over the next 40 years average emission rates for electricity generation in California will fall significantly, reflecting greater use of zero-emission and renewable generating sources, in response to both government policy and market forces.

## 2. MAJOR ASSUMPTIONS AND DATA SOURCES

### 2.1 Electric Bus Range

To estimate the range per charge for current and future electric buses used in LACMTA service, the authors conducted a literature review, interviewed technical and sales staff from three transit bus manufacturers that currently offer 35-ft to 42-ft electric transit buses commercially<sup>4</sup>, and evaluated the results of an on-going in-service test of battery buses at LACMTA.

For an electric bus, range per charge (miles) is a function of two primary variables: 1) the energy capacity of the installed battery pack (kWh), and 2) actual energy use in service (kWh/mi). For any given bus the size of the battery pack is fixed, but energy use can vary based on a number of variables, including driver behavior, bus loading, and route characteristics (i.e. average speed and topography).

In addition, batteries lose capacity over time, as they are charged and dis-charged on a daily basis. This loss of capacity must be factored in to establish a practical range that can be relied on over the expected service life of a bus. Capacity loss is not solely a function of charge/discharge cycles; however, it can also be affected by the “depth” of discharge. Most battery manufacturers do not recommend depleting the battery fully (to zero percent state of charge) on a daily basis, as this can increase the rate at which batteries lose capacity. Over the past 20 years the general rule of thumb has been to use 80% depth of discharge as a planning factor when calculating practical electric vehicle range, to maximize in-service battery life.

Each of these variables is discussed further below, along with the author’s projections of practical electric bus range based on these variables.

#### 2.1.1 Electric Bus Battery Capacity

Virtually all commercially available 40-ft electric transit buses sold today (MY2016) have installed batteries with 300 – 330 kWh of energy storage capacity. In practical terms the size of the battery pack is constrained primarily by available packaging volume on the vehicle, but may also be constrained by axle weight limits. As such, increasing the energy storage capacity of electric buses will require further improvements in battery technology, to increase energy density (kWh/kg; kWh/ft<sup>3</sup>).

All bus manufacturers interviewed indicated that their battery suppliers are promising significant improvements in energy density over the next 5 – 15 years, though estimates vary as to when these improvement will be available, and how large they will be. One bus manufacturer indicated that battery packs larger than 400 kWh would be available within two years; others were more cautious, indicating that battery packs with 33% greater capacity than current packs “might” be available by 2025, with further increases in later years.

For this analysis the authors used conservative estimates for the energy storage capacity of battery packs on future electric buses, as follows: Model Year 2025 – 2034, 420 kWh; model year 2035 – 2044, 450 kWh; model year 2045+ 482 kWh.

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<sup>4</sup> BYD, Proterra, and New Flyer.

### 2.1.2 Electric Bus Energy Use

LACMTA operated a pilot fleet of 5 40-ft battery buses in regular Metro service between June 2015 and April 2016. These buses are used on a route with average speed of approximately 9 MPH. Since entering service they have accumulated more than 30,000 in-service miles. Weekly average energy use for all 5 buses has ranged from 2.3 kWh/mi to 3.5 kWh/mi; the over-all average since the beginning of the test is 3.2 kWh/mi. The route on which these buses operate has a slower average speed (9 MPH) than the LACMTA fleet average speed (12 MPH). Prior modeling conducted by the authors indicates that projected average energy use for these buses on a 12 MPH route would be 2.8kWh/mi.

Electric bus energy economy testing conducted by the Federal Transit Authority's New Model Bus Testing program indicates that there is a significant range in average energy use (kWh/mi) for different commercially available buses today<sup>5</sup>. One of the tested buses averaged 15% less energy per mile on the test routes than the bus model which LACMTA is currently operating in service.

In addition, all bus manufacturers interviewed indicated that electric buses will become more efficient over time, as the technology continues to mature.

Based on all of the above information, this analysis assumes that MY2025 – MY2034 electric buses will use an average of 2.5\_kWh/mi in LACMTA service, MY2035 – MY2044 electric buses will use an average of 2.4 kWh/mi, and MY2045+ electric buses will use an average of 2.3 kWh/mi. These values reflect a 5% reduction in "industry average" energy usage per decade, compared to current buses.

The above values were used to calculate electricity use and cost. To calculate expected range per charge 10% was added to these figures, to account for driver and route variability.

### 2.1.3 Battery Life & Depth of Discharge

One electric bus manufacturer currently offers a 12-year warranty on their batteries, which guarantees that after 12 years in service the battery pack will retain at least 70% of its original name plate capacity (kWh). This implies 2.5% loss of capacity per year. This manufacturer also indicated that there is no restriction on daily depth of discharge.

The other manufacturers are less aggressive with respect to claims of battery life, offering only a standard 5-year warranty which guarantees no less than 80% of initial name plate capacity after that time, and recommending 80% depth of discharge as a planning factor in order to maximize effective battery life. One manufacturer indicated that actual capacity loss after 6 years in service indicates the possibility of a 10-year life, but they are not ready to guarantee that level of performance. This manufacturer also indicated that their battery management system limits depth of discharge to no more than 80% in the first few years of bus life, but opens that up over time, to allow 95% depth of discharge after year 5. In this way, buses are able to achieve consistent daily range even though the pack is losing effective capacity over time.

LACMTA currently keeps their buses in service for 14 years. For electric buses to be reliably usable over their entire life, the expected capacity loss must be included in calculations of the practical range

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<sup>5</sup> Bus Testing and Research Center, Pennsylvania Transportation Institute; Federal Transit Bus Test; Report Number LTI-BT-R1307, June 2014; Report Number LTI-BT-R1405, July 2015; Report Number LTI-BT-R1406, May 2015.

per charge. One option is to assume that batteries will last 14 years without replacement, but the range calculation would then need to assume a usable capacity of only 65% - 70% of battery nameplate capacity. The other option would be to assume that batteries will be replaced at bus mid-life (7 years). Under this scenario LACMTA will incur additional costs for battery replacement, but they will need fewer buses because range per charge can be based on approximately 80% of battery nameplate capacity.

Analysis indicates that buying fewer buses, but planning to replace the battery packs at 7 years, will be the least costly option for LACMTA. Thus, this is the scenario on which projected range per charge was calculated for this analysis.

### **2.1.4 Electric Bus Range per Charge**

Based on projected nameplate battery capacity, protected in-service energy use, and expected battery degradation, as discussed above, this analysis assumes that the practical, reliable electric bus range per charge for buses used in LACMTA service will be 126 miles for MY2025-MY2034 buses, 142 miles for MY2035 -2044 buses, and 161 miles for buses purchased after MY2045. These values represent expected range per charge at the end of year 7 with 95% depth of discharge.

### **2.2 LACMTA Bus Assignments & Electric Bus Replacement Ratio**

Figures 2 and 3 show a summary of LACMTA's week-day scheduled bus assignments. An "assignment" is a piece of work encompassing the time and mileage from when a bus first leaves a depot and enters service to when that bus returns to the depot. Figure 2 plots the weekday bus assignments based on accumulated mileage (miles) before the bus returns to the depot, and Figure 3 plots the assignments based on the accumulated time (hours) before the bus returns to the depot.

There are 2,878 daily bus assignments handled by 1,908 peak buses. That means that approximately 938 buses (49%) do one assignment per day, and 970 buses (51%) do two assignments per day. In general buses that do two assignments per day go out early in the morning to cover the morning peak period, return to the depot in late morning, and then leave the depot again in mid-afternoon to cover the afternoon peak. These buses generally spend three to six hours parked at the depot during mid-day and most will also be parked at the depot for three to six hours again in the late evening/early morning.

As shown on Figures 2 and 3, about 30% of all assignments are longer than 12 hours and 125 miles, and these are the assignments that are typically handled by buses that do only one assignment per day. These assignments average 165 miles and 15 hours per day in service. The remaining 70% of assignments, which are typically handled by buses that do two assignments per day, average 62 miles and 4.7 hours per day in service. That means that the buses that handle these assignments (two per day) generally average 124 miles and 9.4 hours per day in service.

Figure 2. LACMTA Weekday Bus Assignments, Percent versus Accumulated Miles in Service

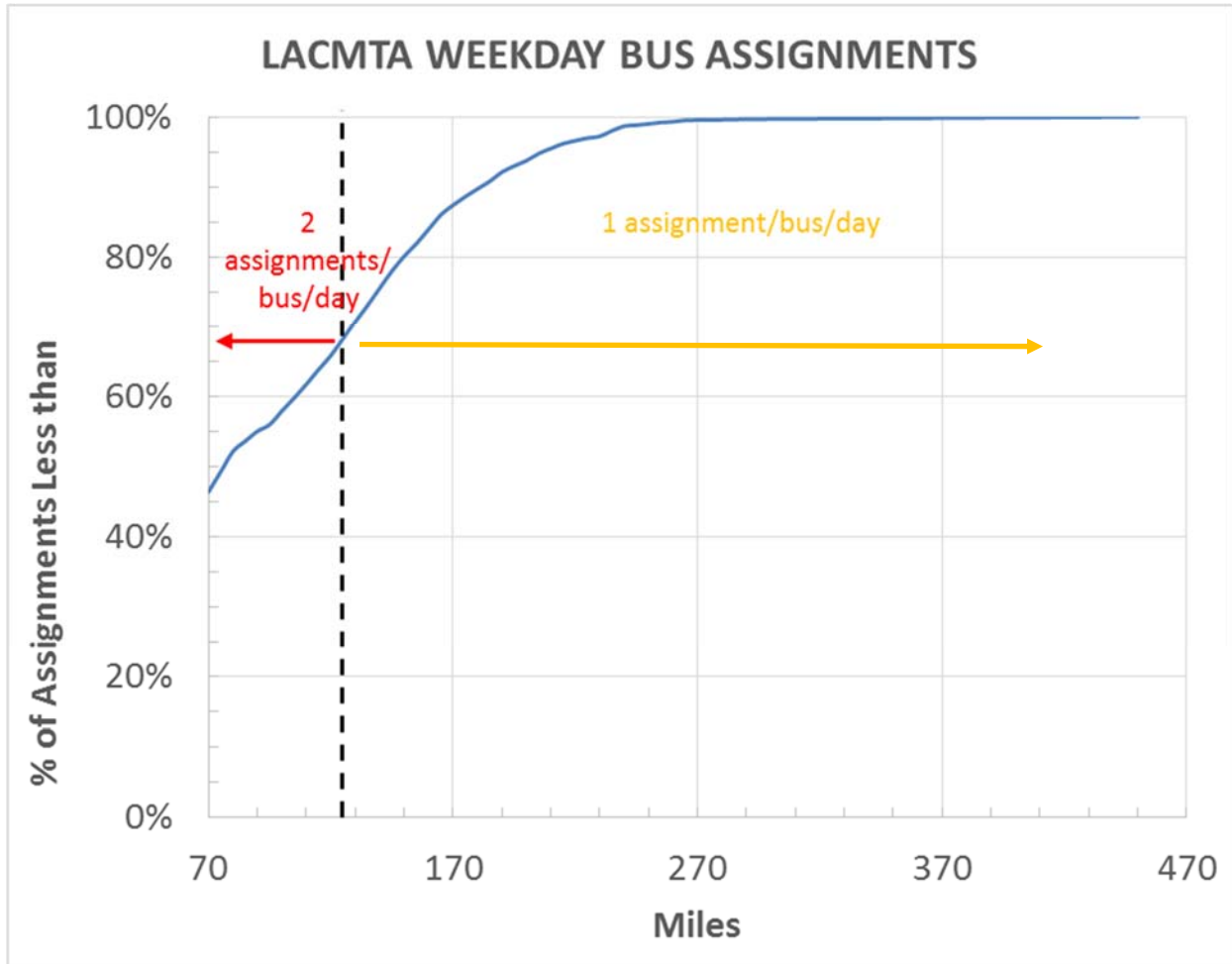
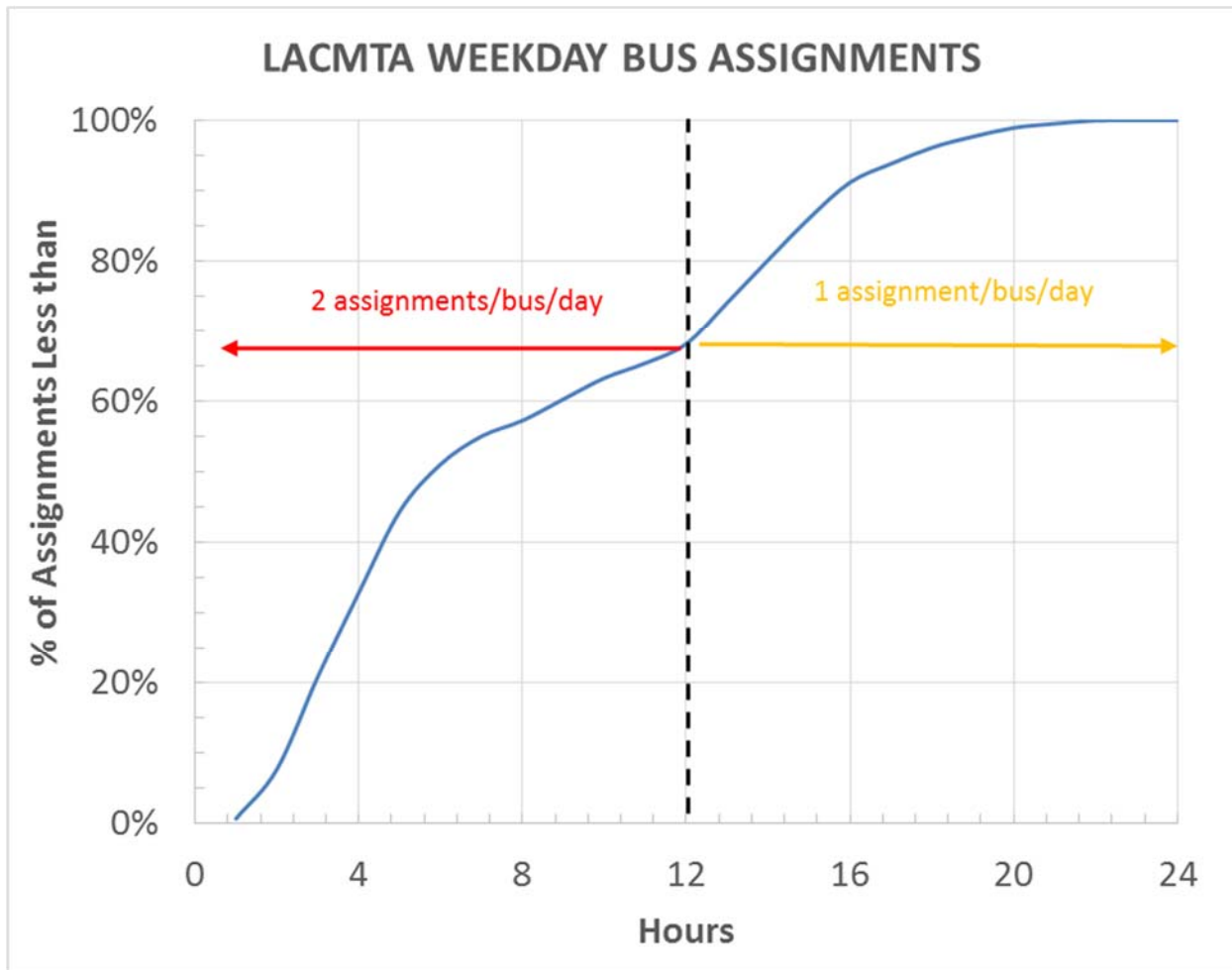




Figure 3. LACMTA Weekday Bus Assignments, Percent versus Accumulated Time in Service



When at the depot, LACMTA buses are parked nose-to-tail in adjacent parking lanes. As such, bus pull-outs for service are based on first-in, first-out; i.e. when a bus operator leaves for his or her assignment they take the first bus in line. When they return from service they park the bus in whatever spot is available. Given this, it is difficult, if not impossible, to dedicate specific buses to specific routes or assignments, except on a limited basis. Every bus of a given size assigned to a depot must be usable for every assignment operated from the depot on which that size bus is used. This means that in practical terms: 1) electric buses must have sufficient range per charge to handle every daily assignment, or 2) long assignments (miles) must be broken up into shorter assignments to accommodate actual electric bus range, or 3) depot charging of electric buses must be supplemented by in-route charging. Option 2, the break-up of long bus assignments into shorter assignments will increase the number of peak buses required compared to the current fleet of CNG buses (i.e. the electric bus replacement ratio will be greater than 1).

As discussed above in Section 2.1, this analysis assumes that model year 2025 – 2034 electric buses will have a practical, reliable range of 124 miles/charge in LACMTA service throughout their service life. This is a 34% increase from the current generation of electric buses (model year 2016) which are

estimated to have a reliable range of 85 – 100 miles per charge in LACMTA service<sup>6</sup>. The analysis assumes that battery technology will continue to improve in future years, such that model year 2035 – 2044 electric buses will have a reliable range of 142 miles/charge and model year 2045 – 2055 electric buses will have a reliable range of 161 miles/charge.

Electric buses can replace current CNG buses one-for-one on daily bus assignments, or combinations of assignments, with shorter accumulated mileage than the assumed range per charge. Daily bus assignments longer than the assumed range per charge will need to be reconfigured to create more, shorter assignments, thus increasing the total number of peak buses required, if only depot charging is used.

To determine the number of electric buses required to replace CNG buses in the depot-charging only scenario, the authors calculated the percentage of current daily bus assignments shorter than the assumed range per charge, and then calculated the percentage of peak buses that would be used for these assignments. The percentage of peak buses is smaller than the percentage of assignments, because most if not all buses used for these short assignments do two assignments per day. Next the authors calculated the average daily mileage for all assignments longer than the assumed miles/charge, and the electric bus replacement ratio that would be required to accommodate these longer assignments. Finally the authors calculated a fleet average electric bus replacement ratio, which is a weighted average of peak buses needed to accommodate short assignments (1:1 replacement) and buses needed to accommodate the current long assignments (greater than 1:1 replacement ratio). The results of this analysis are shown in Table 4.

**Table 4. Estimated Electric Bus Replacement Ratio for Depot charging-only Scenario**

	Model Year 2016	Model Year 2025 - 2034	Model Year 2035 - 2044	Model Year 2045 - 2054
Projected Electric Bus range/charge [miles]	93 mi	126 mi	142 mi	161 mi
% of Bus Assignments <range/charge	55%	68%	75%	84%
% of Peak Buses with daily mileage < range per charge	42%	51%	55%	59%
Average Daily Mileage for Bus Assignments > range/charge	152 mi	168 mi	177 mi	190 mi
Replacement Ratio for Assignments > range/charge	1.70	1.34	1.27	1.19
<b>FLEET AVERAGE REPLACEMENT RATIO</b>	<b>1.41</b>	<b>1.17</b>	<b>1.12</b>	<b>1.08</b>

<sup>6</sup> Projected range varies by bus manufacturer based on differences in installed battery capacity (kWh) and projected average energy use (kWh/mi).

As shown in Table 4, in the 2025 – 2034 time frame 1.17 electric buses would be required to replace one CNG bus if charging is done only at the depot. In the 2035 – 2044 time frame this electric bus replacement ratio drops to 1.12, and it drops further to 1.08 after 2045.

**2.3 Other Assumptions**

Table 5 lists the major assumptions used in the fleet cost and emissions models, as well as the source of these assumptions.

All costs in Table 5 are shown in 2015\$. For each year the model escalates these values based on assumed annual inflation, to calculate yearly total costs in nominal dollars. For net present value calculations these annual nominal dollar totals are then discounted back to 2015\$ based on an assumed discount rate.

**Table 5a. Major Assumptions and Data Sources Used in Fleet Cost & Emissions Model – LACMTA System Characteristics**

<b>5A: LACMTA SYSTEM CHARACTERISTICS</b>		
<i>Metric</i>	<i>Data Sources</i>	<i>Values/Notes</i>
Average Annual Total Miles per bus	LACMTA, National Transit database, 2013	38,000 miles
Average Annual Revenue Miles per bus	LACMTA, National Transit database, 2013	32,000 miles
Fleet Spare Factor	LACMTA policy	20%
Average Daily Total Miles per Bus	MJB&A analysis	130 miles; (annual miles/bus ÷ (365 day/yr x (1-spare factor)))
Average In-service Bus Speed (MPH)	LACMTA, National Transit database, 2013	12.1 MPH; total bus miles ÷ total bus hours
Average Daily in-Service Hours per bus	LACMTA, National Transit database, 2013; MJB&A analysis	10.8 hours; average daily miles ÷ average in-service speed
Bus Retirement age	LACMTA policy	14 years
In-service Bus Lay-over Time	LACMTA Service Planning	10 minutes per hour of driving
Total Lay-over (Terminal) Locations, System-wide	LACMTA Service Planning	280 = 140 bus lines x 2 Terminal/line (one at each end)
2015 Bus Operator Labor Cost (\$/hr)	LACMTA Service Planning	\$33.50/hour; includes direct fringe benefits
Bus Operator Availability (%)	LACMTA Service Planning	80%
Bus Operator % of shift time driving	LACMTA Service Planning	83%

**Table 5b. Major Assumptions and Data Sources Used in Fleet Cost & Emissions Model – Fuel Costs**

5B: FUEL COSTS		
Metric	Data Sources	Values/Notes
Natural Gas (2015)	LACMTA Fuel report	Actual average cost for 2015, \$0.780/therm, includes cost of fuel station maintenance and operation.  This price implicitly includes California Low Carbon Fuel Standard (LCFS) credits that can be earned by the natural gas supplier, and which are wholly or partially passed on to LACMTA via commercial market pricing.
Renewable Natural Gas (2015)	LACMTA Procurement	Assume that purchase cost of renewable natural gas will be the same as standard natural gas, at \$0.780/therm in 2015. This is based on LACMTA market research showing that there are multiple providers willing to provide renewable gas at this rate today.  This price implicitly includes California Low Carbon Fuel Standard (LCFS) credits that can be earned by the RNG fuel supplier, and which are wholly or partially passed on to LACMTA via commercial market pricing.
Electricity (2015)	Southern California Edison, <i>Schedule TOU-8, Time-of-Use General-Service Large; Cal. PUC Sheet No. 53221-E</i>  California Air Resources Board, Final Regulation Order, Subchapter 10 Climate Change, Article 4 Regulations to Achieve Greenhouse Gas Emission Reductions, Subchapter 7 Low Carbon Fuel Standard  MJB&A Analysis	TOU-8 is the electric rate applicable to large commercial customers in Los Angeles with expected usage greater than 500 kW. The rate is composed of delivery and generation energy charges (\$/KWh) which vary by time of day (off-peak, mid-peak, and high-peak) and season (summer, winter). There are also monthly facility demand charges (\$/kW) based on overall peak demand within the month and monthly time-based demand charges (\$/kW) based on monthly peak demand within each daily rate period (off-peak, mid-peak, and high-peak) over the month.  Based on an analysis of scheduled daily LACMTA service (% of buses in service and at the depot by time of day), MJB&A determined that approximately 64%, 32%, and 5% of electric bus depot charging would occur during off-peak, mid-peak, and high-peak periods, and that approximately 24%, 65%, and 11% of in-route charging would occur during off-peak, mid-peak, and high-peak periods.

5B: FUEL COSTS		
Metric	Data Sources	Values/Notes
		<p>Based on this charging distribution the average annual cost of electricity in 2015 under Southern California Edison's TOU-8 rate would be \$0.172/kWh for depot charging and \$0.143/kWh for in-route charging.</p> <p>Based on an assumption of constant daily production during only off-peak and mid-peak hours the average annual cost of electricity for hydrogen production in 2015 would be \$0.1061/kWh under the TOU-8 rate.</p> <p>LACMTA can earn credits under California's low carbon Fuel Standard (LCFS) for battery electric bus charging. Available credits in each year were calculated using the procedures outlined in the LCFS Final Regulation Order, and assuming a credit value of \$100 per metric ton of CO<sub>2</sub> reduction, which is the current market value of LCFS credits. These credits were then deducted from LACMTA's projected cost of purchasing electricity, to yield their net cost of electricity for battery bus charging. Projected LCFS credits are \$0.118/kWh in 2015, increasing to \$0.127/kWh in 2055 as the projected carbon intensity of electricity production falls over time. LACMTA's net electricity costs for battery bus charging are projected to be \$0.053/kWh for depot charging and \$0.025/kWh for in-route charging in 2015.</p>
Hydrogen (2015)	<p>National Renewable Energy Laboratory, <i>H2FAST: Hydrogen Financial Analysis Scenario Tool</i>, April, 2015, Version 1.0</p> <p>California Air Resources Board, Final Regulation Order, Subchapter 10 Climate Change, Article 4 Regulations to Achieve Greenhouse Gas Emission Reductions,</p>	<p>Hydrogen production via steam reforming (SMR) assumes 1.7 therms NG and 10 kWh electricity input per kg of hydrogen produced. The model also assumes \$0.25/kg maintenance and operating cost, which equates to approximately \$300,000 per station/year with one station per depot.</p> <p>Hydrogen production via electrolysis assumes 50 kWh electricity input per kg hydrogen produced in 2015, falling to 44.7 kWh/kg in 2025 and later years. The 2025 value is consistent with US Department of Energy research and development targets and equates to 75% net efficiency (the theoretical minimum energy requirement is 33 kWh/kg). The model also assumes \$0.35/kg maintenance and operating</p>

5B: FUEL COSTS		
<i>Metric</i>	<i>Data Sources</i>	<i>Values/Notes</i>
	<p>Subchapter 7 Low Carbon Fuel Standard</p> <p>MJB&amp;A Analysis</p>	<p>cost, which equates to approximately \$420,000 per station/year with one station per depot.</p> <p>Using these assumptions LACMTA's cost of hydrogen production is projected to be \$2.64/kg using SMR and \$5.65/kg using electrolysis in 2015, not including amortized capital costs for the production equipment, which is calculated separately and included in capital costs.</p> <p>LACMTA can earn credits under California's low carbon Fuel Standard (LCFS) for fuel cell bus hydrogen production. Available credits in each year were calculated using the procedures outlined in the LCFS Final Regulation Order, and assuming a credit value of \$100 per metric ton of CO<sub>2</sub> reduction, which is the current market value of LCFS credits. These credits were then deducted from LACMTA's projected cost of producing hydrogen, to yield their net cost of producing hydrogen. Projected LCFS credits are \$1.03/kg in 2015, resulting in net hydrogen production costs in 2015 of \$1.60/kg for SMR and \$4.62/kg for electrolysis.</p>
<p>Annual Fuel Cost Inflation</p>	<p>Energy Information Administration, Annual Energy Outlook 2016 early release, <i>Table 3.9, Energy Prices by Sector &amp; Source, Pacific region, May 2016</i></p>	<p>Projections for % change in annual nominal price of natural gas and electricity used for transportation (reference case), through 2040; for 2041 – 2055 assumed average rate for 2031 – 2040.</p>

**Table 5c. Major Assumptions and Data Sources Used in Fleet Cost & Emissions Model – Emissions Factors**

5C: EMISSIONS FACTORS		
Metric	Data Sources	Values/Notes
CNG bus tailpipe NO <sub>x</sub> , PM, CH <sub>4</sub> (g/mi)	California Air Resources Board, EMFAC2014	Season - annual; Sub area - Los Angeles (SC); vehicle class – UBUS; Fuel – NG; Process – RUNEX; Speed Time - Weighted average of bins 5 through 30 to simulate urban bus duty cycle with 12.5 MPH average speed. Values calculated for each model year in each calendar year.
Low NO <sub>x</sub> CNG bus tailpipe NO <sub>x</sub> , PM, CH <sub>4</sub> (g/mi)	California Air Resources Board Executive Orders A-021-0631 and A-021-0629	NO <sub>x</sub> , PM, and CH <sub>4</sub> g/mi emissions assumed to be proportionally lower than emissions from standard CNG buses of the same model year based on model year 2016 certified engine emissions for Low NO <sub>x</sub> and standard CNG engines. NO <sub>x</sub> emissions assumed to be 92% lower (0.01 g/bhp-hr vs 0.13 g/bhp-hr), CH <sub>4</sub> g/mi emissions assumed to be 72% lower (0.56 g/bhp-hr vs 1.97 g/bhp-hr) and PM emissions assumed to be 50% lower (0.001 g/bhp-hr vs 0.002 g/bhp-hr).
CNG and Low NO <sub>x</sub> CNG bus tailpipe CO <sub>2</sub> (g/mi)	U.S. Department of Energy, <i>Alternative Fuels &amp; Advanced Vehicles Data Center</i> ( <a href="http://www.afdc.energy.gov/afdc/fuels/properties.html">www.afdc.energy.gov/afdc/fuels/properties.html</a> )	5,593 g CO <sub>2</sub> /therm, assuming NG with 22,453 btu/lb (high heating value) and 75.5% carbon by weight (90% methane and 10% ethane by volume). Gram/mile emissions = Fuel use (therm/mi) x g CO <sub>2</sub> /therm.
Natural Gas Upstream CO <sub>2</sub> , NO <sub>x</sub> , PM, CH <sub>4</sub> (g/therm)	Argonne national Laboratory, <i>The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) Model</i> , as modified by California Air Resources Board to reflect California conditions (CAGREET)	CA GREET was used to calculate upstream emission rates (g/mmbtu, g/therm) for pipeline natural gas and renewable natural gas. The emission rates for renewable natural gas assume the following mixture of production sources: 100% landfill, 0% animal waste, and 0% wastewater treatment plant. These assumptions are conservative; LACMTA has not yet determined actual production sources for commercially available RNG. Inclusion of gas produced from wastewater treatment plants and/or food waste would further reduce emissions of both GHG and NO <sub>x</sub> compared to current assumptions.
Renewable Natural Gas Upstream CO <sub>2</sub> , NO <sub>x</sub> , PM, CH <sub>4</sub> (g/therm)		
Hydrogen Production CO <sub>2</sub> , NO <sub>x</sub> , PM, CH <sub>4</sub> (g/kg)		

5C: EMISSIONS FACTORS		
<i>Metric</i>	<i>Data Sources</i>	<i>Values/Notes</i>
	NREL/TP-5400-60283, July 2014	<p>CA GREET was used to calculate upstream emission rates (g/mmbtu, g/kg) for production of hydrogen using SMR.</p> <p>All upstream emission rates for natural gas, renewable natural gas and SMR hydrogen are assumed to be constant throughout the analysis period.</p> <p>For production of hydrogen using electrolysis, emission rates (g/kg) were determined by multiplying the electrical energy required for production (kWh/kg) by emission rates for electricity generation (g/kWh).</p> <p>For standard natural gas, including the natural gas used for production of hydrogen via SMR, the following components of upstream NOx and PM emissions are assumed to be emitted within the South Coast Air Basin: 7.4% of emissions from “natural gas transmission to fueling station” (50 out of 680 pipeline miles) and 100% of emissions from compression. The following components of natural gas upstream NOx and PM emissions are assumed to be emitted outside of the South Coast Air Basin: 100% of emissions from natural gas recovery and processing; and 92.6% of emissions from natural gas transmission to fueling station (630 out of 680 pipeline miles).</p> <p>For RNG, 25% of NOx and PM emissions from “natural gas transmission to fueling station” (50 out of 200 pipeline miles) are assumed to be in-basin, as well as 100% of emissions from RNG compression. Emissions from production and processing of RNG are attributed as in-basin or out-of-basin depending on the location of the RNG sources. The model assumes that in 2018 100% of RNG will be from out-of-basin sources, but that over time a greater percentage of RNG will be from in-basin sources, rising to 30% by 2055. NREL’s</p>



5C: EMISSIONS FACTORS		
<i>Metric</i>	<i>Data Sources</i>	<i>Values/Notes</i>
		<p>projections of bio-methane potential from all sources shows that approximately 30% of potential bio-methane in California is attributed to sources located within the South Coast Air basin.</p> <p>All emissions from production and compression of hydrogen produced via SMR are assumed to be in-basin.</p>
<p>Electricity Generation CO<sub>2</sub>, NO<sub>x</sub>, PM, CH<sub>4</sub> (g/kWh)</p>	<p>Argonne national Laboratory, <i>The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) Model</i>, as modified by California Air Resources Board to reflect California conditions (CAGREET)</p> <p>ARB targets for renewable generation through 2050</p> <p>ABB Velocity Suite™ database of electric generating units within CAISO</p>	<p>CA GREET was used to calculate 2015 and 2020 emission rates (g/kWh) for each discrete electric generating source type used in California: wind, solar, geothermal, hydroelectric, nuclear, biomass, natural gas, and coal. For each pollutant in each calendar year the model uses source-weighted average emissions factors calculated by multiplying the emission factor for each source type by the assumed percentage of electricity produced by that source type in California that year. The assumptions for percentage of generation by source type match the California Air Resources Board’s published targets for increases in zero-emitting and renewable resources through 2050. For example, the model assumes that there will be no electricity generation using coal after 2027, and that zero-emitting sources will increase from 46% of total generation in 2015 to 78% in 2050. At the same time, generation with natural gas will fall from 53% of total generation in 2015 to 22% in 2050.</p> <p>CA Greet indicates that emission rates (g/kWh) of NO<sub>x</sub>, PM, CO<sub>2</sub>, and CH<sub>4</sub> will fall between 2015 and 2020 for nuclear, natural gas, biomass, and coal generating sources, presumably based on improvements in efficiency and/or addition of emission controls in response to regulation. The difference in emission rates between 2015 and 2020 were used to calculate an annual adjustment factor for each pollutant and generating source,</p>

5C: EMISSIONS FACTORS		
<i>Metric</i>	<i>Data Sources</i>	<i>Values/Notes</i>
		<p>which was applied in each year of the analysis – i.e. emission rates were assumed to continue to improve at the same annual rate through 2055, which is a conservative assumption.</p> <p>To determine the percentage of NOx and PM emissions emitted within the South Coast Air Basin from electricity generation under each scenario, the ABB Velocity Suite™ database was used to determine the percentage of current generation (MWh) within the California Independent System Operator (CAISO) territory produced by generating plants located in the South Coast Air Basin. In 2013 approximately 22.2% of total CAISO generation by natural gas-fired plants was from plants within the basin, while 0% of coal generation was from plants within the basin and 9.4% of biomass generation was from plants within the basin. These percentages were applied separately to the emission factors for each type of generation to calculate weighted average NOx and PM emission factors (g/kWh) within and outside the basin. The analysis assumes that total gas generation will fall each year through 2050, while total biomass generation will increase; however the percentage of total generation from plants of each type within the basin is assumed to stay constant.</p>

**Table 5d. Major Assumptions and Data Sources Used in Fleet Cost & Emissions Model – CNG Buses**

<b>5D: CNG BUSES</b>		
<i>Metric</i>	<i>Data Sources</i>	<i>Values/Notes</i>
Purchase Cost (2015 \$)	LACMTA Maintenance Department	\$490,000 per bus. This is the actual price paid by LACMTA for 40-ft CNG bus purchases in 2013.
Mid-Life Overhaul Cost (2015 \$)	LACMTA Maintenance Department	\$35,000 per bus. This is the actual average cost for overhauls completed in 2014.
Maintenance Cost (\$/mi)	LACMTA maintenance records for 2013 - 2014	Average cost of \$0.850/mile for buses near mid-life (7 years old). 35% of costs (\$0.30/mi) attributed to propulsion system (engine, transmission, brakes) and 65% attributed to all other bus systems (\$0.55/mi).
Fuel Use (therm/mi)	LACMTA fueling records	Average of 0.476 therm/mi.

**Table 5e. Major Assumptions and Data Sources Used in Fleet Cost & Emissions Model – Low NOx CNG Buses**

<b>5E: LOW NOx CNG BUSES</b>		
<i>Metric</i>	<i>Data Sources</i>	<i>Values/Notes</i>
Purchase Cost (2015 \$)	Environ discussion with Cummins, Inc.	Incremental cost of Low NOx CNG bus compared to standard CNG bus \$10,000 through MY2035, falling to \$5,000 after MY2045 due to technology maturity.
Repower Cost (2015 \$)	LACMTA Maintenance Department	Assume \$112,000/bus for repowers in 2015 – 2034, falling to \$102,000/bus for repowers in 2045 – 2054. Current cost of repowering LACMTA CNG buses averages \$100,000/bus. Low NOx repowers assumed to be more expensive due to incremental cost of Low NOx engine (\$10,000) and \$2,000/bus for up-front engineering and design work (\$200,000 spread over 1,000 buses). Incremental cost of Low NOx engine assumed to decline over time as technology matures.
Mid-Life Overhaul Cost (2015 \$)	LACMTA Maintenance Department	Assume that mid-life overhauls for Low NOx engine buses will be \$38,000/bus, which is \$3,000/bus greater than current mid-life overhaul costs for standard CNG buses. Costs assumed to be higher due to higher cost for re-building Low NOx engine.
Maintenance Cost (\$/mi)	LACMTA Maintenance Department	Assume that non-propulsion maintenance costs will be the same as current CNG buses (\$0.553/mi) and that propulsion related maintenance costs will be 10% higher (\$0.327/mi) for Low NOx engines purchased 2015 – 2024, due to technology immaturity. Assumes that by MY2035 propulsion related maintenance costs for Low NOx engines will be the same as for current buses.
Fuel Use (therm/mi)	California Air Resources Board Executive Orders A-021-0631 and A-021-0629	Assume that fuel use for Low NOx engines will be 0.4% higher than fuel use of current NG engines, based on certified CO <sub>2</sub> emissions of model year 2016 Low NOx engines compared to standard engines (465 g/bhp-hr vs 463 g/bhp-hr).

**Table 5f. Major Assumptions and Data Sources Used in Fleet Cost & Emissions Model – Electric Buses**

5F: ELECTRIC BUSES		
Metric	Data Sources	Values/Notes
Purchase Cost (2015 \$)	<p>Air Resources Board, Mobile Source Control Division, <i>Advanced Clean Transit</i>, May 2015</p> <p>BYD bus purchase quote to LACMTA</p> <p>Discussion with battery electric bus manufacturers, BYD, Proterra, and New Flyer</p>	<p>Current costs (MY2016) are estimated to be \$760,000 per bus for depot-only charging and \$810,000 per bus for depot and in-route charging. The increased cost for in-route charging is for inductive charge receiver on the bus.</p> <p>Based on discussion with bus manufacturers, industry average battery bus purchase costs (depot charging, 2015\$) are projected to fall to \$657,000 in MY2025, \$632,000 in MY2035, and \$631,000 in MY2045. These costs reflect significant projected reductions in battery pack costs (\$/kWh, 2015\$), but also significant increases in battery pack size (kW) over time, based on increased energy density.</p> <p>The model assumes no reduction in costs (2015\$) over time for bus systems other than the battery pack; the majority of the cost of a bus is in items and systems (steel structure, doors, windows, suspension system, etc.) that will be common between electric and CNG buses, which are not expected to change.</p> <p>Increases in battery energy density are projected based on current research efforts by battery manufacturers. Reductions in battery costs are projected based on research efforts as well as projected increases in manufacturing volume, primarily based on increased sales of light-duty electric vehicles.</p> <p>Cell level battery costs are projected to fall from an industry average of \$417/kWh (2015\$) today to \$150/kWh in 2025 and \$100/kWh in 2035 and later years (2015\$). Total battery pack costs (including physical structure, battery management system, and manufacturing labor and overhead) are projected to fall from an industry average of \$740/kWh today to \$358/kWh in 2025, \$275/kWh in 2035, and \$258/kWh in 2045 (all in 2015\$).</p>

5F: ELECTRIC BUSES		
Metric	Data Sources	Values/Notes
		<p>Installed battery pack size is projected to increase from an industry average of 330 kWh today to 420 kWh in 2025, 450 kWh in 2035, and 482 kWh in 2045.</p> <p>The above values represent a conservative, but realistic assessment of industry average costs. There was a significant range of values provided by different bus manufacturers, with some stated projections significantly more optimistic than others (lower battery cost and higher energy density).</p>
Mid-Life Overhaul Cost (2015 \$)	<p>BYD purchase quote to LACMTA</p> <p>Discussion with battery electric bus manufacturers, BYD, Proterra, and New Flyer</p>	<p>Based on discussion with bus manufacturers, this analysis assumes that the drive motor and inverter on electric buses will need to be replaced/overhauled at mid-life at a cost of \$30,000. This analysis also assumes that all electric buses will have their battery packs overhauled at mid-life by replacing the battery cells (but not the physical structure). See discussion of battery life in section 2.1.3. Mid-life battery overhaul costs are based on pack size (kW) and assumed cell costs (\$/kWh) discussed above under electric bus Purchase Cost, plus 30% for labor.</p> <p>This results in total mid-life overhaul costs of \$84,600 for MY2025-MY2034 electric buses, \$88,500 for MY2035 – MY2044 electric buses, and \$92,700 for MY2045 – MY2054 electric buses.</p>
Maintenance Cost (\$/mi)	MJB&A analysis	<p>Non-propulsion related costs assumed to be same as CNG, \$0.553/mi.</p> <p>Propulsion-related costs (drive motor, inverter, brakes) assumed to be half the cost of CNG buses (\$0.149/mi).</p>
Fuel Use (kWh/mi)	<p>40-ft electric bus in-service test at LACMTA Bus Testing and Research Center, Pennsylvania Transportation Institute; Federal Transit Bus Test;</p>	<p>MY 2025 electric buses used in LACMTA service are projected to average 2.5 kWh/mi energy use; this fleet average is projected to fall to 2.4 kWh/mi for MY2035 buses and 2.3 kWh/mi for MY2045 buses.</p> <p>See section 2.1.2 for discussion of how these values were derived.</p>

5F: ELECTRIC BUSES		
<i>Metric</i>	<i>Data Sources</i>	<i>Values/Notes</i>
	Report Number LTI-BT-R1307, June 2014; Report Number LTI-BT-R1405, July 2015; Report Number LTI-BT-R1406, May 2015 Discussion with electric bus manufacturers BYD, Proterra, and New Flyer MJB&A Analysis	
Range (mi/charge)	Discussion with battery electric bus manufacturers, BYD, Proterra, and New Flyer MJB&A Analysis	MY 2025 electric buses are assumed to have range per charge of 126 miles, increasing to 142 miles for MY2035 and 161 miles for MY2045. These values represent industry average, reliable daily range at bus mid-life. See Section 2.1 for a full discussion of how these values were derived.

**Table 5g. Major Assumptions and Data Sources Used in Fleet Cost & Emissions Model – Fuel Cell Buses**

5G: FUEL CELL BUSES		
Metric	Data Sources	Values/Notes
Purchase Cost (2015 \$)	Letter from New Flyer to Air Resources Board Air Resources Board, Mobile Source Control Division, <i>Advanced Clean Transit</i> , May 2015  E. den Boer, et al, CE Delft, <i>Zero emissions trucks: An overview of state-of-the-art technologies and their potential</i> , Report Delft, July 2013	Current cost (MY 2016) is \$1,300,000 per bus. Per a letter from New Flyer to Air Resource Board the cost for MY2025 buses (2015\$) is assumed to be \$920,000, falling to \$690,000 in MY2035 (-25%) and \$598,000 in MY2045 (-35%).  Assumed cost reductions for MY2035 and MY2045 are per estimates by CE Delft.
Mid-Life Overhaul Cost (2015 \$)	LACMTA Maintenance Department  E. den Boer, et al, CE Delft, <i>Zero emissions trucks: An overview of state-of-the-art technologies and their potential</i> , Report Delft, July 2013  MJB&A Analysis	Mid-life overhaul costs assumed to be the same as for CNG bus mid-life plus the cost of replacing the fuel cell stack. Fuel cell stack replacement assumed to be \$300,000 for MY2025 – MY2034 buses, \$125,000 for MY2035 – MY2044 buses, and \$50,000 for MY2045 – MY2054 buses, based on projected future cost differential between CNG and fuel cell buses at time of overhaul.
Maintenance Cost (\$/mi)	L. Eudy and M. Post, National Renewable Energy Laboratory, <i>Zero Emission Bay Area (ZEBA) Fuel Cell Bus Demonstration Results: Fourth Report</i> , July 2015	Non-propulsion related costs assumed to be same as CNG, \$0.553/mi.  Current generation fuel cell buses have propulsion related costs at least 33% higher than diesel buses.  For this analysis propulsion related costs assumed to be 20% higher than CNG buses for MY2025 – MY2034 buses, falling to only 10% higher for MY2045-MY2054 buses due to technology maturity.



5G: FUEL CELL BUSES		
<i>Metric</i>	<i>Data Sources</i>	<i>Values/Notes</i>
H <sub>2</sub> Fuel Use (kg/mi)	L. Eudy and M. Post, National Renewable Energy Laboratory, <i>Zero Emission Bay Area (ZEBA) Fuel Cell Bus Demonstration Results: Fourth Report</i> , July 2015	Average H <sub>2</sub> fuel use for current generation buses is 0.156 kg/mi. This value used for MY2025 – MY2034 buses. Assumed 5% reduction for MY2035-MY2044 buses, and 10% reduction for MY2045 -MY2054 buses due to technology maturity.

**Table 5h. Major Assumptions and Data Sources Used in Fleet Cost & Emissions Model – Fueling Infrastructure – Electric Buses**

<b>5H: FUELING INFRASTRUCTURE – ELECTRIC BUSES</b>		
<i>Metric</i>	<i>Data Sources</i>	<i>Values/Notes</i>
Depot Chargers (\$/kW)	J. Agenbroad, Rocky Mountain Institute, <i>Pulling Back the Veil on EV Charging Station Costs</i> , April 29, 2014 <a href="http://blog.rmi.org/blog_2014_04_29_pulling_back_the_veil_on_ev_charging_station_costs">http://blog.rmi.org/blog_2014_04_29_pulling_back_the_veil_on_ev_charging_station_costs</a>	LACMTA facilities department estimates a cost of \$500/kW to upgrade depot electrical infrastructure, plus \$10,000 per bus for the charge adapter, based on a full depot roll-out of electric buses. This equates to \$30,000/bus for required 40 kW chargers.  Model assumes 2,000 depot chargers will be required, one for each daily in-service bus. Daily in-service buses = Fleet assignment x (1-spare factor %).  Annual maintenance costs for depot chargers are assumed to be 10% of installed capital cost.
In-route Chargers (\$/kW)	Recent LACMTA experience installing chargers for BYD electric buses	Installed cost of \$4,000/kW, based on \$80,000 for public, 20 kW DC inductive fast-charger. In-route chargers assumed to be more expensive than depot-based chargers due to need to secure right-of-way, longer feeder runs, and installation of inductive charging pad.  Model assumes that 308 in-route chargers will be required, which is one at each terminal point of 140 bus routes, plus 10%; some existing terminal locations routinely hold more than one bus at a time and would require more than one charger.  Annual maintenance costs for in-route chargers are assumed to be 10% of installed capital cost.
Size (kW)	MJB&A analysis	Charger size (depot and in-route) based on average daily energy requirement (kWh) and available charging time (hr). Average daily energy requirement based on average daily miles times average energy use (kWh/mi).  Depot charger size is 40 kW; In-route charger size is 20 kW.

**Table 5i. Major Assumptions and Data Sources Used in Fleet Cost & Emissions Model – Fueling Infrastructure – Fuel Cell Buses**

<b>5I: FUELING INFRASTRUCTURE – FUEL CELL BUSES</b>		
<i>Metric</i>	<i>Data Sources</i>	<i>Values/Notes</i>
SMR Cost (\$/kg/day)	M. Melaina and M. Penev, National Renewable Energy Laboratory, <i>Hydrogen Station Cost Estimates, Comparing Hydrogen Station Cost Calculator Results with other Recent Estimates</i> , Technical Report NREL/TP-5400-56412, September 2013	\$5,150/kg/day for stations built 2025 – 2034, and \$3,370/day for stations built after 2034. These values represent a 70% and 80% reduction in costs, respectively, compared to recently built hydrogen fuel stations.
Electrolyzer Cost (\$/kg/day)		
Required Capacity (kg/day)	MJB&A analysis	Required hydrogen production/dispensing capacity based on number of buses, daily mileage (mi/day), and average fuel use (kg/mi). Early buses will require 20 kg/bus/day and later buses will require only 18 kg/bus/day based on improved fuel economy due to technology maturity.

**Table 5j. Major Assumptions and Data Sources Used in Fleet Cost & Emissions Model – Depot Expansion and Modifications**

<b>5J: DEPOT EXPANSION AND MODIFICATIONS</b>		
<i>Metric</i>	<i>Data Sources</i>	<i>Values/Notes</i>
Depot Expansion (\$/incremental bus)	LACMTA Engineering Department	\$67,500/bus, applicable only to fleet expansion for electric buses with depot-only charging. Fleet expansion is required because electric buses cannot replace current buses one-for one due to limited range. This cost is based on \$500/sf for depot maintenance bays and \$100/sf for bus parking areas, but is discounted by 50% due to potential excess capacity within the system based on future operational changes.
Depot Parking Expansion (\$/charger)	LACMTA Engineering Department	Assumes that each depot-based electric charger will require 200 square feet of space for installation in depot parking areas. This will require expansion of parking areas to maintain bus parking capacity. Cost of new bus parking areas assumed to be \$100/sf. Total cost of additional bus parking space is \$20,000 per charger.
Maintenance & Diagnostic Equipment (\$/bus)	BYD electric bus quote to LACMTA for electric bus diagnostic equipment	Average cost of \$200/bus, applicable to all new Electric and Fuel Cell buses, based on recent BYD quote.
H <sub>2</sub> Detection and Ventilation Upgrade Cost (\$/bus)	L. Eudy and M. Post, National Renewable Energy Laboratory, <i>Zero Emission Bay Area (ZEBA) Fuel Cell Bus Demonstration Results: Fourth Report</i> , July 2015	Average costs of \$28,000/bus, applicable to all new Fuel Cell buses. This is based on costs of \$350,000 per maintenance bay incurred by AC Transit, and an average of one maintenance bay per 12.6 buses.

**Table 5k. Major Assumptions and Data Sources Used in Fleet Cost & Emissions Model – Global Economic Assumptions**

<b>5K: GLOBAL ECONOMIC ASSUMPTIONS</b>		
<i>Metric</i>	<i>Data Sources</i>	<i>Values/Notes</i>
Annual Inflation, Bus and Infrastructure Purchase and Maintenance and Bus Operator Labor	Energy Information Administration, Annual Energy Outlook 2016, <i>early release, Table 20 Macroeconomic Indicators</i>	Projections for average annual % change in annual Wholesale Price Index, Industrial Commodities Excluding Energy (reference case), through 2040; value used is 1.8%.
Discount Rate for Net Present Value Calculations	LACMTA Policy	Value of 4% intended to represent average borrowing cost for LACMTA capital bonds. Note that this rate is generally consistent with the Energy Information Administration's projection of interest rates for 10-year treasury notes over the next 25 years (AEO2016 reference case).
Methane Global Warming Potential (GWP <sub>100</sub> )	Intergovernmental Panel on Climate Change, <i>Fifth Assessment Report, 2013</i>	Global warming potential of methane over 100 years relative to CO <sub>2</sub> . Value is 25.

## 3. RESULTS

This section summarizes the detailed results of the fleet cost and emissions analysis for each modeled bus technology/fuel purchase scenario.

### 3.1 Fleet Costs 2015 - 2055

Table 6 summarizes the total estimated fleet costs from 2015 – 2055 under each scenario in nominal dollars, during the transition to the different bus and fuel technologies. Incremental costs for each scenario compared to baseline are also plotted in Figure 4. See the Executive Summary for the net present value of estimated fleet costs in current dollars (2015).

As shown, the use of RNG by itself is not projected to increase total fleet costs. The use of RNG and the transition to LNOx buses is projected to increase total fleet costs over the next 40 years by \$297 million, an increase of 0.8% over projected baseline costs. The increased costs are due to slightly higher fuel and maintenance costs, as well as slightly higher bus purchase and overhaul costs.

The transition to electric buses is projected to increase total fleets costs by \$764 million - \$1.82 billion over the next 40 years, an increase of 2.1% - 4.9% over projected baseline costs. Exclusive depot charging is projected to be more expensive than depot and in-route charging during the transition.

The electric bus scenarios have increased costs relative to the baseline projection primarily due to increased capital costs for bus purchase and overhaul and for required depot modifications and installation of required fueling infrastructure.

For electric buses total operating costs are projected to be lower than baseline operating costs due to reduced fuel and maintenance costs. For depot-only charging these operating cost reductions are offset by higher bus operator labor costs due to the need to operate a greater number of buses because of electric bus operating range restrictions. Depot-only charging is projected to be more expensive than depot and in-route charging due to this increase in operator labor, as well as increased costs for purchasing a greater number of buses, which more than offsets higher infrastructure costs for route-based chargers.

**Table 6. LACMTA Zero Emission Bus Estimated Total Fleet Costs 2015 - 2055 (nominal \$ million)**

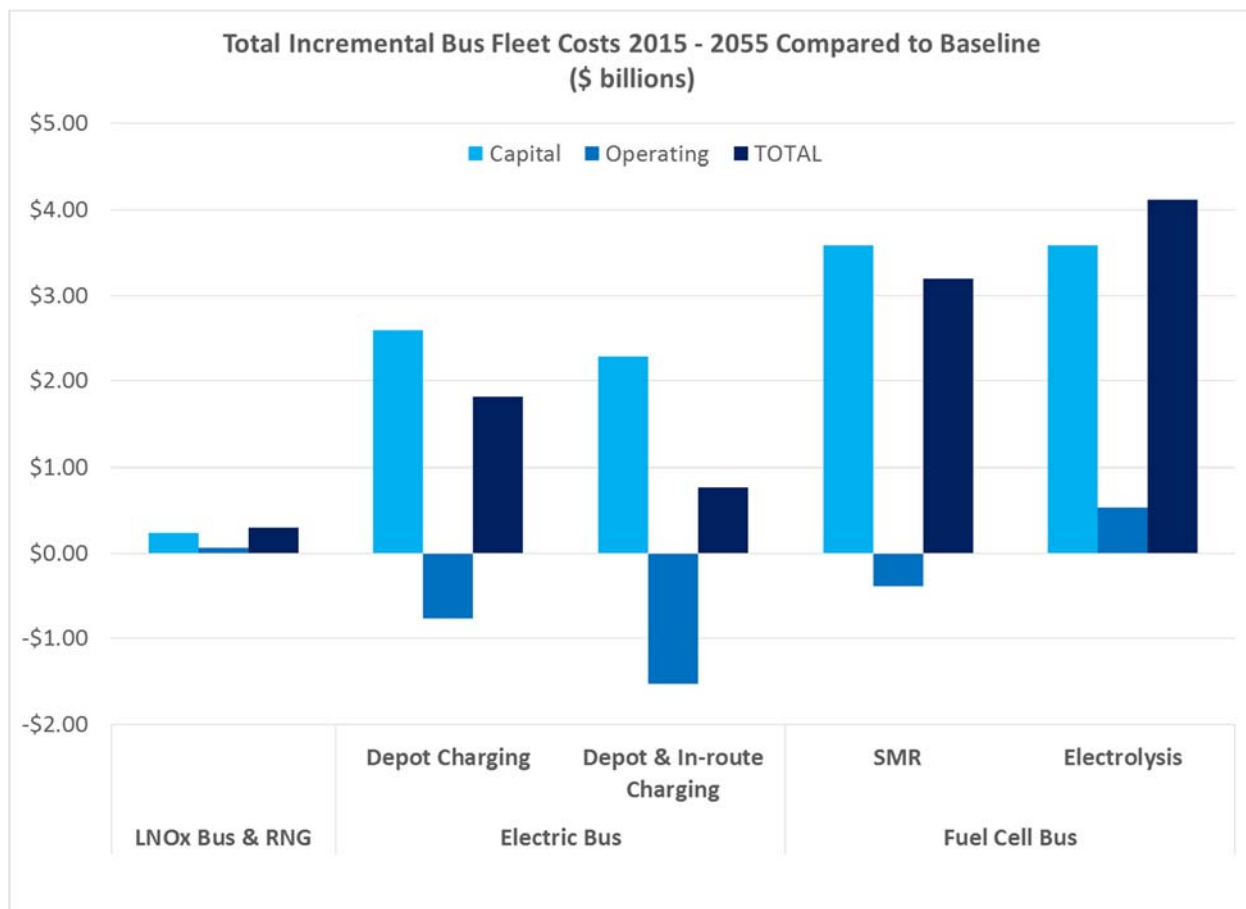
Cost Element		BASELINE	RENEW NG	LOW NOx CNG BUS & REPOWER		ELECTRIC BUS		FUEL CELL BUS	
		Std CNG Bus Conv NG	Std CNG Bus RNG	LNOx Bus Conv NG	LNOx Bus RNG	Depot Charging	Depot & In- Route Charging	H <sub>2</sub> by SMR	H <sub>2</sub> by Electrolysis
<b>Capital</b>	Bus Purchase	\$5,177.9	\$5,177.9	\$5,250.0	\$5,250.0	\$7,094.2	\$6,889.2	\$7,101.5	\$7,101.5
	Bus Repower			\$135.7	\$135.7				
	Bus mid-life OH	\$369.9	\$369.9	\$395.1	\$395.1	\$823.4	\$744.1	\$1,603.6	\$1,603.6
	Depot Mods					\$118.7	\$72.8	\$100.8	\$100.8
	Fuel Infra	\$0.0	\$0.0	\$0.0	\$0.0	\$99.4	\$127.7	\$324.9	\$324.9
	<i>sub-total</i>	<i>\$5,547.8</i>	<i>\$5,547.8</i>	<i>\$5,780.9</i>	<i>\$5,780.9</i>	<i>\$8,135.7</i>	<i>\$7,833.7</i>	<i>\$9,130.7</i>	<i>\$9,130.7</i>
<b>Operating</b>	BO Labor	\$23,515.6	\$23,515.6	\$23,515.6	\$23,515.6	\$24,174.3	\$23,515.6	\$23,515.6	\$23,515.6
	Fuel	\$2,958.4	\$2,958.4	\$2,968.8	\$2,968.8	\$1,733.3	\$1,680.5	\$2,396.6	\$3,317.9
	Maintenance	\$4,793.8	\$4,793.8	\$4,846.9	\$4,846.9	\$4,591.7	\$4,549.5	\$4,968.8	\$4,968.8
	<i>sub-total</i>	<i>\$31,267.8</i>	<i>\$31,267.8</i>	<i>\$31,331.3</i>	<i>\$31,331.3</i>	<i>\$30,499.3</i>	<i>\$29,745.6</i>	<i>\$30,881.0</i>	<i>\$31,802.2</i>
<b>TOTAL</b>		<b>\$36,815.6</b>	<b>\$36,815.6</b>	<b>\$37,112.2</b>	<b>\$37,112.2</b>	<b>\$38,635.0</b>	<b>\$37,579.3</b>	<b>\$40,011.7</b>	<b>\$40,933.0</b>
<b>INCREASE</b>		<b>NA</b>	<b>\$0.00</b>	<b>\$296.59</b>	<b>\$296.59</b>	<b>\$1,819.44</b>	<b>\$763.73</b>	<b>\$3,196.17</b>	<b>\$4,117.40</b>

The transition to fuel cell buses is projected to increase total fleets costs by \$3.2 - \$4.1 billion over the next 40 years, an increase of 8.7% - 11.2% over projected baseline costs.

Fuel cell buses are projected to have slightly higher maintenance costs and significantly higher capital costs than the baseline. Fuel costs are projected to be either lower or higher than the baseline, depending on the method of hydrogen production; making hydrogen using electrolysis is projected to be significantly more expensive than making hydrogen using SMR.

Capital costs are higher due to the projected cost of fueling infrastructure, as well as significantly higher bus purchase and overhaul costs.

Figure 4. LACMTA Zero Emission Bus Estimated Incremental Fleet Costs 2015 - 2055 (nominal \$)



### 3.2 Annual Fleet Costs After 2055

Table 7 summarizes the total estimated fleet costs in 2055 under each scenario in nominal dollars. Incremental costs for each scenario compared to baseline are also plotted in Figure 5. This data represents projected on-going annual costs for each bus/fuel technology after fully transitioning the fleet.

As shown, the use of RNG by itself is not projected to increase on-going annual fleet costs. The use of RNG and LNOx buses is projected to increase on-going annual fleet costs by \$3.3 million (2055 \$), an increase of 0.3% over projected baseline annual costs. The increased costs are due to slightly higher annual fuel costs, as well as slightly higher annual bus purchase and overhaul costs.

The use of electric buses with depot-only charging is projected to increase on-going annual fleet costs by \$31 million, an increase of 2.5% over projected baseline costs. The use of electric buses with depot and in-route charging is projected to increase on-going annual fleet costs by \$2.7 million, an increase of 0.2% over projected baseline costs.

The electric bus scenarios have increased on-going annual costs relative to the baseline projection primarily due to continuing higher annual capital costs for bus purchase and overhaul. These scenarios

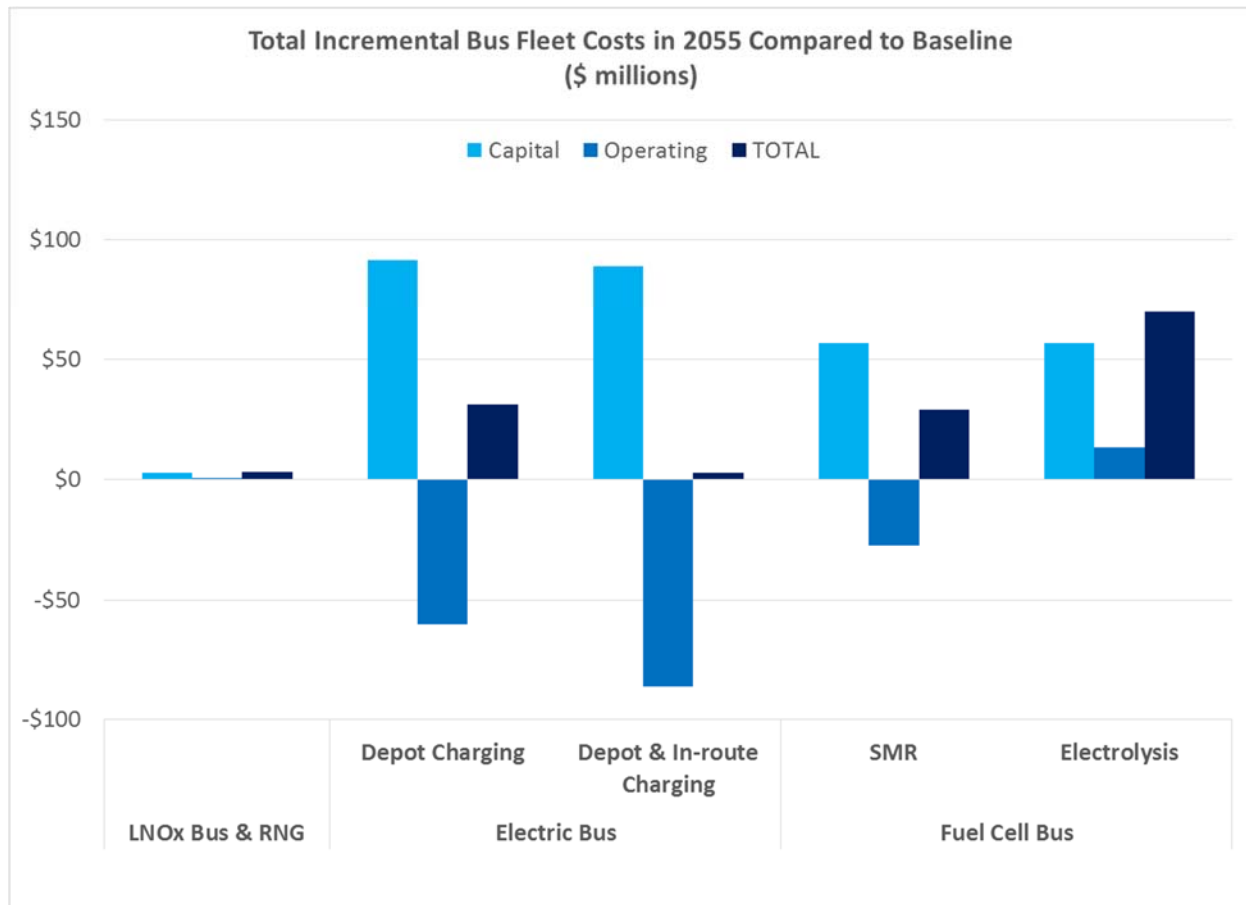


have significantly lower annual operating costs for fuel and maintenance, but these savings do not outweigh the increase in amortized capital costs.

**Table 7. LACMTA Zero Emission Bus Estimated Annual Fleet Costs in 2055 (nominal \$ million)**

Cost Element		BASELINE	RENEW NG	LOW NOx CNG BUS & REPOWER		ELECTRIC BUS		FUEL CELL BUS	
		Std CNG Bus Conv NG	Std CNG Bus RNG	LNOx Bus Conv NG	LNOx Bus RNG	Depot Charging	Depot & In- Route Charging	H <sub>2</sub> by SMR	H <sub>2</sub> by Electrolysis
<b>Capital</b>	Bus Purchase	\$175.3	\$175.3	\$177.1	\$177.1	\$243.6	\$243.7	\$213.9	\$213.9
	Bus Repower			\$0.0	\$0.0				
	Bus mid-life OH	\$12.5	\$12.5	\$13.6	\$13.6	\$35.8	\$33.1	\$30.4	\$30.4
	Depot Mods					\$0.0	\$0.0	\$0.0	\$0.0
	Fuel Infra	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
	<i>sub-total</i>	<b>\$187.8</b>	<b>\$187.8</b>	<b>\$190.6</b>	<b>\$190.6</b>	<b>\$279.3</b>	<b>\$276.9</b>	<b>\$244.3</b>	<b>\$244.3</b>
<b>Operating</b>	BO Labor	\$796.0	\$796.0	\$796.0	\$796.0	\$818.9	\$796.0	\$796.0	\$796.0
	Fuel	\$114.6	\$114.6	\$115.1	\$115.1	\$45.8	\$43.8	\$80.8	\$121.5
	Maintenance	\$162.3	\$162.3	\$162.3	\$162.3	\$147.7	\$146.6	\$168.8	\$168.8
	<i>sub-total</i>	<b>\$1,072.9</b>	<b>\$1,072.9</b>	<b>\$1,073.3</b>	<b>\$1,073.3</b>	<b>\$1,012.4</b>	<b>\$986.5</b>	<b>\$1,045.5</b>	<b>\$1,086.2</b>
<b>TOTAL</b>		<b>\$1,260.7</b>	<b>\$1,260.7</b>	<b>\$1,264.0</b>	<b>\$1,264.0</b>	<b>\$1,291.7</b>	<b>\$1,263.3</b>	<b>\$1,289.8</b>	<b>\$1,330.5</b>
<b>INCREASE</b>		<b>NA</b>	<b>\$0.00</b>	<b>\$3.32</b>	<b>\$3.32</b>	<b>\$31.08</b>	<b>\$2.67</b>	<b>\$29.13</b>	<b>\$69.88</b>

**Figure 5. LACMTA Zero Emission Bus Estimated Incremental Annual Costs in 2055 (nominal \$)**



The use of fuel cell buses is projected to increase on-going annual fleet costs by \$29 - \$70 million, an increase of 2.3% - 5.5% over projected baseline costs.

The fuel cell bus scenarios have increased on-going annual costs relative to the baseline projection primarily due to continuing higher annual capital costs for bus purchase and overhaul, as well as slightly higher annual maintenance costs.

On-going annual fuel costs for fuel cell buses are projected to be lower than the baseline projection if hydrogen is produced using SMR, but higher than baseline fuel costs if hydrogen is produced using electrolysis.

**3.3 Fleet Emissions 2015 - 2055**

Annual estimated fleet emissions of in-basin NOx, out-of-basin NOx, in-basin PM, out-of-basin PM CH4, CO2, and GHG between 2015 and 2055 under each bus technology/fuel purchase scenario are shown in figures 6 – 12.

As shown in these figures, under the baseline scenario there is a significant reduction in annual in-basin NOx emissions, and a smaller reduction in CH4 and GHG emissions, between 2015 and 2020, while CO2, out-of-basin NOx, and in-basin and out-of-basin PM hold steady. This NOx and CH4 reduction is due to the retirement of LACMTA’s oldest CNG buses, which have significantly higher

tailpipe NOx and CH<sub>4</sub> emissions than the new CNG buses that will replace them under the baseline scenario. After 2020 the baseline scenario shows only minor year-to-year changes in annual emissions of all pollutants from the LACMTA bus fleet.

Figure 6. Estimated Annual Fleet Emissions of in-basin NOx (tons), 2015 – 2055

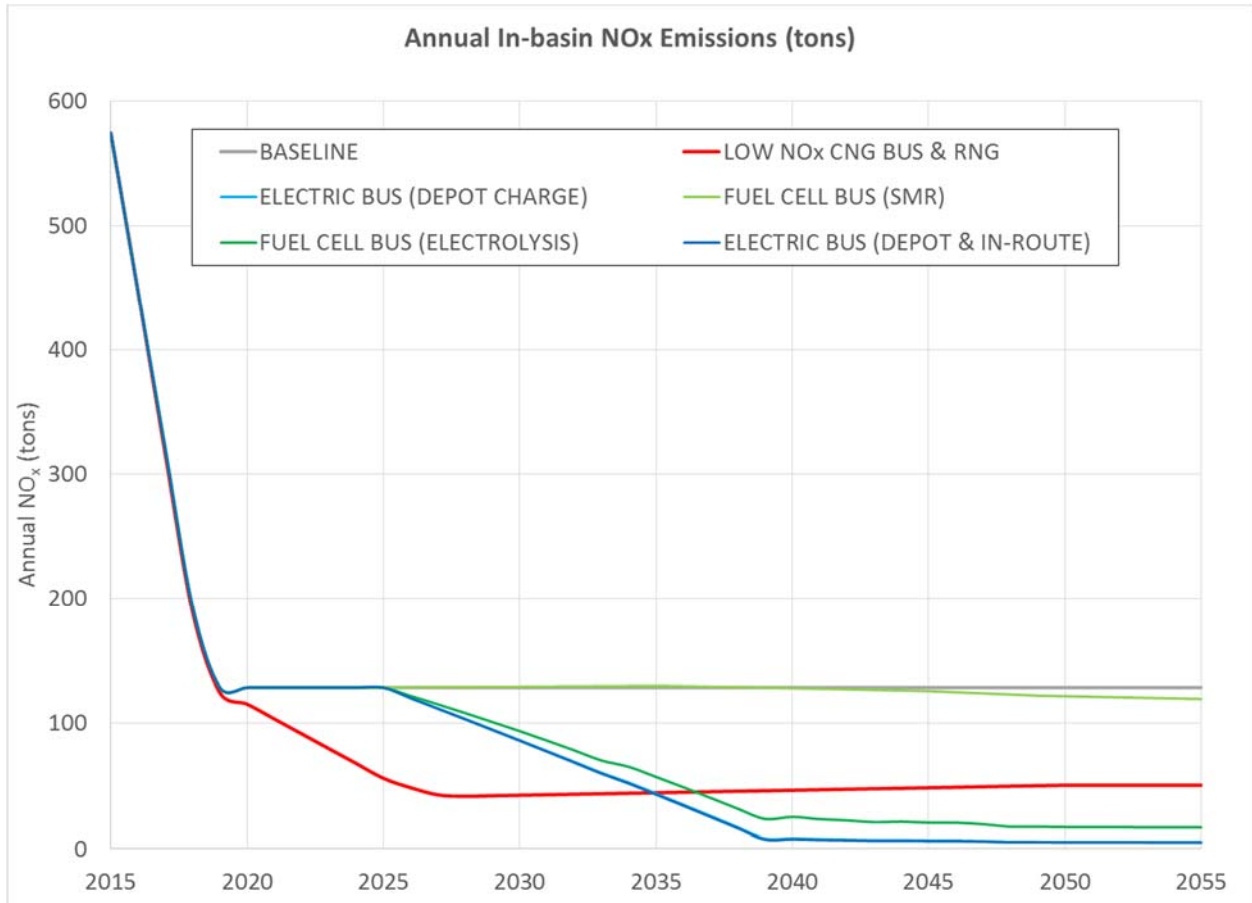


Figure 7. Estimated Annual Fleet Emissions of out-of-basin NOx (tons), 2015 – 2055

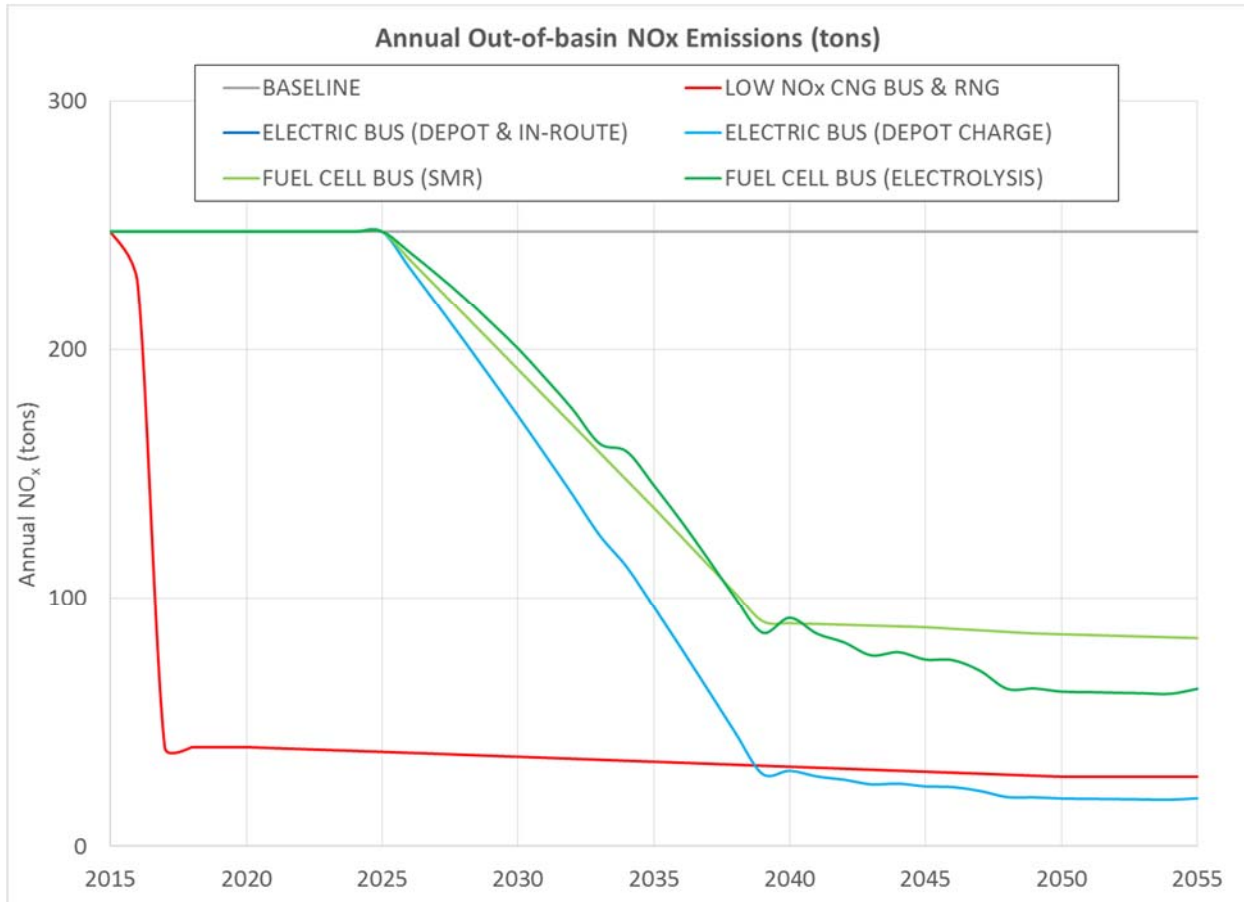


Figure 8. Estimated Annual Fleet Emissions of in-basin PM (tons), 2015 - 2055

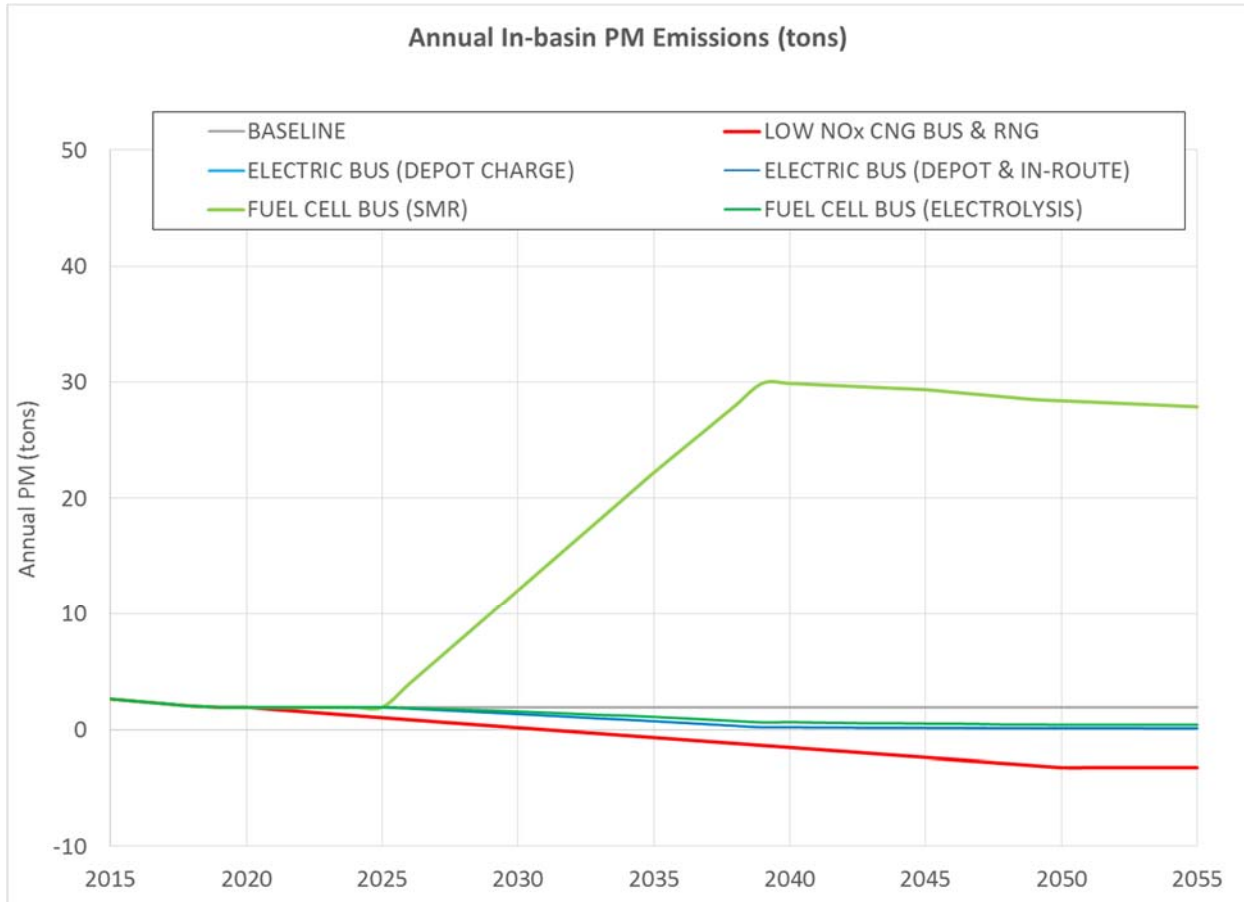


Figure 9. Estimated Annual Fleet Emissions of out-of-basin PM (tons), 2015 - 2055

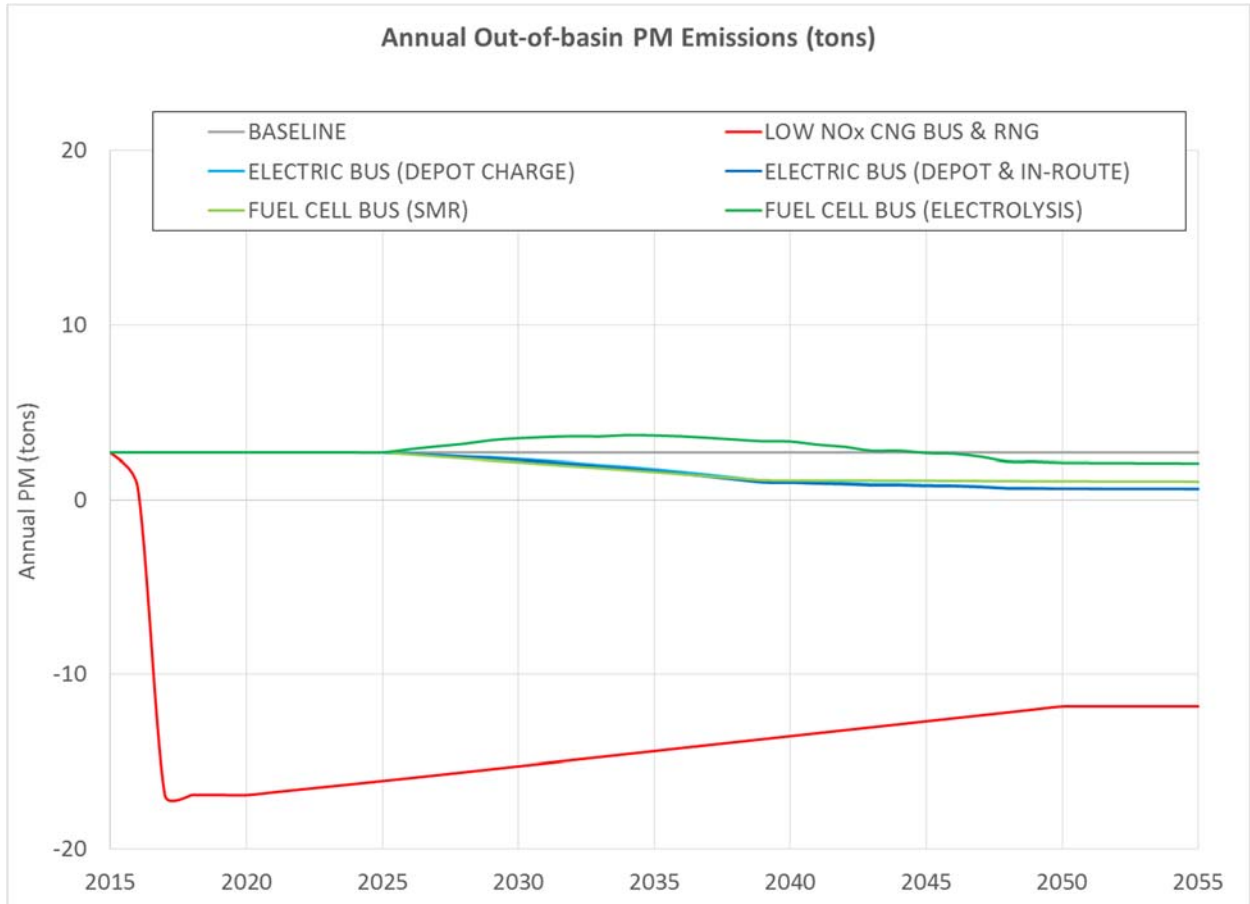


Figure 10. Estimated Annual Fleet Emissions of CH<sub>4</sub> (tons), 2015 - 2055

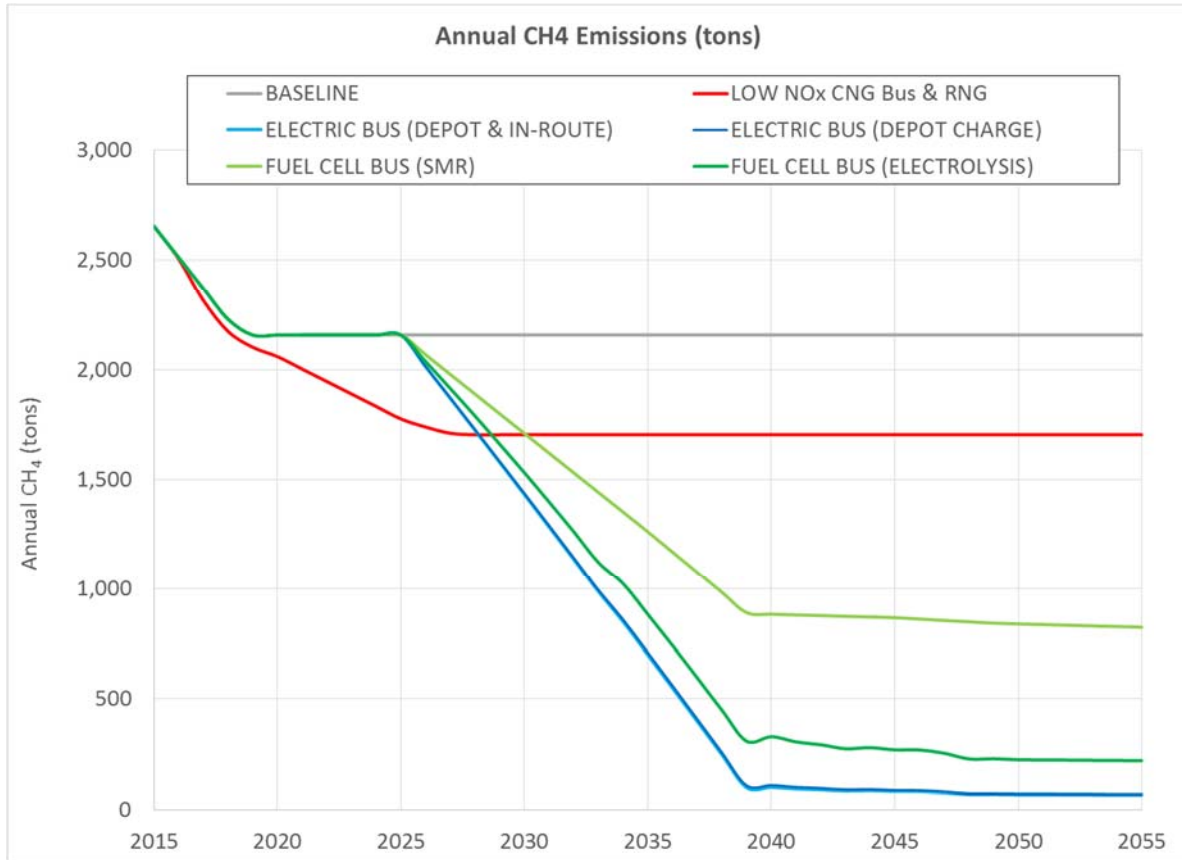


Figure 11. Estimated Annual Fleet Emissions of CO<sub>2</sub> (tons), 2015 - 2055

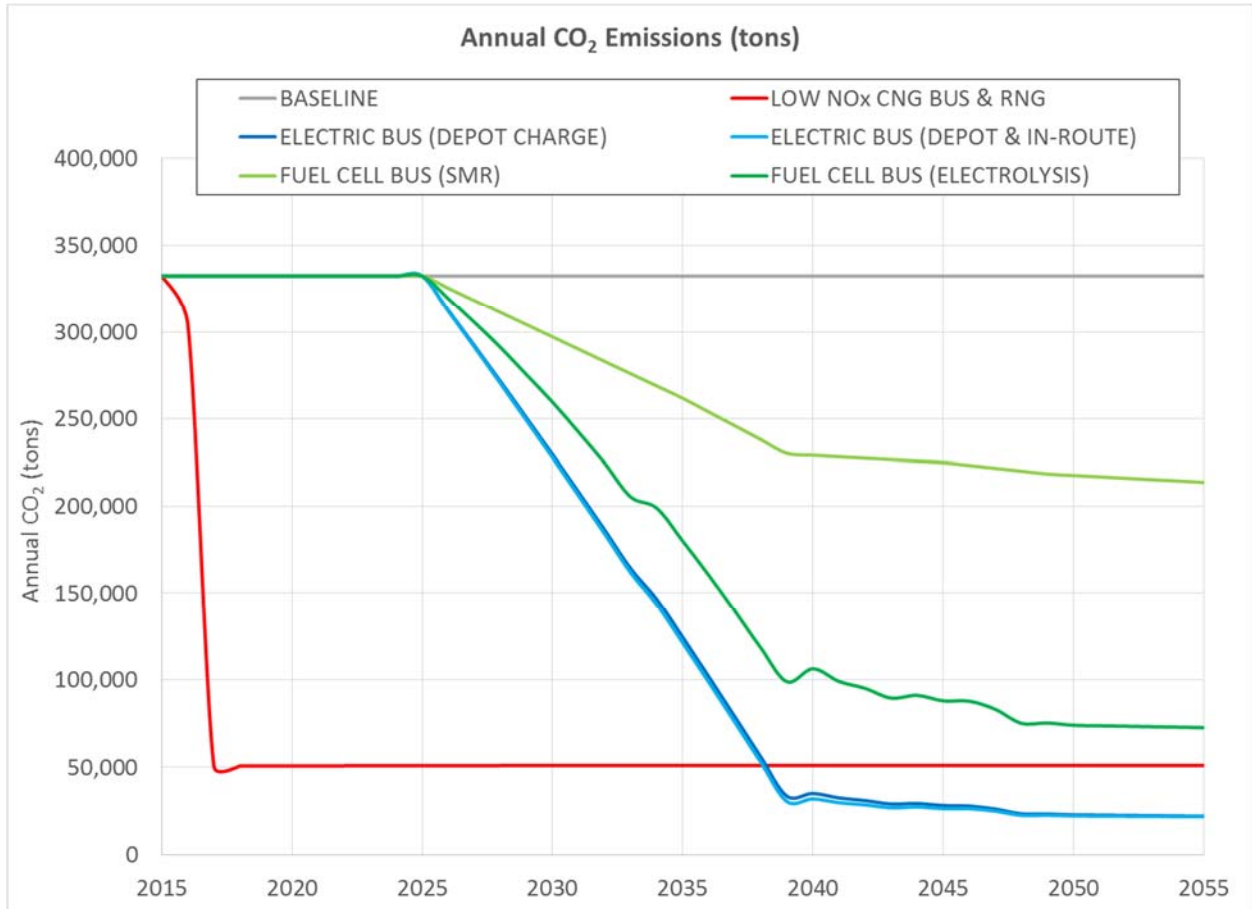
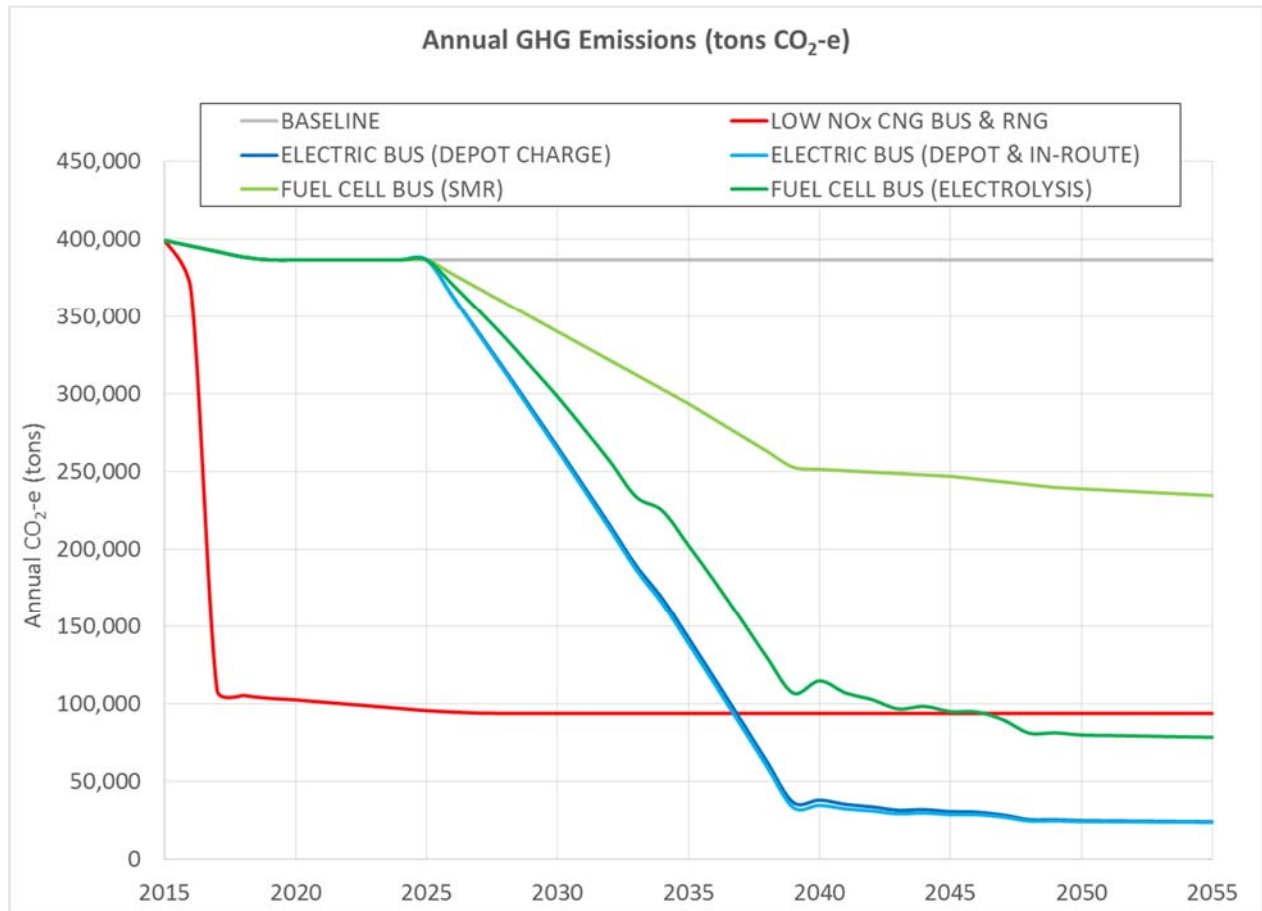




Figure 12. Estimated Annual Fleet Emissions of GHG (tons CO<sub>2</sub>-e), 2015 - 2055



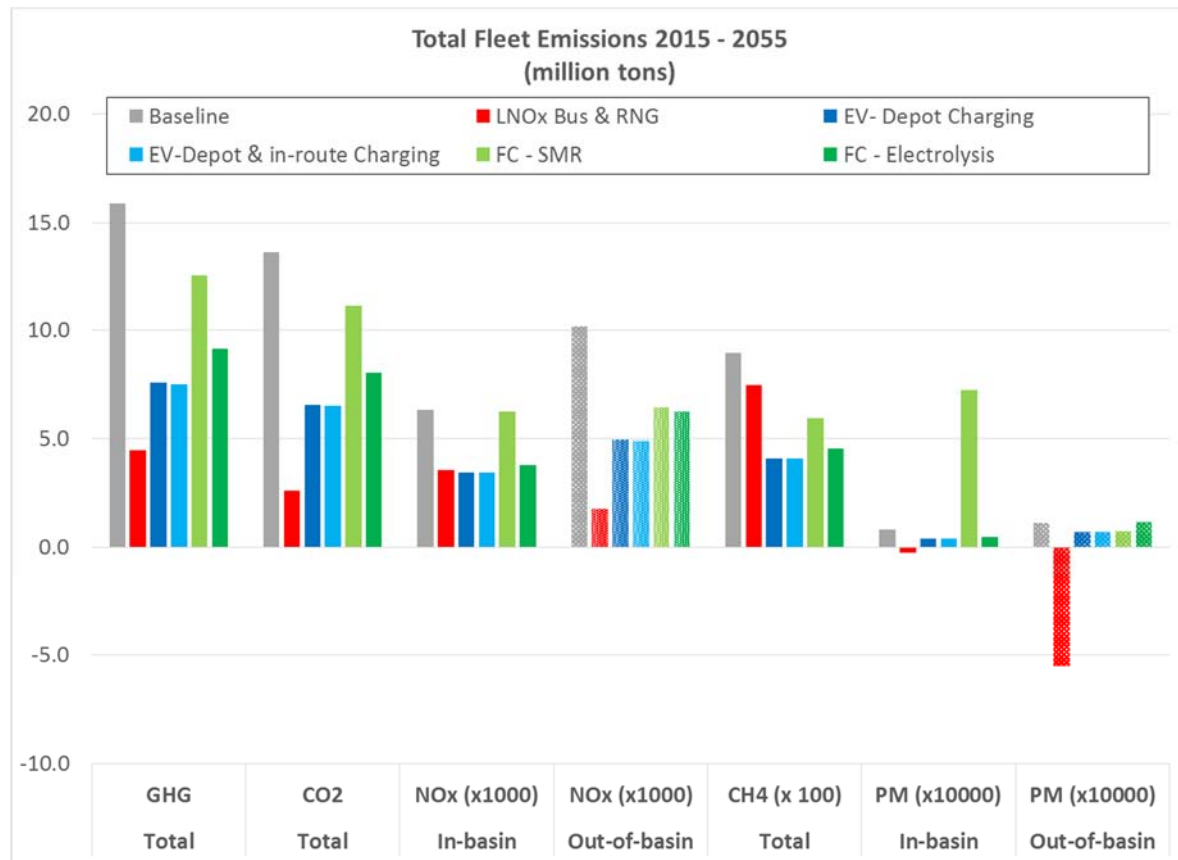
Under the LNO<sub>x</sub> Bus + RNG scenario annual estimated out-of-basin NO<sub>x</sub> and PM, CH<sub>4</sub>, CO<sub>2</sub> and GHG emissions fall dramatically between 2016 and 2018 compared to the baseline, as the entire existing bus fleet is transitioned to RNG. These reductions are the result of lower upstream emissions from RNG production and transport compared to production and transport of standard natural gas. Annual out-of-basin PM emissions from this scenario are negative due to upstream PM credits for RNG production. Over the time period 2018 – 2028 annual in-basin NO<sub>x</sub>, in-basin PM, and CH<sub>4</sub> emissions continue to fall as the bus fleet transitions from standard natural gas engines to Low NO<sub>x</sub> natural gas engines with lower tailpipe emissions of NO<sub>x</sub>, PM, and CH<sub>4</sub>. Between 2028 and 2055 in-basin PM and NO<sub>x</sub> under this scenario increase slightly year-to-year, while out-of-basin PM and NO<sub>x</sub> decrease slightly, due to assumed transition to a greater percentage of RNG produced by in-basin sources.

Under the electric bus and fuel cell bus scenarios annual NO<sub>x</sub>, CH<sub>4</sub>, CO<sub>2</sub>, and total GHG emissions start to fall in 2025 compared to the baseline, with significant year-to-year reductions through 2038 as the fleet transitions to electric or fuel cell buses. After 2038 annual emissions continue to fall, but at a lower rate. These continuing annual reductions after 2038 are due to continuing reductions in upstream emission rates (g/kWh) for electricity production, based on greater use of zero-emission renewable energy sources (solar, wind). With the exception of the fuel cell scenario with hydrogen fuel produced via SMR the electric and fuel cell scenarios produce significant reductions in both in-basin and out-of-basin NO<sub>x</sub>. When hydrogen is produced via SMR, out-of-basin NO<sub>x</sub> emissions fall

year-to-year, but annual in-basin NOx emissions are similar to those under the baseline scenario throughout the analysis period.

With the exception of the fuel cell scenario when hydrogen is produced via SMR the electric and fuel cell scenarios also show reduced in-basin and out-of-basin PM emission compared to the baseline. When hydrogen production is by SMR out-of-basin PM emissions fall relative to the baseline, but in-basin PM emission increase significantly year-to-year through 2039 and then start to fall slightly. These increased in-basin PM emissions are due to the upstream emissions from producing hydrogen via SMR at the depots, and they outweigh reductions in tailpipe PM emissions from CNG buses.

Figure 13. LACMTA Zero Emission Bus Total Fleet Emissions (million tons) 2015 -2055



Total fleet emissions from each scenario over the period 2015 – 2055 are summarized in Figure 13. As shown, over the next 40 years total estimated fleet emissions of in-basin and out-of-basin PM, out-of-basin NOx, CO<sub>2</sub>, and GHG are projected to be lower from the use of RNG and transition to LNOx buses than from transition to electric or fuel cell buses, while total fleet emissions of in-basin NOx are projected to be slightly higher and total fleet emissions of CH<sub>4</sub> are projected to be moderately higher.

Note that this analysis assumes that the RNG purchased by LACMTA will be 100% landfill gas, with 100% sourced from outside of the South Coast Air Basin in the near term, transitioning to 30% sourced from within the basin after 2050. According to the California Air Resources Board<sup>7</sup> RNG produced from wastewater treatment plants or food waste would have lower NOx and lower GHG

<sup>7</sup> California Low Carbon Fuel Standard

emissions than landfill gas. The use of RNG from these sources could further reduce total GHG and NOx emissions for the LNOx Bus + RNG scenario, compared to the data shown in Figure 11. The proportion of total NOx emitted in-basin and out-of-basin under the LNOx Bus + RNG scenario would be affected by both the RNG source type and the RNG source location.

**3.4 Fleet Emissions After 2055**

Table 8 summarizes the total estimated fleet emissions in 2055 under each scenario; this data is also plotted in Figure 14. This data represents projected on-going annual LACMTA fleet emissions for each bus/fuel technology after fully transitioning the fleet.

**Table 8. Projected LACMTA Annual Fleet Emissions in 2055 (tons)**

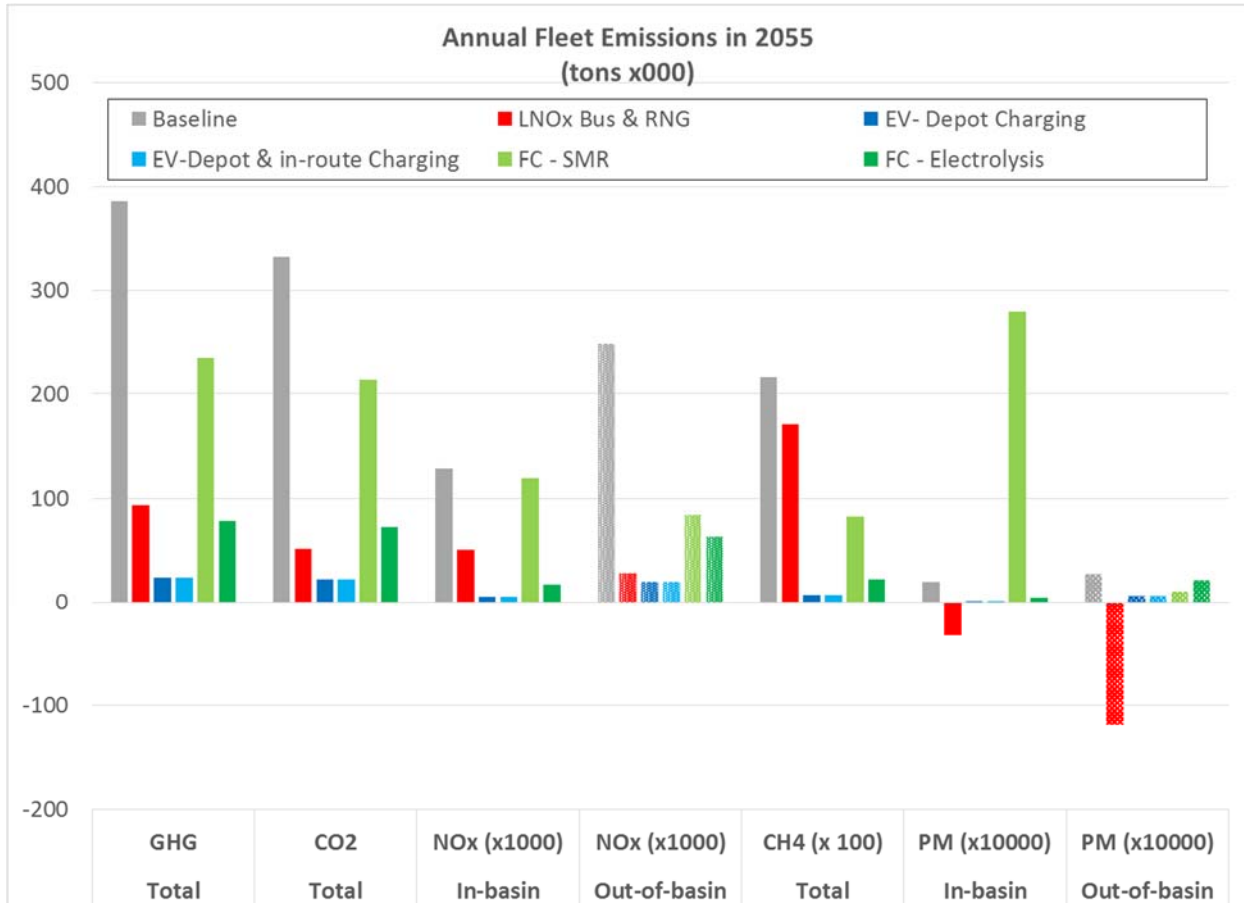
Pollutant	BASELINE		RENEW NG		LOW NOx CNG BUS & REPOWER		ELECTRIC BUS		FUEL CELL BUS	
	Std CNG Bus Conv NG	Std CNG Bus Renew NG	LNOx Bus Conv NG	LNOx Bus Renew NG	Depot Charging	Depot & In- Route Charging	H <sub>2</sub> by SMR	H <sub>2</sub> by Electrolysis		
<b>NOx (in-basin)</b>	128.6	136.6	42.5	50.5	5.1	5.1	119.6	16.9		
<b>PM (in-basin)</b>	1.94	-3.13	1.87	-3.22	0.13	0.13	27.87	0.42		
<b>CH<sub>4</sub></b>	2,157.3	2,101.8	1,759.4	1,703.7	67.1	66.3	824.2	220.2		
<b>CO<sub>2</sub></b>	332,622	50,795	333,958	50,999	22,151	21,896	213,790	72,708		
<b>GHG (CO<sub>2</sub>-e)</b>	386,554	103,340	377,942	93,591	23,829	23,554	234,395	78,213		
<b>NOx (Out-of-basin)</b>	247.7	27.9	248.7	28.0	19.3	19.1	83.8	63.4		
<b>PM (out-of-basin)</b>	2.69	-11.83	2.70	-11.88	0.63	0.63	1.05	2.08		

In 2055 and later years electric buses are projected to have the lowest annual GHG emissions, approximately 94% lower than the baseline, and 75% lower than RNG plus LNOx buses. Fuel cell buses are projected to have GHG emissions 16% lower than RNG plus LNOx buses if the hydrogen fuel is produced by electrolysis, but 148% higher if the hydrogen fuel is produced by SMR.

Despite higher annual emissions after 2055, total cumulative GHG emissions would be lower from the transition to RNG and LNOx buses than from the transition to electric buses through 2099 due to lower emissions between 2015 and 2055. After 2099 electric buses would start to accrue net GHG reductions relative to RNG and LNOx buses.

Fuel cell buses would not start to accrue net GHG reductions relative to RNG and LNOx buses until 2358, even if hydrogen fuel was produced using electrolysis.

Figure 14. Projected LACMTA Fleet Emissions in 2055 (tons x000)



In 2055 and later years electric buses are projected to have the lowest annual in-basin and out-of-basin NOx emissions, approximately 96% and 92% lower than the baseline respectively. In 2055 in-basin NOx emissions from electric buses are projected to be 90% lower than from RNG plus LNOx buses. Fuel cell buses are projected to have in-basin NOx emissions 66% lower than RNG plus LNOx buses if the hydrogen fuel is produced by electrolysis, but 136% higher if the hydrogen fuel is produced by SMR.

# Biomethane Implementation Plan

APRIL 2013



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## 1. Introduction and Background

Metro has several adopted policies that guide sustainability and energy related actions within the agency. The Metro Sustainability Implementation Plan (MSIP) demonstrates our continuing commitment to sustainability through fiscal responsibility, social equity, and environmental stewardship. Some of the initiatives addressed in the MSIP include energy and resource conservation and greenhouse gas (GHG) management. In 2010, Metro conducted a cost-effectiveness study on GHG reduction strategies which in particular investigated the GHG impacts of Metro operations and fuel use. Metro's comprehensive Energy Conservation and Management Plan (ECMP), developed in 2011, provides a blueprint to direct Metro's overall energy management in a sustainable and cost-effective manner. Metro adopted its Renewable Energy Policy in 2011 which outlines elements to implement comprehensive renewable energy programs including the exploration of creative renewable energy resources and the establishment of a stretch goal of an additional 13% renewable energy use above the current baseline usage of 20% by 2020. A recent report to the Metro Board dated June 29, 2012 includes an outline of Metro's current progress toward achieving such a goal.

These policies and plans make energy efficiency and environmental responsibility priorities in our agency and require us to continually evaluate viable options to use more renewable energy to power transit and facilities operations. Utilizing renewable energy presents opportunities to reduce GHG emissions and meet our adopted renewable energy policy goals.

Metro currently operates the largest alternatively fueled fleet in the nation (and has 100% of its fleet transitioned to compressed natural gas, or CNG). Staff is committed to explore ways that will further improve our operations and reduce our environmental impact, specifically via cost-effective methods. Staff has identified biomethane as a potentially viable alternative to CNG. Biomethane has the same chemical make-up and can be produced with the same fuel specifications as CNG. Biomethane currently has the lowest carbon intensity among alternative fuels included in the suite of options to comply with California's Low Carbon Fuel Standard (LCFS), including CNG. The carbon intensity of a fuel is a measure of its GHG emissions over the lifecycle of production – including processes such as extraction, transportation, and combustion or use in a vehicle.

Based on our current understanding of biomethane, use of this fuel has the potential to help Metro reach our renewable energy goals, reduce our agency's GHG emissions, and generate revenue without changing our current fueling infrastructure, bus fleet, or maintenance operations. However, because of the potentially complex nature of a transition to biomethane, there is a need to conduct a more detailed analysis to better understand the feasibility of the use of biomethane as an alternative form of fuel for our fleet.

## 2. Summary of Biomethane as a Transportation Fuel

Biomethane refers to pipeline quality natural gas that is conditioned from biogas, a renewable resource derived from a variety of sources including landfills and wastewater treatment plants. The biogas is subsequently upgraded and all impurities are removed before delivery to an end

user or injection into an existing natural gas pipeline. The biomethane delivered to an end user such as Metro will meet the same specifications of the natural gas that is currently delivered to our agency via utility pipelines. As a result, there are few infrastructure modifications and no vehicle modifications required if we shift to this fuel. Further, the operation and maintenance of Metro's existing fleet will be unaffected by the use of biomethane.

Metro will likely be an attractive customer for biomethane producers because of the size of its fleet and the predictability of its fuel demand. For instance, transit agencies in Sweden have established themselves as "anchor customers" because of the constant high demand for fuel – this is common with transit agencies and one of the reasons that the natural gas vehicle industry continues to target transit fleets for potential conversion to CNG from diesel. Based on initial research, Metro may have sufficient demand to help spur the investment of or invest in its own biomethane production facility, depending on a variety of factors.

Based on current information, while biomethane appears to be a viable fuel option for Metro, shifting from CNG to biomethane may be more challenging. Further research and analysis are warranted regarding the implications of switching from CNG to biomethane. The following subsections outline the major issues that Metro will consider moving forward to understand the implications of switching from biomethane to CNG for its bus fleet. These issues are highlighted as follows:

- **Biomethane sourcing:** Biogas can be derived from a variety of sources, including but not limited to waste resources such as from landfills, wastewater treatment plants, food processing waste, and manure (e.g., at dairy farms). Biogas can also be derived from purpose grown energy crops, or agriculture and forestry residue. Biogas is generally produced via anaerobic digestion, whereby microorganisms breakdown organic matter in the absence of oxygen. Facilities that are interested in producing biogas generally introduce an anaerobic digester and a collections system.
- **Operational impacts:** For an end-user like Metro, no operational changes to its CNG fueled buses will be required. Neither the fueling stations nor the buses will require any modifications to compress or combust biomethane. The only operational impact would occur if Metro moves away from using CNG buses.
- **Fiscal impacts:** There are multiple fiscal impacts that require consideration regarding biomethane:
  - **Biomethane pricing:** Biomethane is more expensive than the natural gas that Metro currently uses. Unless we have a deal with the provider to offset this price, then it may not make sense fiscally
  - **Procurement:** includes the relationship with the utility and biogas source.
  - **LCFS revenue:** Metro is currently opted into the LCFS as an obligated party dispensing CNG. Displacing CNG with biomethane will impact the potential revenue that could be earned from credits that Metro would generate in the future.

- **Environmental impacts:** There are significant environmental benefits of using biomethane – it has the same air quality benefits as natural gas; however, it also has significant GHG reduction potential, as noted previously. Biomethane is also a renewable resource that can help Metro increase its renewable portfolio. Based on the current suspension of using biomethane to comply with Renewable Portfolio Standards (RPS) in the electricity generation sector, this may be an optimal time for biomethane producers to seek out transportation markets for their product. This could work in Metro’s favor, as it would increase its renewable energy profile, while also providing an opportunity to fuel providers seeking demand for their supply.
- **Policy impacts:** Metro has established internal goals and priorities related to renewable energy consumption that will be affected by a decision to transition to biomethane. Despite the many positives associated with switching to biomethane for the bus fleet, there is also the potential that switching could have an impact on Metro’s relationship with its utility providers.

Based on Metro’s initial review of the potential to transition to biomethane, we outlined three potential options:

- **A rapid transition to biomethane in the next 1-2 years:** A rapid transition to biomethane will likely offer Metro the most cost competitive biomethane purchasing – and enable us to maintain the potential for revenue from the LCFS; however, the potential impacts to other operational impacts within Metro requires advance planning that will delay the implementation of a rapid transition for at least one year based on our current best estimates.
- **A scheduled transition to biomethane over a defined time period:** Although this approach minimizes impacts to Metro operations, it reduces the potential for more competitive pricing. As noted previously, Metro’s fleet is particularly attractive to biomethane producers because it has high volume demand. Through a measured transition, Metro would likely need to provide the appropriate assurances to the biomethane producer with a clearly defined schedule for increased consumption. Metro could also use the measured transition approach as a way to solicit multiple bids for the procurement of biomethane – this would help introduce cost control measures and potentially offset the higher costs of not transitioning more rapidly. A slower implementation schedule would allow Metro’s operations staff to plan for the transition to biomethane, while also providing our procurement team to consider bids from multiple suppliers.
- **No transition to biomethane:** In this third pathway considered, Metro could continue to run its fleet of buses using conventional natural gas. Although this is the path of least resistance, Metro has a goal of reducing the environmental footprint of its operations through the introduction of renewable energy and achieving lower emissions from buses. In order to achieve these goals through its bus operations, and assuming that there are no changes to CNG buses, then Metro will have to explore alternatives that will reduce air quality pollutants and GHG emissions.

## 3. Biomethane Implementation Plan

### 3.1. Introduction

Metro's fleet of transit buses is a major part of the agency's operations. As such, fleet operations will be an important target in Metro's strategy to improve the sustainability of our operations. Although Metro already operates the largest fleet of alternative fuel buses in the United States, we continue to seek opportunities to reduce our GHG emissions. Metro staff have conservatively estimated that a transition to 10% biomethane consumption in our fleet of transit buses will reduce our GHG emissions by 12,000 MT CO<sub>2</sub>e annually.<sup>1</sup>

In Fall 2012, Metro staff initiated research into the feasibility of transitioning Metro's fleet of buses to lower emitting alternatives, with a focus on biomethane. This report outlines the initial findings of Metro's research and outlines the next steps regarding the possibility of biomethane as a fuel for Metro's transit buses.

Metro staff have identified two likely pathways for Metro to transition to biomethane. These pathways, intended to position Metro at the forefront of innovative GHG reduction strategies amongst transit agencies, also provide flexibility and adaptability amidst a somewhat uncertain clean fuels market. These pathways are summarized as:

- Pathway 1: Metro purchases and conditions biogas
- Pathway 2: Pipeline injection of biomethane on Metro's behalf

These pathways are introduced in more detail in the following sections. For each pathway, Metro staff has outlined the following information:

- Overview
- Potential Sources / Partnerships
- Impacts on Operations
- Potential Costs

Following the discussion of the two main pathways considered for biomethane use in our transit fleet, Metro staff have outlined some of the potential ways to offset the costs associated with a transition to biomethane.

### Overview of Metro's Demand for Natural Gas

Prior to the in-depth discussion of the likely pathways for Metro to introduce biogas, we provide a brief overview of Metro's demand for compressed natural gas (CNG). Metro currently consumes about 50 million therms of CNG annually to fuel its fleet of more than 2,200 buses.

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<sup>1</sup> Metro staff assumed 10% of conventional natural gas consumption in transit buses would be displaced by biomethane. Metro staff also accounted for the electricity that would be required to operate the biogas conditioning and upgrading equipment. GHG emissions factors for electricity and natural gas were taken from climate registry data reported online at <http://www.climateregistry.org/tools/carrot/carrot-public-reports.html>.

Metro has 11 divisions around Los Angeles County that have fueling infrastructure; however, only 10 of these divisions use significant quantities of CNG. The consumption of each division is about 10% of the total fleet consumption, which is equivalent to about 420,000 therms monthly.

For the sake of reference, landfill gas collected from waste facilities has a lower content of methane (CH<sub>4</sub>) than what is required for operating buses. The landfill gas needs to be upgraded and conditioned. For the purposes of this report, we assume that biogas has a methane content of 60% and that a facility has a methane capture rate after conditioning and upgrading of 87%. In other words, if a landfill is capturing 1,000 therms, then it can produce 522 therms of natural gas for compression and use in a transit bus.

## 3.2. Pathway 1: Metro Purchases and Conditions Biogas

### Overview

In this pathway, Metro would purchase biogas from a local or regional facility that captures methane (e.g., a landfill or wastewater treatment plant). Moreover, Metro would assume responsibility to condition and to upgrade the biogas for pipeline injection or delivery and use as a transportation fuel. Metro staff identified several sub-pathways, as described here:

- **Pathway 1a: Biogas delivery to Metro / Biogas conditioned at Metro facility.** Metro builds pipeline and conditioning facility at a Metro-owned site (e.g., Division) to dispense biomethane. Additional considerations: Other equipment needed on-site such as storage tanks, alignment/interface with bus operations (e.g., compression facilities, fueling demands).
- **Pathway 1b: Biogas conditioned at collection site / Biomethane delivered to Metro.** In this scenario, Metro would build a conditioning facility at the biogas collection site to enable pipeline injection and delivery to Metro facilities. Additional considerations: By injecting into a pipeline, Metro becomes an Energy Service Provider (ESP) or must use broker who will sell biomethane at a premium and has agreements with SoCalGas to provide energy into pipeline (storage, contracts, etc).
- **Pathway 1c: Metro procures biogas / SoCalGas conditions biogas on Metro's behalf.** This pathway is similar to Pathway 1a; however, rather than Metro assuming responsibility for conditioning and upgrading the biogas, Metro opts into a special tariff. As part of the service, SoCalGas will design, install, own, operate, and maintain a biogas conditioning/upgrading facility on or adjacent to the tariff service customer's premises and charge the tariff service customer the fully allocated cost of providing the service under a long term (10 to 15 year) agreement. SoCalGas will not own the biogas entering the facility or the processed renewable natural gas leaving the facility.

### Potential Sources and Partnerships

The focus of this pathway is identifying local or regional sources of biogas which could displace Metro's current consumption of fossil-based natural gas in our fleet of transit buses. Due to cost

concerns (as discussed in more detail later), Metro staff focused research on identifying potential biogas sources in close proximity to Metro’s divisions that use CNG. To help filter the potential local sources of biomethane, we assumed that a landfill would need a potential of at least 1,390 standard cubic feet per minute (scfm).<sup>2</sup> We identified the landfill gas facilities that met this threshold using the Waste to Biogas Mapping Tool available through the US Environmental Protection Agency’s website.<sup>3</sup> The mapping tool provides the operating company, address, and estimated biogas capacity of landfills in a given area.

The map below shows Metro divisions that have CNG refueling infrastructure (blue markers) and the location of the landfills that met the aforementioned threshold of 1,390 scfm (red markers).

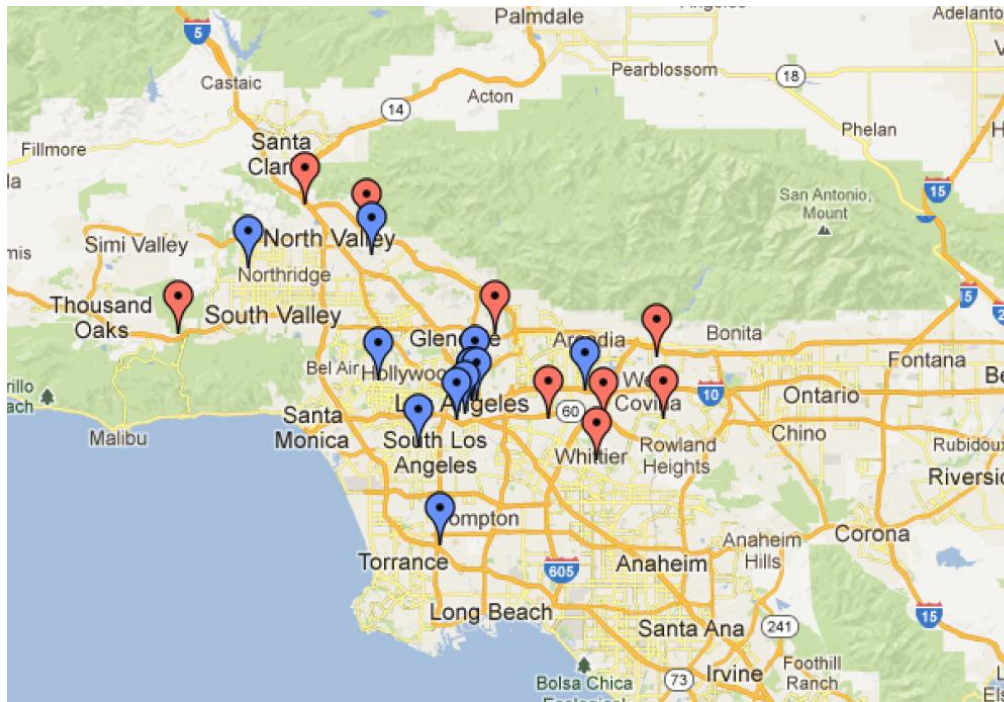


Figure 1. Metro Divisions (blue markers) and Nearby Landfills (red markers)

<sup>2</sup> Generally, biogas capture is measured in units of standard cubic feet per minute (scfm); this is more common than therms or other metrics.

<sup>3</sup> Available online at: <http://epamap21.epa.gov/biogas/index.html>. Accessed April 2013.

Company	Address	City	Biogas potential scfm/yr	Notes
Operating Industries Inc.	900 Potrero Grande Dr	Monterey Park	4,000	
Scholl Canyon Sanitary Landfill	3001 Scholl Canyon Rd	Glendale	6,242	
Azusa Land Reclamation Co. Landfill	1211 West Gladstone St	Azusa	2,270	
Lopez Canyon Sanitary Landfill	11950 Lopez Canyon Rd	San Fernando	2,150	Being used in microturbines; generation 6 MW
Sunshine Canyon City/County Landfill	14747 San Fernando Road	Sylmar	7,679	Partnering with DTE Energy to produce 20 MW energy (five turbines on-site planned)
Savage Canyon Landfill	13919 East Penn Street	Whittier	1,145	
Puente Hills Landfill	13130 Crossroads Pkwy South	Industry	28,220	Gas-to-energy project, produce 50 MW; biogas conditioning closed in 2007
BKK Sanitary Landfill	2210 South Azusa Avenue	West Covina	11,986	Closed; still have landfill gas collection in place
Calabasas Sanitary Landfill	5300 Lost Hills Road	Agoura	5,693	

## Impacts on Operations

Transitioning Metro’s bus fleet to biomethane under this pathway may require facility modifications. Although neither fueling stations nor buses will require any modifications, a biogas conditioning and upgrading facility may need to be sited on Metro property. Siting factors include size of the facility, hookups to existing utility connections and/or compression facilities, and associated storage tanks and other equipment. If for some reason the flow of biomethane or biogas is interrupted or cannot meet the demand of the bus fleet at that division, natural gas will still be available through existing utility hookups and Metro will be subsequently billed by the utility as occurs today.

Metro will likely have to incorporate on-site storage of biogas to accommodate a consistent flow of biogas. Under current conditions, when demand for natural gas ceases at a Metro facility, the flow from the pipeline ceases as well. This is optimal considering the non-linear nature of bus fueling operations. However, under the proposed pathway, the flow of biogas from the source and biomethane from the conditioning facility is constant. There is no off switch, although some landfills may have mechanisms for diverting captured biogas (note: generally, wastewater treatment plants do not). Therefore, the excess biomethane would need to be used or stored. Other options for this excess gas are co-generation plants and storage tanks. Currently, some biogas conditioning facilities have microturbines or fuel cell plants built in to utilize excess biogas. There will be additional costs and operational considerations such as heat and electrical

output as part of these scenarios, but benefits include electrical generation and useful heat output.

## Potential Costs

The cost elements that we must consider for Pathways 1a, 1b, and 1c are generally similar, but have some differences.<sup>4</sup> Metro staff have identified the following cost elements:

- Biogas procurement
- Costs of biogas conditioning facility
- Potential pipeline costs
- SoCalGas tariff (applies only to Pathway 1c)

### Biogas Procurement

For the sake of reference, natural gas spot prices are currently around \$4/MMBtu today. Metro staff anticipate that we should be able to enter into a contract to procure biogas for less than the SoCal Border Wholesale Market price. The commodity cost of biogas (i.e., excluding any clean-up costs or delivery charges) from a landfill operation should be lower than the commodity cost of natural gas spot prices for several reasons.:

- Biogas has a lower methane content, thereby lowering the value of the fuel. Generally, landfill biogas has around 60% methane and requires conditioning and upgrading for consumption in a transit application or for pipeline injection. If Metro were to bear the costs of conditioning and upgrading the fuel (see next subsection), then Metro staff anticipate that we should be able to purchase the biogas at a significant discount.
- Metro is in a position to provide landfills with a revenue stream that are otherwise flaring captured gas. In California, landfills are required to capture biomethane. Landfills can use the captured gas or flare it. Today, the regulatory environment in Southern California makes it difficult for biogas collection facilities to use the gas in energy production. In the past, facilities have simply combusted the captured biogas in reciprocating engines; however, due to air quality regulations, it is increasingly expensive and often cost-prohibitive to install engines that meet emission requirements. Furthermore, landfills are prohibited from injecting biogas into the pipeline.<sup>5</sup> As a result, many landfills are simply flaring the captured product.
- Metro is also in a strong bargaining position because it has a large and consistent demand for natural gas to fuel our transit bus fleet. In other words, Metro can use a significant amount of biogas that landfills are producing, thereby limiting the administrative barriers of having multiple purchasers of biogas from a single source.
- Metro would also be in a position to work with the landfill producer to share the revenue associated with LCFS credits (discussed in more detail in the following section).

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<sup>4</sup> It is important to note that we assume that any facility which Metro partners with will already have biogas recovery equipment installed.

<sup>5</sup> The CEC and CPUC are seeking to resolve the issue of biomethane quality for injection into the pipeline per Assembly Bill 1900.



- A landfill biogas to transit fuel project would be an appealing and innovative strategy to reduce transit-related *and* regional greenhouse gases while making use of the country's landfills.

**Costs of Biogas Conditioning Facility**

There are two main cost components for a biogas conditioning facility: 1) the initial capital costs of the facility and 2) the ongoing maintenance costs of a biogas conditioning facility.

- We estimate capital costs of about \$3-5 million for a medium- to large-sized (i.e., about 1,400 scfm) biogas conditioning facility at a landfill or on-site at one of Metro's divisions.
- We estimate ongoing operational costs for the biogas conditioning facility of about \$1-1.5 million annually

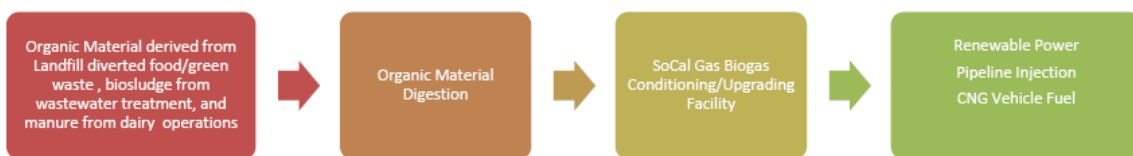
As noted previously, it is likely that Metro – in coordination with its biogas supplier – will have to install a storage facility because of the constant production of biogas from landfills. Conditioned biomethane can be stored in tanks designed for pressurized gas at an additional cost. For example, a 5,000 PSIG 3-pak storage tank costs about \$75,000 and holds 36,000 scfm of gas.

**Potential Pipeline Costs**

The costs of building a pipeline can vary significantly depending on where the pipeline being installed. We use a general estimate of pipeline construction of \$1 million per mile. Assuming that the delivery of biogas to Metro requires a pipeline, that there are no major configuration changes required at Metro Division facilities, and based on the proximity of landfills to Metro's facilities, we estimate potential costs of \$2 million to \$10 million.

**Tariff through SoCalGas**

SoCalGas has requested approval from the California Public Utilities Commission to establish a new tariff to offer Biogas Conditioning/Upgrading Services. Under this service, SoCalGas, will design, install, own, operate, and maintain a biogas conditioning/upgrading facility on or adjacent to the tariff service customer's premises and charge the tariff service customer the fully allocated cost of providing the service under a long term (10 to 15 year) agreement (as shown in the diagram below). SoCalGas will not own the biogas entering the facility or the processed renewable natural gas leaving the facility. SoCalGas' role will be to process the tariff service customer's biogas and condition/upgrade it to the gas quality level(s) contractually specified by the tariff service customer. SoCalGas will conduct an initial technical and economic feasibility analysis of the design, installation, operation and maintenance of the gas conditioning equipment. A site assessment and detailed information about the quality and quantity of biogas are included in this analysis as well. The potential tariff service customer will pay for this initial feasibility analysis. Approval for this tariff is expected by August 2013.



The deal is structured so that the tariff customer pays no capital costs upfront. The capital costs may include laying pipeline, building the facility, and projected operations and maintenance over the lifetime of the project. The tariff customer pays a monthly bill for the life of the project, with a CPI escalator (2-3%). The tariff customer also must pay for electricity to run the facility. In previous scenarios, the cost of electricity is about 2/3 of the entire cost to the tariff customer.

SoCalGas staff has provided Metro with rough estimates of the costs of these services. In order to take 1,400 scfm of raw biogas (estimated demand in previous section) and upgrade it to natural gas quality for expected biomethane output of about 375,000 MMBtu/Year costs about \$165,000 per month over 15 years (\$29.7 million). In addition, the parasitic load for the biogas conditioning facility is about 5.5 million kWh per year or an additional \$660,000 annually in electricity costs. Therefore, the total monthly cost of dispensing biomethane is approximately \$220,000 plus the cost of purchasing the raw biogas and associated pipeline extension costs. As a reference, the average monthly cost of dispensing CNG at a given bus division ranged from about \$150,000 to \$240,000.

### **3.3. Pathway 2: Biomethane Injected into Pipeline on Metro's Behalf**

#### **Overview**

In this pathway, rather than dealing with a local provider of biogas, Metro would contract with a 3<sup>rd</sup> party Energy Service Provider (ESP) because SoCalGas does not offer biomethane. In this case, the biomethane would still be delivered to Metro via the natural gas transmission and delivery system of SoCalGas. As part of its contract with an ESP, Metro would stipulate a percentage of biomethane as part of the pro forma. This biomethane, like the natural gas, would be injected into the pipeline on Metro's behalf. Elements of this pathway include contracts terms with an ESP and administrative agreements with utility.

#### **Potential Partnerships**

SoCalGas maintains a list of participating ESPs pre-approved to supply "Core" customers such as Metro.<sup>6</sup> If Metro were to form an agreement with a non-listed ESP, that entity would have to go through an approval and agreement process with SoCalGas which can take several months.

In this scenario, Metro enters into an agreement with an ESP which can provide biomethane for injection directly into the pipeline. One of the primary differences between this pathway and the previously discussed pathway is the source of biogas. There are currently restrictions on injecting landfill-derived biogas into pipelines in California; however, these restrictions do not exist in other states. In other words, a biogas producer in another state (e.g., Texas or Washington) can capture landfill gas, condition it and inject it into the pipeline locally and have this gas delivered to California for use by a customer such as Metro.

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<sup>6</sup> The list is available at <http://www.socalgas.com/for-your-business/natural-gas-services/energy-service-providers/customer-core-list-of-esps.shtml>.

This would require an agreement between the biomethane injector (Metro) and SoCalGas in order for this to occur, as well as an interconnection fee which can cost up to \$2 million depending on where a local connection capable of receiving pipeline quality gas exists in relation to the site. At many sites, this local connection already exists due to previous installations of biogas conditioning and injection programs.

If Metro contracts with an ESP to inject biomethane into the pipeline on its behalf, there are protocols that must be followed, as outlined by SoCalGas. Generally, these include a number of contracts including a Master Services Agreement, ESP Agreement, Storage Contract, and others.

As part of the pro forma, Metro should insist on a minimum percentage of biomethane (equal to or greater than fuel demand of one bus division) to be injected into pipeline on our behalf. It is also recommended that Metro stipulate a percentage of ownership of RINs and LCFS credits as part of this deal.

Additionally, under Pathway 1, if Metro is injecting the biomethane into the pipeline rather than dispensing it at its bus divisions, it is recommended that Metro go through an experienced broker with contracts with SoCalGas already in place to buy, sell, and inject pipeline quality gas on the behalf of its customers.

## Impacts on Operations

In Pathway 2, there are no impacts on operations or modifications to existing facilities. Further, there would be no discernible difference between the natural gas that would be delivered to Metro's facilities.

## Potential Costs

If Metro were to contract with an ESP to inject biomethane on its behalf, Metro staff are operating under the assumption that the long-term contract with the ESP would link to the SoCal Border Wholesale Market price for natural gas. Apart from this, Metro does not anticipate any additional costs to procure biomethane.

## 3.4. Revenue/Cost Offsetting Potential

There are two fundamental strategies that Metro can employ to help offset the potential costs of transitioning to biomethane, particularly as they apply to Pathway 1 (and each subpathway):

- Revenue from regulatory markets i.e., LCFS market and the RFS2 market
- Grants from funding agencies e.g., CEC or SCAQMD

## Revenue from Regulatory Markets

### Low Carbon Fuel Standard

Metro currently has a LCFS credit balance of about 150,000 credits. At this point in time, Metro has not taken the steps to monetize these credits. However, credits are currently trading for

about \$35-40/credit. Based on Metro’s initial conversations with brokers and other market participants, it may be challenging to sell the entire balance of Metro’s credits in the near-term future as a financing mechanism. In other words, the potential value of Metro’s current account balance is upwards of \$6 million; however, that is dependent on Metro’s ability to move a large volume of credits.

The carbon intensity of biomethane is considerably lower than conventional fossil-based CNG. As a result, the consumption of biomethane as a transportation fuel has the potential to earn a significant number of LCFS credits.

As noted previously, Metro already has a credit balance of 150,000 LCFS credits based on its use of CNG in its fleet of transit buses. Biomethane in the transportation sector has significant potential to generate credits. Today, Metro earns credit as the owner of the fueling station that dispenses CNG. However, the entity that generates the credit for biomethane is the producer. In order for Metro to earn additional credits, we would have to enter an agreement with the biogas provider indicating what is called an obligation with transfer.

The table below highlights the potential LCFS credit generating opportunities under various scenarios:

- Under the business-as-usual (BAU) scenario, Metro continues to earn credits by dispensing natural gas.
- For Pathway 1, Metro staff assumed a 100% transition to biomethane by 2015 from a local in-state landfill. We assumed a carbon intensity of about 11 g/MJ.
- For Pathway 2, Metro staff assumed a 100% transition to biomethane by 2015 from an out-of-state landfill. We assumed a carbon intensity of about 29 g/MJ.

Year	CNG (BAU)	Pathway 1: Biogas (in California)	Pathway 2: Biogas (out-of-state)
2013	90,000		
2014	88,000		
2015	83,000	348,000	264,000
2016	79,000	343,000	260,000
2017	73,000	337,000	254,000
2018	67,000	331,000	248,000
2019	61,000	325,000	242,000
2020	53,000	317,000	233,000
<b>Total (2015-2020)</b>	<b>416,000</b>	<b>2,001,000</b>	<b>1,501,000</b>

### **Federal RFS2 Market: RIN Generation**

Biogas also has the potential to generate Renewable Identification Numbers (RINs), the currency that the US Environmental Protection Agency (EPA) uses to administer the Federal Renewable Fuel Standard (RFS2). In order to generate RINs, the facility producing biogas needs to register as a RIN-generating entity with the US EPA. Biomethane is categorized as an Advanced Biofuel under the EPA's RFS2 program and can generate RINS in this category. Today, biodiesel and sugarcane ethanol are the most common fuels used to comply with the RFS2 requirements of the Advanced Biofuel category.

### **Potential Grant Funding**

Metro staff have identified two potential sources of grant funding to help offset the additional costs of delivering and conditioning biogas that we would incur if we pursued Pathway 1:

- Metro could collaborate with a partner and apply for money under the CEC's Alternative and Renewable Fuel and Vehicle Technology Program (funded via AB 118). Biomethane as a transportation fuel has received a significant amount of funding to date, which is likely to continue in the coming years.
- Metro could also seek opportunities to fund a biomethane project through the Clean Fuels Program, administered by SCAQMD's Technology Advancement Office.

## **4. Next Steps**

The near-term focus of Metro staff is to conduct the following outreach:

- Engage potential local suppliers in substantive discussions regarding the potential to provide biogas to Metro. These discussions need to address the following items:
  - What is the potential supply to Metro? And what is the length of contract that the landfill can guarantee delivery of the biogas? Furthermore, what price is the biogas supplier seeking?
  - Would biogas conditioning occur at the landfill for injection? Or on-site at one of Metro's facilities?
  - What is the arrangement regarding LCFS credits or RINs?
- Based on the outcome of conversations with local suppliers regarding the potential to supply biogas to Metro, determine feasibility of Pathway 1. If Pathway 1 (and its sub-pathways) are not viable, then Metro can immediately engaged with a short list of ESPs that would be willing to supply us with biomethane.



Biomethane Implementation Plan

Anticipated Timeline for Biomethane Implementation												
Major Milestones	Summer 2013			Summer 2014			Summer 2015					
	Initial Feasibility Study	█										
Identify Viable Sources	█											
Assess LCFS & RIN Revenue Potential	█											
Pursue ESP & Broker Commitment		█										
Pathway 1				█								
Apply for Tariff Service (or Comparable)				█								
Biogas Procurement Deal				█								
Pipeline/Facility Construction				█			█					
Testing & Coordination							█					
Begin dispensing biomethane										█		
Pathway 2				█								
ESCO (ESP) Contract				█								
Contract Execution							█					

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**Board Report**

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**File #:** 2017-0144, **File Type:** Agreement**Agenda Number:** 37

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**REGULAR BOARD MEETING  
MAY 25, 2017****SUBJECT: NORTH HOLLYWOOD JOINT DEVELOPMENT PROJECT****ACTION: AUTHORIZE EXECUTION OF EXCLUSIVE NEGOTIATIONS AND PLANNING AGREEMENT FOR NORTH HOLLYWOOD JOINT DEVELOPMENT PROJECT****RECOMMENDATION**

AUTHORIZE the Chief Executive Officer to execute an Exclusive Negotiations and Planning Agreement (ENA) with Trammell Crow Company and Greenland USA (Developer) for the **properties at North Hollywood Station** (Site), for 24 months with the option to extend up to 30 months.

**ISSUE**

On June 24, 2016, Metro and the Developer entered into a 6-month Short Term ENA for the North Hollywood Joint Development Project (Project). Both parties executed a 3-month administrative extension of the Short Term ENA on December 24, 2016, and the Metro Board of Directors authorized an additional 3-month extension on February 23, 2017. These extensions were made to allow additional time for Metro and the Developer to 1) confirm feasibility of transit infrastructure requirements for project shaping; 2) ensure that the proposed development does not physically preclude relevant transit projects funded by the approval of Measure M; and 3) conduct further public outreach to share the results of these feasibility studies and site programming and gather further community feedback.

In the Short Term ENA period, the Developer worked in good faith with Metro staff and performed pursuant to the requirements of the agreement. Staff is now in a position to recommend entering into an ENA, which will enable more advanced negotiations around development of the Site and will allow processing the required entitlements including environmental approvals.

**DISCUSSION**

The North Hollywood Station is a regional, multi-modal transportation hub that includes the termini of the Metro Red and Orange Lines, a local bus layover facility, and a Metro park-and-ride lot. The Site is comprised of four parcels, one easterly and three westerly of Lankershim Boulevard, with potential transit connections available via underground access panels. The Site has arterial and freeway access and extensive public transportation access. Attachment A includes a map of the Metro properties for joint development and their approximate acreages. In total, the Site comprises 15.6

acres situated at the heart of North Hollywood Arts District, and is part of Metro's Transit Oriented Communities (TOC) Demonstration Program.

#### Proposed Development Program and Design

In the fall of 2015, Metro conducted a robust community outreach process to create a Guide for Development for the Site. Input from this process included the community's desire for a high-density, iconic development that is balanced with well-designed open space and celebrates the eclectic, artistic character of the North Hollywood Arts District. The Board approved the Guide for Development in December 2015.

The Developer's site plan and development program, provided in Attachment B, meet the vision laid out in the community-driven Guide for Development. The proposed 1.9 million square foot development includes two high-rise residential towers, four podium residential buildings, of which two are affordable housing, a 300,000 square foot mid-rise office building, a varied 140,000 square foot retail program that potentially includes specialty grocery uses, neighborhood-serving restaurants and retail goods and services; low-rise office space; common area amenities; and pedestrian improvements. In addition to providing these amenities, the proposed development features strong urban design characteristics that will engage the activity generated by the Metro station and activate the streets and open spaces surrounding the new buildings.

A key component of the project is the consolidation of transit facilities at a new multi-modal transit center that will integrate local bus service and Metro Orange Line service on the west side of Lankershim. The consolidated facility will make transfers from Red and Orange Line to local buses more convenient and comfortable. The proposed transit center also includes a dedicated, underground garage, replacing the existing transit parking spaces. Additional parking for transit patrons will be shared with other uses on the Site.

#### Potential Use of Adjacent Metro-owned Property

Metro owns a 1.15 acre parcel immediately west of the Site. This parcel could provide the opportunity to provide either up to 200 additional parking spaces or up to 225 additional affordable housing units. This parcel will need to be studied further to determine the final parking or affordable housing that could be added. The 200 parking stalls could increase the overall parking count to provide additional parking if actual parking demand exceeds Metro's estimate. Transit parking demand will be reassessed with the implementation of Metro's Parking Management Pilot Program, which will be in place by summer 2017, as well as the Parking Guidance System. The parking management system will both charge for daily parking and affirmatively restrict parking to transit riders. Determination of the most appropriate use for this parcel will be further explored to incorporate feedback from the community as well as data from the new parking demand management systems.

#### Coordination with Metro Departments/Transit Facility Configuration

Throughout the Short Term ENA phase, Metro Joint Development staff coordinated with Bus and Rail Operations, Systemwide Planning, Program Management, and Parking Management to ensure that the conceptual Project will meet Metro's broader needs. The resulting concept will:

1. accommodate continuous transit operations at the Site during construction;
2. be constructed without damaging Metro infrastructure;
3. replace all required transit infrastructure currently at the Site;

4. provide sufficient parking to meet the Station's transit parking demand; and,
5. allow future construction and operation of transit infrastructure at and around the Site including electrification of the Orange Line, conversion of the Orange Line to light rail, and incorporation of the North Hollywood to Pasadena BRT.

If the ENA is executed, Joint Development staff will continue internal coordination to vet the project with all affected departments and divisions within Metro to ensure that the project does not limit Metro's current or future infrastructure or operational needs.

#### Financial Feasibility

Metro retained Maxima Group, an experienced financial consultant (Consultant), to review the materials received during the Short Term ENA period. The Consultant found that the Developer has laid out a Program that appears to be financially feasible in its conceptual form. The Consultant observed that the proposed development program and site plan demonstrate that the key objectives laid out in the Guide for Development can be met, and that, taken as a whole, the Developer's preliminary assumptions about development costs and potential income are achievable. The ENA period will allow further market research and review of financial assumptions to inform ground lease negotiations and to further refine infrastructure costs and funding.

#### **DETERMINATION OF SAFETY IMPACT**

Approval of this item will have no impact on safety. Metro's operations staff will continue to review and comment on the proposed development to ensure that the proposals have no adverse impact on the station, portal and public areas on Metro's property.

#### **FINANCIAL IMPACT**

Funding for joint development activities related to the ENA and the proposed project is included in the FY18 budget in Cost Center 2210, Project 401011. In addition, the ENA will require a non-refundable fee of \$50,000 as well as a \$50,000 deposit to cover third-party expenses during the negotiation.

#### Impact to Budget

Metro project planning activities and related costs will be funded from General Fund local right-of-way lease revenues and any deposits secured from the Developers, as appropriate. Local right-of-way lease revenues are eligible for bus/rail operating and capital expenses. Execution of the ENA will not impact ongoing bus and rail operating and capital budget, Proposition A and C and TDA administration budget or Measure R administration budget.

#### **ALTERNATIVES CONSIDERED**

The Board could choose not to proceed with the recommended action and could direct staff to (a) not enter into an ENA with the Developer, (b) continue communications regarding refinement of the project with the Developer within the existing Short Term ENA, or (c) not proceed with the proposed project and seek new development options via a new competitive process.

Staff does not recommend proceeding with these alternatives because the recommended action will ensure additional input from the community and other public sector stakeholders and appropriately builds upon the significant community input and procurement process that has transpired thus far. A new RFP process would delay the development of the Site and Metro may fail to take advantage of currently favorable conditions in the real estate market. Further, if the outcome of the discussion during the ENA period does not create a project proposal suitable to the community or the Board, other options could still be considered.

**NEXT STEPS**

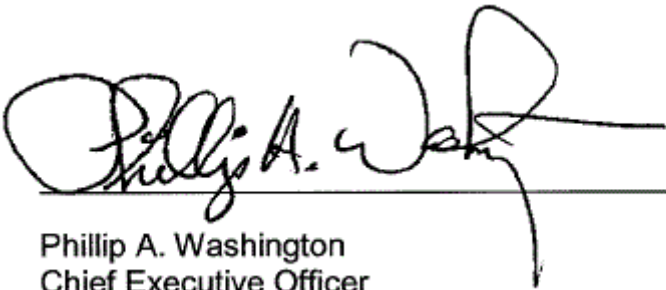
Upon approval of the recommended action, Metro will enter into an ENA with Trammell Crow Company/Greenland USA. The Developer team, together with the joint development staff, will refine transit facility requirements and the overall project concept, explore options for funding, and continue the outreach and community engagement process. The Developer will further design and begin the environmental clearance process. After the initial 18 months of the ENA process, staff will update the Board on the status of the project.

**ATTACHMENTS**

- Attachment A - North Hollywood Joint Development Site
- Attachment B - Proposed North Hollywood Site Plan and Program Summary

Prepared by: Wells Lawson, Senior Director, Countywide Planning & Development, (213) 922-2563  
Jenna Hornstock, Deputy Executive Officer, Countywide Planning & Development (213) 922-7437  
Cal Hollis, Senior Executive Officer, Countywide Planning & Development (213) 922-7319

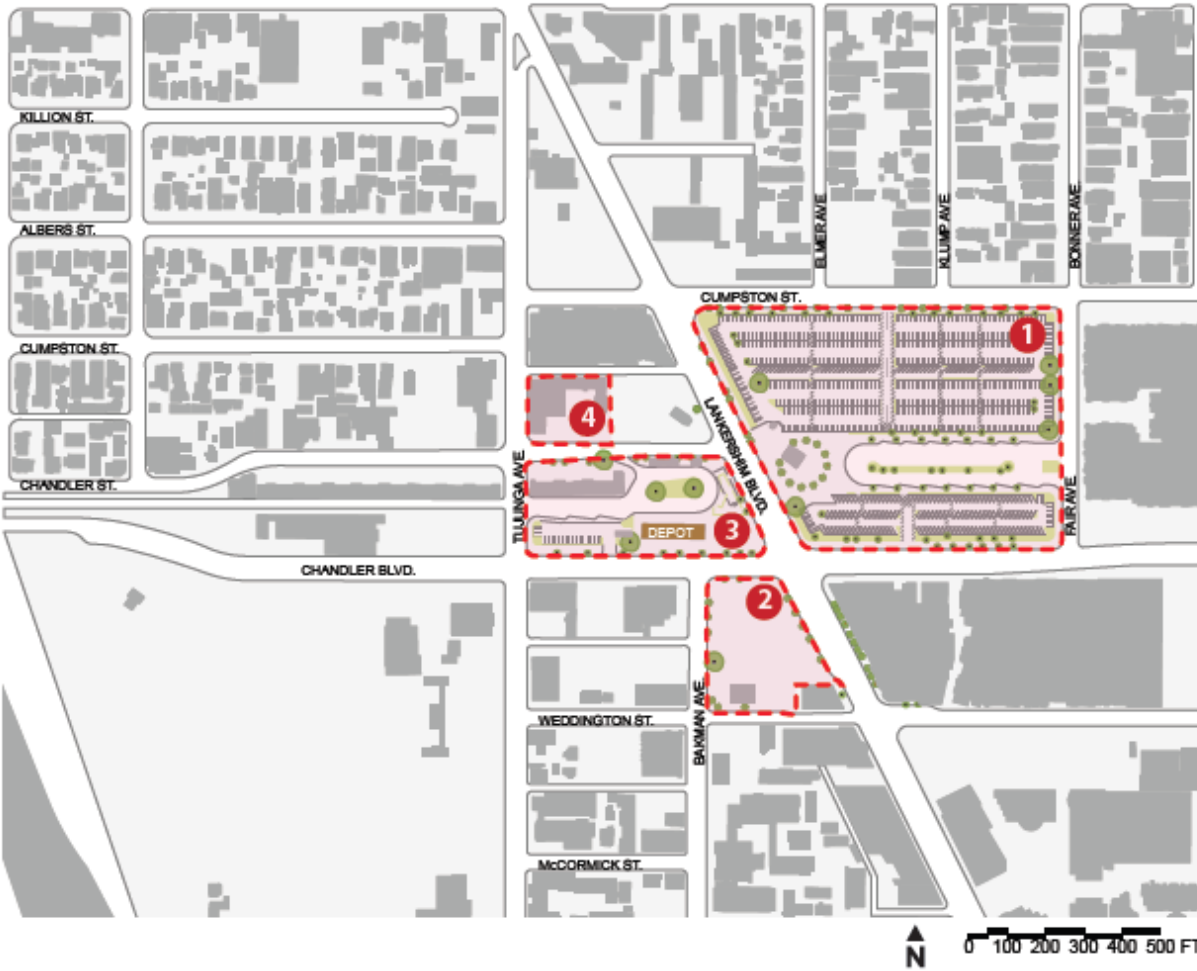
Reviewed by: Therese W. McMillan, Chief Planning Officer, (213) 922-7077



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Phillip A. Washington  
Chief Executive Officer

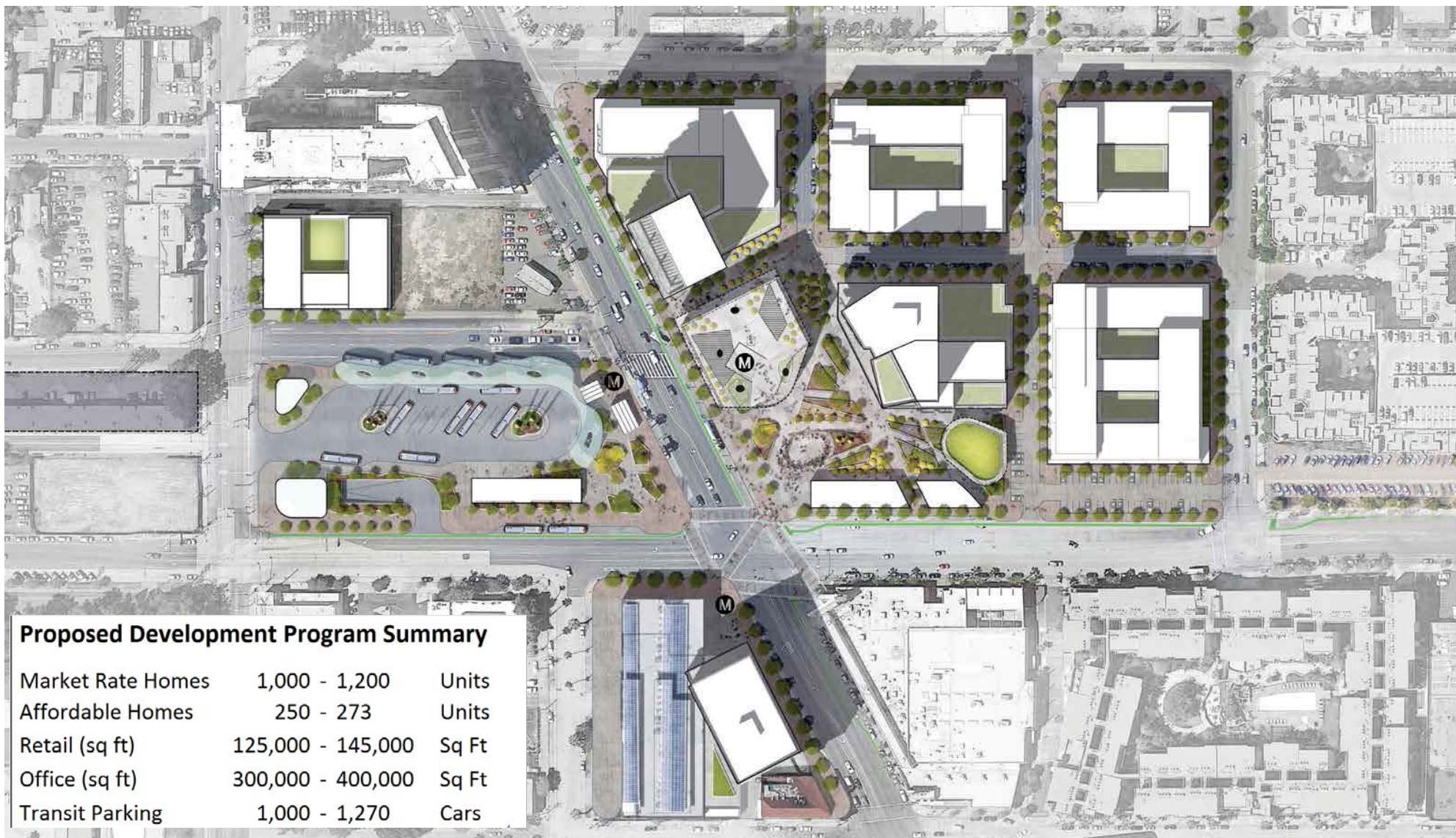
North Hollywood Joint Development Site



- 1 Station | Parking | Bus Layover Area (10.5 Acres)
- 2 Weddington Property (1.8 Acres)
- 3 Metro Orange Line Terminus (2.6 Acres)  
Excludes Historic Train Depot
- 4 Currently Short-term Leased to Costume Shop And Plumbing Supply Store (.66 Acres)

# ATTACHMENT B

## Proposed North Hollywood Development Site Plan and Program Summary



### Proposed Development Program Summary

Market Rate Homes	1,000 - 1,200	Units
Affordable Homes	250 - 273	Units
Retail (sq ft)	125,000 - 145,000	Sq Ft
Office (sq ft)	300,000 - 400,000	Sq Ft
Transit Parking	1,000 - 1,270	Cars

### Development Illustrative Plan

# NORTH HOLLYWOOD JOINT DEVELOPMENT

*Planning and Programming Committee Meeting: April 2017*







# SITE OVERVIEW





# JOINT DEVELOPMENT PROCESS

Metro Joint Development Process				
STAGE	Initial Community Outreach	Developer Solicitation/ Selection**	Project Refinement, Joint Development Agreement Ground Lease Negotiations	Permitting and Construction
ACTIONS				
	<ul style="list-style-type: none"> <li>&gt;Community meetings</li> <li>&gt;Creation of Development Guidelines*</li> </ul>	<ul style="list-style-type: none"> <li>&gt;Issue Request for Information and Qualifications (RFIQ) and/or Request for Proposals (RFP)</li> <li>&gt;Evaluate proposals</li> <li>&gt;Community update</li> </ul>	<ul style="list-style-type: none"> <li>&gt;Developers progress architectural design</li> <li>&gt;Community outreach and input - several iterations</li> <li>&gt;Entitlements and CEQA process***</li> <li>&gt;Negotiation of financial terms</li> </ul>	<ul style="list-style-type: none"> <li>&gt;City engineering</li> <li>&gt;Construction documents</li> <li>&gt;City building permits</li> <li>&gt;Seek concurrence from FTA (for properties with federal interest)</li> <li>&gt;City-related approvals</li> <li>&gt;On-site construction</li> <li>&gt;Occupancy</li> </ul>
	Metro Board approves Development Guidelines	Metro Board authorizes Exclusive Negotiation Agreement (ENA) with recommended developer(s)	Metro Board approves Joint Development Agreement and Ground Lease Agreement	Completed project
RESULT				



WE ARE HERE



Metro™

# OUTREACH PROCESS

- > 3 focus group meetings with community organizations, residents, and businesses, totaling ~45 participants
- > Community Workshop with ~65 participants
- > Open House with ~50 participants
- > Received comments both online and via email



**Metro**<sup>TM</sup>

# WHAT WE HEARD

- > Preserve artistic, historic, eclectic character of NoHo Arts District
- > Balance density and height with a comfortable human-scaled environment
- > Bring pedestrian activity further north on Lankershim
- > Include quality central open space near the Station that encourages activity, gathering, and street life
- > Prioritize safety for a family-friendly environment and promote safety through design



# DEVELOPER SELECTION

Trammell Crow Company



Cesar Chavez Foundation

Gensler

RELM



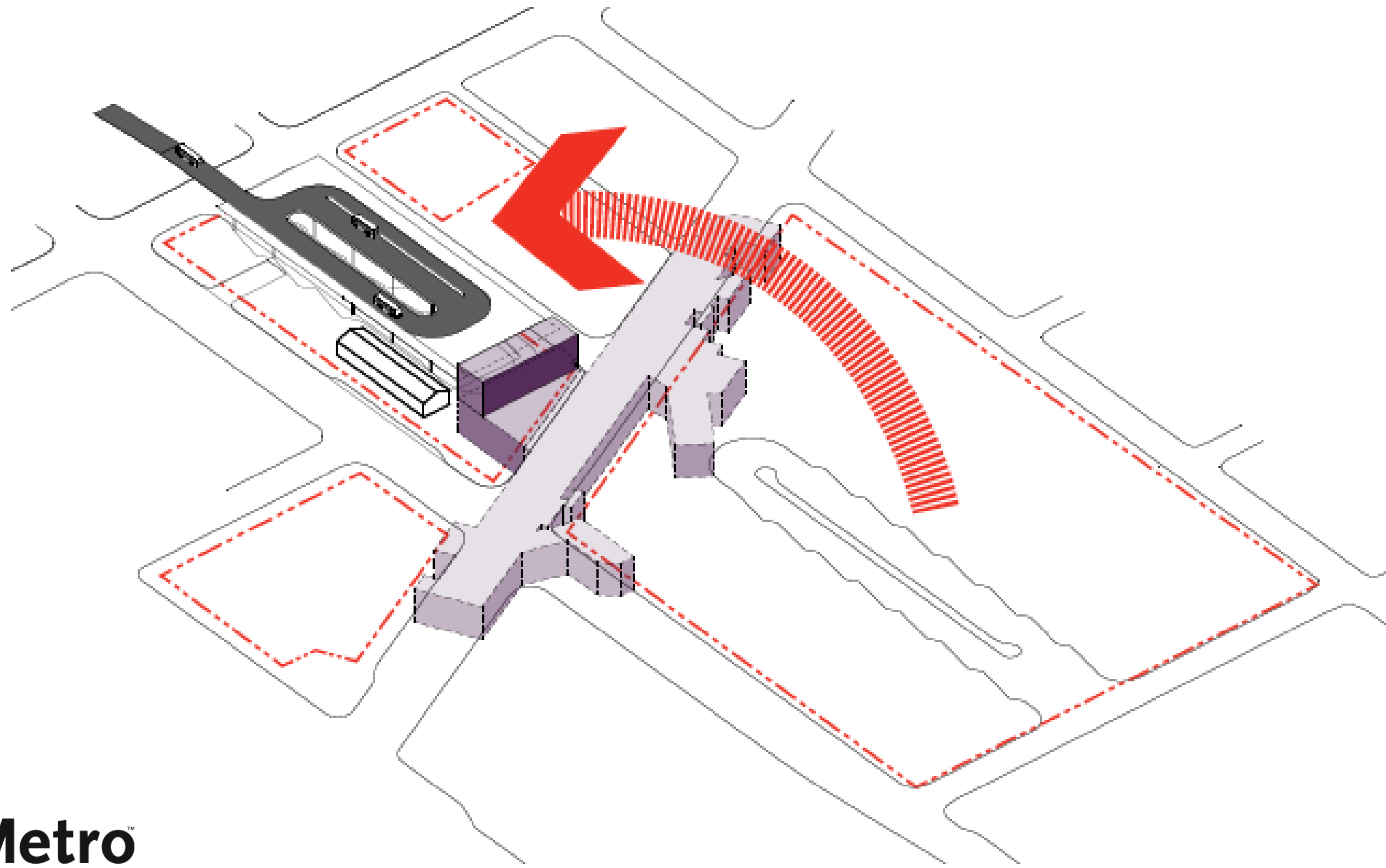
# SHORT TERM ENA

- ✓ Preliminary Site Planning
- ✓ Optimized Transit Facility
- ✓ Parking Evaluation
- ✓ Outreach – 80 open house attendees



**Metro**<sup>TM</sup>

# PROPOSED TRANSIT FACILITY



**Metro**<sup>™</sup>

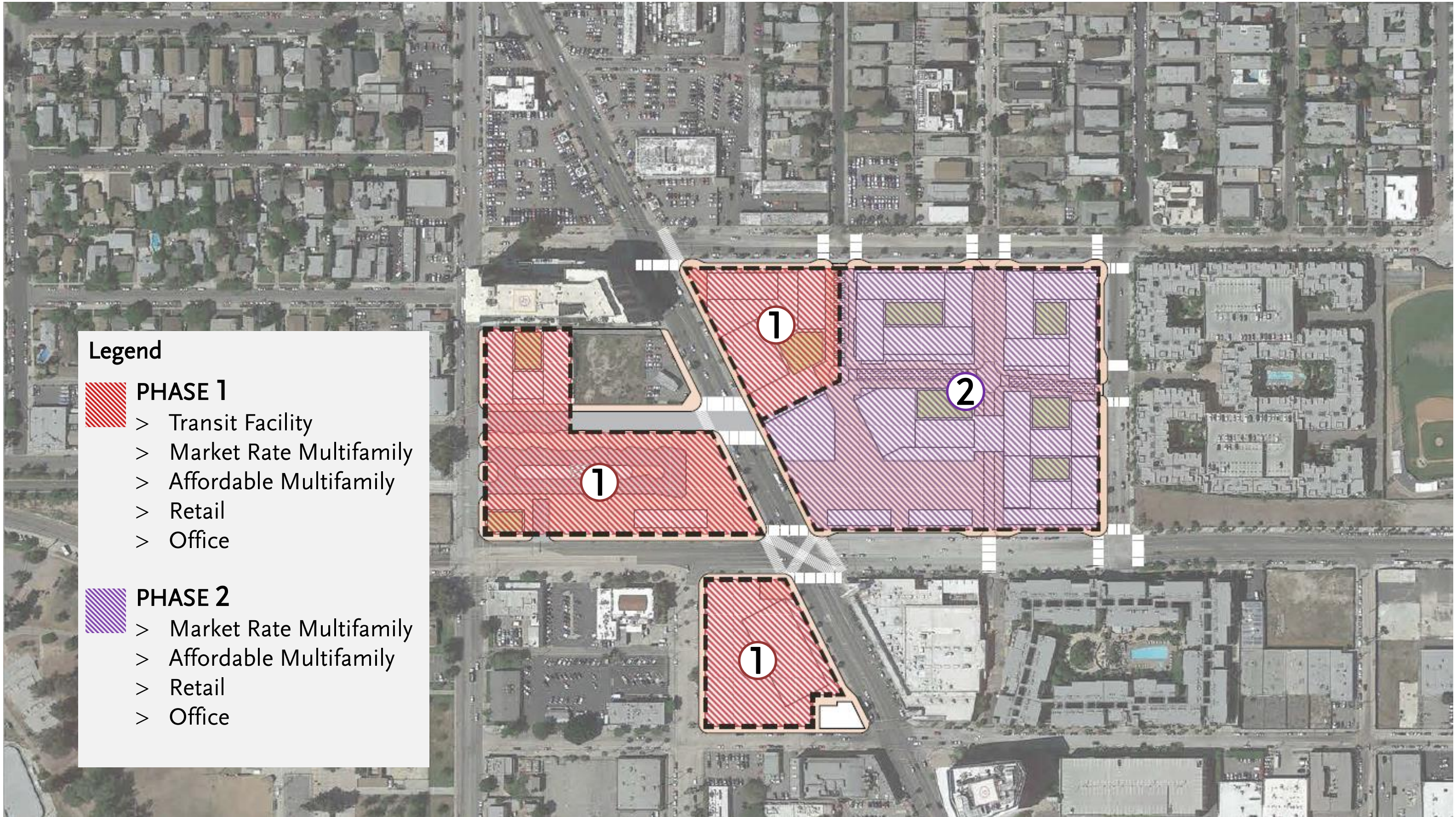
WHAT WE'VE BEEN UP TO

# CONCEPTUAL SITE PLAN



# WHAT WE'VE BEEN UP TO

# PHASING PLAN

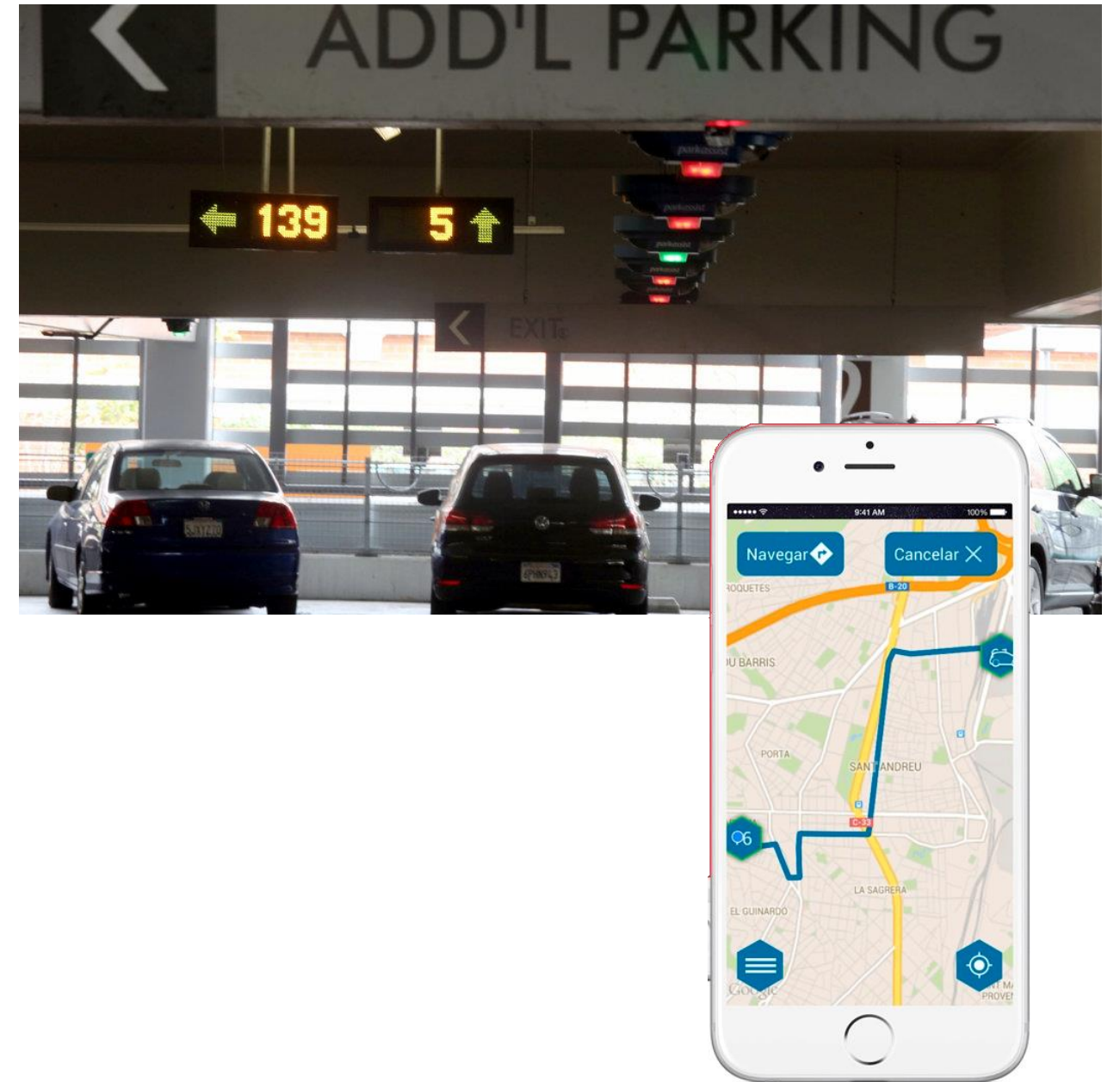








WHAT WE'VE BEEN UP TO:

# PARKING MANAGEMENT

- Systemwide parking evaluation
- Implementing:
  - Parking Guidance System
  - Paid parking in high demand locations
- Results will shape parking design at NoHo
- Additional Study
  - Industry trends
  - Evolving parking and driving technology
  - Shared parking opportunities
  - Policy implications



WHERE WE'VE BEEN:  
**NEXT STEPS**

Metro Joint Development Process				
STAGE	Initial Community Outreach	Developer Solicitation/ Selection**	Project Refinement, Joint Development Agreement Ground Lease Negotiations	Permitting and Construction
ACTIONS	 <ul style="list-style-type: none"> <li>&gt;Community meetings</li> <li>&gt;Creation of Development Guidelines*</li> </ul>	 <ul style="list-style-type: none"> <li>&gt;Issue Request for Information and Qualifications (RFIQ) and/or Request for Proposals (RFP)</li> <li>&gt;Evaluate proposals</li> <li>&gt;Community update</li> </ul>	 <ul style="list-style-type: none"> <li>&gt;Developers progress architectural design</li> <li>&gt;Community outreach and input - several iterations</li> <li>&gt;Entitlements and CEQA process***</li> <li>&gt;Negotiation of financial terms</li> </ul>	 <ul style="list-style-type: none"> <li>&gt;City engineering</li> <li>&gt;Construction documents</li> <li>&gt;City building permits</li> <li>&gt;Seek concurrence from FTA (for properties with federal interest)</li> <li>&gt;City-related approvals</li> <li>&gt;On-site construction</li> <li>&gt;Occupancy</li> </ul>
	RESULT	Metro Board approves Development Guidelines	Metro Board authorizes Exclusive Negotiation Agreement (ENA) with recommended developer(s)	Metro Board approves Joint Development Agreement and Ground Lease Agreement



**WE ARE HERE**

# CONCEPTUAL PROJECT RENDERING





## Board Report

File #: 2017-0096, File Type: Contract

Agenda Number: 49.

### REGULAR BOARD MEETING JUNE 22, 2017

**SUBJECT: HIGHWAY PROGRAM PROJECT DELIVERY SUPPORT  
SERVICES FOR LOS ANGELES COUNTY**

**ACTION: AWARD PROFESSIONAL SERVICES CONTRACTS**

#### **RECOMMENDATION**

AUTHORIZE the Chief Executive Officer to:

- A. AWARD three, three-year on-call contracts, Contract Nos. AE30673000, AE30673001, and AE30673002, to AECOM Technical Services, Inc., CH2M Hill, Inc., and Parsons Transportation Group, Inc., respectively, for a total not-to-exceed amount of \$30,000,000, for **Highway Program Project Delivery Support Services for Los Angeles County**, subject to resolution of protest(s), if any; and
- B. AWARD Task Orders within the approved not to exceed cumulative value of \$30,000,000.

#### **ISSUE**

The Highway program requires professional services to support the various phases of the highway program project delivery process (planning, research/data collection, environmental assessments/clearance, design, public outreach, project management, quality assurance/quality control, risk analysis, surveying, etc.). The majority of the task order assignments that may be issued under these Contracts are tasks that will require specialized services and must be initiated and completed in a relatively short period of time. The Highway Program On-Call Services Contracts will enable the initiation and award of task orders in a shorter period of time than the traditional RFP solicitation process for technical and professional services and provide for cost effective and accelerated delivery of projects.

#### **DISCUSSION**

Metro's Highway Program is delivering a number of short, mid, and long term improvement projects. This includes non-Measure R (Federal, State and Proposition C), Measure R and soon Measure M projects for which funding has been or will soon be programmed for implementation. More than \$3.7 billion over the next decade have been earmarked for investments in highway improvements.

Highway Program has been utilizing an existing on-call contract that was awarded in December 2013 and will expire in June 30, 2017. This contract has been successful in assisting the Program Management (Highway, Engineering and Construction) Division to deliver highway improvement projects as well as transit-related projects on state highways and arterials. To date, staff has issued 14 task orders for a total value of \$9,955,939.00

The new on call Contracts will provide the needed technical assistance to the Program Management/Highway Program Department in the following areas: (1) Planning and Technical Studies, (2) Research/Data Collection, (3) Project Approval and Environmental Document (PA/ED), (4) Plans Specifications and Estimates (PS&E) Deliverables, (5) Project Right of Way and Utility Services, (6) Intelligent Transportation Systems Support, (7) Program/Project Management Support and QA/QC, (8) Administrative Project Support Activities and other tasks as identified by Highway Programs.

### **DETERMINATION OF SAFETY IMPACT**

The approval of this procurement will not have any negative impact on the safety of Metro's patrons or employees or the users of the highway system in LA County.

### **FINANCIAL IMPACT**

These are task order driven contracts which will be utilized and funded by Highway related projects. The funding mechanism for executing task orders will be driven by approved fiscal year funding of the affected Highway project(s). As a result, the execution of Recommendation A for these Contracts would have minimal financial impact to the agency. Initially, the contract awards will be funded with Measure R Administration (1.5%) funds and Prop C Streets and Highways (25%) funds with subsequent task orders issued and funded by a highway project(s).

#### **Impact to Budget**

FY 17 funding for these Contracts will come from Measure R Administration (1.5%) funds under project 100055, task number 08.01, cost center 4730, and account 50316; and Proposition C Streets and Highways (25%) funds under project 405522, task number 01, cost center 4730 and account 50316.

Since these are multi-year Contracts, the Chief Program Management Officer, Senior Executive Officer, Highway Program and Cost Center Manager will be responsible for budgeting the costs in future years.

### **ALTERNATIVES CONSIDERED**

Two alternatives were considered:

1. Utilizing Metro staff to perform the work. This alternative is not recommended since the Highway Program is not staffed to perform all the technical services authorized under these on

-call Contracts.

2. Hiring additional full time personnel. This alternative is not recommended because an on-call contract is better suited to meet the as-needed staffing requirements for specialized technical knowledge and expertise, and to cover temporary peaks in workload.

### **NEXT STEPS**

Upon approval by the Board, staff will execute Contract Nos. AE30673000, AE30673001, and AE30673002 with AECOM Technical Services, Inc., CH2M HILL, Inc., and Parsons Transportation Group, Inc., respectively.

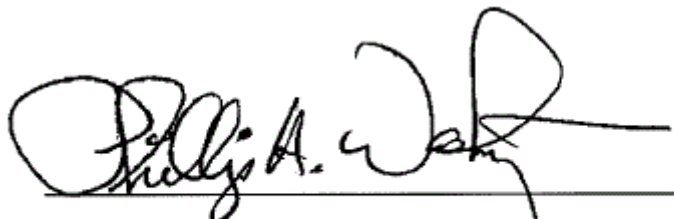
### **ATTACHMENTS**

Attachment A - Procurement Summary

Attachment B - DEOD Summary

Prepared by: Benkin Jong, Senior Transportation Planner (213) 922-3053  
Ernesto Chaves, Senior Director, (213) 922-7343  
Abdollah Ansari, Senior Executive Officer, (213) 922-4781

Reviewed by: Debra Avila, Chief Vendor/Contract Management Officer (213) 418-3051  
Richard F. Clarke, Chief Program Management Officer, (213) 922-7557



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Phillip A. Washington  
Chief Executive Officer

## PROCUREMENT SUMMARY

HIGHWAY PROGRAM PROJECT DELIVERY SUPPORT SERVICES FOR  
LOS ANGELES COUNTY/AE30673000, AE30673001 & AE30673002

1.	<b>Contract Numbers:</b> AE30673000, AE30673001 and AE30673002	
2.	<b>Recommended Vendors:</b> AECOM Technical Services, Inc., CH2M HILL, Inc., and Parsons Transportation Group, Inc.	
3.	<b>Type of Procurement (check one):</b> <input type="checkbox"/> IFB <input type="checkbox"/> RFP <input checked="" type="checkbox"/> RFP-A&E <input type="checkbox"/> Non-Competitive <input type="checkbox"/> Modification <input type="checkbox"/> Task Order	
4.	<b>Procurement Dates:</b>	
	<b>A. Issued:</b> August 24, 2016	
	<b>B. Advertised/Publicized:</b> August 24, 2016	
	<b>C. Pre-Proposal Conference:</b> September 7, 2016	
	<b>D. Proposals Due:</b> October 3, 2016	
	<b>E. Pre-Qualification Completed:</b> March 17, 2017	
	<b>F. Conflict of Interest Form Submitted to Ethics:</b> March 15, 2017	
	<b>G. Protest Period End Date:</b> April 21, 2017	
5.	<b>Solicitations Picked up/Downloaded:</b> 168	<b>Proposals Received:</b> 9
6.	<b>Contract Administrator:</b> David Chia	<b>Telephone Number:</b> (213) 922-1064
7.	<b>Project Manager:</b> Benkin Jong	<b>Telephone Number:</b> (213) 922-3053

**A. Procurement Background**

This Board Action is to approve Contract Nos. AE30673000, AE30673001 and AE30673002, which are respectively issued to AECOM Technical Services, Inc., CH2M Hill, Inc. and Parsons Transportation Group, Inc. (referred to individually as "Contractor" and collectively as "Contractors"), in support of on-call project delivery support services for highway capital projects throughout Los Angeles County. Board approval of contract awards are subject to resolution of any properly submitted protest.

This Architectural and Engineering (A&E) qualifications based Request for Proposal (RFP) to award three contracts was issued in accordance with Metro's Acquisition Policy. The RFP was issued with an SBE/DVBE goal of 30% (SBE 27% and DVBE 3%).

Work for each Contract will be authorized through the issuance of separate FFP task orders. Each future task order will contain a specific statement of work for a scope of services.

Task orders will be issued to the contractors on a rotating basis. If one contractor is unable to perform the work under a task order, the task order will be issued to the next contractor.

One amendment was issued during the solicitation phase of this RFP:

- Amendment No. 1, issued on September 9, 2016, updated the Statement of Work to include safety provisions, clarified cost proposal instructions, and extended the proposal due date to October 3, 2016.

A pre-proposal conference was held on September 7, 2016, and was attended by 92 participants representing 62 companies. There were 40 questions asked and responses were released prior to the proposal due date.

A total of 168 firms downloaded the RFP and were included in the planholders' list. A total of 9 proposals were received on October 3, 2016.

## **B. Evaluation of Proposals**

A Proposal Evaluation Team (PET), consisting of staff from Metro Highway Programs and Caltrans District 7, was convened and conducted a comprehensive technical evaluation of the proposals received.

The proposals were evaluated based on the following evaluation criteria and weights:

- |  |            |
|--|------------|
| • Experience and Capabilities of Contractor's Team         | 30 percent |
| • Management Plan and Controls                             | 26 percent |
| • Degree of Skills and Experience of Team Members          | 40 percent |
| • SBE/DVBE Contacting Outreach and Mentor Protégé Approach | 4 percent  |

The evaluation criteria are appropriate and consistent with criteria developed for other, similar A&E on-call project delivery support services procurements. Several factors were considered when developing these weights, giving the greatest importance to the degree of skills and experience of team members and experience and capabilities of the contractors' teams.

This is an A&E, qualifications based procurement; therefore, price cannot be used as an evaluation factor pursuant to state and federal law.

During October 6, 2016 through December 7, 2016, the PET completed its independent evaluation of the proposals. The PET determined that one firm was outside the competitive range and was not included for further consideration. The firm's management plan did not satisfactorily identify personnel, key roles, or positions and also did not demonstrate how work would be distributed/assigned. In addition, the firm did not demonstrate direct experience with emerging technologies or grant writing assistance.



The eight firms within the competitive range are listed below in alphabetical order:

1. AECOM Technical Services, Inc. (AECOM)
2. CH2M Hill, Inc. (CH2M)
3. HDR Engineering, Inc. (HDR)
4. Jacobs Engineering Group, Inc. (Jacobs)
5. Kimley-Horn and Associates, Inc. (Kimley-Horn)
6. Parsons Transportation Group, Inc. (Parsons)
7. TranSystems Corporation (TranSystems)
8. T.Y. Lin International (TY Lin)

On November 17, 2016, the PET interviewed the eight firms within the competitive range. The project manager and key team members from each firm were invited to present their firm's respective qualifications and respond to the PET's questions. In general, all firms elaborated on their experience with innovative and cost-effective project delivery solutions and discussed their staffing levels and long term staff commitments.

In addition, the project manager and key personnel from each firm responded to the PET's inquiries regarding the firm's approach and ability to reducing tort liability, negotiating between design preferences and design standards, reconciling between contract requirements and project requirements, managing differing stakeholder interests, and resolving disputes that may arise among public agencies and stakeholders.

### **Qualifications Summary of Recommended Firms**

#### **AECOM**

AECOM is a multinational design and engineering firm that provides design, consulting, construction, and management services. AECOM's proposal and oral presentation demonstrated expertise in a wide range of services, expertise in emerging technologies and grant writing, effective project management, quality control and risk management plans, and a skilled team of project personnel.

The proposal and oral presentation demonstrated experience in all phases of planning and design services across a wide range of disciplines. AECOM identified projects that involved planning and environmental services, preliminary and final design services, and services during construction. AECOM also identified projects involving concept reports, feasibility studies, corridor studies, project study reports, technical studies, tunneling, project approval/environmental document services, public outreach, bridge and wall structures services, traffic handling services, utilities and electrical services, landscaping services, and geotechnical services. Examples include: the I-710 South Corridor Environmental Impact Report/Environment Impact Statement (EIR/EIS), SR-47 Heim Bridge Plans, Specification & Estimate (PS&E), and I-405/Avalon Interchange Project Approval/Environment Document (PA/ED) and PS&E.

The proposal and oral presentation demonstrated substantial experience in emerging technologies, citing the design of Hyperloop test tracks for Space X and the development of the e-Highway demonstration project for the SR-47. In addition, the proposal demonstrated AECOM's experience with alternative project delivery, including the I-210 Iconic Freeway Structure, SR-91 Expansion, and the I-15/I-215 Devore Interchange.

The proposal and oral presentation provided a detailed management plan that included a task order management plan, project organization chart, quality management system, and project controls plan. The oral presentation also elaborated upon AECOM's quality management system, which has earned AECOM an ISO 9001:2008 certification for exceptional quality management.

The proposal and oral presentation stressed the importance of identifying risks, understanding stakeholder objectives, and utilizing AECOM's deep-rooted relationships with agency contacts, particularly with Caltrans geometric reviewers and district liaisons. In addition, the proposal demonstrated AECOM's local stakeholder experience, which includes Metro, Caltrans District 7, regional transportation agencies (Orange County Transportation Authority and Riverside County Transportation Commission), councils of government, cities, and local community groups.

The proposal and oral presentation demonstrated that AECOM's key personnel have direct experience across a gamut of disciplines, all stages of design, and an array of project delivery methods. Significantly, the project manager possesses 100% availability. The project manager has 32 years of experience. Other key personnel average over 27 years of experience.

### CH2M

CH2M is a global engineering firm that specializes in consulting, design, construction, and operation services. CH2M's proposal and oral presentation showed expertise in a broad range of disciplines, expertise in emerging technologies and grant writing, effective project management, quality control and risk management plans, and an experienced team of project personnel.

The proposal demonstrated experience in all phases of planning and design services across a wide range of disciplines. The proposal identified projects that involved planning and design services, studies, and management. The proposal identified projects that involved technical studies, literature research, data collection, PA/ED services, PS&E services, right-of-way (ROW) and utility services, intelligent transportation systems (ITS) support services, project management services, and administrative project support.

The proposal demonstrated highly relevant on-call experience and substantial local stakeholder experience within the Los Angeles area, including Metro, Caltrans Districts 7, councils of government, municipalities, and city agencies.

The proposal and oral presentation demonstrated substantial experience in emerging technologies and alternative project delivery. The proposal identified leading ITS projects that involve all-electronic tolling, road user pricing, advanced traffic management (ATM) systems, vehicle-miles traveled fee (VMT) systems, adaptive traffic signal control systems (ATSCS), integrated corridor management (ICM), remote traffic microwave sensor (RTMS) detection zones, and dynamic message signs (DMS).

The proposal and oral presentation provided a detailed management plan that is based on CH2M's Program Management Framework system, which standardizes delivery strategy, processes, tools and resources around a common platform. Notably, CH2M's management plan includes utilization of an internal web-based document control system.

The proposal presented a detailed quality control plan that is ISO 9001 compliant. Key elements of the plan include production quality control reviews, technical advisory reviews, and construction management staff reviews. In addition, the proposal and oral presentation addressed CH2M's risk management plan, citing a detailed three pronged approach involving research, stakeholder involvement, and documentation.

The proposal and oral presentation demonstrated that CH2M's key personnel have direct experience across a gamut of disciplines, all stages of design, management planning, and an array of project delivery methods. The availability of personnel ranges from 20% to 90%. The project manager has 37 years of experience. Other key personnel average over 28 years of experience, and task leader's average 24 of years of experience.

### Parsons

Parsons is a global engineering and construction company. Parsons' proposal and oral presentation showed expertise in a broad range of disciplines, expertise in emerging technologies and grant writing, effective project management, quality control and risk management plans, and an experienced team of project personnel.

The proposal demonstrated experience in all phases of planning and design services across a wide range of disciplines. It identified projects that involved technical studies, PA/ED services, PS&E, ROW and utility services, ITS services, program management services, design-build services, and funding support.

Most significantly, the proposal identified highly relevant on-call project experience with local stakeholders. Those projects included Caltrans District 7 Design On-Call (with 27 task orders processed), Caltrans District 7 Environmental On-Call (with 18

task orders processed), SANBAG Program Project Management (with over 25 projects), and Bakersfield TRIP Program Management (with 12 projects).

The proposal and oral presentation demonstrated substantial experience in emerging technologies and alternative project delivery. The proposal provided a list of project experience in dynamic shoulder use, active traffic management, tolling, travel demand management, integrated corridor management, and ITS technologies and various strategies for implementing these emerging technologies.

The proposal presentation provided a detailed management plan for planning work, monitoring progress, identifying issues, and recommending solutions. To illustrate its management plan, the proposal included a “Project Development Phases” chart, “Design Build Program Management” diagram, and “Contract Management” chart.

The proposal outlined a detailed quality control plan, which has earned Parsons an ISO 9001:2015 certification. The proposal and oral presentations detailed Parsons’ risk management plan which includes the following six principal components: risk planning, risk identification, risk monitoring and control, risk prioritization (qualitative risk analysis), risk effect analysis (quantitative risk analysis), and risk response planning.

The proposal and oral presentation demonstrated that its key personnel have direct experience across a gamut of disciplines, all stages of design, and an array of project delivery methods. All key personnel have experience in management, planning, and design improvement projects. The availability of key personnel is at 70% or higher. The project manager has 25 years of experience.

Following is a summary of the PET evaluations scores:

	Firm	Average Score	Factor Weight	Weighted Average Score	Rank
<b>1</b>	<b>Parsons Transportation Group, Inc.</b>				
<b>2</b>	Experience and Capabilities of Contractor’s Team	95.33	30.00%	28.60	
<b>3</b>	Management Plan and Controls	90.90	26.00%	23.63	
<b>4</b>	Degree of Skills and Experience of Team Members	95.83	40.00%	38.33	
<b>5</b>	SBE/DVBE Contacting Outreach and Mentor Protégé Approach	50.00	4.00%	2.00	
<b>6</b>	<b>Total</b>		<b>100.00%</b>	<b>92.56</b>	<b>1</b>
<b>7</b>	<b>CH2M HILL, Inc.</b>				
<b>8</b>	Experience and Capabilities of Contractor’s Team	93.89	30.00%	28.17	
<b>9</b>	Management Plan and Controls	93.33	26.00%	24.27	

10	Degree of Skills and Experience of Team Members	94.17	40.00%	37.67	
11	SBE/DVBE Contacting Outreach and Mentor Protégé Approach	50.00	4.00%	2.00	
12	<b>Total</b>		<b>100.00%</b>	<b>92.11</b>	<b>2</b>
13	<b>AECOM Technical Services, Inc.</b>				
14	Experience and Capabilities of Contractor's Team	91.44	30.00%	27.43	
15	Management Plan and Controls	90.90	26.00%	23.63	
16	Degree of Skills and Experience of Team Members	93.33	40.00%	37.33	
17	SBE/DVBE Contacting Outreach and Mentor Protégé Approach	50.00	4.00%	2.00	
18	<b>Total</b>		<b>100.00%</b>	<b>90.39</b>	<b>3</b>
19	<b>HDR Engineering Group, Inc.</b>				
20	Experience and Capabilities of Contractor's Team	85.89	30.00%	25.77	
21	Management Plan and Controls	89.23	26.00%	23.20	
22	Degree of Skills and Experience of Team Members	85.83	40.00%	34.33	
23	SBE/DVBE Contacting Outreach and Mentor Protégé Approach	25.00	4.00%	1.00	
24	<b>Total</b>		<b>100.00%</b>	<b>84.30</b>	<b>4</b>
25	<b>Kimley-Horn and Associates, Inc.</b>				
26	Experience and Capabilities of Contractor's Team	85.33	30.00%	25.60	
27	Management Plan and Controls	86.03	26.00%	22.37	
28	Degree of Skills and Experience of Team Members	85.83	40.00%	34.33	
29	SBE/DVBE Contacting Outreach and Mentor Protégé Approach	50.00	4.00%	2.00	
30	<b>Total</b>		<b>100.00%</b>	<b>84.30</b>	<b>4</b>
31	<b>Jacobs Engineering Group, Inc.</b>				
32	Experience and Capabilities of Contractor's Team	84.22	30.00%	25.27	
33	Management Plan and Controls	89.62	26.00%	23.30	
34	Degree of Skills and Experience of Team Members	82.50	40.00%	33.00	
35	SBE/DVBE Contacting Outreach and Mentor Protégé Approach	50.00	4.00%	2.00	
36	<b>Total</b>		<b>100.00%</b>	<b>83.57</b>	<b>6</b>
37	<b>TranSystems Corporation</b>				
38	Experience and Capabilities of Contractor's Team	83.89	30.00%	25.17	

<b>39</b>	Management Plan and Controls	85.51	26.00%	22.23	
<b>40</b>	Degree of Skills and Experience of Team Members	83.33	40.00%	33.33	
<b>41</b>	SBE/DVBE Contacting Outreach and Mentor Protégé Approach	50.00	4.00%	2.00	
<b>42</b>	<b>Total</b>		<b>100.00%</b>	<b>82.73</b>	<b>7</b>
<b>43</b>	<b>T.Y. Lin International</b>				
<b>44</b>	Experience and Capabilities of Contractor's Team	85.56	30.00%	25.67	
<b>45</b>	Management Plan and Controls	83.46	26.00%	21.70	
<b>46</b>	Degree of Skills and Experience of Team Members	80.83	40.00%	32.33	
<b>47</b>	SBE/DVBE Contacting Outreach and Mentor Protégé Approach	50.00	4.00%	2.00	
<b>48</b>	<b>Total</b>		<b>100.00%</b>	<b>81.70</b>	<b>8</b>

### **C. Cost Analysis**

The recommended fully burdened negotiated rate structure for the labor classifications required under each contract have been determined to be fair and reasonable based upon Metro's Management and Audit Services report.

Work will be performed through the issuance of separate task orders. Proposals submitted for each task order will be subjected to cost analysis, technical analysis, fact finding, and negotiation to determine the fairness and reasonableness of price.

### **D. Background on Recommended Contractors**

#### AECOM

The first recommended firm, AECOM, located in Los Angeles, has been in business for over 25 years in design and engineering. The firm possesses experience in a diverse range of complex projects. Recent complex projects include the I-710 South Corridor EIR/EIS, I-710 South Utility Study, I-10/I-110 ExpressLanes design-build project, SR-2 Terminus Improvements, and the US 101/Universal Terrace Parkway Interchange.

The proposed project manager has 32 years of experience in managing the planning, design and construction of highways, bridges and transportation related structures. The proposed project manager led the I-405 Improvements (between SR-73 and OC line), I-405/SR-22 HOV Connector, Exposition Light Rail Transit Project (Phase 1), I-10 HOV Widening, and SR-22 Design-Build Program Management.

Key personnel average over 27 years of diverse transportation project experience. Project experience include the I-710 South Corridor EIR/EIS, SR-60/SR-57

Confluence, I-5 PA/ED) I-405 to SR-55), and SR-47/Vincent Thomas Bridge & Front Street/Harbor Boulevard Interchange Reconfiguration PA/ED.

## CH2M

The second recommended firm, CH2M, located in Los Angeles, has been in business for over 70 years in transportation planning, design, construction, financing, traffic, operations, and management.

The firm possesses experience in a diverse range of complex projects. Notably, CH2M has managed two separate on-call contracts for Metro and Caltrans District 7. CH2M is the current contractor under Metro's contract for Project Management and Quality Assurance/Control Support Services and the current contractor under Caltrans's contract for On-Call Design Services.

The proposed project manager has 37 years of experience in transportation management, planning, and design. The proposed project manager led the I-5 North HOV & Truck Lanes PS&E, SR 710 Soundwall Package No. 3, PS&E, SR 79 Realignment PA/ED, SR 57 Northbound Widening PS&E, and I-405/SR 55 HOV Connectors PS&E.

Key personnel average over 28 years of diverse transportation project experience. Project experience include the SR-710 Gap North Study Alternatives Analyses, Project Report Preparation, and Environmental Studies Documentation, SR-170 and I-405 Soundwalls, Package 11, Caltrans Planning, Design, and Specialty Services, and California High Speed Rail Special Study.

## Parsons

The third recommended firm, Parsons, headquartered in Pasadena, has been in business for over 70 years in design, engineering, and construction.

The firm possesses experience in a wide spectrum of complex projects. Notably, Parsons has managed several on-call contracts. They include the Caltrans Design On-Call, Caltrans Environmental On-Call, SANBAG Program Project Management, and Bakersfield TRIP Program Management.

The proposed project manager has 25 years of experience. Project experience includes the I-5 HOV Lane and Widening Project, I-5 Bridge Replacement at Carmenita, and I-10/I-605 Design-Build Interchange Improvement.

Key personnel average over 29 years of experience. Project experience includes US-101 Operational Improvements (PA/ED), I-405 North Improvement Project (SR-73 to I-605), and SR-91 Corridor Improvement.

All three firms possess a significant amount of local stakeholder experience. Each firm has worked closely with Metro, Caltrans, councils of government, cities, and community groups. With their extensive experience and knowledge, AECOM, CH2M and Parsons possess the ability to complete on-call task orders issued under the RFP's Statement of Work.



## DEOD SUMMARY

**HIGHWAY PROGRAM PROJECT DELIVERY SUPPORT SERVICES  
AE30673000, AE30673001 & AE30673002**

**A. Small Business Participation**

Highway Program on-call proposers formed teams that included Small Business Enterprise (SBE) and Disabled Veteran Business Enterprise (DVBE) firms without schedules or specific dollar commitments prior to the establishment of these on-call Contracts.

The on-call Contracts have an SBE goal of 30%, inclusive of a 27% SBE and 3% DVBE goal. Overall SBE/DVBE participation for the on-call contracts will be determined based on the aggregate of all Task Orders issued.

<b>Small Business Goal</b>	<b>27% SBE 3% DVBE</b>	<b>Small Business Commitment</b>	<b>27% SBE 3% DVBE</b>
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**Prime: AECOM Technical Services, Inc.**

	<b>SBE Subcontractors</b>	<b>% Committed</b>
1.	Arellano Associates	TBD
2.	Civil Works Engineers	TBD
3.	Consensus	TBD
4.	GPA Consulting	TBD
5.	Guida Surveying	TBD
6.	Intueor	TBD
7.	Optitrans	TBD
8.	PacRim Engineering	TBD
9.	PQM, Inc.	TBD
10.	SHA Analytics	TBD
11.	Tatsumi & Partners	TBD
12.	V&A	TBD
13.	Value Management Strategies	TBD
14.	WKE	TBD
	<b>Total SBE Commitment</b>	<b>27%</b>

	<b>DVBE Subcontractors</b>	<b>% Committed</b>
1.	Leland Saylor Associates	TBD
	<b>Total DVBE Commitment</b>	<b>3%</b>

**Prime: CH2M Hill**

	<b>SBE Subcontractors</b>	<b>% Committed</b>
1.	ACT Consulting Engineers	TBD
2.	AP Engineering & Testing, Inc.	TBD
3.	Arellano Associates	TBD
4.	EPIC Land Solutions	TBD
5.	Geo-Advantec, Inc.	TBD
6.	Hout Construction Services	TBD
7.	Martini Drilling Corporation	TBD
8.	Minagar & Associates	TBD
9.	PacRim Engineering	TBD
10.	Rincon Consultants	TBD
11.	System Metrics Group	TBD
12.	Tatsumi & Partners, Inc.	TBD
13.	Wagner Engineering & Survey	TBD
	<b>Total SBE Commitment</b>	<b>27%</b>

	<b>DVBE Subcontractors</b>	<b>% Committed</b>
1.	Virtek Company	TBD
	<b>Total DVBE Commitment</b>	<b>3%</b>

**Prime: Parsons Transportation Group, Inc.**

	<b>SBE Subcontractors</b>	<b>% Committed</b>
1.	Arellano Associates	TBD
2.	Engineering Solutions	TBD
3.	EPIC Land Solutions	TBD
4.	GeoAdvantec, Inc.	TBD
5.	GPA Consulting	TBD
6.	Guida Surveying, Inc.	TBD
7.	SHA Analytics, LLC	TBD
8.	WKE	TBD
	<b>Total SBE Commitment</b>	<b>27%</b>

	<b>DVBE Subcontractors</b>	<b>% Committed</b>
1.	Global Environmental Network	TBD
2.	Ohana Vets, Inc.	TBD
3.	ZMassociates Environmental Corp.	TBD
	<b>Total DVBE Commitment</b>	<b>3%</b>

**B. Contracting Outreach and Mentoring Plan**

To be responsive, Proposers were required to submit a Contracting Outreach and Mentor Protégé Plan (COMP), which included its plan to mentor one SBE firm and one DVBE firm for protégé development. AECOM selected Optitrans (SBE) and Leland Saylor Associates (DVBE). CH2M Hill selected PacRim Engineering (SBE) and Virtek Company (DVBE). Parsons Transportation Group selected Guida Surveying (SBE) and ZMassociates (DVBE).

**C. Living Wage and Service Contract Worker Retention Policy Applicability**

The Living Wage and Service Contract Worker Retention Policy is not applicable to this Contract.

**D. Prevailing Wage Applicability**

Prevailing Wage requirements are applicable to this project. DEOD will monitor contractors' compliance with the State of California Department of Industrial Relations (DIR), California Labor Code, and, if federally funded, the U S Department of Labor (DOL) Davis Bacon and Related Acts (DBRA).

**E. Project Labor Agreement/Construction Careers Policy**

Project Labor Agreement/Construction Careers Policy is not applicable to this Contract.

**Board Report**

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**File #:** 2017-0188, **File Type:** Contract**Agenda Number:** 14

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**CONSTRUCTION COMMITTEE  
MAY 18, 2017****SUBJECT: PROGRAM MANAGEMENT SUPPORT SERVICES****ACTION: AWARD PROFESSIONAL SERVICES CONTRACT****RECOMMENDATION**

CONSIDER:

- A. AUTHORIZING the Chief Executive Officer to award a cost reimbursable fixed fee contract, Contract No. AE35279, to **Kal Krishnan Consulting Services/Triunity Engineering & Management Joint Venture (KKCS/Triunity JV), the most qualified proposer, for Program Management Support Services (PMSS)** for a not-to-exceed amount of \$76,745,629.86 for the base five-years, plus \$32,436,264.59 for a two-year option, for a combined total amount not to exceed \$109,181,894.45, subject to resolution of protest(s), if any;
- B. AUTHORIZING the Chief Executive Officer to execute individual Contract Work Orders and Contract Modifications within the Board approved contract funding amount;
- C. APPROVING Contract Modification Authority specific to Contract No. AE35279 for 10% of the not-to-exceed award value.

**ISSUE**

Program Management Support Services (PMSS) are needed to assist the Program Management Department in managing and supporting delivery of Metro's Capital Program. These services will be required to supplement staffing and provide technical expertise to support project delivery of capital projects and strategic initiatives detailed in the Program Management Plan (PMP) and the Annual Program Evaluation (APE) presented to and approved by the Board. The PMSS Contract will provide Metro the flexibility to adjust the necessary resources to implement and deliver capital projects safely, on-time and within budget.

On November 21, 2016, request for proposals were issued for PMSS to assist Metro to manage and support Board-approved projects for a base term of five years with one two-year option. The recommended joint venture contractor is comprised of two Small/Disadvantaged Business Enterprise (SBE/DBE) firms - Kal Krishnan Consulting Services, Inc. and Triunity Engineering & Management, Inc.

## **DISCUSSION**

The Program Management Department is responsible for the delivery of the large transportation capital program at Metro. With the recently approved Measure M program added to the Measure R program, Metro is currently undertaking the largest transportation construction program in the nation, which creates an unprecedented challenge to project delivery. Recognizing that staffing is a key factor in project delivery, Program Management is committed to developing strengths in its capacity and capability to ensure the multi-billion dollar capital program can be successfully managed.

The proposed PMSS contract is a new approach for Metro that would assist Program Management in securing sufficient qualified resources across a broad spectrum of disciplines in a timely manner needed to manage and support delivery of Board approved projects. The selected consultant would scale staff up or down depending on Metro's transit, highway, regional rail and other capital improvement program needs. The contract allows us to efficiently and effectively augment Metro Program Management staff as required to ensure proper resources needed to manage a project are available to us both in terms of staff availability and technical expertise.

With the significant increase in number and size of projects and the aggressive implementation schedule for delivering Metro's Capital Program, close coordination and expertise across multi-disciplines are required in the following eight key functions: project management, program management, project delivery development support, project control, estimating, configuration management, project management and other technical training, and Project Management Information System (PMIS) support services. The scope also allows for contract administration and small business contract compliance support assisting Vendor/Contract Management (V/CM), not requiring an agent agreement, to efficiently provide sufficient staffing needed to perform V/CM support activities. Combining all the above functions together into one contract allows for a better coordinated and more efficient allocation of resources for Metro than would be possible under a series of separate contracts.

Shortly after Measure M was approved, Program Management and Vendor/Contract Management jointly hosted Metro's first Pre-Solicitation Meet and Greet Session for the upcoming PMSS opportunities to business owners, which was also attended by the CEO. Prime contractors and other businesses were encouraged to network with each other for possible future joint ventures, partnerships or subcontracting opportunities. Establishing a competitive and qualified pool of consultants, contractors, and small businesses on Metro's projects is integral to successful project delivery.

## **DETERMINATION OF SAFETY IMPACT**

This Board action will not have an impact on established safety standards for Metro's construction projects.

## **FINANCIAL IMPACT**

The not-to-exceed award value is based on the planned level of services. The Contract Work Orders (CWO) issued will reflect the actual level of services required to support individual Board-approved projects. The Contract funds are authorized by issuing separate CWOs for various projects using labor classifications and rates set forth in the Contract. This method of contracting results in more efficient cost and schedule management, since CWOs and modifications to existing CWOs are negotiated and issued as additional work is identified.

Funding for these services are included in the approved FY18 Budget for the various Metro projects. The individual CWOs will be funded from the associated life-of-project (LOP) budgets that are approved by the Board. The project managers, cost managers and Chief Program Management Officer will be accountable for budgeting the cost in future years, including cost associated with exercising the option.

### **Impact to Budget**

There is no impact to the FY18 Budget as funds for this action will be included in the approved budget for each project. Most of the projects are funded with multiple sources of funds: federal and state grants, federal loans, bonds and local sales taxes. Much of local sales taxes are eligible for bus and rail operations and capital improvements. These funds are programmed to state of good repair projects and to augment the costs of mega projects, where eligible and appropriate.

## **ALTERNATIVES CONSIDERED**

The Board may choose to have existing or new Metro staff perform these services. This alternative is not practical or cost effective because Metro would have to hire a large workforce and attract high-paid expertise dependent on fluctuating projects' needs. While requests for additional Metro staff are being considered by the Board as part of the FY18 Budget process, consultant support is also recommended in order to meet peak, short-term needs, and provide technical assistance that is not available internally.

## **NEXT STEPS**

After Board approval of this PMSS contract, the Contracting Officer will award the contract in accordance with Metro Procurement Policies and Procedures.


## **ATTACHMENTS**

Attachment A - Procurement Summary  
Attachment B - DEOD Summary

Prepared by: Brian Boudreau, Sr. Executive Officer, Program Control  
(213) 922-2474

Reviewed by: Richard Clarke, Chief Program Management Officer,

(213) 922-7557  
Debra Avila, Chief Vendor/Contract Management Officer,  
(213) 418-3051



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Phillip A. Washington  
Chief Executive Officer

## PROCUREMENT SUMMARY

## PROGRAM MANAGEMENT SUPPORT SERVICES / AE35279

1.	<b>Contract Number:</b> AE35279	
2.	<b>Recommended Vendor:</b> Kal Krishnan Consulting Services/Triunity Engineering & Management Joint Venture	
3.	<b>Type of Procurement (check one):</b> <input type="checkbox"/> IFB <input type="checkbox"/> RFP <input checked="" type="checkbox"/> RFP-A&E <input type="checkbox"/> Non-Competitive <input type="checkbox"/> Modification <input type="checkbox"/> Task Order	
4.	<b>Procurement Dates:</b>	
	A. <b>Issued:</b> November 21, 2016	
	B. <b>Advertised/Publicized:</b> November 21-24, 2016	
	C. <b>Pre-proposal/Pre-Bid Conference:</b> December 6, 2016	
	D. <b>Proposals/Bids Due:</b> January 12, 2017	
	E. <b>Pre-Qualification Completed:</b> TBD	
	F. <b>Conflict of Interest Form Submitted to Ethics:</b> March 28, 2017	
	G. <b>Protest Period End Date:</b> May 22, 2017	
5.	<b>Solicitations Picked up/Downloaded:</b> 201	<b>Bids/Proposals Received:</b> 4
6.	<b>Contract Administrator:</b> Tamara Reid / Bruce Warrensford	<b>Telephone Number:</b> (213) 922-7215 / (213) 922-7338
7.	<b>Project Manager:</b> Amy Wang	<b>Telephone Number:</b> (213) 922-1024

**A. Procurement Background**

This Board Action is to approve the award of Contract No. AE35279, issued in support of Program Management Support Services (PMSS). The scope of the Contract is to support the Program Management Department in managing and supporting the delivery of Metro's Capital Program. Board approval of contract awards are subject to resolution of all properly submitted protests.

The Contract type is a Cost Plus Fixed Fee (CPFF). The Contract period of performance is five base years plus one two-year option.

The RFP was issued in accordance with Metro's Acquisition Policy and California Government Code §4525 - 4529. Two amendments were issued during the solicitation phase of this RFP:

- Amendment No. 1, issued on December 6, 2016, extended the proposal due date; and
- Amendment No. 2, issued on January 5, 2017, modified the DBE Contract Outreach and Mentoring Plan.

On December 6, 2016, a pre-proposal conference was held with 36 firms in attendance. Four proposals were received on January 12, 2017.



## **B. Evaluation of Proposals**

A Proposal Evaluation Team (PET) consisting of management staff from Program Management and Vendor/Contract Management was convened and conducted a comprehensive technical evaluation of the proposal received.

The proposals were evaluated based on the following evaluation criteria and weights:

- Experience, Qualifications, and Capabilities of Firms on the Team 30%
- Experience, Qualifications, and Capabilities of Personnel 40%
- Understanding and Approach to Service Delivery 30%
- DBE Contracting Outreach and Mentor Protégé Approach (Bonus) 4%

The evaluation criteria are appropriate and consistent with criteria developed for other, similar Architect and Engineers (A&E) procurements. Several factors were considered when developing these weights, giving the greatest importance to the experience, qualification and capabilities of personnel.

This is an A&E, qualifications based procurement. Price cannot be and was not used as an evaluation factor as governed by California Government Code §4525 - 4529.

All four proposals were determined to be within the competitive range and are listed below in alphabetical order:

1. Kal Krishnan Consulting Services/ Triunity Engineering & Management Joint Venture (KKCS/Triunity JV);
2. LA Mobility Solutions;
3. PMA-Intueor JV; and
4. Anil Verma Associates, Inc./Simpson & Simpson Management Consulting JV

During the week of February 9, 2017, the PET conducted oral presentations with the firms. The firms' project managers and key team members had an opportunity to present each team's qualifications and respond to the evaluation committee's questions. In general, each team's presentation addressed the requirements of the RFP, experience with all aspects of the required tasks, and stressed each firm's commitment to the success of the project. Also highlighted were staffing plans, work plans, and perceived project issues. Each team was asked questions relative to each firm's qualifications and previous experience.

### **Qualification Summary of Recommended Firm:**

The evaluation performed by the PET, in accordance with evaluation criteria set forth in the RFP, determined KKCS/Triunity JV as the most qualified firm to provide the required services.

KKCS has extensive experience with Metro contracts and similar projects for other transit agencies. Their firm showed a good understanding of Metro's processes and solutions to mitigate potential risks.

Triunity Engineering & Management (Triunity) specializes in program Management/Construction Management and System Engineering services specifically for highway and rail transportation.

KKCS/Triunity JV provided a detailed Project Management Plan that included extensive coordination with internal teams and Metro as well as staffing requirements demonstrated a clear understanding of the proposed scope of work.

KKCS/Triunity JV demonstrated they are well-skilled in providing the scope of services at the level required by this contract, and has the capabilities to provide staffing for task order assignments that may be issued under this contract.

The PET ranked the proposals and assessed strengths, weaknesses and associated risks of each of the Proposers to determine the most qualified firm.

1	FIRM	Avg Score	Factor Weight	Weighted Average Score	Rank
2	<b>KKCS/Triunity JV</b>				
3	Experience, Qualifications and Capabilities of Firms on the Team	90.67	30%	27.20	
4	Experience, Qualifications and Capabilities of Personnel	90.67	40%	36.27	
5	Understanding and Approach to Service Delivery	91.67	30%	27.50	
6	DBE Contracting Outreach & Mentor Protégé Approach	75.00	4%	3.00	
7	<b>Total</b>		<b>104%</b>	<b>93.97</b>	<b>1</b>
8	<b>LA Mobility Solutions</b>				
9	Experience, Qualifications and Capabilities of Firms on the Team	90.00	30%	27.00	
10	Experience, Qualifications and Capabilities of Personnel	88.33	40%	35.33	
11	Understanding and Approach to Service Delivery	89.33	30%	26.80	
12	DBE Contracting Outreach & Mentor Protégé Approach	75.00	4%	3.00	
13	<b>Total</b>		<b>104%</b>	<b>92.13</b>	<b>2</b>
14	<b>PMA-Intueor JV</b>				
15	Experience, Qualifications and Capabilities of Firms on the Team	83.00	30%	24.90	
16	Experience, Qualifications and Capabilities of Personnel	83.33	40%	33.33	

17	Understanding and Approach to Service Delivery	84.33	30%	25.30	
18	DBE Contracting Outreach & Mentor Protégé Approach	50.00	4%	2.00	
19	<b>Total</b>		<b>104%</b>	<b>85.53</b>	<b>3</b>
20	<b>Anil Verma/Simpson &amp; Simpson JV</b>				
21	Experience, Qualifications and Capabilities of Firms on the Team	77.67	30%	23.30	
22	Experience, Qualifications and Capabilities of Personnel	53.33	40%	21.33	
23	Understanding and Approach to Service Delivery	81.67	30%	24.50	
24	DBE Contracting Outreach & Mentor Protégé Approach	75.00	4%	3.00	
25	<b>Total</b>		<b>104%</b>	<b>72.13</b>	<b>4</b>

### C. Cost/Price Analysis

The cost analysis included (1) a comparison with historical cost data of other firms offering similar services; (2) an analysis of prior audited and overhead rates, and factors for labor, and other direct costs, and (3) compliance with Federal Acquisition Regulation (FAR) Part 31 guidelines. Metro has rates for direct labor and negotiated provisional overhead rates, and a negotiated fixed fee factor for the Contract. The negotiated amount has been determined to be fair and reasonable.

An audit request has been submitted to the Metro Management Audit Services Department (MASD). In order to prevent any unnecessary delay in contract award, provisional overhead rates have been established subject to retroactive Contract adjustments. In accordance with FTA Circular 4220.1.f, if an audit has been performed by any other cognizant agency within the last twelve month period, Metro will receive and accept that audit report for the above purposes rather than perform another audit.

<b>Proposer Name</b>	<b>Contract Term</b>	<b>Proposal Amount</b>	<b>Metro Independent Cost Estimate</b>	<b>Recommended NTE Amount</b>
KKCS/ Triunity JV	Base Contract for Years 1-5	\$76,745,629.86	\$73,901,212	\$76,745,629.86
	Option for Years 6-7	\$32,436,264.59	\$ 32,530,392	\$32,436,264.59
	Total Contract Value (Base + Option)	\$109,181,894.45	\$106,431,604	\$109,181,894.45

#### **D. Background on Recommended Contractor**

KKCS/Triunity JV is a multi-disciplined team that has extensive experience providing program management services for transportation agencies across the U.S. Founded in 1987, KKCS is a Metro-certified DBE firm with 87 employees in Los Angeles and regional offices in Oakland, San Diego, Seattle, New York, and Boston.

Since 2003, Triunity and its 50+ employees have provided full spectrum Project Management/Construction Management services including program management, project management, construction management, project controls, project management oversight, and estimating to transportation agencies, including Regional Transportation District-Denver (RTD) and FTA PMOC.

KKCS has a successful partnership with Metro and has had a role helping to deliver some of Metro's largest projects, including I-405 Sepulveda Pass Improvements; Alternatives Analysis for the Westside Subway Extension; Expo Light Rail Phase 2; Universal City Station Pedestrian Bridge; Assessment of Operations Capital Improvements and Supplementary Station Entrances for the Metro Blue, Green, and Gold Lines; Congestion Reduction Demonstration Program for Metro ExpressLanes; and Red Line Station Canopies.

In addition, KKCS and Triunity are currently providing program-level support to Metro's Program Management Department, assisting implementation of specific program and construction management best practices, including the Project Review Readiness Procedure, Project Delivery Selection Procedure, Lessons Learned Report and Program, and Risk Management Program.

## DEOD SUMMARY

## PROGRAM MANAGEMENT SUPPORT SERVICES AE35279

**A. Small Business Participation**

The Diversity and Economic Opportunity Department (DEOD) established a 30% Disadvantaged Business Enterprise (DBE) goal for this solicitation. DBE firms Kal Krishnan Consulting Services and Triunity Engineering & Management formed Kal Krishnan Consulting Services/Triunity Engineering & Management Joint Venture (KKCS/Triunity JV), and exceeded the goal by making a 73.31% DBE commitment.

<b>SMALL BUSINESS GOAL</b>	<b>30% DBE</b>	<b>SMALL BUSINESS COMMITMENT</b>	<b>73.31% DBE</b>
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	<b>DBE Contractors</b>	<b>Scope of Work</b>	<b>NAICS Codes</b>	<b>Ethnicity</b>	<b>% Committed</b>
1.	KKCS (JV Partner)	Program Management, Project Control	<b>541611</b> - Admin. Mgmt. and Gen. Mgmt. Consult.	Subcontinent Asian	19.89%
2.	Triunity (JV Partner)	Program Management	<b>541611</b> - Admin. Mgmt. and Gen. Mgmt. <b>541690</b> – Other Scientific and Tech. Consulting Services <b>541618</b> – Other Mgmt. Consulting	African American	18.75%
3.	Armand Resource Group, Inc.	Contract Compliance	<b>541611</b> - Admin. Mgmt. and Gen. Mgmt. <b>541618</b> - Other Mgmt. Consulting	African American	6.28%
4.	Lenax Construction Services, Inc.	Cost Estimating & Project Controls Support Services	<b>541611</b> - Admin. Mgmt. and Gen. Mgmt. <b>541618</b> - Other Mgmt. Consulting; <b>561499</b> - All Other Business Support Services;	Caucasian Female	21.28%
5.	LKG-CMC, Inc.	Doc. Control, Configuration Mgmt. Admin.	<b>541611</b> - Admin. Mgmt. and Gen. Mgmt. <b>541618</b> - Other Mgmt. Consulting	Caucasian Female	1.99%
6.	MBI Media	Public Outreach and Meeting Facilitation	<b>541820</b> - Public Relations Agencies	Caucasian Female	1.23%
7.	Ogx Consulting	Project Program Management Support Services	<b>541611</b> - Admin. Mgmt. and Gen. Mgmt. <b>541618</b> - Other Mgmt. Consulting; <b>541612</b> - Human Resources Consulting Services	African American	1.70%

8.	Ramos Consulting Services	Project Controls & Estimating	541330 - Engineering Services; 541611 - Admin. Mgmt. and Gen. Mgmt.	Hispanic American	1.68%
9.	Stellar Services, Inc.	Program Management Information Systems	541511 - Custom Comp. Prog. Services; 541512 - Computer System Design Services; 541519 - Other Computer Related Services;	Asian Pacific American	0.51%
<b>Total Commitment</b>					<b>73.31%</b>

**B. Contracting Outreach and Mentoring Plan**

To be responsive, Proposers were required to submit a Contracting Outreach and Mentoring Plan (COMP), to include their plans to mentor two (2) DBE firms for protégé development.

**C. Prevailing Wage Applicability**

Prevailing wage is not applicable to this contract.

**D. Living Wage Service Contract Worker Retention Policy Applicability**

The Living Wage and Service Contract Worker Retention Policy is not applicable to this contract.

**E. Project Labor Agreement/Construction Careers Policy**

Project Labor Agreement/Construction Careers Policy is not applicable to this contract.



## Board Report

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File #: 2016-1004, File Type: Contract

Agenda Number: 50.

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### SYSTEM SAFETY, SECURITY AND OPERATIONS COMMITTEE MAY 18, 2017

**SUBJECT: CONSULTANT BENCH FOR RAIL VEHICLE & SYSTEMS ENGINEERING SUPPORT**

**ACTION: AWARD BENCH CONTRACT**

#### **RECOMMENDATION**

AUTHORIZE the Chief Executive Officer to:

- A. AWARD Bench Contract No.PS37755 to consultant firms CH2M Hill, Inc., LTK Engineering Services, Mott McDonald, LLC, WSP/Parsons Brinkerhoff, and STV Inc., to establish a general account for consultant support services that will be utilized for **Rail Vehicle and Rail Systems Engineering Consultant Services**, for an amount not-to-exceed \$8,027,100, subject to resolution of protest, if any; and
- B. EXECUTE Task Work Orders within the approved total not-to-exceed amount of the Contract.

#### **ISSUE**

Metro requires as-needed consultant support services from qualified firms to support Metro Rail Vehicle and Systems Engineering capital and operating projects.

In April 2008, the Board authorized the award of Bench Contract No.OP39602112 in the total amount of \$20,000,000 to five (5) qualified consulting firms. These firms provided Metro with professional engineering and project management support to develop technical specifications, independent cost estimates and to provide oversight for the procurement and installation of our rail fleet systems and equipment. This bench contract expired in March 2017.

#### **DISCUSSION**

The bench Contract permits Metro to supplement internal resources by having available consulting firms with a wide range of specialized engineering, technical and program management experience and expertise.

The consulting firms that will form the vehicle bench have the demonstrated depth and breadth of technical and engineering experience and capacity to support Metro with the anticipated tasks and

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projects. On an as-needed basis Statements of Work will be developed, defining the type and level of support required for specific tasks and projects. Consultants on the vehicle bench will be eligible to bid for the work that they were approved under each Disciplines. This bench Contract consists of three disciplines: A) Support services for rail vehicle acquisition, overhauls and system compatibility, B) Support services for fleet reliability, operating rail vehicles, systems, and facilities, and C) Support services for traction power, rail vehicles, systems and facilities. Work will then be assigned to the successful consultant firm through task orders.

Subject to Metro's direction, the consultant shall apply appropriate engineering, technical and program management support services and resources to facilitate the timely execution of the associated deliverables for Metro's Rail Vehicle and Systems Engineering capital and operating projects.

Potential work under this bench Contract includes, but is not limited to: Specification development and review; condition based assessments of exiting fleets; car specific failure investigations; vehicle/MOC interface failure investigations; fleet reliability studies; review and development of shop maintenance practices; conduct vendor visits and audits; verification and validation of hardware and software modifications; development and testing of prototypes; development and testing of existing train control system and train control track circuits; and assist with developing specifications and procedures for TWC replacement, signal system rehabilitation, and line emergency trip system replacement.

The Diversity & Economic Opportunity Department (DEOD) has completed its evaluation of the Proposers' commitment to meet the overall twenty percent (20%) SBE/DVBE or DBE goal established for this project. The qualified firms, CH2M Hill, Inc., LTK Engineering Services, Mott McDonald, LLC, WSP/Parsons Brinkerhoff, and STV Inc., have committed to meeting the 20% goal.

### **DETERMINATION OF SAFETY IMPACT**

The required consultant support services will contribute to maintaining the rail system in a State of Good Repair which is essential in providing safe and reliable service for the Metro rail system riders.

### **FINANCIAL IMPACT**

As the support services under the bench Contract are intended to support capital and operations projects that are already funded, the funds for these expenses are included in the FY17 Operating budget and Life-of-Project budget of each individual project that these consultants will be supporting. As specific Rail Vehicle and Systems Engineering services needs arise, task orders will be issued and funded from the associated project budgets, upon approval by the responsible Project Manager. \$400,000 is included in the FY17 budget in Cost Center 3043, in account 50316 - Professional Services under various projects. Since this a multi-year contract, the cost center manager and project manager will be responsible to ensure that funding is budgeted in future years.

### **ALTERNATIVES CONSIDERED**

Staff has considered using in-house Metro resources to perform this work; however, this approach is



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not recommended as Metro does not have sufficient resources and subject matter experts available to perform this work.

The Board of Directors may choose not to authorize the Contract award for this project; however, this alternative is not recommended as this Bench Contract is critical to facilitate the timely execution and associated deliverables of Metro's Rail Vehicle Acquisition, Rail Systems Engineering and Rail Vehicle Engineering capital and operating projects.

**NEXT STEPS**

Upon Board approval, staff will continue to competitively award individual task orders, on an as-needed basis, for engineering, technical, and program management support services.

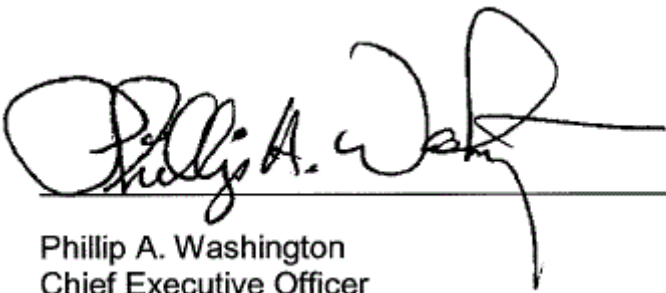
**ATTACHMENTS**

Attachment A - Procurement Summary

Attachment B - DEOD Summary

Prepared by: Julio C. Rodriguez, Senior Engineer, Rail Vehicle Acquisition (213) 922-3169  
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Reviewed by: James T. Gallagher, Chief Operations Officer (213)922-4424  
Debra Avila, Chief Vendor/Contract Management Officer (213)418-3051



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Phillip A. Washington  
Chief Executive Officer

## PROCUREMENT SUMMARY

CONSULTANT BENCH FOR RAIL VEHICLE AND SYSTEMS ENGINEERING  
SUPPORT / PS37755

1.	<b>Contract Number: PS37755</b>	
2.	<b>Recommended Vendor (In alphabetical order):</b> 1) CH2M Hill, Inc. 2) LTK Engineering Services, Inc. 3) Mott MacDonald, Inc., 4) Parsons Brinkerhoff, Inc. 5) STV, Inc.	
3.	<b>Type of Procurement (check one):</b> <input type="checkbox"/> IFB <input type="checkbox"/> RFP <input checked="" type="checkbox"/> RFP–Qualification Based <input type="checkbox"/> Non-Competitive <input type="checkbox"/> Modification <input type="checkbox"/> Task Order	
4.	<b>Procurement Dates:</b>	
	A. Issued: February 3, 2017	
	B. Advertised/Publicized: February 3, 2017	
	C. Pre-Proposal Conference: February 15, 2017	
	D. Proposals Due: March 6, 2017	
	E. Pre-Qualification Completed: In process	
	F. Conflict of Interest Form Submitted to Ethics: March 9, 2017	
	G. Protest Period End Date: April 21, 2017	
5.	<b>Solicitations Picked up/Downloaded:</b> 64	<b>Proposals Received:</b> 5
6.	<b>Contract Administrator:</b> Nicole Dang	<b>Telephone Number:</b> 213-922-7438
7.	<b>Project Manager:</b> Julio Rodriguez	<b>Telephone Number:</b> 213-922-3169

**A. Procurement Background**

This Board Action is to approve Contract No. PS37755 issued to establish a bench contract with qualified firms to support Metro Rail Vehicle Acquisition Department. This bench Contract contains three disciplines which are A) Support services for rail vehicle acquisition, overhauls and system compatibility, B) Support services for fleet reliability, operating rail vehicles, systems, and facilities, and C) Support services for traction power, rail vehicles, systems and facilities. Board approval of contract awards are subject to resolution of any properly submitted protest.

The RFP was issued in accordance with Metro’s Acquisition Policy for a qualification based non-Architect & Engineering procurement and the contract type is a cost plus fixed fee.

Two amendments were issued during the solicitation phase of this RFP:

- Amendment No. 1, issued on February 17, 2017, revised Exhibit A entitled “Statement of Qualifications”.
- Amendment No. 2, issued on February 22, 2017, revised Section 3 of the RFP document entitled “Submittal Requirements”.

The pre-proposal conference was held on February 15, 2017 and 16 firms attended this meeting. A total of 13 questions were received and responded to by March 1, 2017. A total of five proposals were received on March 6, 2017.

## **B. Evaluation of Proposals**

A Proposal Evaluation Team (PET) consisting of staff from Metro Vehicle Acquisition department and Metro Service Warranty and Quality Assurance department was convened and conducted a comprehensive technical evaluation of the five proposals received.

The proposals were evaluated based on the following evaluation criteria and weights:

- Prime Firm Qualification 40% percent
- Project Manager and Experience 50% percent
- Availability/Effective Schedule/ Cost Management Plan 10% percent

The evaluation criteria are appropriate and consistent with criteria developed for other, similar professional services bench procurements. Several factors were considered when developing these weights, giving the greatest importance to the project manager and experience. This is a qualification based bench contract; therefore, firms that scored over 59 percent and met the minimum qualifications were considered qualified. Price was not an evaluation factor for establishing the qualified firms for this Bench. However, price shall be an evaluation factor for all task order solicitations and awards. All task orders will be awarded on a competitive basis.

All five proposals received were determined to be within the competitive range. The five firms within the competitive range are listed below in alphabetical order:

1. CH2M Hill, Inc.
2. LTK Engineering Services, Inc.
3. Mott MacDonald, Inc.
4. Parsons Brinckerhoff, Inc.
5. STV, Inc.

The PET met during the month of March 2017 to review the five proposals received. During the week of March 6-24, 2017, Requests for Clarification were issued to CH2M Hill, Inc., LTK Engineering Services, Inc., Mott MacDonald, Inc., Parsons Brinckerhoff, Inc. and STV, Inc. The clarification requests were mainly for additional documentation of resumes. The responses received were satisfactory. All five firms submitted proposals for disciplines A, B, and C, and all five firms were approved and qualified for all three disciplines (A, B, & C).

This professional services bench Contract is anticipated to have a cumulative total of \$8,027,100 in task orders for the three disciplines combined over the six year term of the contracts. Individual task orders will be competed between the 5 firms on the bench and awarded competitively through a Request for Proposal (RFP).

### **Qualifications Summary of Firms within the Competitive Range:**

#### **CH2M Hill, Inc. (Disciplines A, B, C)**

CH2M Hill, Inc. (CH2M) was founded in 1942 and is headquartered in Englewood, CO. CH2M has a local office in Los Angeles, CA. CH2M has 20,000 employees, including 600 transit staff that specializes in consulting, design, construction, and operation services. CH2M provided consultant support services to Metro A650 HRV Overhaul and P2000 LRV Mid Life Overhaul. CH2M is among the firms in Metro's current rail vehicle consultant support bench. CH2M has provided satisfactory rail vehicle and systems engineering services to Metro's staff.

#### **LTK Engineering Services, Inc. (Disciplines A, B, C)**

LTK Engineering Services, Inc. (LTK) was founded in 1921 and is headquartered in Ambler, Pennsylvania. LTK has a local office in Los Angeles, CA. LTK specializes in rail system engineering, maintenance facilities, signals and communications, traction electrification and fare collection. LTK clients include local, regional, state and federal public agencies, domestic and foreign operating commuter rail, rapid transit, light rail, railroads, and People Mover systems. LTK has served as Metro's vehicle engineer for the procurement of the Red Line Option cars, Metro's consultant support services for the P3010 Light Rail Vehicles. LTK is among the firms in Metro's current rail vehicle consultant support bench. LTK has provided satisfactory rail vehicle and systems engineering services to Metro's staff.

#### **Mott MacDonald, Inc. (Disciplines A, B, C)**

Mott MacDonald provides design and management of rail and transit projects and is headquartered in Los Angeles, CA. Mott MacDonald has 16,000 staff worldwide and 2,300 staff in North America in 60 offices. Mott MacDonald specializes in engineering, management, and development consultancy working in 150 countries. Mott MacDonald clients include municipals such as LA Metro, Bay Area Rapid Transit, California High Speed Rail Authority, Orange County Transportation Authority, North County Transit District (NCTD), San Bernardino County Transportation Authority (SBCTA), and Santa Clara Valley Transportation Authority. This will be Mott MacDonald's first opportunity to provide rail vehicle and systems engineering services. Mott MacDonald has provided other satisfactory services to Metro.

### **WSP/Parsons Brinckerhoff, Inc. (Disciplines A, B, C)**

WSP/ Parsons Brinckerhoff, Inc. (PB) was founded in 1885 and has a local office in Los Angeles, CA. PB has over 36,700 employees located in more than 500 offices reaching across 40 countries worldwide. PB Transit and Rail System Technical Excellence Center (TEC) maintains more than 260 engineers and technical specialists dedicated to railroad systems which includes rolling stock, signals, train controls, communications, traction power, overhead catenary systems, fare collection, operations planning, safety and security, track and rail intermodal facilities. PB through a joint venture developed the performance based technical specification for Metro HR4000 Heavy Rail Vehicle procurement. PB is among the firms in Metro's current rail vehicle consultant support bench. PB has provided satisfactory rail vehicle and systems engineering services to Metro.

### **STV, Inc. (Disciplines A, B, C)**

STV, Inc. (STV) has been in business for 100 years and has a local office in Los Angeles, CA. STV has incorporated a Vehicle Technology and Operations group into their organization which offers consulting support in rail vehicle specification development and procurement, rail vehicle condition assessment, rail vehicle overhaul specification development and support, inspection and quality control support, and failure analysis. STV through a joint venture developed the performance based technical specification for Metro HR4000 Heavy Rail Vehicle procurement. STV has provided rail engineering support to municipals such as Massachusetts Bay Transportation Authority (MBTA), Maryland MTA, City of Ottawa Confederation and LA Metro. STV has provided satisfactory rail vehicle and systems engineering services to Metro.

1	Firm	Average Score	Factor Weight	Weighted Average Score	Rank
2	<b>Mott MacDonald, Inc.</b>				<b>1</b>
3	Prime Firm Qualification	8.83	40.00%	35.32%	
4	Project Management and Experience	8.70	50.00%	43.50%	
5	Availability/Effective Schedule/Cost Management Plan	9.33	10.00%	9.33%	
	Total		100.00%	88.15%	
8	<b>STV, Inc.</b>				<b>2</b>
9	Prime Firm Qualification	8.88	40.00%	35.52%	
10	Project Management and Experience	8.33	50.00%	41.65%	
11	Availability/Effective Schedule/Cost Management Plan	9.03	10.00%	9.03%	
12	Total		100.00%	86.20%	
13	<b>LTK Engineering, Inc.</b>				<b>3</b>
14	Prime Firm Qualification	8.75	40.00%	35.00%	
15	Project Management and Experience	8.43	50.00%	42.15%	
16	Availability/Effective Schedule/Cost Management Plan	8.93	10.00%	8.93%	
17	Total		100.00%	86.08%	
18	<b>Parsons Brinckerhoff, Inc.</b>				<b>4</b>
19	Prime Firm Qualification	8.58	40.00%	34.32%	
20	Project Management and Experience	7.93	50.00%	39.65%	
21	Availability/Effective Schedule/Cost Management Plan	8.53	10.00%	8.53%	
22	Total		100.00%	82.50%	
23	<b>CH2M Hill, Inc.</b>				<b>5</b>
24	Prime Firm Qualification	8.20	40.00%	32.80%	
25	Project Management and Experience	7.87	50.00%	39.35%	
	Availability/Effective Schedule/Cost Management Plan	8.23	10.00%	8.23%	
	Total		100.00%	<b>80.38%</b>	

### C. Cost/Price Analysis

This section is not applicable to the qualification approval of a bench Contract. However, task orders relating to this bench Contract will be awarded on a competitive

basis to the firms that provide Metro with the most advantageous proposal where price is a material factor. Individual task order awards shall include, cost/price analysis, technical evaluation, independent cost estimates, and as appropriate, audits will be performed for each Task Order.

**CONSULTANT BENCH FOR RAIL VEHICLE AND SYSTEMS ENGINEERING  
SUPPORT / PS37755**

**A. Small Business Participation**

Rail Vehicle and Rail Systems Engineering Consultant Support Services Bench Proposers formed teams that included Disadvantaged Business Enterprise (DBE), Small Business Enterprise (SBE) and Disabled Veteran Business Enterprise (DVBE) firms without schedules or specific dollar commitments prior to the establishment of the bench Contract.

The Bench Contract has a DBE goal of 20% for task orders awarded with federal funds. In addition, the bench Contract has a SBE goal of 20%, inclusive of 17% SBE/3% DVBE, for task orders awarded with non-federal funds. Overall DBE, SBE, and DVBE participation for the bench will be determined based on the total aggregate of all Task Orders issued dependent upon funding source.

<b>Small Business Goal</b>	<b>20% DBE &amp; 17% SBE 3% DVBE</b>	<b>Small Business Commitment</b>	<b>20% DBE &amp; 17% SBE 3% DVBE</b>
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**Prime: Mott MacDonald LLC**

	<b>DBE Subcontractors</b>	<b>Ethnicity</b>	<b>% Committed</b>
1.	Electrical Building Systems, Inc.	Hispanic American	TBD
2.	LKG-CMC	Caucasian Female	TBD
3.	NBA Engineering	Caucasian Female	TBD
4.	Pacific Railway Enterprises	Caucasian Female	TBD
5.	Raul Bravo + Associates	Hispanic American	TBD
6.	Virginkar and Associates	Subcontinent Asian American	TBD
<b>Total DBE Commitment</b>			<b>20%</b>

	<b>SBE Subcontractors</b>	<b>% Committed</b>
1.	LKG-CMC	TBD
2.	NBA Engineering	TBD
3.	Pacific Railway Enterprises	TBD
4.	Raul Bravo + Associates	TBD
5.	Virginkar and Associates	TBD
<b>Total SBE Commitment</b>		<b>17%</b>

	<b>DVBE Subcontractors</b>	<b>% Committed</b>
1.	PSM Associates	TBD
<b>Total DVBE Commitment</b>		<b>3%</b>



**Prime: CH2M Hill**

	<b>DBE Subcontractors</b>	<b>Ethnicity</b>	<b>% Committed</b>
1.	Parthenon Corporation	Hispanic American	TBD
2.	LKG-CMC	Caucasian Female	TBD
3.	Virginkar and Associates	Subcontinent Asian American	TBD
4.	Capitol Gov't Contract Specialists	Hispanic American	TBD
5.	E.W. Moon Inc.	African American	TBD
6.	Civil Earth Engineering	Asian Pacific American	TBD
<b>Total DBE Commitment</b>			<b>20%</b>

	<b>SBE Subcontractors</b>	<b>% Committed</b>
1.	Parthenon Corporation	TBD
2.	LKG-CMC	TBD
3.	Virginkar and Associates	TBD
4.	Turner Engineering Corporation	TBD
5.	Capitol Gov't Contract Specialists	TBD
6.	E.W. Moon Inc.	TBD
7.	Civil Earth Engineering	TBD
<b>Total SBE Commitment</b>		<b>17%</b>

	<b>DVBE Subcontractors</b>	<b>% Committed</b>
1.	Capitol Gov't Contract Specialists	TBD
<b>Total DVBE Commitment</b>		<b>3%</b>

**Prime: Parsons Brinckerhoff**

	<b>DBE Subcontractors</b>	<b>Ethnicity</b>	<b>% Committed</b>
1.	Capitol Gov't Contract Specialists	Hispanic American	TBD
2.	Casamar Group	Hispanic American	TBD
3.	Information Design Consultants	African American	TBD
4.	LKG-CMC, Inc.	Caucasian Female	TBD
5.	Pacific Railways Enterprises	Caucasian Female	TBD
6.	Systems Consulting LLC	African American	TBD
7.	Virginkar & Associates Inc.	Caucasian Female	TBD
8.	VP Engineering	Subcontinent Asian American	TBD
<b>Total DBE Commitment</b>			<b>20%</b>

**Prime: Parsons Brinckerhoff (cont.)**

	<b>SBE Subcontractors</b>	<b>% Committed</b>
1.	Capitol Gov't Contract Specialists	TBD
2.	Casamar Group	TBD
3.	Information Design Consultants	TBD
4.	LKG-CMC, Inc.	TBD
5.	Pacific Railways Enterprises	TBD
6.	Systems Consulting LLC	TBD
7.	Turner Engineering Corporation	TBD
8.	Virginkar & Associates Inc.	TBD
9.	VP Engineering	TBD
<b>Total SBE Commitment</b>		<b>17%</b>

	<b>DVBE Subcontractors</b>	<b>% Committed</b>
1.	Capitol Gov't Contract Specialists	TBD
<b>Total DVBE Commitment</b>		<b>3%</b>

**Prime: LTK Engineering**

	<b>DBE Subcontractors</b>	<b>Ethnicity</b>	<b>% Committed</b>
1.	Capitol Gov't Contract Specialists	Hispanic American	TBD
2.	DAV-LEAR Systems, Inc.	African American	TBD
3.	Ramos Consulting Services	Hispanic American	TBD
4.	Virginkar & Associates	Subcontinent Asian American	TBD
<b>Total DBE Commitment</b>			<b>20%</b>

	<b>SBE Subcontractors</b>	<b>% Committed</b>
1.	Capitol Gov't Contract Specialists	TBD
2.	DAV-LEAR Systems, Inc.	TBD
3.	Ramos Consulting Services	TBD
4.	Turner Engineering Inc.	TBD
5.	Virginkar & Associates	TBD
<b>Total SBE Commitment</b>		<b>17%</b>

	<b>DVBE Subcontractors</b>	<b>% Committed</b>
1.	DAV-LEAR Systems, Inc.	TBD
<b>Total DVBE Commitment</b>		<b>3%</b>

**Prime: STV Incorporated**

	<b>DBE Subcontractors</b>	<b>Ethnicity</b>	<b>% Committed</b>
1.	Capitol Gov't Contract Specialists	Hispanic American	TBD
2.	Casamar Group	Hispanic American	TBD
3.	dHA + CALPEC	Sub-Continent Asian American	TBD
4.	ERJ Engineering Consultants	Sub-Continent Asian American	TBD
5.	E.W. Moon, Inc.	African American	TBD
6.	LKG-CMC, Inc.	Caucasian Female	TBD
7.	Virginkar & Associates	Sub-Continent Asian American	TBD
8.	VP Engineering	Sub-Continent Asian American	TBD
<b>Total DBE Commitment</b>			<b>20%</b>

	<b>SBE Subcontractors</b>	<b>% Committed</b>
1.	Capitol Gov't Contract Specialists	TBD
2.	Casamar Group	TBD
3.	dHA + CALPEC	TBD
4.	ERJ Engineering Consultants	TBD
5.	E.W. Moon, Inc.	TBD
6.	LKG-CMC, Inc.	TBD
7.	Virginkar & Associates	TBD
8.	VP Engineering	TBD
<b>Total SBE Commitment</b>		<b>17%</b>

	<b>DVBE Subcontractors</b>	<b>% Committed</b>
1.	Capitol Gov't Contract Specialists	TBD
<b>Total DVBE Commitment</b>		<b>3%</b>

**B. Living Wage and Service Contract Worker Retention Policy Applicability**

The Living Wage and Service Contract Worker Retention Policy is not applicable to this Contract.

**C. Prevailing Wage Applicability**

Prevailing wage is not applicable to this Contract.

**D. Project Labor Agreement/Construction Careers Policy**

Project Labor Agreement/Construction Careers Policy is not applicable to this Contract.

**Board Report**

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**File #:** 2017-0141, **File Type:** Program**Agenda Number:** 26

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**EXECUTIVE MANAGEMENT COMMITTEE  
MAY 18, 2017****SUBJECT: ADDITIONAL LOCATIONS FOR PARKING MANAGEMENT PILOT PROGRAM****ACTION: APPROVE RECOMMENDATIONS****RECOMMENDATION**

CONSIDER:

- A. **AUTHORIZING** the implementation of the **Parking Management Pilot Program at the Metro Gold Line Monrovia Station with a public shared parking program during non-peak transit hours;**
- B. **AUTHORIZING** the implementation of the **Parking Management Pilot Program at the Metro Green Line Crenshaw Station;**
- C. **AMENDING** Metro's Parking Rates and Fee Resolution (Attachment A) in support of the implementation of the Parking Management Pilot Program and Shared Public Parking Pilot Program at the Monrovia and Crenshaw Stations; and
- D. **APPROVING** Contract Modification Authority (CMA) to Contract No. PS6264800 with L&R Group of Companies dba Joe's Auto Parks in the amount of \$1.3 million, increasing the total CMA amount from \$838,827 to \$2,138,827 to provide additional parking management services at two (2) locations and improved functions for all 15 Metro parking facilities.

**ISSUE**

The Parking Management Pilot Program (Pilot Program) was developed to manage anticipated parking demand and enhance the transit customer's experience. Implementation of the Pilot Program started in May 2016 with the opening of the Expo Phase 2 stations and will begin at Red, Gold, Green and Silver Line Stations in the coming months. Staff is proposing expanding the Pilot Program to the Metro Gold Line Monrovia Station through a public shared use parking program during non-peak commuter hours and implementing paid parking at the Crenshaw Green Line Station parking facility per the request of the South Bay Regional Service Council members during their March meeting (Attachment B). The actions of this Board Report will authorize the implementation of the Pilot Program at the Monrovia and Crenshaw stations, amend Metro's Parking Fee Resolution and approve Contract Modification No. 2 with Joe's Auto Parks in support of the Pilot Program.

## **DISCUSSION**

### Parking Management Pilot Program

In December 2016, the Board approved the implementation of the Phase 2 of the Pilot Program at up to 13 Metro stations. Initial implementation of the Pilot Program had already taken place at the stations along Expo Line (Expo/Bundy, Expo/Sepulveda, 17<sup>th</sup> St. /SMC and at La Cienega/Jefferson). Staff anticipates completion of implementation at all proposed Pilot Program locations by fall 2017.

The goal of the Pilot Program is to operate Metro parking facilities between 85% to 90% occupancy levels. These occupancy levels are cited by parking experts as the level that maximizes utilization while allowing for customers to be able to find parking at any time. In addition the Program prioritizes parking spaces at Metro stations for transit patrons. Findings from both phases of the Pilot Program will support final recommendations in the Supportive Transit Parking Program Master Plan (STPP Master Plan) currently underway and will help determine the direction of Metro's parking management in the future.

### Monrovia Station Parking

Staff has assessed parking utilization at the Monrovia Gold Line Station which has reached 90% occupancy levels in recent months. Staff is proposing adding 350 parking spaces in the Monrovia Station parking garage to the Pilot Program.

Staff has also been working with the City of Monrovia to develop a public shared use parking program at the Monrovia Station to allow for non-transit parking during non-peak commuter hours. Following an analysis of transit parking patterns, staff has concluded that spaces can be made available during non-peak transit periods without impacting availability for transit patrons. Public parking at the Monrovia Station will only be available between 6:00 pm and 5:00 am Monday through Friday, and all day Saturday and Sunday. Should conflicts with transit parking requirements develop, Metro has the discretion to eliminate the public parking program.

For transit riders, staff is proposing a daily rate of \$3.00 or a monthly rate of \$59.00 with TAP ridership verification. For the shared use parking, staff is proposing a \$3.00 flat rate and all non-transit parking users must exit the parking facility before 5 am. TAP verification will not be required during non-peak commuter hours.

### Crenshaw Station Parking

Parking Management staff presented up-to-date findings of the Pilot Program to all Regional Service Councils in February and March 2017. Some of the findings indicate there has been a significant reduction of non-transit usage at Metro parking facilities after the implementation of the Pilot Program. During the March meeting, the South Bay Service Council members expressed concern with the usage of Metro parking facilities by private buses and trailers. This concern is consistent with the findings by Parking Management staff. The South Bay Service Council passed a motion supporting the addition of the Green Line Crenshaw Station to the Pilot Program (Attachment B) to address the non-transit usage of Metro's Crenshaw Park and Ride Lot.

Staff is proposing a daily rate of \$3.00 or a monthly rate of \$59.00 with TAP ridership verification at

the Crenshaw station.

#### Metro Parking Rates and Permit Fee Resolution

Implementation of the Pilot Program at the Monrovia and Crenshaw Stations requires amending Metro's Parking Fee Resolution. The last amendment to the fee resolution was in December 2016 for the implementation of the Pilot Program phase two (2). Changes in the fee resolution only reflect the addition of the Monrovia and Crenshaw Stations to the Pilot Program and the Monrovia shared public parking program, along with a number of edits to address typographical and grammatical errors.

#### Joe's Auto Parks Contract Modification Authority (CMA)

During the implementation of the Pilot Program, staff identified additional functions needed to consolidate all Parking Management Services under one system. The two (2) additional locations of the Pilot Program will require additional payment equipment, payment options and administrative duties. The proposed increase in CMA with Joe's Auto Parks will address these additional functions and services needed to expand and operate the Pilot Program at all fifteen (15) locations.

### **DETERMINATION OF SAFETY IMPACT**

Implementation of the Pilot Program at the Monrovia and Crenshaw Stations will not create any safety impacts because it will operate within the existing infrastructure. Phasing of the programs will only require the purchase and installation of equipment and signage. Customer service ambassadors will be at the facilities at the beginning of the program to provide assistance to patrons during commuter hours. Customer service ambassadors will also improve safety at the facilities as their presence will discourage theft and vandalism. Ambassadors will also be able to report incidents to Metro Security.

### **FINANCIAL IMPACT**

Implementation of the Pilot Program at the two (2) additional locations will not have an impact on Metro's expense budget. Staff anticipates the additional Pilot Program locations will generate \$2.0 million in gross revenue from transit parking alone, (excluding, additional public parking revenue from Monrovia Station) over the four (4)-year period after both locations are in operation. Staff will report back on the revenue generated from the public parking program in fall 2017. The \$1.3 million operating costs are primarily equipment and labor for the four (4)-year period. The additional Pilot Program locations are projected to generate additional net revenues of \$700,000 over 4 years or approximately an additional \$175,000 net revenue a year.

Contract No. PS6264800 is a net revenue generating contract. Metro will not pay out any funds for this contract. The contractor will cover all the operating costs and be compensated through the parking revenues collected. Metro will receive the net revenue collected from the contractor. There will be no requirement for any local, state or federal funding to pay any expenses.

#### Impact to 2018 Budget

Staff estimates the above additions to the Pilot Program will generate approximately \$125,000 in FY18 (partial year) after deductions for equipment and labor costs, in Account 40707 for Parking

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Revenue. Funds generated by this program will contribute to the RAM internal savings accounts.

**ALTERNATIVES CONSIDERED**

The Board may choose not to authorize staff to move forward with the implementation of the public shared parking program and Pilot Program at the Monrovia and Crenshaw Stations. This is not recommended as they are both components of the STPP Master Plan's examination of a long-term strategy for managing parking demand using an affordable parking pricing program and creating a self-sustaining system. In addition, the results from these programs will support the completion of the STPP Master Plan. The Pilot Program is also part of the Board-adopted RAM initiative. Implementation of public parking during non-peak commuter hours will allow Metro to share its parking resources with nearby communities where no impact to transit parking availability is anticipated. The data from this program will also help support staff with findings from the implementation at all 15 locations for the STPP Master Plan.

Finally, stakeholders in Monrovia and the South Bay Regional Council are strongly supportive of these recommendations.

**NEXT STEPS**

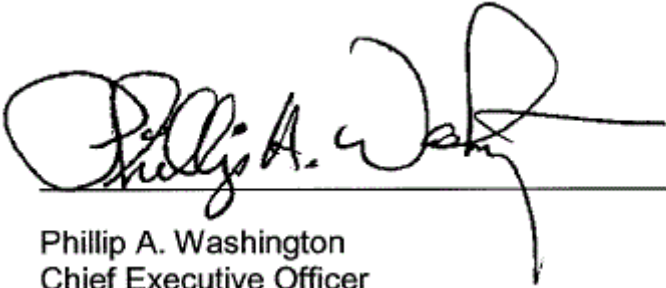
Upon approval by the Board, staff will implement the above changes to the Pilot Program at the fifteen (15) approved locations in 2017. Parking Management staff will return to the Board in fall 2017 to report on the findings from the Pilot Program and for the adoption of the Parking Strategic Plan and STPP Master Plan.

**ATTACHMENTS**

- Attachment A - Metro's Parking Rates and Permit Fee Resolution
- Attachment B - Letter from the South Bay Regional Service Council

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Phillip A. Washington  
Chief Executive Officer

**A RESOLUTION OF THE METRO BOARD  
OF LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
ESTABLISHING PARKING RATES AND PERMIT FEES FOR ALL  
METRO PARKING FACILITIES AND RESOURCES**

WHEREAS, the Los Angeles County Metropolitan Transportation Authority (Metro) operates parking facilities throughout the Los Angeles County in the City of Los Angeles, Pasadena, Long Beach, North Hollywood, Culver City, Norwalk, Downey, Lynwood, Hawthorne, Inglewood, El Segundo, Redondo Beach, Compton, El Monte and Gardena. At Metro Blue Line Stations at: Florence, Willowbrook, Artesia, Del Amo Willow and Wardlow Stations. Metro Gold Line Stations at: Atlantic, Indiana, Heritage, Lincoln Heights, Lake, Sierra Madre, Arcadia, Monrovia, Duarte/City of Hope, Irwindale, Azusa Downtown and APU/Citrus. Metro Red Line Stations at: Universal, North Hollywood and MacArthur Park. Metro Expo Line Stations at Expo/Crenshaw, La Cienega/Jefferson and Culver City, Expo/Sepulveda, Expo/Bundy and 17<sup>th</sup> Street/SMC. Metro Orange Line Stations at: Van Nuys, Sepulveda, Balboa, Reseda, Pierce College, Canoga, Sherman Way and Chatsworth Stations. Metro Silver Line Stations at: Slauson, Manchester, Rosecrans, Harbor Freeway, Harbor Gateway Transit Center and El Monte. Metro also operates the parking at Los Angeles Union Station.

WHEREAS, Metro has designated preferred parking zones throughout its parking facilities with parking restrictions to manage parking availability to patrons; and

WHEREAS, the Metro Board of Directors is authorized to set parking rates and permit fees, by resolution, at Metro owned, leased, operated, contracted and managed parking facilities and preferred parking zones; and

WHEREAS, the METRO Chief Executive Officer or its designee is hereby authorized to establish rate adjustments for special event parking or other special circumstances that increase parking demand. The METRO CEO is also authorized to establish parking rates at additional and new rail line extension parking facilities not included in the current fee resolution. Parking rates at these additional parking facilities will be established within the current fee structure and range and based on the demographics and location of the facility; and

WHEREAS, adopting the parking rates and permit fees as a means of regulating the use of all Metro parking facilities and resources will distribute the parking load more evenly between transit patrons and non-transit users, and maximize the utility and use of Metro operated parking facilities and resources, enhance transit ridership and the customer experience, thereby making parking easier, reducing traffic hazards and congestion, and promoting the public's convenience, safety, and welfare;

NOW, THEREFORE, THE BOARD OF DIRECTORS OF METRO DOES RESOLVE AS FOLLOWS:

SECTION 1. The parking rates established in this Resolution are effective as of September 24, 2015 at all Metro Parking Facilities.



SECTION 2. As used in this Resolution, the term “daily” means a consecutive 24-hour period commencing upon the time of entry of a vehicle into a parking facility.

SECTION 3. The parking rates listed in this Resolution shall apply to vehicles entering the specified Metro off-street parking facility for the specified times, and rates unless a special event is scheduled that is anticipated to increase traffic and parking demands. If an event is scheduled, the rate may be determined by Metro with approval of Parking Management staff, which approval may be granted based on Metro’s best interests. The maximum rate may be set as either a flat rate per entry or an increased incremental rate based upon time of entry and duration of parking.

SECTION 4. The following fees are established at the Metro Florence Blue Line Station:

Parking rates shall be as follows:

- a. Parking prior to 11am will require a \$25.00 monthly flat rate at designated preferred parking spaces. Users must maintain a minimum of ten (10) daily ridership transactions using their TAP card, per month, in order to renew their permit for the following month.
- b. Patrons that lose their permit due to less than ten (10) daily ridership transactions may file an appeal for an exemption. The application administration fee is \$5.00. All applications will be reviewed on a case by case basis. The review process may take up to 20 working days.
- c. Parking prior to 11am will require a \$4.00 flat rate at designated preferred parking spaces on a daily basis.
- d. After 11am all parking spaces become available to all transit patrons.
- e. Parking on weekends is free to all transit users.
- f. Parking is available on a first come first serve basis.

SECTION 5. The following fees are established at the Metro Willowbrook Blue Line Station:

Parking rates shall be as follows:

- a. Parking is available free of charge seven days a week.
- b. Parking is available on a first come first serve basis.

SECTION 6. The following fees are established at the Metro Artesia Blue Line Station:

Parking rates shall be as follows:

- a. Parking prior to 11am will require a \$25.00 monthly flat rate at designated preferred parking spaces. Users must maintain a minimum of ten (10) daily ridership transactions using their TAP card, per month, in order to renew their permit for the following month.
- b. Patrons that lose their permit due to less than ten (10) daily ridership transactions may file an appeal for an exemption. The application administration fee is \$5.00. All applications will be reviewed on a case by case basis. The review process may take up to 20 working days.

- c. Parking prior to 11am will require a \$4.00 flat rate at designated preferred parking spaces on a daily basis.
- d. After 11am all parking spaces become available to all transit patrons.
- e. Parking on weekends is free to all transit users.
- f. Parking is available on a first come first serve basis.

SECTION 7. The following fees are established at the Metro Del Amo Blue Line Station:

Parking rates shall be as follows:

- a. Parking prior to 11am will require a \$25.00 monthly flat rate at designated preferred parking spaces. Users must maintain a minimum of ten (10) daily ridership transactions using their TAP card, per month, in order to renew their permit for the following month.
- b. Patrons that lose their permit due to less than ten (10) daily ridership transactions may file an appeal for an exemption. The application administration fee is \$5.00. All applications will be reviewed on a case by case basis. The review process may take up to 20 working days.
- c. Parking prior to 11am will require a \$4.00 flat rate at designated preferred parking spaces on a daily basis.
- d. After 11am all parking spaces become available to all transit patrons.
- e. Parking on weekends is free to all transit users.
- f. Parking is available on a first come first serve basis.

SECTION 8. The following fees are established at the Metro Wardlow Blue Line Station:

Parking rates shall be as follows:

- a. Parking prior to 11am will require a \$25.00 monthly flat rate at designated preferred parking spaces. Users must maintain a minimum of ten (10) daily ridership transactions using their TAP card, per month, in order to renew their permit for the following month.
- b. Patrons that lose their permit due to less than ten (10) daily ridership transactions may file an appeal for an exemption. The application administration fee is \$5.00. All applications will be reviewed on a case by case basis. The review process may take up to 20 working days.
- c. Parking prior to 11am will require a \$4.00 flat rate at designated preferred parking spaces on a daily basis.
- d. After 11am all parking spaces become available to all transit patrons.
- e. Parking on weekends is free to all transit users.
- f. Parking is available on a first come first serve basis.

SECTION 9. The following fees are established at the Metro Willow Blue Line Station:

Parking rates shall be as follows:

- a. Parking prior to 11am will require a \$25.00 monthly flat rate at designated preferred parking spaces. Users must maintain a minimum of ten (10) daily ridership transactions using their TAP card, per month, in order to renew their permit for the following month.
- b. Patrons that lose their permit due to less than ten (10) daily ridership transactions may file an appeal for an exemption. The application administration fee is \$5.00. All applications will be reviewed on a case by case basis. The review process may take up to 20 working days.
- c. Parking prior to 11am will require a \$4.00 flat rate at designated preferred parking spaces on a daily basis.
- d. After 11am all parking spaces become available to all transit patrons.
- e. Parking on weekends is free to all transit users.
- f. Parking is available on a first come first serve basis.
- g. Any vehicle parked over 72 hours requires an Extended Parking Permit. The Extended Parking Permit Administration Fee is \$10.00.

SECTION 10. The following fees are established at the Metro Norwalk Green Line Station:

Parking rates shall be as follows:

- a. Permit parking at designated preferred parking spaces will be subject to a \$39.00 monthly flat rate. Preferred parking space permits will only be renewed for users with a minimum of ten (10) daily ridership transactions using their TAP card, per month.
- b. Patrons that lose their permit due to less than ten (10) daily ridership transactions may file an appeal for an exemption. The application administration fee is \$5.00. All applications will be reviewed on a case by case basis. The review process may take up to 20 working days.
- c. Transit users with verified use of a TAP Card within 96 hours of parking their vehicle will be subject to a \$2.00 flat rate per 24 hours.
- d. Carpool permit parking will be offered for a monthly rate of \$25.00. A minimum of three (3) TAP card users is required, including registered vehicles/license plates, to qualify for the carpool rate. Only one (1) vehicle will be allowed to park at a time. If more than one vehicle is parked at the same time, the regular daily transit rider rate will be applied to the monthly parking charges for each vehicle.
- e. Metro staff shall review and authorize adjustments to the parking rates pursuant to the Paid Parking Program and targeted occupancy levels. Parking rate adjustments: will not exceed a daily rate of \$5.00 per day; require 30 days' notice for pricing changes (increase or decrease); and cannot be made more frequently than every two months.
- f. Transit rider parking rates will also apply to non-Metro public transit agencies that accept Metro's TAP Card as a fare payment.
- g. Parking is available on a first come first serve basis.
- h. For any vehicle that exits the parking facility without completing the payment transaction, an outstanding parking transaction notice will be generated along with a bill for the parking fee based on the vehicle's DMV record. The administration fee for the billing is \$25.00 and will be added to the

outstanding parking fee. Any outstanding parking transaction delinquent more than 30 days from the billing date will be assessed an additional \$55.00 administration fee.

- i. Patrons requesting a monthly statement to be mailed for the Preferred Permit Parking monthly transaction or mobile payment transactions will be assessed a \$2.00 mailed statement fee.

SECTION 11. The following fees are established at the Metro Lakewood Green Line Station:

Parking rates shall be as follows:

- a. Permit parking at designated preferred parking spaces will be subject to a \$39.00 monthly flat rate. Preferred parking space permits will only be renewed for users with a minimum of ten (10) daily ridership transactions using their TAP card, per month.
- b. Patrons that lose their permit due to less than ten (10) daily ridership transactions may file an appeal for an exemption. The application administration fee is \$5.00. All applications will be reviewed on a case by case basis. The review process may take up to 20 working days.
- c. Transit users with verified use of a TAP Card within 96 hours of parking their vehicle will be subject to a \$2.00 flat rate per 24 hours.
- d. Carpool permit parking will be offered for a monthly rate of \$25.00. A minimum of three (3) TAP card users is required, including registered vehicles/license plates, to qualify for the carpool rate. Only one (1) vehicle will be allowed to park at a time. If more than one vehicle is parked at the same time, the regular daily transit rider rate will be applied to the monthly parking charges for each vehicle.
- e. Metro staff shall review and authorize adjustments to the parking rates pursuant to the Paid Parking Program and targeted occupancy levels. Parking rate adjustments: will not exceed a daily rate of \$5.00 per day; require 30 days' notice for pricing changes (increase or decrease); and cannot be made more frequently than every two months.
- f. Transit rider parking rates will also apply to non-Metro public transit agencies that accept Metro's TAP Card as a fare payment.
- g. Parking is available on a first come first serve basis.
- h. For any vehicle that exits the parking facility without completing the payment transaction, an outstanding parking transaction notice will be generated along with a bill for the parking fee based on the vehicle's DMV record. The administration fee for the billing is \$25.00 and will be added to the outstanding parking fee. Any outstanding parking transaction delinquent more than 30 days from the billing date will be assessed an additional \$55.00 administration fee.
- i. Patrons requesting a monthly statement to be mailed for the Preferred Permit Parking monthly transaction or mobile payment transactions will be assessed a \$2.00 mailed statement fee.

SECTION 12. The following fees are established at the Metro Long Beach Green Line Station:

Parking rates shall be as follows:

- a. Parking is available free of charge seven days a week.
- b. Parking is available on a first come first serve basis.

SECTION 13. The following fees are established at the Metro Avalon Green Line Station:

Parking rates shall be as follows:

- a. Parking is available free of charge seven days a week.
- b. Parking is available on a first come first serve basis.

SECTION 14. The following fees are established at the Metro Harbor Freeway Green Line Station:

Parking rates shall be as follows:

- a. Parking is available free of charge seven days a week.
- a. Parking is available on a first come first serve basis.

SECTION 15. The following fees are established at the Metro Vermont Green Line Station:

Parking rates shall be as follows:

- a. Parking is available free of charge seven days a week.
- b. Parking is available on a first come first serve basis.

SECTION 16. The following fees are established at the Metro Crenshaw Green Line Station:

Parking rates shall be as follows:

- a. Permit parking at designated preferred parking spaces will be subject to a \$59.00 monthly flat rate. Preferred parking space permits will only be renewed for users with a minimum of ten (10) daily ridership transactions using their TAP card, per month.
- b. Patrons that lose their permit due to less than ten (10) daily ridership transactions may file an appeal for an exemption. The application administration fee is \$5.00. All applications will be reviewed on a case by case basis. The review process may take up to 20 working days.
- c. Transit users with verified use of a TAP Card within 96 hours of parking their vehicle will be subject to a \$3.00 flat rate per 24 hours.
- d. Carpool permit parking will be offered for a monthly rate of \$20.00. A minimum of three (3) TAP card users is required, including registered vehicles/license plates, to qualify for the carpool rate. Only one (1) vehicle will be allowed to park at a time. If more than one vehicle is parked at the same time, the regular daily transit rider rate will be applied to the monthly parking charges for each vehicle.

- e. Metro staff shall review and authorize adjustments to the parking rates pursuant to the Paid Parking Program and targeted occupancy levels. Parking rate adjustments: will not exceed a daily rate of \$5.00 per day; require 30 days' notice for pricing changes (increase or decrease); and cannot be made more frequently than every two months.
- f. Transit rider parking rates will also apply to non-Metro public transit agencies that accept Metro's TAP Card as a fare payment.
- g. Parking is available on a first come first serve basis.
- h. Any vehicle parked over 72 hours will require an Extended Parking Permit. Extended Parking Permit Administration Fee is \$10.00.
- i. For any vehicle that exits the parking facility without completing the payment transaction, an outstanding parking transaction notice will be generated along with a bill for the parking fee based on the vehicle's DMV record. The administration fee for the billing is \$25.00 and will be added to the outstanding parking fee. Any outstanding parking transaction delinquent more than 30 days from the billing date will be assessed an additional \$55.00 administration fee.
- j. Patrons requesting a monthly statement to be mailed for the Preferred Permit Parking monthly transaction or mobile payment transactions will be assessed a \$2.00 mailed statement fee.

SECTION 17. The following fees are established at the Metro Hawthorne Green Line Station:

Parking rates shall be as follows:

- a. Parking is available free of charge seven days a week.
- b. Parking is available on a first come first serve basis.

SECTION 18. The following fees are established at the Metro Aviation Green Line Station:

Parking rates shall be as follows:

- a. Transit users with verified use of a TAP Card within 96 hours of parking their vehicle will be subject to a \$2.00 flat rate per 24 hours.
- b. Carpool permit parking will be offered for a monthly rate of \$25.00. A minimum of three (3) TAP card users is required, including registered vehicles/license plates, to qualify for the carpool rate. Only one (1) vehicle will be allowed to park at a time. If more than one vehicle is parked at the same time, the regular daily transit rider rate will be applied to the monthly parking charges for each vehicle.
- c. Metro staff shall review and authorize adjustments to the parking rates pursuant to the Paid Parking Program and targeted occupancy levels. Parking rate adjustments: will not exceed a daily rate of \$5.00 per day; require 30 days' notice for pricing changes (increase or decrease); and cannot be made more frequently than every two months.
- d. Transit rider parking rates will also apply to non-Metro public transit agencies that accept Metro's TAP Card as a fare payment.
- e. Parking is available on a first come first serve basis.

- f. For any vehicle that exits the parking facility without completing the payment transaction, an outstanding parking transaction notice will be generated along with a bill for the parking fee based on the vehicle's DMV record. The administration fee for the billing is \$25.00 and will be added to the outstanding parking fee. Any outstanding parking transaction delinquent more than 30 days from the billing date will be assessed an additional \$55.00 administration fee.
- g. Patrons requesting a monthly statement to be mailed for the Preferred Permit Parking monthly transaction or mobile payment transactions will be assessed a \$2.00 mailed statement fee.

SECTION 19. The following fees are established at the Metro El Segundo Green Line Station:

Parking rates shall be as follows:

- a. Parking is available free of charge seven days a week.
- b. Parking is available on a first come first serve basis.

SECTION 20. The following fees are established at the Metro Redondo Beach Green Line Station:

Parking rates shall be as follows:

- a. Parking is available free of charge seven days a week.
- b. Parking is available on a first come first serve basis.
- c. Any vehicle parked over 72 hours requires an Extended Parking Permit. The Extended Parking Permit Administration Fee is \$10.00.

SECTION 21. The following fees are established at the Metro MacArthur Park Red Line Station:

Parking rates shall be as follows:

- a. Parking is available free of charge seven days a week.
- b. Parking is available on a first come first serve basis.

SECTION 22. The following fees are established at the Metro Universal Red Line Station:

Parking rates shall be as follows:

- a. Permit parking at designated preferred parking spaces will be subject to a \$55.00 monthly flat rate. Preferred parking space permits will only be renewed for users with a minimum of ten (10) daily ridership transactions using their TAP card, per month.
- b. Patrons that lose their permit due to less than ten (10) daily ridership transactions may file an appeal for an exemption. The application administration fee is \$5.00. All applications will be reviewed on a case by case basis. The review process may take up to 20 working days.

- c. Transit users with verified use of a TAP Card within 96 hours of parking their vehicle will be subject to a \$3.00 flat rate per 24 hours.
- d. Carpool permit parking will be offered for a monthly rate of \$45.00. A minimum of three (3) TAP card users is required, including registered vehicles/license plates, to qualify for the carpool rate. Only one (1) vehicle will be allowed to park at a time. If more than one vehicle is parked at the same time, the regular daily transit rider rate will be applied to the monthly parking charges for each vehicle.
- e. Metro staff shall review and authorize adjustments to the parking rates pursuant to the Paid Parking Program and targeted occupancy levels. Parking rate adjustments: will not exceed a daily rate of \$5.00 per day; require 30 days' notice for pricing changes (increase or decrease); and cannot be made more frequently than every two months.
- f. Transit rider parking rates will also apply to non-Metro public transit agencies that accept Metro's TAP Card as a fare payment.
- g. Parking is available on a first come first serve basis.
- h. For any vehicle that exits the parking facility without completing the payment transaction, an outstanding parking transaction notice will be generated along with a bill for the parking fee based on the vehicle's DMV record. The administration fee for the billing is \$25.00 and will be added to the outstanding parking fee. Any outstanding parking transaction delinquent more than 30 days from the billing date will be assessed an additional \$55.00 administration fee.
- i. Patrons requesting a monthly statement to be mailed for the Preferred Permit Parking monthly transaction or mobile payment transactions will be assessed a \$2.00 mailed statement fee.

SECTION 23. The following fees are established at the Metro North Hollywood Red Line Station:

Parking rates shall be as follows:

- a. Permit parking at designated preferred parking spaces will be subject to a \$59.00 monthly flat rate. Preferred parking space permits will only be renewed for users with a minimum of ten (10) daily ridership transactions using their TAP card, per month.
- b. Patrons that lose their permit due to less than ten (10) daily ridership transactions may file an appeal for an exemption. The application administration fee is \$5.00. All applications will be reviewed on a case by case basis. The review process may take up to 20 working days.
- c. Transit users with verified use of a TAP Card within 96 hours of parking their vehicle will be subject to a \$3.00 flat rate per 24 hours.
- d. Carpool permit parking will be offered for a monthly rate of \$45.00. A minimum of three (3) TAP card users is required, including registered vehicles/license plates, to qualify for the carpool rate. Only one (1) vehicle will be allowed to park at a time. If more than one vehicle is parked at the same time, the regular daily transit rider rate will be applied to the monthly parking charges for each vehicle.



- e. Metro staff shall review and authorize adjustments to the parking rates pursuant to the Paid Parking Program and targeted occupancy levels. Parking rate adjustments: will not exceed a daily rate of \$5.00 per day; require 30 days' notice for pricing changes (increase or decrease); and cannot be made more frequently than every two months.
- f. Transit rider parking rates will also apply to non-Metro public transit agencies that accept Metro's TAP Card as a fare payment.
- g. Parking is available on a first come first serve basis.
- h. For any vehicle that exits the parking facility without completing the payment transaction, an outstanding parking transaction notice will be generated along with a bill for the parking fee based on the vehicle's DMV record. The administration fee for the billing is \$25.00 and will be added to the outstanding parking fee. Any outstanding parking transaction delinquent more than 30 days from the billing date will be assessed an additional \$55.00 administration fee.
- i. Patrons requesting a monthly statement to be mailed for the Preferred Permit Parking monthly transaction or mobile payment transactions will be assessed a \$2.00 mailed statement fee.

SECTION 24. The following fees are established at the Metro Atlantic Gold Line Station:

Parking rates shall be as follows:

- a. Permit parking at designated preferred parking spaces will be subject to a \$29.00 monthly flat rate. Preferred parking space permits will only be renewed for users with a minimum of ten (10) daily ridership transactions using their TAP card, per month.
- b. Patrons that lose their permit due to less than ten (10) daily ridership transactions may file an appeal for an exemption. The application administration fee is \$5.00. All applications will be reviewed on a case by case basis. The review process may take up to 20 working days.
- c. Transit users with verified use of a TAP Card within 96 hours of parking their vehicle will be subject to a \$2.00 flat rate per 24 hours.
- d. Non-transit riders can park without TAP Card ridership verification for up to three hours, for a \$3.00 flat rate.
- e. Carpool permit parking will be offered for a monthly rate of \$20.00. A minimum of three (3) TAP card users is required, including registered vehicles/license plates, to qualify for the carpool rate. Only one (1) vehicle will be allowed to park at a time. If more than one vehicle is parked at the same time, the regular daily transit rider rate will be applied to the monthly parking charges for each vehicle.
- f. Metro staff shall review and authorize adjustments to the parking rates pursuant to the Paid Parking Program and targeted occupancy levels. Parking rate adjustments: will not exceed a daily rate of \$5.00 per day; require 30 days' notice for pricing changes (increase or decrease); and cannot be made more frequently than every two months.

- g. Transit rider parking rates will also apply to non-Metro public transit agencies that accept Metro's TAP Card as a fare payment.
- h. Parking is available on a first come first serve basis.
- i. Any vehicle parked over 72 hours requires an Extended Parking Permit. The Extended Parking Permit Administration Fee is \$10.00.
- j. For any vehicle that exits the parking facility without completing the payment transaction, an outstanding parking transaction notice will be generated along with a bill for the parking fee based on the vehicle's DMV record. The administration fee for the billing is \$25.00 and will be added to the outstanding parking fee. Any outstanding parking transaction delinquent more than 30 days from the billing date will be assessed an additional \$55.00 administration fee.
- k. Patrons requesting a monthly statement to be mailed for the Preferred Permit Parking monthly transaction or mobile payment transactions will be assessed a \$2.00 mailed statement fee.

SECTION 25. The following fees are established at the Metro Indiana Gold Line Station:

Parking rates shall be as follows:

- a. Parking prior to 11am will require a \$29.00 monthly flat rate at designated preferred parking spaces. Users must maintain a minimum of ten (10) daily ridership transactions using their TAP card, per month, in order to renew their permit for the following month.
- b. Patrons that lose their permit due to less than ten (10) daily ridership transactions may file an appeal for an exemption. The application administration fee is \$5.00. All applications will be reviewed on a case by case basis. The review process may take up to 20 working days.
- c. Parking prior to 11am will require a \$4.00 flat rate at designated preferred parking spaces on a daily basis.
- d. After 11am all parking spaces become available to all transit patrons.
- e. Parking on weekends is free to all transit users.
- f. Parking is available on a first come first serve basis.

SECTION 26. The following fees are established at the Metro Lincoln/Cypress Gold Line Station:

Parking rates shall be as follows:

- a. Parking prior to 11am will require a \$25.00 monthly flat rate at designated preferred parking spaces. Users must maintain a minimum of ten (10) daily ridership transactions using their TAP card, per month, in order to renew their permit for the following month.
- b. Patrons that lose their permit due to less than ten (10) daily ridership transactions may file an appeal for an exemption. The application administration fee is \$5.00. All applications will be reviewed on a case by case basis. The review process may take up to 20 working days.

- c. Parking prior to 11am will require a \$4.00 flat rate at designated preferred parking spaces on a daily basis.
- d. After 11am all parking spaces become available to all transit patrons.
- e. Parking on weekends is free to all transit users.
- f. Parking is available on a first come first serve basis.

SECTION 27. The following fees are established at the Metro Heritage Square Gold Line Station:

Parking rates shall be as follows:

- a. Parking prior to 11am will require a \$20.00 monthly flat rate at designated preferred parking spaces. Users must maintain a minimum of ten (10) daily ridership transactions using their TAP card, per month, in order to renew their permit for the following month.
- b. Patrons that lose their permit due to less than ten (10) daily ridership transactions may file an appeal for an exemption. The application administration fee is \$5.00. All applications will be reviewed on a case by case basis. The review process may take up to 20 working days.
- c. Parking prior to 11am will require a \$4.00 flat rate at designated preferred parking spaces on a daily basis.
- d. After 11am all parking spaces become available to all transit patrons.
- e. Parking on weekends is free to all transit users.
- f. Parking is available on a first come first serve basis.

SECTION 28. The following fees are established at the Metro Fillmore Gold Line Station:

Parking rates shall be as follows:

- a. Permit parking at designated preferred parking spaces will be subject to a \$29.00 monthly flat rate. Preferred parking space permits will only be renewed for users with a minimum of ten (10) daily ridership transactions using their TAP card, per month.
- b. Patrons that lose their permit due to less than ten (10) daily ridership transactions may file an appeal for an exemption. The application administration fee is \$5.00. All applications will be reviewed on a case by case basis. The review process may take up to 20 working days.
- c. Parking is only available Monday through Friday.
- d. Parking is available on a first come first serve basis.

SECTION 29. The following fees are established at the Metro Sierra Madre Villa Gold Line Station:

Parking rates shall be as follows:

- a. Permit parking at designated preferred parking spaces will be subject to a \$29.00 monthly flat rate. Preferred parking space permits will only be renewed

- for users with a minimum of ten (10) daily ridership transactions using their TAP card, per month.
- b. Patrons that lose their permit due to less than ten (10) daily ridership transactions may file an appeal for an exemption. The application administration fee is \$5.00. All applications will be reviewed on a case by case basis. The review process may take up to 20 working days.
  - c. Transit users with verified use of a TAP Card within 96 hours of parking their vehicle will be subject to a \$2.00 flat rate per 24 hours.
  - d. Carpool permit parking will be offered for a monthly rate of \$20.00. A minimum of three (3) TAP card users is required, including registered vehicles/license plates, to qualify for the carpool rate. Only one (1) vehicle will be allowed to park at a time. If more than one vehicle is parked at the same time, the regular daily transit rider rate will be applied to the monthly parking charges for each vehicle.
  - e. Metro staff shall review and authorize adjustments to the parking rates pursuant to the Paid Parking Program and targeted occupancy levels. Parking rate adjustments: will not exceed a daily rate of \$5.00 per day; require 30 days' notice for pricing changes (increase or decrease); and cannot be made more frequently than every two months.
  - f. Transit rider parking rates will also apply to non-Metro public transit agencies that accept Metro's TAP Card as a fare payment.
  - g. Parking is available on a first come first serve basis.
  - h. Any vehicle parked over 72 hours requires an Extended Parking Permit. The Extended Parking Permit Administration Fee is \$10.00.

SECTION 30. The following fees are established at the Metro Arcadia Gold Line Station:

Parking rates shall be as follows:

- a. Parking is available free of charge seven days a week.
- b. Parking is available on a first come first serve basis.

SECTION 31. The following fees are established at the Metro Monrovia Gold Line Station:

Parking rates shall be as follows:

- a. Permit parking at designated preferred parking spaces will be subject to a \$59.00 monthly flat rate. Preferred parking space permits will only be renewed for users with a minimum of ten (10) daily ridership transactions using their TAP card, per month.
- b. Patrons that lose their permit due to less than ten (10) daily ridership transactions may file an appeal for an exemption. The application administration fee is \$5.00. All applications will be reviewed on a case by case basis. The review process may take up to 20 working days.

- c. Transit users with verified use of a TAP Card within 96 hours of parking their vehicle will be subject to a \$3.00 flat rate per 24 hours.
- d. Non-transit riders can park without TAP Card ridership verification between 6:00 pm and 5:00 am Monday through Friday and all day Saturday and Sunday for a \$3.00 flat rate.
- e. Carpool permit parking will be offered for a monthly rate of \$45.00. A minimum of three (3) TAP card users is required, including registered vehicles/license plates, to qualify for the carpool rate. Only one (1) vehicle will be allowed to park at a time. If more than one vehicle is parked at the same time, the regular daily transit rider rate will be applied to the monthly parking charges for each vehicle.
- f. Metro staff shall review and authorize adjustments to the parking rates pursuant to the Paid Parking Program and targeted occupancy levels. Parking rate adjustments: will not exceed a daily rate of \$5.00 per day; require 30 days' notice for pricing changes (increase or decrease); and cannot be made more frequently than every two months.
- g. Transit rider parking rates will also apply to non-Metro public transit agencies that accept Metro's TAP Card as a fare payment.
- h. Parking is available on a first come first serve basis.
- i. For any vehicle that exits the parking facility without completing the payment transaction, an outstanding parking transaction notice will be generated along with a bill for the parking fee based on the vehicle's DMV record. The administration fee for the billing is \$25.00 and will be added to the outstanding parking fee. Any outstanding parking transaction delinquent more than 30 days from the billing date will be assessed an additional \$55.00 administration fee.
- j. Patrons requesting a monthly statement to be mailed for the Preferred Permit Parking monthly transaction or mobile payment transactions will be assessed a \$2.00 mailed statement fee.

SECTION 32. The following fees are established at the Metro Duarte/City of Hope Gold Line Station:

Parking rates shall be as follows:

- a. Parking is available free of charge seven days a week.
- b. Parking is available on a first come first serve basis.

SECTION 33. The following fees are established at the Metro Irwindale Gold Line Station:

Parking rates shall be as follows:

- a. Permit parking at designated preferred parking spaces will be subject to a \$39.00 monthly flat rate. Preferred parking space permits will only be renewed for users with a minimum of ten (10) daily ridership transactions using their TAP card, per month.
- b. Patrons that lose their permit due to less than ten (10) daily ridership transactions may file an appeal for an exemption. The application

administration fee is \$5.00. All applications will be reviewed on a case by case basis. The review process may take up to 20 working days.

- c. Transit users with verified use of a TAP Card within 96 hours of parking their vehicle will be subject to a \$3.00 flat rate per 24 hours.
- d. Carpool permit parking will be offered for a monthly rate of \$25.00. A minimum of three (3) TAP card users is required, including registered vehicles/license plates, to qualify for the carpool rate. Only one (1) vehicle will be allowed to park at a time. If more than one vehicle is parked at the same time, the regular daily transit rider rate will be applied to the monthly parking charges for each vehicle.
- e. Metro staff shall review and authorize adjustments to the parking rates pursuant to the Paid Parking Program and targeted occupancy levels. Parking rate adjustments: will not exceed a daily rate of \$5.00 per day; require 30 days' notice for pricing changes (increase or decrease); and cannot be made more frequently than every two months.
- f. Transit rider parking rates will also apply to non-Metro public transit agencies that accept Metro's TAP Card as a fare payment.
- g. Parking is available on a first come first serve basis.
- h. For any vehicle that exits the parking facility without completing the payment transaction, an outstanding parking transaction notice will be generated along with a bill for the parking fee based on the vehicle's DMV record. The administration fee for the billing is \$25.00 and will be added to the outstanding parking fee. Any outstanding parking transaction delinquent more than 30 days from the billing date will be assessed an additional \$55.00 administration fee.
- i. Patrons requesting a monthly statement to be mailed for the Preferred Permit Parking monthly transaction or mobile payment transactions will be assessed a \$2.00 mailed statement fee.

SECTION 34. The following fees are established at the Metro Azusa Downtown Gold Line Station:

Parking rates shall be as follows:

- a. Parking prior to 11am will require a \$39.00 monthly flat rate at designated preferred parking spaces. Users must maintain a minimum of ten (10) daily ridership transactions using their TAP card, per month, in order to renew their permit for the following month.
- b. Patrons that lose their permit due to less than ten (10) daily ridership transactions may file an appeal for an exemption. The application administration fee is \$5.00. All applications will be reviewed on a case by case basis. The review process may take up to 20 working days.
- c. After 11am all parking spaces become available to all transit patrons.
- d. Parking on weekends is free to all transit users.
- e. Parking is available on a first come first serve basis.

SECTION 35. The following fees are established at the Metro APU/Citrus College Gold Line Station:

Parking rates shall be as follows:

- a. Transit users with verified use of a TAP Card within 96 hours of parking their vehicle will be subject to a \$2.00 flat rate per 24 hours.
- b. Carpool permit parking will be offered for a monthly rate of \$25.00. A minimum of three (3) TAP card users is required, including registered vehicles/license plates, to qualify for the carpool rate. Only one (1) vehicle will be allowed to park at a time. If more than one vehicle is parked at the same time, the regular daily transit rider rate will be applied to the monthly parking charges for each vehicle.
- c. Metro staff shall review and authorize adjustments to the parking rates pursuant to the Paid Parking Program and targeted occupancy levels. Parking rate adjustments: will not exceed a daily rate of \$5.00 per day; require 30 days' notice for pricing changes (increase or decrease); and cannot be made more frequently than every two months.
- d. Transit rider parking rates will also apply to non-Metro public transit agencies that accept Metro's TAP Card as a fare payment.
- e. Parking is available on a first come first serve basis.
- f. For any vehicle that exits the parking facility without completing the payment transaction, an outstanding parking transaction notice will be generated along with a bill for the parking fee based on the vehicle's DMV record. The administration fee for the billing is \$25.00 and will be added to the outstanding parking fee. Any outstanding parking transaction delinquent more than 30 days from the billing date will be assessed an additional \$55.00 administration fee.
- g. Patrons requesting a monthly statement to be mailed for the Preferred Permit Parking monthly transaction or mobile payment transactions will be assessed a \$2.00 mailed statement fee.

SECTION 36. The following fees are established at the Metro Expo/Crenshaw Expo Line Station:

Parking rates shall be as follows:

- a. Parking is available free of charge.
- b. Parking is only available from Monday at 2 am through Sunday at 2am.
- c. Parking is available on a first come first serve basis.

SECTION 37. The following fees are established at the Metro La Cienega/Jefferson Expo Line Station:

Parking rates shall be as follows:

- a. Permit parking at designated preferred parking spaces will be subject to a \$59.00 monthly flat rate. Preferred parking space permits will only be renewed for users with a minimum of ten (10) daily ridership transactions using their TAP card, per month.

- b. Patrons that lose their permit due to less than ten (10) daily ridership transactions may file an appeal for an exemption. The application administration fee is \$5.00. All applications will be reviewed on a case by case basis. The review process may take up to 20 working days.
- c. Transit users with verified use of a TAP Card within 96 hours of parking their vehicle will be subject to a \$3.00 flat rate per 24 hours.
- d. Non-transit riders can park without TAP Card ridership verification for up to three hours, for a \$5.00 flat rate.
- e. Carpool permit parking will be offered for a monthly rate of \$45.00. A minimum of three (3) TAP card users is required, including registered vehicles/license plates, to qualify for the carpool rate. Only one (1) vehicle will be allowed to park at a time. If more than one vehicle is parked at the same time, the regular daily transit rider rate will be applied to the monthly parking charges for each vehicle.
- f. Metro staff shall review and authorize adjustments to the parking rates pursuant to the Paid Parking Program and targeted occupancy levels. Parking rate adjustments: will not exceed a daily rate of \$5.00 per day; require 30 days' notice for pricing changes (increase or decrease); and cannot be made more frequently than every two months.
- g. Transit rider parking rates will also apply to non-Metro public transit agencies that accept Metro's TAP Card as a fare payment.
- h. Parking is available on a first come first serve basis.
- i. For any vehicle that exits the parking facility without completing the payment transaction, an outstanding parking transaction notice will be generated along with a bill for the parking fee based on the vehicle's DMV record. The administration fee for the billing is \$25.00 and will be added to the outstanding parking fee. Any outstanding parking transaction delinquent more than 30 days from the billing date will be assessed an additional \$55.00 administration fee.
- j. Patrons requesting a monthly statement to be mailed for the Preferred Permit Parking monthly transaction or mobile payment transactions will be assessed a \$2.00 mailed statement fee.

SECTION 38. The following fees are established at the Metro Culver City Expo Line Station:

Parking rates shall be as follows:

- a. Permit parking at designated preferred parking spaces will be subject to a \$39.00 monthly flat rate. Preferred parking space permits will only be renewed for users with a minimum of ten (10) daily ridership transactions using their TAP card, per month.
- b. Patrons that lose their permit due to less than ten (10) daily ridership transactions may file an appeal for an exemption. The application administration fee is \$5.00. All applications will be reviewed on a case by case basis. The review process may take up to 20 working days.
- c. Transit users with verified use of a TAP Card within 96 hours of parking their vehicle will be subject to a \$2.00 flat rate per 24 hours.



- d. Carpool permit parking will be offered for a monthly rate of \$25.00. A minimum of three (3) TAP card users is required, including registered vehicles/license plates, to qualify for the carpool rate. Only one (1) vehicle will be allowed to park at a time. If more than one vehicle is parked at the same time, the regular daily transit rider rate will be applied to the monthly parking charges for each vehicle.
- e. Metro staff shall review and authorize adjustments to the parking rates pursuant to the Paid Parking Program and targeted occupancy levels. Parking rate adjustments: will not exceed a daily rate of \$5.00 per day; require 30 days' notice for pricing changes (increase or decrease); and cannot be made more frequently than every two months.
- f. Transit rider parking rates will also apply to non-Metro public transit agencies that accept Metro's TAP Card as a fare payment.
- g. Parking is available on a first come first serve basis.
- h. For any vehicle that exits the parking facility without completing the payment transaction, an outstanding parking transaction notice will be generated along with a bill for the parking fee based on the vehicle's DMV record. The administration fee for the billing is \$25.00 and will be added to the outstanding parking fee. Any outstanding parking transaction delinquent more than 30 days from the billing date will be assessed an additional \$55.00 administration fee.
- i. Patrons requesting a monthly statement to be mailed for the Preferred Permit Parking monthly transaction or mobile payment transactions will be assessed a \$2.00 mailed statement fee.

SECTION 39. The following fees are established at the Metro Expo/Sepulveda, Expo Line Station:

Parking rates shall be as follows:

- a. Permit parking at designated preferred parking spaces will be subject to a \$39.00 monthly flat rate. Preferred parking space permits will only be renewed for users with a minimum of ten (10) daily ridership transactions using their TAP card, per month.
- b. Patrons that lose their permit due to less than ten (10) daily ridership transactions may file an appeal for an exemption. The application administration fee is \$5.00. All applications will be reviewed on a case by case basis. The review process may take up to 20 working days.
- c. Transit users with verified use of a TAP Card within 96 hours of parking their vehicle will be subject to a \$2.00 flat rate per 24 hours.
- d. Non-transit riders can park without TAP Card ridership verification for up to three hours, for a \$5.00 flat rate.
- e. Carpool permit parking will be offered for a monthly rate of \$25.00. A minimum of three (3) TAP card users is required, including registered vehicles/license plates, to qualify for the carpool rate. Only one (1) vehicle will be allowed to park at a time. If more than one vehicle is parked at the same time, the regular daily transit rider rate will be applied to the monthly parking charges for each vehicle.

- f. Metro staff shall review and authorize adjustments to the parking rates pursuant to the Paid Parking Program and targeted occupancy levels. Parking rate adjustments: will not exceed a daily rate of \$5.00 per day; require 30 days' notice for pricing changes (increase or decrease); and cannot be made more frequently than every two months.
- g. Transit rider parking rates will also apply to non-Metro public transit agencies that accept Metro's TAP Card as a fare payment.
- h. Parking is available on a first come first serve basis.
- i. For any vehicle that exits the parking facility without completing the payment transaction, an outstanding parking transaction notice will be generated along with a bill for the parking fee based on the vehicle's DMV record. The administration fee for the billing is \$25.00 and will be added to the outstanding parking fee. Any outstanding parking transaction delinquent more than 30 days from the billing date will be assessed an additional \$55.00 administration fee.
- j. Patrons requesting a monthly statement to be mailed for the Preferred Permit Parking monthly transaction or mobile payment transactions will be assessed a \$2.00 mailed statement fee.

SECTION 40. The following fees are established at the Expo/Bundy Expo Line Station:

Parking rates shall be as follows:

- a. Permit parking at designated preferred parking spaces will be subject to a \$49.00 monthly flat rate. Preferred parking space permits will only be renewed for users with a minimum of ten (10) daily ridership transactions using their TAP card, per month.
- b. Patrons that lose their permit due to less than ten (10) daily ridership transactions may file an appeal for an exemption. The application administration fee is \$5.00. All applications will be reviewed on a case by case basis. The review process may take up to 20 working days.
- c. Transit users with verified use of a TAP Card within 96 hours of parking their vehicle will be subject to a \$2.00 flat rate per 24 hours.
- d. Non-transit riders can park without TAP Card ridership verification for up to three hours, for a \$5.00 flat rate.
- e. Carpool permit parking will be offered for a monthly rate of \$25.00. A minimum of three (3) TAP card users is required, including registered vehicles/license plates, to qualify for the carpool rate. Only one (1) vehicle will be allowed to park at a time. If more than one vehicle is parked at the same time, the regular daily transit rider rate will be applied to the monthly parking charges for each vehicle.
- f. Metro staff shall review and authorize adjustments to the parking rates pursuant to the Paid Parking Program and targeted occupancy levels. Parking rate adjustments: will not exceed a daily rate of \$5.00 per day; require 30 days' notice for pricing changes (increase or decrease); and cannot be made more frequently than every two months.
- g. Transit rider parking rates will also apply to non-Metro public transit agencies that accept Metro's TAP Card as a fare payment.

- h. Parking is available on a first come first serve basis.
- i. For any vehicle that exits the parking facility without completing the payment transaction, an outstanding parking transaction notice will be generated along with a bill for the parking fee based on the vehicle's DMV record. The administration fee for the billing is \$25.00 and will be added to the outstanding parking fee. Any outstanding parking transaction delinquent more than 30 days from the billing date will be assessed an additional \$55.00 administration fee.
- j. Patrons requesting a monthly statement to be mailed for the Preferred Permit Parking monthly transaction or mobile payment transactions will be assessed a \$2.00 mailed statement fee.

SECTION 41. The following fees are established at the 17<sup>th</sup> St/SMC Expo Line Station:

Parking rates shall be as follows:

- a. Permit parking at designated preferred parking spaces will be subject to a \$59.00 monthly flat rate. Preferred parking space permits will only be renewed for users with a minimum of ten (10) daily ridership transactions using their TAP card, per month.
- b. Patrons that lose their permit due to less than ten (10) daily ridership transactions may file an appeal for an exemption. The application administration fee is \$5.00. All applications will be reviewed on a case by case basis. The review process may take up to 20 working days.
- c. Transit users with verified use of a TAP Card within 96 hours of parking their vehicle will be subject to a \$3.00 flat rate per 24 hours.
- d. Non-transit riders can park without TAP Card ridership verification for up to three hours, for a \$5.00 flat rate.
- e. Carpool permit parking will be offered for a monthly rate of \$45.00. A minimum of three (3) TAP card users is required, including registered vehicles/license plates, to qualify for the carpool rate. Only one (1) vehicle will be allowed to park at a time. If more than one vehicle is parked at the same time, the regular daily transit rider rate will be applied to the monthly parking charges for each vehicle.
- f. Metro staff shall review and authorize adjustments to the parking rates pursuant to the Paid Parking Program and targeted occupancy levels. Parking rate adjustments: will not exceed a daily rate of \$5.00 per day; require 30 days' notice for pricing changes (increase or decrease); and cannot be made more frequently than every two months.
- g. Transit rider parking rates will also apply to non-Metro public transit agencies that accept Metro's TAP Card as a fare payment.
- h. Parking is available on a first come first serve basis.
- i. For any vehicle that exits the parking facility without completing the payment transaction, an outstanding parking transaction notice will be generated along with a bill for the parking fee based on the vehicle's DMV record. The administration fee for the billing is \$25.00 and will be added to the outstanding parking fee. Any outstanding parking transaction delinquent

more than 30 days from the billing date will be assessed an additional \$55.00 administration fee.

- j. Patrons requesting a monthly statement to be mailed for the Preferred Permit Parking monthly transaction or mobile payment transactions will be assessed a \$2.00 mailed statement fee.

SECTION 42. The following fees are established at the Metro Van Nuys Orange Line Station:

Parking rates shall be as follows:

- a. Parking is available free of charge seven days a week.
- b. Parking is available on a first come first serve basis.
- c. Any vehicle parked over 72 hours requires an Extended Parking Permit. The Extended Parking Permit Administration Fee is \$10.00.

SECTION 43. The following fees are established at the Metro Sepulveda Orange Line Station:

Parking rates shall be as follows:

- a. Parking is available free of charge seven days a week.
- b. Parking is available on a first come first serve basis.
- c. Any vehicle parked over 72 hours requires an Extended Parking Permit. The Extended Parking Permit Administration Fee is \$10.00.

SECTION 44. The following fees are established at the Metro Balboa Orange Line Station:

Parking rates shall be as follows:

- a. Parking prior to 11am will require a \$20.00 monthly flat rate at designated preferred parking spaces. Users must maintain a minimum of ten (10) daily ridership transactions using their TAP card, per month, in order to renew their permit for the following month.
- b. Patrons that lose their permit due to less than ten (10) daily ridership transactions may file an appeal for an exemption. The application administration fee is \$5.00. All applications will be reviewed on a case by case basis. The review process may take up to 20 working days.
- c. Parking prior to 11am will require a \$4.00 daily flat rate at designated preferred parking spaces.
- d. After 11am all parking spaces become available to all transit patrons.
- e. Parking on weekends is free to all transit users.
- f. Parking is available on a first come first serve basis.

SECTION 45. The following fees are established at the Metro Reseda Orange Line Station:

Parking rates shall be as follows:

- a. Parking is available free of charge seven days a week.
- b. Parking is available on a first come first serve basis.

- c. Any vehicle parked over 72 hours requires an Extended Parking Permit. The Extended Parking Permit Administration Fee is \$10.00.

SECTION 46. The following fees are established at the Metro Pierce College Orange Line Station:

Parking rates shall be as follows:

- a. Parking is available free of charge seven days a week.
- b. Parking is available on a first come first serve basis.
- c. Any vehicle parked over 72 hours requires an Extended Parking Permit. The Extended Parking Permit Administration Fee is \$10.00.

SECTION 47. The following fees are established at the Metro Canoga Orange Line Station:

Parking rates shall be as follows:

- a. Parking is available free of charge seven days a week.
- b. Parking is available on a first come first serve basis.

SECTION 48. The following fees are established at the Metro Sherman Way Orange Line Station:

Parking rates shall be as follows:

- a. Parking is available free of charge seven days a week.
- b. Parking is available on a first come first serve basis.
- c. Any vehicle parked over 72 hours requires an Extended Parking Permit. The Extended Parking Permit Administration Fee is \$10.00.

SECTION 49. The following fees are established at the Metro Chatsworth Orange Line Station:

Parking rates shall be as follows:

- a. Parking is available free of charge seven days a week.
- b. Parking is available on a first come first serve basis.
- c. Any vehicle parked over 72 hours requires an Extended Parking Permit. The Extended Parking Permit Administration Fee is \$10.00.

SECTION 50. The following fees are established at the Metro El Monte Silver Line Station:

Parking rates shall be as follows:

- a. Permit parking at designated preferred parking spaces will be subject to a \$39.00 monthly flat rate. Preferred parking space permits will only be renewed for users with a minimum of ten (10) daily ridership transactions using their TAP card, per month.
- b. Patrons that lose their permit due to less than ten (10) daily ridership transactions may file an appeal for an exemption. The application

administration fee is \$5.00. All applications will be reviewed on a case by case basis. The review process may take up to 20 working days.

- c. Transit users with verified use of a TAP Card within 96 hours of parking their vehicle will be subject to a \$2.00 flat rate per 24 hours.
- d. Carpool permit parking will be offered for a monthly rate of \$25.00. A minimum of three (3) TAP card users is required, including registered vehicles/license plates, to qualify for the carpool rate. Only one (1) vehicle will be allowed to park at a time. If more than one vehicle is parked at the same time, the regular daily transit rider rate will be applied to the monthly parking charges for each vehicle.
- e. Metro staff shall review and authorize adjustments to the parking rates pursuant to the Paid Parking Program and targeted occupancy levels. Parking rate adjustments: will not exceed a daily rate of \$5.00 per day; require 30 days' notice for pricing changes (increase or decrease); and cannot be made more frequently than every two months.
- f. Transit rider parking rates will also apply to non-Metro public transit agencies that accept Metro's TAP Card as a fare payment.
- g. Parking is available on a first come first serve basis.
- h. For any vehicle that exits the parking facility without completing the payment transaction, an outstanding parking transaction notice will be generated along with a bill for the parking fee based on the vehicle's DMV record. The administration fee for the billing is \$25.00 and will be added to the outstanding parking fee. Any outstanding parking transaction delinquent more than 30 days from the billing date will be assessed an additional \$55.00 administration fee.
- i. Patrons requesting a monthly statement to be mailed for the Preferred Permit Parking monthly transaction or mobile payment transactions will be assessed a \$2.00 mailed statement fee.

SECTION 51. The following fees are established at the Metro Slauson Silver Line Station:

Parking rates shall be as follows:

- a. Parking is available free of charge seven days a week.
- b. Parking is available on a first come first serve basis.
- c. Any vehicle parked over 72 hours requires an Extended Parking Permit. The Extended Parking Permit Administration Fee is \$10.00.

SECTION 52. The following fees are established at the Metro Manchester Silver Line Station:

Parking rates shall be as follows:

- a. Parking is available free of charge seven days a week.
- b. Parking is available on a first come first serve basis.
- c. Any vehicle parked over 72 hours requires an Extended Parking Permit. The Extended Parking Permit Administration Fee is \$10.00.

SECTION 53. The following fees are established at the Metro Rosecrans Silver Line Station:

Parking rates shall be as follows:

- a. Parking is available free of charge seven days a week.
- b. Parking is available on a first come first serve basis.
- c. Any vehicle parked over 72 hours requires an Extended Parking Permit. The Extended Parking Permit Administration Fee is \$10.00.

SECTION 54. The following fees are established at the Metro Harbor Gateway Transit Center Silver Line Station:

Parking rates shall be as follows:

- a. Parking is available free of charge seven days a week.
- b. Parking is available on a first come first serve basis.
- c. Any vehicle parked over 72 hours requires an Extended Parking Permit. The Extended Parking Permit Administration Fee is \$10.00.

SECTION 55. The following fees are established at Los Angeles Union Station Gateway:

Parking rates shall be as follows:

- a. Each 15 minutes is \$2.00.
- b. Daily Maximum shall be \$8.00 per entry per every 24 hour stay.
- c. Monthly fees for the general public are \$110.00.
- d. Event parking fees can be established based on market rate conditions.
- e. Special monthly parking rates may be negotiated between Metro and tenant, government, or business entity.
- f. Metro is hereby authorized to adjust parking rates at Union Station for special events in the area based on parking demand.
- g. Parking is available on a first come first serve basis.
- h. All rates apply seven days a week.

SECTION 56. The following fees are established at Los Angeles Union Station West:

Parking rates shall be as follows:

- a. Monthly fees for parking garage reserved stalls shall be \$130.00.
- b. Monthly fees for parking garage tandem spaces shall be \$82.50.
- c. Valet parking shall be \$20.00.
- d. Valet parking for special events shall be \$25.00.
- e. Special monthly parking rates may be negotiated between Metro and tenant, government, or business entity.
- f. Metro is hereby authorized to adjust parking rates at Union Station for special events in the area based on parking demand.

SECTION 57. All parking fees and rate structures, including hourly, daily, weekly, and monthly parking shall be approved and established by resolution of the METRO Board.

METRO Staff shall review and recommend parking fee adjustments to the METRO Board based on parking demand.

The METRO Chief Executive Officer or its designee is hereby authorized to establish rate adjustments for special event parking or other special circumstances that increase parking demand. The METRO CEO is also authorized to establish parking rates at additional and new rail line extension parking facilities not included in the current fee resolution. Parking rates at these additional parking facilities will be established within the current fee structure and range and based on the demographics and location of the facility.

SECTION 58. The following fees shall be established for all preferred parking zones:

1. Initiation fee shall be \$7.00.
2. Replacement of a lost or stolen preferred parking permit shall be \$7.00.

SECTION 59. Short-term reserved parking may be purchased by phone or by internet web-page.

SECTION 60. All parking rates and permit fees shall be per vehicle for the specified period and non-refundable once issued.

SECTION 61. Parking passes or permits that are issued via access cards shall require payment of an initial non-refundable fee of \$25.00.

SECTION 62. All parking rates set forth in this Resolution include city's parking tax if applicable.

SECTION 63. The following fees are established for each type of violation:



## ATTACHMENT A

Chapter	Title	Citation Fee
8-05-030	Illegal Parking Outside of a Defined Parking Space or Parking Space Markings	\$63.00
8-05-040	Failure to Obey Signs	\$63.00
8-05-050	Exceeding Posted Time Limit	\$53.00
8-05-060	Temporary No Parking	\$53.00
8-05-070	Restricted Parking	\$53.00
8-05-080	Parking Within Marked Bicycle Lane	\$63.00
8-05-090	Illegal Parking in Loading Zone	\$53.00
8-05-100	Vehicle Exceeds Load Size Limit	\$53.00
8-05-110	Disconnected Trailer	\$53.00
8-05-120	Bus Loading Zones	\$263.00
8-05-130	Illegal Parking in Kiss and Ride Spaces and Passenger Loading Zone	\$53.00
8-05-140	No Parking – Alley	\$53.00
8-05-150	Illegal Parking in Red Zones	\$53.00
8-05-160	Vehicle Parked Seventy-Two (72) or More Hours	\$53.00
8-05-170	Inproperly Parked on Parking Grades	\$63.00
8-05-180	Improperly Parked in Angled Parking	\$63.00
8-05-190	Double Parking	\$53.00
8-05-200	No Parking Anytime/Posted Hours	\$53.00
8-05-210	Wrong Side Two Way Traffic or Roadway	\$53.00
8-05-220	Blocking Street or Access	\$53.00
8-05-230	Parking Special Hazard	\$53.00
8-05-240	Illegal Parking at Fire Hydrant	\$68.00
8-05-250	Illegal Parking at Assigned / Reserved Spaces	\$53.00
8-05-260	Illegal Parking at Taxicab Stands	\$53.00
8-05-270	Illegal Parking at/ Adjacent to a Landscape Island or Planter	\$53.00
8-05-280a	Failure to Properly Register Vehicle Licence Plate Information	\$53.00
8-05-280b	Parking in a Permit Parking Spaces Without a Permit	\$53.00
8-05-280c	Display and Altered, Counterfeit, or Expired Permit	\$53.00
8-05-280d	Display a Permit Registered to Another Vehicle	\$53.00
8-05-280e	Failure to Properly Display the Permit as Instructed by Parking Terms and Conditions	\$53.00
8-05-310	Permit Penalty Provisions	\$53.00
8-05-320	Expired Meter or Pay Station	\$53.00
8-05-330	Parking Facilities Cleaning, Maintenance and Capital Projects	\$53.00
8-05-340	Electric Vehicle Parking Spaces	\$53.00
8-05-350	Parking on Sidewalk/ Parkway	\$53.00
8-05-370	Peak Hour Traffic Zones	\$53.00
8-05-380	Parking Prohibition for Vehicles Over Six Feet High, Near Intersections	\$53.00
8-05-400	Car Share or Vanpool Authorization Required	\$53.00
8-05-410	Speed Limit	\$53.00
8-05-420	Motor Vehicle Access	\$63.00
8-05-440	Accessible Parking Spaces Designated for Vehicle Operators with Disabilities	\$338.00
8-07-030a	Improperly Parked Bicycles outside of Designated Bicycle Parking Areas	\$38.00
8-07-030b	Bicycle parked in Landscaped Areas Violation	\$38.00
8-07-040b	Improperly Parked Bicycles Outside of Designated Area Violation	\$38.00
8-07-040c	Operation of Motorcycle, Bicycle and Mopeds on Bicycle Pathways or Sidewalks	\$38.00

SECTION 64. The Parking Fee Resolution adopted by the Metro Board of Directors on September 24, 2015 is repealed as of the effective date of the parking rates set forth in this Resolution.

SECTION 65. If there are any conflicts between the parking rates adopted in this Resolution and any parking rates adopted by prior resolution, the rates adopted in this Resolution shall take precedence.

SECTION 66. The Metro Board shall certify the adoption of this Resolution, which shall become effective at such time as appropriate signs notifying the public of the provisions herein have been posted by the Metro Parking Management unit.

**Metro**Los Angeles County  
Metropolitan Transportation AuthorityOne Gateway Plaza  
Los Angeles, CA 90012-2952213.922.2000 Tel  
metro.net

Board of Directors  
Los Angeles County Metropolitan Transportation Authority  
One Gateway Plaza, 99-3-1  
Los Angeles, CA 90012

April 14, 2017

Dear Metro Board of Directors:

At our March meeting, Frank Ching, Senior Director of the Parking Management Program, made a presentation on Phase II of the Parking Management Program. As Mr. Ching shared details of the program with us, the Council realized that the program could be used to address some long-standing parking issues at the Green Line Crenshaw Station Park & Ride in our service region. Council expressed a strong preference that the Crenshaw Station Park & Ride be added to the list of pilot locations for parking enforcement.

My fellow Council Members and I strongly urge you to consider adding the Green Line Crenshaw Station as an additional pilot location in Metro's Parking Management Program Phase II. The dedicated parking lot at that station has experienced parking shortages for Metro patrons for several years. Parking is frequently monopolized by big rigs and employees of area businesses, and is also utilized as a pick up site for casino shuttles. Implementation of the parking management program at this site would encourage transit ridership by ensuring that transit users who want to access the system via the Green Line would be able to find parking and make their trips. It would also discourage inappropriate uses of the site and generate revenue for the much needed deferred maintenance of the lot, which would also serve to improve the experience of Metro patrons. Towards this end, at our March 10, 2017 meeting, the South Bay Service Council passed a motion supporting the addition of the Green Line Crenshaw Station to the pilot locations of the Parking Management Program's Phase II.

The members of the South Bay Service Council respectfully request that the Board direct Mr. Ching to add the Crenshaw Station to the locations to have new parking management technologies installed as part of this pilot program. We look forward to continuing to work with you to provide quality service to our transit patrons.

Sincerely,

Ralph Franklin, Chair  
South Bay Cities Service Council



**Board Report**

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**File #:** 2017-0316, **File Type:** Informational Report

**Agenda Number:** 27

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**REGULAR BOARD MEETING  
MAY 25, 2017**

**SUBJECT: POLICY ADVISORY COUNCIL UPDATE ON PUBLIC REVIEW OF DRAFT  
MEASURE M MASTER GUIDELINES**

**ACTION: RECEIVE AND FILE**

**RECOMMENDATION**

RECEIVE AND FILE **Policy Advisory Council update on public review of Draft Measure M Master Guidelines.**

**ISSUE**

The Policy Advisory Council (PAC) is presenting an update on their review of the Draft Measure M Master Guidelines. Information from the update is included as Attachment A.

**FINANCIAL IMPACT**

The receipt of this update has no financial impact to the agency.

**NEXT STEPS**

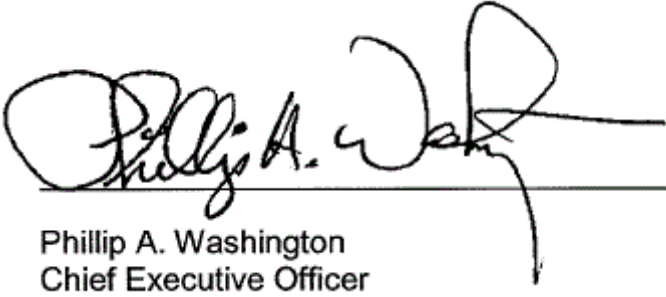
The PAC will return to the Board with additional information in June 2017.

**ATTACHMENTS**

Attachment A - Policy Advisory Council Update on Draft Measure M Master Guidelines

Prepared by: Vivian Rescalvo, Senior Director, (213) 922-2563  
Kalieh Honish, Executive Officer, (213) 922-7109

Reviewed by: Therese W. McMillan, Chief Planning Officer, (213) 922-7077



Phillip A. Washington  
Chief Executive Officer

## **POLICY ADVISORY COUNCIL UPDATE ON MEASURE M MASTER GUIDELINES**

### Summary of Policy Advisory Council Initial Comments

The Policy Advisory Council (PAC) brings together 27 committee members, each with an alternate, spread across 3 groups of stakeholders (Jurisdictions/Councils of Governments, Providers, and Consumers) to provide input and recommendations on Measure M's draft guidelines and the upcoming Long Range Transportation Plan (LRTP).

### PAC Engagement Process

At the first meeting on April 5<sup>th</sup>, Metro staff provided an overview of the roles and responsibilities of the PAC, followed by a presentation on the Measure M ordinance and draft guidelines. Committee members then discussed the challenges of the short timeline and mapped out a strategy on how to provide input to the Board on the draft guidelines by May. The committee broke out into the 3 categories (Jurisdictions/COGs, Providers, and Consumers) and each nominated an officer (Cecilia Estolano, Roderick Diaz, and Jessica Meaney). Each officer is responsible for coordinating with their respective members to gather their input.

In the weeks following the first PAC meeting, committee members were provided a survey to fill out with their key issues regarding the Measure M guidelines. Over 80 comments on various parts of the draft guidelines were recorded through this survey. The PAC committee then held a conference call at the end of April to begin to distill these responses into potential discussion topics for the May 2<sup>nd</sup> meeting. Comments were grouped into clusters of topics so that small "breakout" groups of PAC members could have a discussion and potentially come to consensus recommendations. Five general categories emerged:

- 3% Local Contribution for Transit
- ADA/Paratransit, Transit for Elder Adults and Students, Discounts
- Local Return: Local Return Floor, Other Allocation and Eligibility Issues
- Shovel-Readiness/Project Readiness, Program Eligibility
- Multi-Year Subregional Programs, COG/Metro Roles/Responsibilities, Fund Administration

There were also a few comments that could not fit into these five general categories that were reserved for discussion at a later date.

### Comments by Category – Consensus Comments and Points needing Greater Clarification / Discussion

Based on notes from the breakout discussions at the May 2<sup>nd</sup> meeting, the PAC officers have summarized the range of perspectives expressed by members and identified areas where there is broad consensus.

### **3% Local Contribution for Transit**

#### *Consensus Ideas*

- How 3% funding commitment is made should be flexible and be done either by individual jurisdictions (not just those within ½ mile of a station), on a corridor approach funded by the jurisdictions or through applicable subregional programs, or by state or federal grants.
- Any costs that would normally be considered a project cost that can be offset should be considered as eligible for the 3% local match. This may include staff time for plan checking, inspection, or permit issuance that would normally be paid for by the project.
- If the local agency is working with a developer that results in the construction of improvements that would otherwise have been included in as a component of the light rail project as defined at the 30% design stage, those cost offsets shall be counted towards the 3% local match.
- For local match requirements imposed on unincorporated county, those costs shall be assigned to the supervisorial district in which the improvements are located.

#### *Points needing Greater Clarification / Discussion*

- Clarify “Betterments” and what improvements would be eligible to satisfy the local contribution requirement.

### **ADA/Paratransit, Transit for Elder Adults and Students, Discounts**

#### *Consensus Ideas*

- There needs to be a way to quantify and publicize the delivery of programs and services that result from Measure M monies.
- Overall, the group agreed that there wasn’t enough funding in this category to sufficiently fund these worthy initiatives.
- Understanding of student needs is at a very nascent stage
- A regional Travel Training/Mobility Management program would be beneficial to seniors and people with disabilities and could solve the issues raised above by providing resources to these groups about transportation options and also directing them to programs that could assist them in utilizing these options.

*Points needing Greater Clarification / Discussion*

- The 75/25 Allocation of the 2% ADA Paratransit for the Disabled; Metro Discounts for Seniors and Students
- The need to educate affected groups about programs available to them
- Provisions to expand accommodation for wheelchair passengers on regular fixed-route transit
- The possibility of using local return monies to provide local senior and disabled transportation services and suggestion that the Metro Board could incentivize local cities to provide additional services to their citizens.

**Local Return: Local Return Floor, Other Allocation and Eligibility Issues**

*Consensus Ideas*

- Local Return Floor – The allocation of \$100,000 or more to every city should be eliminated. There is not support for this proposal and there is strong opposition to redirecting funds from other cities, particularly low income cities, to the few cities that would benefit from this proposal.
- TOCs (Transit Oriented Communities) – The guidelines should provide more details on Metro’s own TOC policies, potentially reference the Metro manual, Metro’s own affordable housing goal for TOC, the MATCH program, etc., with specific details subject to future discussion
- Expand “Subsidized Taxi” to include similar services.

*Points needing Greater Clarification / Discussion*

- Allocation Formula – daytime employment v. residential population
- DBE/SBE/DVBE requirements for Local Return – requirements for some SBE/DBE/DVBE requirements or guidance; management and technical expertise



## **Shovel-Readiness/Project Readiness, Program Eligibility**

### *Consensus Ideas*

- Project Readiness – There is a need for a more consistent definition of “project readiness” applied throughout the guidelines. "Project readiness" should be expanded to include the ability to fund all phases of work including planning, environmental, design, right of way and construction, as well as expanding eligibility for funding both programs and projects.
- Bus Rapid Transit – Bus Rapid Transit Program should be expanded to include projects where operators other than Metro can receive funds and a process should be defined to define how projects can be added.
- Mobility Matrices – Additional flexibility is warranted to allow additional projects beyond those identified on the Mobility Matrices. The review process could be consistent with the 5 and 10 year allocation period assessment reviews, where new projects could be added. Messaging regarding the Mobility Matrices was not clear in the guidelines.

### *Points needing Greater Clarification / Discussion*

- Potential expansion of eligibility for "green streets" beyond that of just stormwater improvements to climate technology.
- Funding cap on the earlier planning and EIR phases, to ensure that too much money is not being spent on a project that may not be feasible and likely moving forward to delivery.
- Eligibility for 2% Highway Connectivity Program
- Eligibility for 2% Transit Connectivity Program
- Flexibility in Performance Measures for 1% Regional Rail Program

## **Multi-Year Subregional Programs**

### *Consensus Ideas*

- The subregions should be empowered to create five year plans for their programs and need a funding set aside to accomplish this task. These plans

should be based on, but not limited to, the projects and programs included in the Mobility Matrices.

- There should be specific metrics around community involvement and that the subregional plans should not be constraining. In other words, subregions should be able to work within the framework of the subregional plan but not be bound by it, particularly if adjustments arise during the planning process.
- The guidelines should lay out a process for project and program development that clearly articulates Metro's role relative to other stakeholders as well as the eligibility of certain tasks related to project development in the pre-environmental phase (outreach, conceptual design, etc.).

*Points needing Greater Clarification / Discussion*

- Connectivity to Airports other than LAX
- The need for a process for projects related to:
  - Roles and responsibilities
  - Funding
- The need for a mechanism to sort out when cities need to go through the COGs.
- Mechanisms for borrowing from one sub-region to another.
- The need for funding for COGs to plan and prioritize projects.
- Use of Equity Funds for bonding capacity and the need for two-way concurrence from COGs and Cities and guidance related to applicability by size of projects
- Active Transportation Programs and professional capacity of city staff to administer federal grants and whether the guidelines should allow Metro to serve as an administrator.



## Board Report

File #: 2017-0097, File Type: Informational Report

Agenda Number: 29

**REVISED**  
**AD-HOC CONGESTION, HIGHWAY AND ROADS COMMITTEE**  
**MAY 17, 2017**

**SUBJECT: SR 710 NORTH PROJECT UPDATE**

**ACTION: RECEIVE AND FILE**

**RECOMMENDATION**

RECEIVE AND FILE **status update on the State Route 710 (SR 710) North Project environmental process** including explanation of the performance measures/scoring and methodology used to compare and contrast various alternatives studied in the environmental process leading to recommendation of the Preferred Alternative.

**ISSUE**

The current SR 710 environmental process started in 2011 to address the significant traffic congestion and the resulting community impacts along the missing segment of the 710 freeway between I-10 and I-210. The Study Area, as depicted in Attachment A of this report, extended more than 100 square miles and encompassed east/northeast Los Angeles and western San Gabriel Valley. This study was continuation of prior efforts dating back to the 1970s.

After comparing and weighing the benefits and impacts of a range of multi-modal alternatives, reviewing the comments received during the public circulation of the State Route 710 North Draft Environmental Impact Report/ Environmental Impact Statement (SR 710 North Draft EIR/EIS), and completing the performance evaluation for each of the alternatives (Attachment B), the technical studies completed over the past few years clearly capture the mobility benefits included in the Single Bore Freeway Tunnel (SBFT), with tolls and truck restrictions (no heavy trucks over 33,000 **lbs tons**) . This alternative reduces regional and local congestion associated with north-south travel demand within the study area, and delivers the best transportation performance and benefits with the least environmental impacts.

Caltrans is the lead agency responsible for compliance with the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). Under CEQA, Caltrans will certify that the SR 710 North Project complies with the requirements of CEQA, prepare Facts and Findings, and if necessary, prepare a Statement of Overriding Considerations (SOC) for impacts that cannot be

mitigated below a level of significance; and certify that the Findings and SOC have been considered prior to project approval. Caltrans will then file a CEQA Notice of Determination (NOD) with the State Clearinghouse that will identify whether the SR 710 North Project will have significant impacts, if mitigation measures were included as conditions of project approval, Findings were made, and an SOC was adopted.

Under NEPA assignment, Caltrans, as lead agency, will document and explain its decision regarding the selected Preferred Alternative, the project impacts, and mitigation measures in a Record of Decision (ROD).

### BACKGROUND

In 2008, upon passage of Measure R, funds in the amount of \$780,000,000 were earmarked for the SR 710 North project.

In 2011, Metro, in partnership with Caltrans, initiated project scoping, a robust public outreach program, alternative analyses and other technical work leading to the preparation of the SR 710 North environmental document.

In 2012, five alternatives were advanced to the Draft EIR/EIS for further study - (1) No Build, (2) Transportation System Management/Transportation Demand Management (TSM/TDM) operational improvements, (3) Bus Rapid Transit (BRT), (4) Light Rail Transit (LRT), and (5) a Freeway Tunnel with design and operational variations.

Also in 2012, two advisory committees, the SR 710 North Technical Advisory Committee and the SR 710 North Stakeholder Outreach Advisory Committee, were established to ensure stakeholder input on a wide range of planning and technical issues during the development of the environmental document. The SR 710 North Advisory Committee members represented technical staff and elected officials from local agencies within the study area.

On March 6, 2015, Caltrans approved the release and circulation of the Draft EIR/EIS for public comments. Five public hearings were convened.

In June 2015, an analysis of cost and benefits (CBA) for the SR 710 North study alternatives was made available to the public.

Approximately, 8000 comments including written comments, formal letters, emails, speaker/comment cards, verbal testimonies, and online submittals were received on the Draft EIR/EIS by Caltrans prior to the close of the public comment period on August 5, 2015. Of the public comments received, 1328 comments supported and 237 comments opposed the freeway tunnel alternative. All comments received during the public comment period will be addressed in the SR 710 North Final EIR/EIS.

More than 300 meetings and/or briefings with community groups/organizations, members of the public and elected officials (state and federal representatives) have been held since the initiation of the SR 710 North Study.

The following summarizes the SBFT design and key features.

#### Single Bore Freeway Tunnel

As described in the SBFT fact sheet (Attachment C), the freeway tunnel connects the existing southern stub of State Route 710 in Alhambra to the existing northern stub of Route 710 in Pasadena. The tunnel design consists of a single two-level bored tunnel with two lanes on each level - one in each direction - for a total of four travel lanes. The tunnel will have an inside diameter of 53.5 feet (and outside diameter of 58.5 feet) and will be from 40 feet to 250 feet below the surface. While the majority of the tunnel is expected to be constructed using a tunnel boring machine (TBM), the end segments of the tunnel are expected to be constructed using the cut-and-cover construction method. Ventilation structures will be constructed at both ends of the tunnel. There will be no intermediate interchanges or ventilation structures along the tunnel alignment. The preliminary construction cost estimate is \$3.15 billion (in 2014 dollars) of which approximately \$50 million is earmarked for TSM/TDM improvements related to the freeway tunnel alternative.

In general, the SBFT design reflects state-of-the-art tunnel systems and incorporates the latest ground control and monitoring techniques (used in conjunction with the TBMs) to minimize the potential for settlement and vibration. Innovative traffic and traveler information systems are proposed for the SBFT to protect and inform motorists and enhance the driving experience. Incident response teams will be stationed at both ends of the tunnel in the Operations and Maintenance Center to respond immediately in the event of an incident in the tunnel.

The TSM/TDM component of the freeway alternative consists of strategies and improvements that increase the efficiency and capacity of the existing transportation system. As described in TSM/TDM fact sheet (Attachment D), the TSM strategies include Intelligent Transportation Systems (ITS) improvements, local street and intersection improvements, and active traffic management. The TDM strategies include new and expanded bus service, bus service improvements and active transportation improvements. Two TSM projects (e.g. Valley Boulevard to Mission Road Connector and the extension of St. John Avenue between Del Mar Boulevard and California Boulevard) with potential conflict with major future investments in this corridor were excluded from the list of improvements in Attachment D.

The following summarizes the results of the performance evaluation that was conducted for the No Build, TSM/TDM, BRT, LRT and Freeway Tunnel Alternatives. It is worth noting the Freeway Tunnel Alternative that was studied consisted of two design variations and six operational variations (three

for each design) as shown in the table below.

Single Bore	Dual Bore
Tolls (no vehicular restrictions)	
Tolls and Truck Restriction (no heavy trucks over 33,000 <b>lbs</b> <del>tons</del> )	No Tolls and no vehicular restrictions
Tolls and Express Bus Service (no vehicular restrictions)	No Tolls and Truck Restriction (no heavy trucks over 33,000 <b>lbs</b> <del>tons</del> )

\*Vehicles carrying flammable or hazardous materials will be prohibited in the tunnel for all scenarios.

State Route 710 North Project Performance Evaluation Summary of Results

As shown in Attachment B, performance evaluation factors were established, in consultation with the SR 710 North advisory committees, to evaluate how well each alternative addresses the Project Purpose and Need. A scale from 1 to 10 was used to compare the alternatives with respect to the performance evaluation factors between the alternatives.

Performance evaluation results indicated that both tunnel alternatives:

- Showed above average performance compared to the other alternatives that reported below average performances when transportation objectives (e.g. minimize travel time; improve connectivity and mobility; and reduce congestion on local street system) and the corresponding performance measures were evaluated.
- Provided substantial benefits in terms of reducing congestion, particularly on local streets compared to the transit alternatives, which showed negligible operational improvements on the overall transportation network (freeway and local/arterial roadways).
- Showed considerable increase in transit ridership. The transit alternatives provided a better performance related to the increased transit ridership objective when compared to the other alternatives, with minimal benefits reported for the overall transportation network.
- Demonstrated positive effect on minimizing environmental (human and natural) impacts by avoidance, or practical and feasible mitigation measures to off-set impacts.
- Showed considerable advantage over the other alternatives when evaluating the remaining non-transportation related objectives (e.g. minimizing right of way impacts and maximizing cost efficiency of public investments).

**FINANCIAL IMPACT**

This is a status update report and required no action by the Board and, therefore, will have no financial impacts.

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**NEXT STEPS**

With the SR 710 North Project environmental process nearing completion, emphasis will be placed on addressing all comments received during the public review process and completing the Final EIR/EIS in accordance with NEPA and CEQA guidelines and mandates. It is anticipated the Final EIR/EIS will be signed by the first quarter of 2018 and that Caltrans will certify the project by filing the NOD and ROD. This will conclude the environmental phase of the SR 710 North Project.

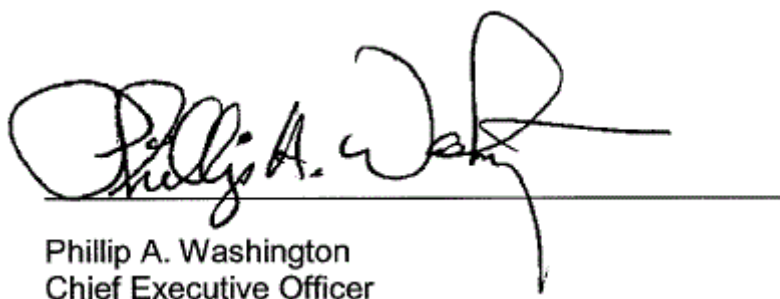
Staff will report back to the Metro Board of Directors in November/December 2017.

**ATTACHMENTS**

- ATTACHMENT A - State Route 710 North Project Study Area
- ATTACHMENT B - State Route 710 North Project Performance Evaluation Matrix
- ATTACHMENT C - State Route 710 North Single Bore Freeway Tunnel Fact Sheet
- ATTACHMENT D - State Route 710 North Transportation System  
Management/Transportation Demand Management (TSM/TDM)  
Alternative Fact Sheet

Prepared by: Michelle Smith, Sr. Director, (213) 922-3057  
Abdollah Ansari, Sr. Executive Officer, (213) 922-4781  
Bryan Pennington, Deputy Chief Program Management Officer, (213) 922-7449

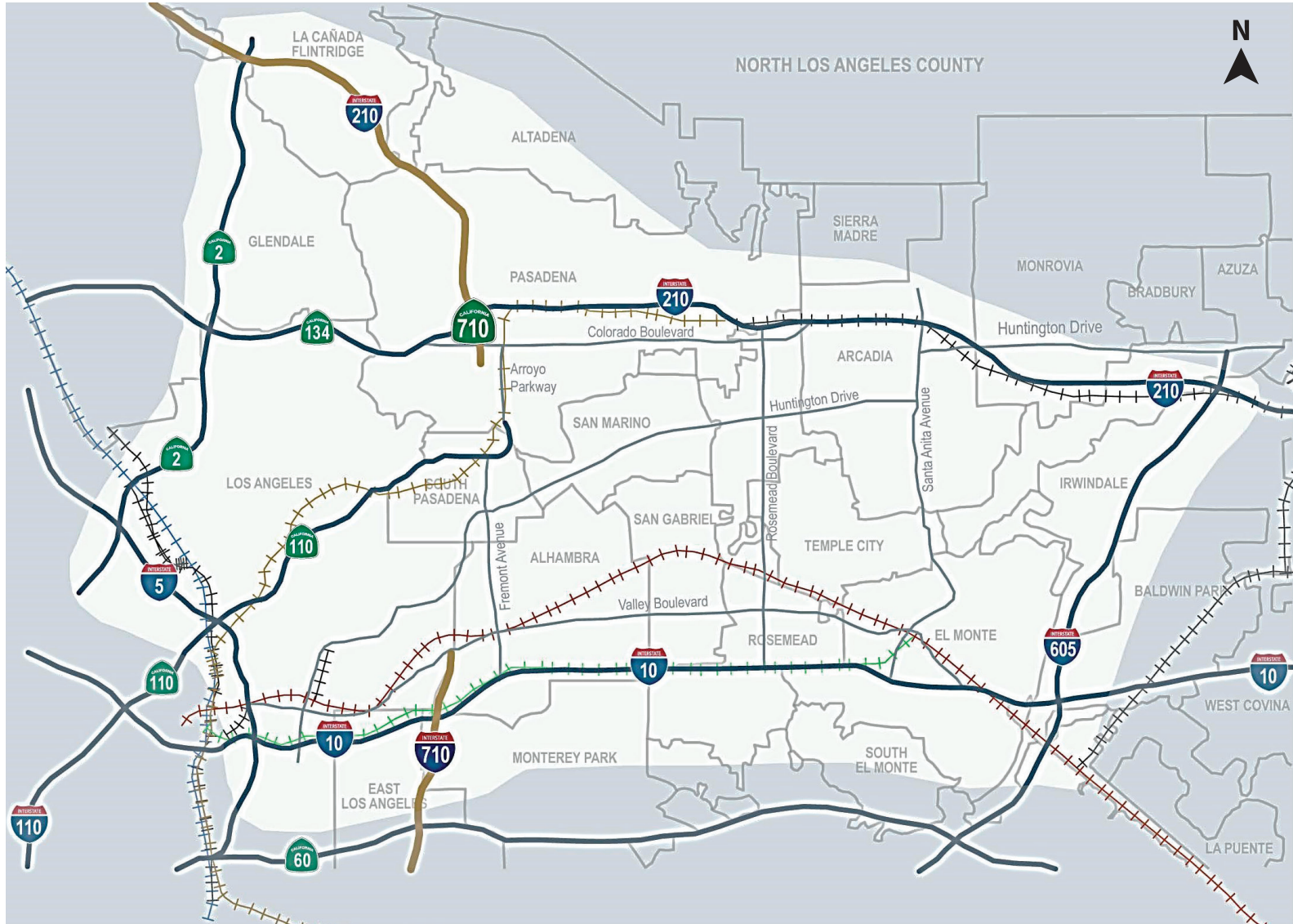
Reviewed by: Richard F. Clarke, Chief Program Management Officer, (213) 922-7557



Phillip A. Washington  
Chief Executive Officer

# State Route 710 North Project

## STUDY AREA

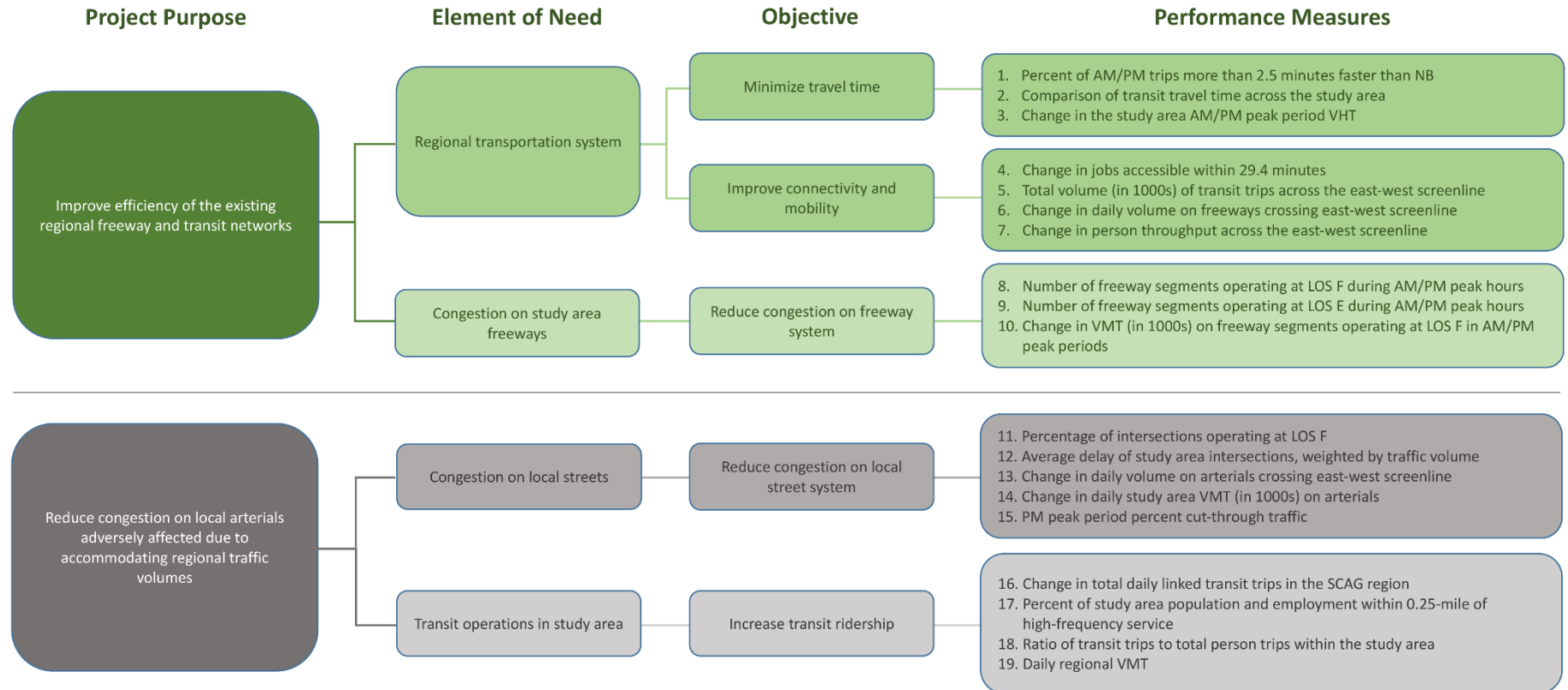


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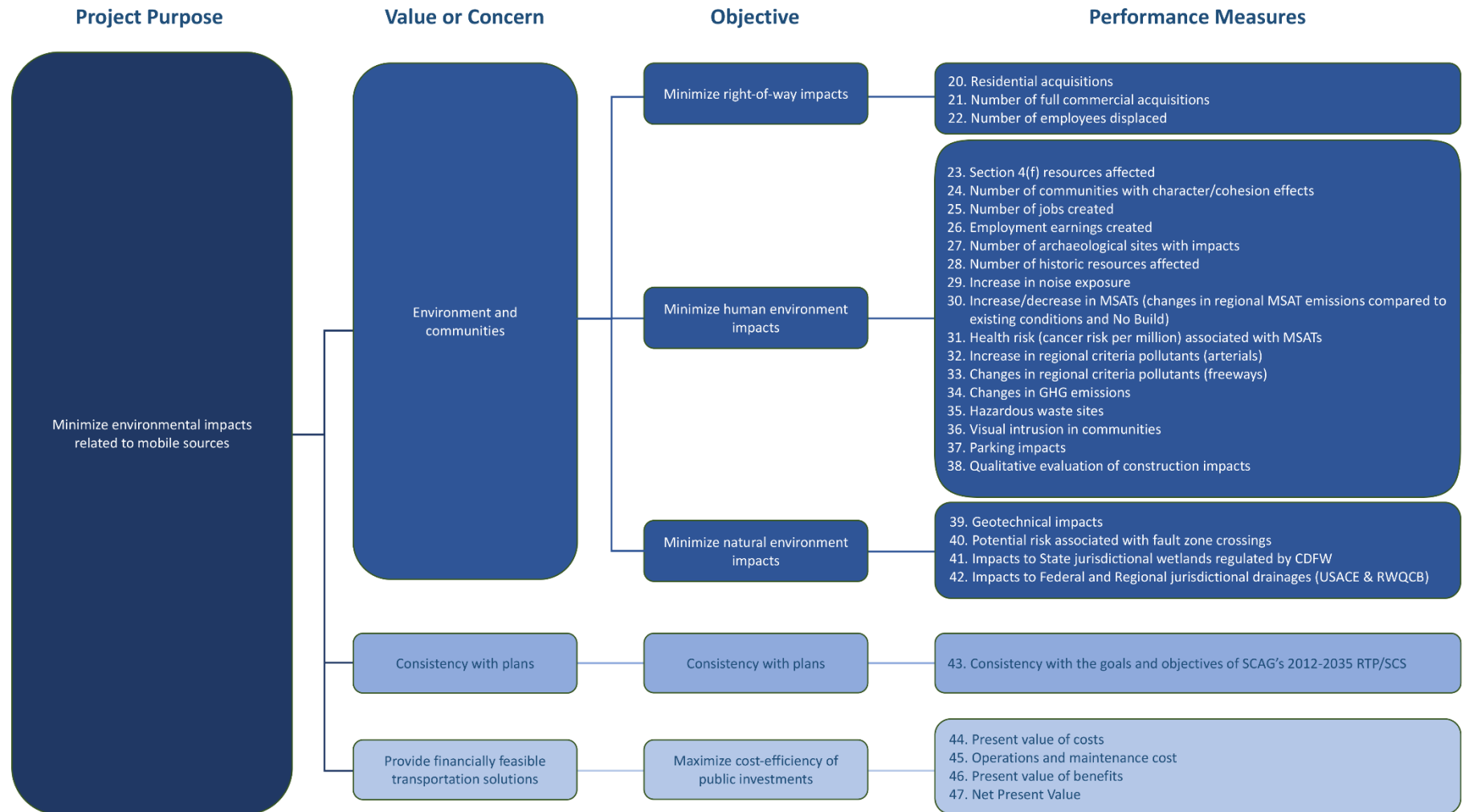




# State Route 710 North Project Performance Evaluation Matrix



# State Route 710 North Project Performance Evaluation Matrix (Cont'd)



### State Route 710 North Project Performance Evaluations Summarized by Objective

Element of Need	#	Objective	Single-Bore Tunnel					Dual Bore Tunnel				
			NB	TSM/ TDM	BRT	LRT	Toll	No Trucks	Express Bus	No Toll	No Toll No Trucks	Toll
<b>OVERALL AVERAGE</b>			6	6	6	5	7	7	7	7	7	7
Regional Transportation System	1	Minimize Travel Time	1	2	3	4	6	7	7	7	7	8
	2	Improve Connectivity and Mobility	1	2	3	3	7	6	6	7	8	8
Congestion on Study Area Freeways	3	Reduce Congestion on Freeway System	5	4	5	4	4	5	4	5	5	5
Congestion on Local Streets	4	Reduce Congestion on Local Street System	1	1	1	1	6	6	6	10	10	9
Transit Operations in Study Area	5	Increase Transit Ridership	5	6	7	7	6	5	6	5	6	6
Environment and Communities	6	Minimize Right-of-Way Impacts	10	9	8	1	9	9	9	9	9	9
	7	Minimize Human Environment Impacts	7	5	5	5	7	7	7	7	7	7
	8	Minimize Natural Environment Impacts	10	10	10	9	6	6	6	5	5	5
Consistency with Plans	9	Consistency with Plans	10	10	10	10	10	10	10	10	10	10
Provide Financially Feasible Transportation Solutions	10	Maximize Cost Efficiency	6	6	5	3	7	7	7	4	5	3



# State Route 710 North

## SINGLE BORE FREEWAY TUNNEL FACT SHEET

### Description

The Single Bore Freeway Tunnel (SBFT) connects the existing southern stub of State Route 710 in Alhambra, to the existing northern stub of Interstate Route 710, south of the Interstate 210/State Route 134 interchange in Pasadena. The alignment is approximately 6.3 miles long, and consists of a bored tunnel (4.2 miles), short (0.7 miles) cut-and-cover tunnel segments at the south and north termini, and at-grade (1.4 miles) segments; with no intermediate interchanges or vertical ventilation shafts.

The SBFT has the highest net present value at approximately \$1.5 Billion. The preliminary construction cost estimate is \$3.15 Billion (in 2014 \$s) of which approximately \$50 Million is earmarked for TSM/TDM improvements. The construction is expected to take between 4 and 5 years.

Continued local input and coordination with cities, state and local fire representatives, first responders, California Highway Patrol, Caltrans, power companies, railroads, the flood control district and other affected agencies, is expected throughout the remaining project development phases.

### Transportation Benefits

The SBFT is expected to carry 90,000 vehicles per day, remove 42,000 vehicles per day from local streets within the study area and save motorists (using the tunnel) 13 minutes, in addition to providing the following benefits:

- > Improves local and regional mobility
- > Improves air quality for affected cities within the study area
- > Reduce congestion and cut-through traffic on local streets- 42,000 fewer vehicles per day
- > Travel time savings (and less delay) -4000 fewer vehicle hours traveled per day during peak period within the study
- > Fewer vehicle miles traveled on local streets- reduce arterial travel by 280,000 vehicles miles travelled per day
- > Improve connectivity and mobility - increase throughput by 66,000 vehicles per day on the freeway, and increase person throughput by 49,000 daily

- > Create the greatest number of jobs- approximately 42,000 (only surpassed by the dual bore tunnel alternative potential jobs)
- > Generates the highest employment earnings approximately \$29 Million (in 2010 \$s) per year (only surpassed by the dual bore tunnel alternative potential earnings)

### Design Features

Portals are planned at the southern terminus, south of Valley Boulevard and at the northern terminus, north of Del Mar Boulevard. Ventilation structures will be located at both ends of the tunnel, (incorporated into the south portal building design at the south end, and situated near the 210 interchange at the north end). In addition to providing innovative traffic and traveler information systems, other supporting tunnel systems will include, but not be limited to:

- > Air scrubbers, fans and longitudinal ventilation systems
- > Fire suppression systems (sprinkler system)
- > 24 hour communication and surveillance systems

### Transportation System Management/ Transportation Demand Management (TSM/ TDM) Elements

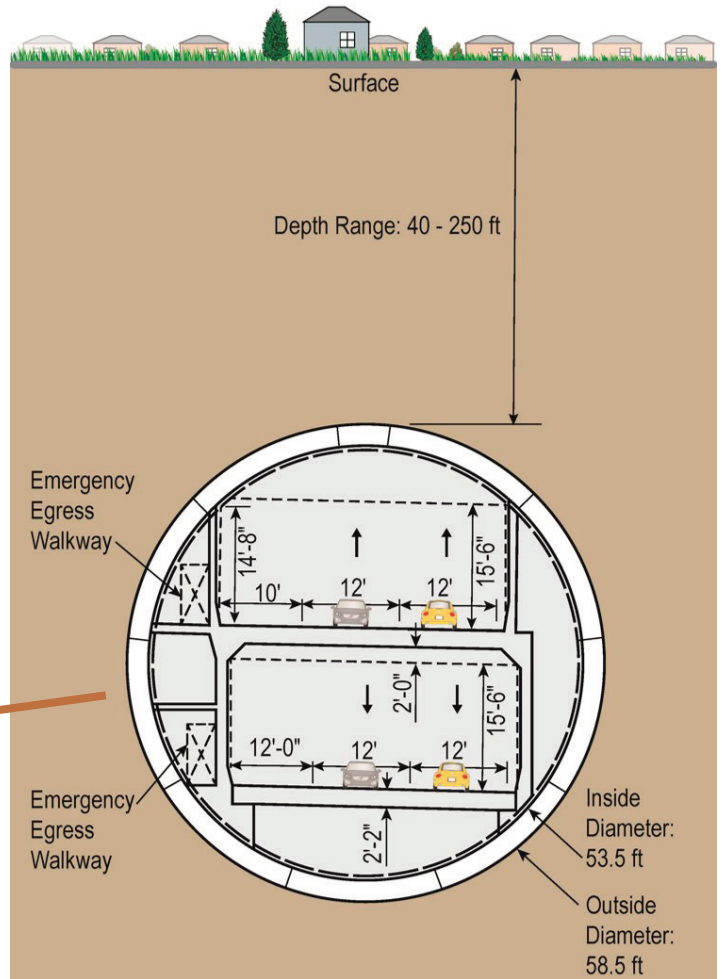
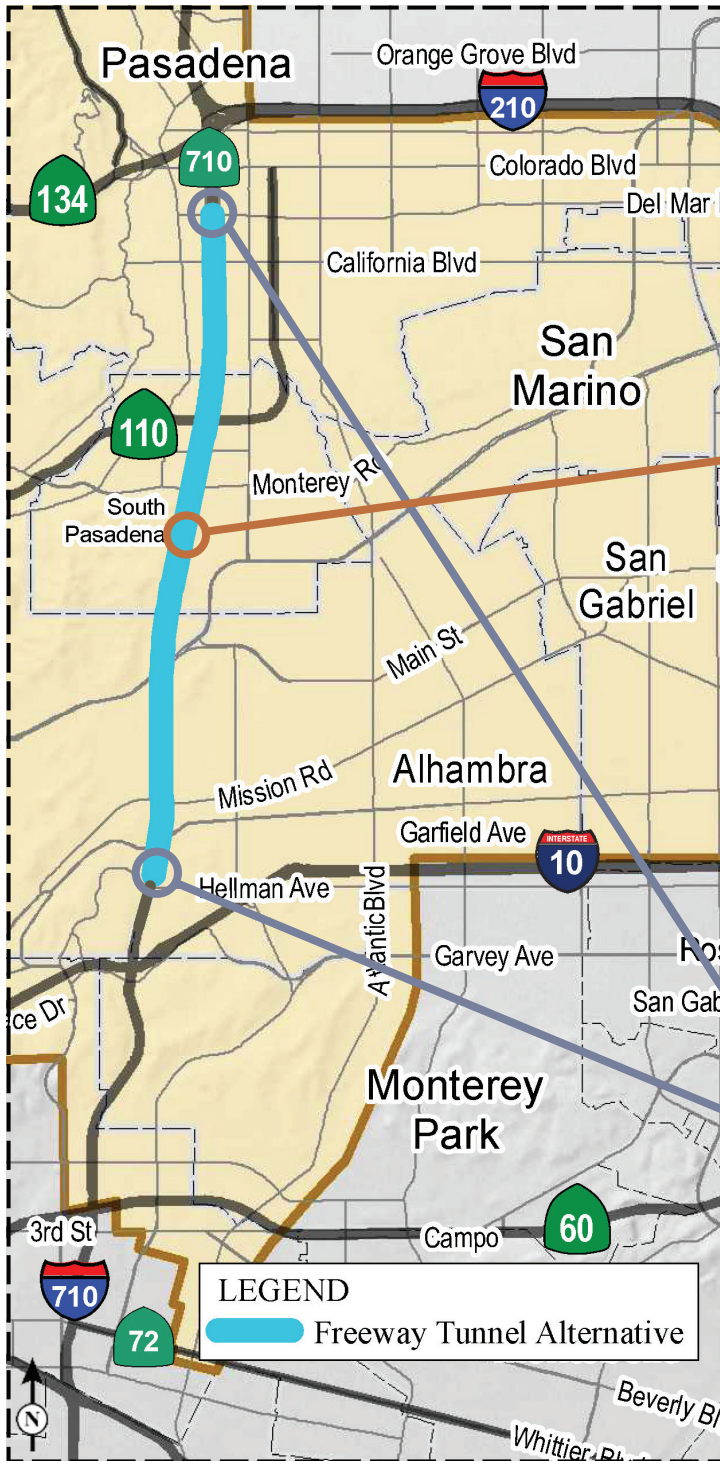
The SBFT includes all of the proposed TSM/TDM operational improvements, except for the proposed connector between Valley Boulevard to Mission Road and the extension of St. John Avenue between Del Mar and California Boulevards, due to design conflicts.

### Operational Consideration

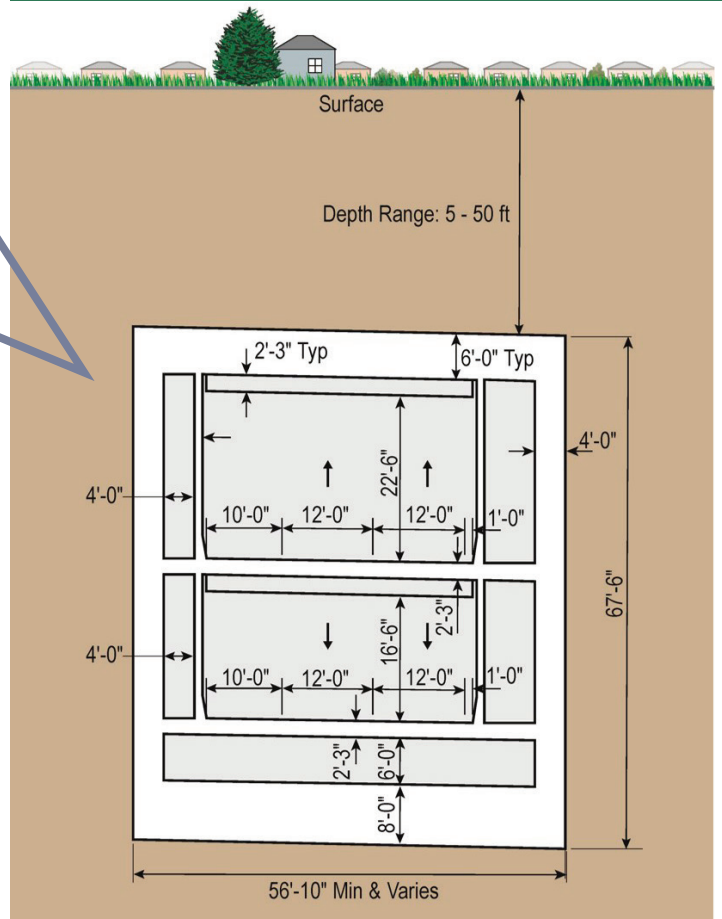
The SBFT with tolls would provide a potential revenue source and an opportunity to deliver a Public Private Partnership project. Restricting heavy trucks in excess of 33,000 tons, in addition to prohibiting vehicles carrying flammable or hazardous materials, will optimize traffic operations. Express bus service in the tunnel will have a negligible effect on improving system performance.

# FREEWAY TUNNEL PROJECT AREA

# BORED TUNNEL SECTION



# CUT AND COVER SECTION



# State Route 710 North

## TRANSPORTATION SYSTEM MANAGEMENT/TRANSPORTATION DEMAND MANAGEMENT ALTERNATIVE

### Description

The Transportation System Management/Transportation Demand Management (TSM/TDM) alternative is designed to maximize the efficiency of the existing transportation system by improving capacity on the local street system and reducing the effects of bottlenecks and chokepoints. These relatively low-cost, low-impact strategies are included to all of the State Route 710 Build alternatives to enhance performance.

TSM strategies include coordinated traffic signal timing to help relieve congestion, ramp metering to control the entry of vehicles onto a freeway, and minor street widening and intersection improvements to improve traffic circulation. TDM strategies promote carpooling, staggered work shifts and more transit use.

Further refinements with local input and coordination, prior to implementation will be crucial to optimize performance and minimize impacts to surrounding communities.

### TSM Design Elements

The following TSM elements are being considered:

#### *Intelligent Transportation Systems (ITS)*

- > Traffic signal upgrades and prioritization
- > Transit signal priority
- > Ramp metering
- > Driver information system
- > Local arterial changeable message signs
- > Vehicle detection systems
- > Variable speed control

#### *Transit (Bus) Enhanced Service*

- > Adjust bus service operating plans and evaluate off board fare collection technologies to reduce delay and increase bus service during peak periods
- > Results in bus frequencies reduced to as little as 2.5 minute headways during peak periods

#### *Active Transportation Systems*

- > Provide pedestrian and bicycle amenities to support access to proposed transit alternatives
  - o Requires coordination with local agencies

#### *Intersection and Local Street Improvements*

- > Accommodate targeted capacity improvements throughout the study area
  - o 27 local intersections, 7 local street segments, 2 street extensions, and one interchange
  - o Requires coordination with local agencies

### TDM Strategies

The following TDM strategies are being considered:

- > Enhanced bus service
- > Reduce the demand for travel during peak periods
- > Encourage rideshare and transit use
- > Eliminate trips (e.g. telecommuting)
- > Improved transportation options

**Board Report**

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**File #:** 2017-0132, **File Type:** Contract**Agenda Number:** 51.

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**REVISED**  
**REGULAR BOARD MEETING**  
**JUNE 22, 2017**

**SUBJECT: METRO BLUE LINE SIGNALING REHABILITATION AND OPERATIONAL IMPROVEMENTS PROJECT**

**ACTION: AWARD CONTRACT**

**RECOMMENDATION**

AUTHORIZE the CEO to award Contract No. C1081 to Mass Electric Construction Co/Parsons, the selected best value contractor to design and construct the **Blue Line State of Good Repair signaling rehabilitation and operational improvements** for a contract value of \$81,513,000.

**ISSUE**

The existing MBL light rail transit system is over 25 years old. Signaling and Overhead Catenary Systems (OCS) are in need of rehabilitation as they are essential subsystems for safe and effective light rail operations. Currently, the MBL is operating with a limited number of interlockings, which are trackwork and signaling components that allow trains to cross from one track to another during planned maintenance or in the event that there is a disabled train. With the existing six interlockings between Washington Station and Willow Station, some segments of the MBL are limited to 30 - 40 minute headways during emergency situations. The addition of four new interlockings is expected to improve single tracking headways to approximately 15 - 20 minutes and allow a better overall emergency operation response.

Finally, the MBL Division 11 Yard is operating with an obsolete signal system that is very limited and relies on manual control. The Yard signal system portion of this project will update the signaling of Division 11 and provide a more efficient and safe yard operation.

**BACKGROUND**

As a State-of-Good-Repair project, Metro Blue Line Signaling Rehabilitation and Operational Improvements (Signal/Interlocking/OCS) Project will:

1. Replace all vital relays
2. Install four additional interlockings and one siding at 95<sup>th</sup> Street
3. Install the associated Solid State Interlockings (SSI) and the associated communications

equipment

4. Install new frequency converters for the train detection sub-system
5. Redesign the switch between the two redundant power supplies in the Signaling bungalows to address recurring loss of signal power issues
6. Replace code transmitter relays for the speed control sub-system
7. Replace the OCS in the Long Beach loop and Downtown Los Angeles
8. Upgrade the Signal system in the Division 11 yard

These activities will improve single tracking capability that take place during planned maintenance or unplanned incidents. In addition, the additional siding track near 95<sup>th</sup> Street will provide train storage for more operational flexibility.

The OCS contact wires operating in sections in downtown Los Angeles and Long Beach have experienced significant wear over time, resulting in an increasing probability of a wire failure and service disruptions. Replacing and re-tensioning these wires will provide a more reliable and safer operation. The OCS in the 7th Street/Metro Center tunnel is also approaching the end of its useful life. The replacement of the existing wire system with new Overhead Contact Rail (OCR) system will reduce future maintenance needs and will support the Regional Connector tunnel OCR which is currently under construction.

The new train control system in the Division 11 Yard will provide efficient and safe yard operations for Metro staff. The control tower will have the ability to route trains remotely and monitor MBL operation more easily.

## **DISCUSSION**

### **Scope and Use of Advanced Technologies**

1. This scope enables the use of advanced technologies. For example Solid State Interlocking (SSI) technologies for the control of the interlockings will be used instead of relays. Solid state electronic equipment is much more reliable due to the use of electronic circuits and components. SSI technologies have a much lower failure rate than relays and a longer life, which improves system reliability and is more cost effective in the long term. Finally the use of SSI technologies will align the MBL with the Expo line or the Regional Connector project in terms of technologies between projects to improve the overall efficiency and effectiveness of maintenance.
2. Due to the use of more advanced technologies for the interlockings, one of the crossovers added to the project requires a new bungalow to house the new train control and communication



equipment. The existing Metro Right-of-Way is not adequate to add a new bungalow; the project is proposing to purchase a small property adjacent to the MBL tracks.

3. The scope of the project also addresses reliability. The existing MBL Signaling bungalows currently house 3,500 vital relays. These relays are 25 years old and approaching the end of their useful life. Therefore, the replacement of all 3,500 vital relays is included in the scope of this project to improve reliability.
4. The project is also replacing the code generators of the existing signal system. The existing code generators required urgent replacement. The cost of procurement and installation for the complete code generator replacement is included in the scope of this project.
5. Finally in order to minimize the disruptions of Operations during the construction of the project on the Blue Line, it is critical to have Metro Inspectors and Flagmen support the construction of the project. Not only is this a new CPUC regulation, but it is also a direct experience from the success of the MBL stations enhancements project. Metro Inspectors and Flagmen are needed to grant contractors access to Metro equipment rooms and equipment and tracks, including the Signaling bungalows. They also assist with shutting down the traction power when appropriate, and authorizing and inspecting all contractor activities to ensure the safety of our system.

## **FINANCIAL IMPACT**

The amount of this contract action is \$81,513,000. Funding for the FY 18 effort and ~~approval for an \$118,900,000 Life of Project budget are included in the proposed~~ were approved by the 2017 May Board item 30 FY18 budget board report ~~scheduled for consideration at the May Finance and Budget and regular board meeting.~~

It is proposed that since this is a multi-year project, the Project Manager, Cost Center Manager, and Chief Officer of Program Management will ensure that costs will be budgeted in future years.

### Impact to Budget

The source of funds for this procurement will come from Prop A 35%, TDA Article 4, Measure M 2% and California Cap and Trade Transit and Intercity Rail Capital Program (TIRCP) grant funding.

## **ALTERNATIVES CONSIDERED**

The Board may choose not to award this contract. This alternative is not recommended because rejecting this project would have the MBL continue to operate on the aging signaling and catenary system equipment as well as the difficulties of providing adequate service during single tracking for routine maintenance and in the event of an incident. The aging MBL systems will

require additional maintenance and still suffer more breakdowns, which would lead to less reliable operations.

### **NEXT STEPS**

Upon approval of the contract award, staff will work with Vendor/Contract Management to issue a Notice to Proceed for Contract C1081 MBL Signaling Rehabilitation and Operational. It is anticipated that the project will be completed within 36 months from issuance of the Notice to Proceed.

### **ATTACHMENTS**

Attachment A - Sources and Uses Table

Attachment B - Procurement Summary

Attachment C - DEOD Summary

Prepared by:

James Wei, Director Engineering, (213) 922-7528

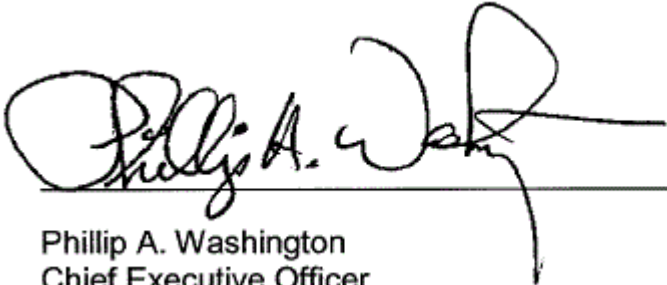
Samuel Mayman, Executive Officer, Engineering, (213) 922-7289

Reviewed by:

James T. Gallagher, Chief Operations Officer (213) 418-3108

Debra Avila, Chief Vendor/Contract Management Officer (213) 418-3051

Richard Clarke, Chief Program Management Officer (213) 922-7557



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Phillip A. Washington  
Chief Executive Officer

## Sources and Use Table

<b>Construction</b>	<b>FY 18</b>	<b>FY 19</b>	<b>FY 20</b>	<b>Total</b>
Construction Contract Bid (C1081)	\$ 16,302,600	\$ 32,605,200	\$ 32,605,200	\$ 81,513,000
<b>Construction Cost</b>	<b>\$ 16,302,600</b>	<b>\$ 32,605,200</b>	<b>\$ 32,605,200</b>	<b>\$ 81,513,000</b>

<b>Sources and Uses</b>	<b>FY 18</b>	<b>FY 19</b>	<b>FY 20</b>	<b>Funding</b>
California Cap and Trade (TIRCP)	\$ 16,302,600	\$ 22,191,400	\$ -	\$ 38,494,000
Additional Funding ( Prop A 35% TDA Article 4, and Measure M 2%)		\$ 10,413,800	\$ 32,605,200	\$ <b>43,019,000</b>
<b>Total Funding</b>	<b>\$ 16,302,600</b>	<b>\$ 32,605,200</b>	<b>\$ 32,605,200</b>	<b>\$ 81,513,000</b>

**PROCUREMENT SUMMARY**

**METRO BLUE LINE SIGNAL SYSTEM REHABILITATION PROJECT-  
DESIGN/BUILD / CONTRACT NUMBER C1081**

1.	<b>Contract Number:</b> C1081	
2.	<b>Recommended Vendor:</b> Mass Electric Construction Co.	
3.	<b>Type of Procurement (check one):</b> <input type="checkbox"/> IFB <input checked="" type="checkbox"/> RFP <input type="checkbox"/> RFP-A&E <input type="checkbox"/> Non-Competitive <input type="checkbox"/> Modification <input type="checkbox"/> Task Order	
4.	<b>Procurement Dates:</b>	
	<b>A. Issued:</b> 3/21/16	
	<b>B. Advertised/Publicized:</b> 3/11/16	
	<b>C. Pre-Proposal Conference:</b> 4/11/16	
	<b>D. Proposals Due:</b> 2/21/17	
	<b>E. Pre-Qualification Completed:</b> 10/27/16	
	<b>F. Conflict of Interest Form Submitted to Ethics:</b> 11/15/16	
	<b>G. Protest Period End Date:</b> <del>4/24/17</del> 5/24/17	
5.	<b>Solicitations Picked up:</b> 50	<b>Bids/Proposals Received:</b> 2
6.	<b>Contract Administrator:</b> Rafael Vasquez	<b>Telephone Number:</b> (213) 418-3036
7.	<b>Project Manager:</b> James Wei	<b>Telephone Number:</b> (213) 922-2758

**A. Procurement Background**

This Board Action is to approve the award of a design/build “Best Value” procurement issued in support of the Metro Blue Line Signal System Rehabilitation Project. Contract No. C1081 will provide management, coordination, professional services, labor, equipment, materials and all other services necessary to perform the final design and construction of the Metro Blue Line Signal System Rehabilitation. Board approval of contract awards are subject to resolution of any properly submitted protest(s).

The Work includes the addition of four new interlockings, one siding track, installation of new Overhead Catenary System (OCS), replacements of existing OCS contact wire, modifications to existing mainline Automatic Train Control System, and modifications to the train control system in the MBL Yard (Division 11). The Contract type is a firm fixed price.

A Request for Qualifications (RFQ)/Request for Proposals (RFP) was issued on March 21, 2016. A pre-proposal conference was held on April 11, 2016, in the Board Room with representatives of approximately 11 firms in attendance.

The RFQ/RFP implemented a two-step negotiated procurement in accordance with California Public Contract Code §22160-22169 and in accordance with Metro’s Acquisition Policy. The first phase of the procurement was a request for Statement of Qualifications (SOQ). A prequalification evaluation team evaluated the SOQs. Three responsive SOQs were received on June 17, 2016.

The three firms that met the RFQ requirements, were designated as prequalified parties, and were invited to submit proposals in response to the second RFP phase of the solicitation.

- Mass Electric Construction Company
- Balfour Beatty Infrastructure Inc.
- C3M/Clark, a Joint Venture

The prequalified firms submitted technical and commercial questions which were recorded and reviewed by Metro staff. Formal written answers to 557 questions were provided to the prequalified firms and other planholders.

Twenty one amendments were issued during the solicitation and evaluation process:

- Amendment No. 1, issued on March 24, 2016, changed Pre-Proposal Conference Room location, added a technical/outreach meeting, and revised Scope of Work;
- Amendment No. 2, issued on March 28, 2016, provided missing Project Definition Documents references such as Metro's Rail Design Criteria Drawings, Rail Directive Drawings, Rail Standard Drawings, Signage Standards, and Wayside Signage Directive Drawings;
- Amendment No. 3, issued on April 1, 2016, extended the SOQs due date to May 5, 2016 and extended the Proposal due date to July 7, 2016;
- Amendment No. 4, issued on April 5, 2016, clarified contract language, including revisions to Contract Payment Provisions to Subcontractors;
- Amendment No. 5, issued April 20, 2016, extended the SOQ due date to May 19, 2016, extended the Proposal due date to July 21, 2016, and clarified contract language, including revisions to General Conditions GC-51;
- Amendment No. 6, issued on April 27, 2016, extended the SOQs due date to June 2, 2016, extended the Proposal due date to August 18, 2016, and revised Instructions to Proposers, Supplemental Instructions to Proposers and Submittal Requirements;
- Amendment No. 7, issued on May 5, 2016, provided Metro Blue Line As-builts reference documents information;
- Amendment No. 8, issued on May 18, extended the SOQ due date to June 9, 2016, extended the Proposal due date to August 25, 2016, and clarified contract language, by adding CP-5A Voluntary Payment to Subcontractors Initiative provision and revising the Scope of Work;
- Amendment No. 9, issued on June 3, 2016, extended the SOQs to June 17, 2016, revised Contract Administrator contact information and clarified contract language, including revisions to Non-Disclosure Agreement and Special Provisions Alternate Proposals;
- Amendment No. 10, issued on June 3, 2016, clarified Contract Administrator phone number;
- Amendment No. 11, issued on June 13, 2016, clarified the SOQs due date;

- Amendment No. 12, issued on June 22, 2016, extended the Proposal due date to September 15, 2016, clarified contract language, including revisions to the Schedule of Quantities and Prices, the qualifications and functions of key personnel, and the Scope of Work;
- Amendment No. 13, issued on July 19, 2016, clarified Proposal Documents and revised Qualifications of Key Personnel and Functions;
- Amendment No. 14, issued August 12, 2016, extended Proposal due date to September 29, 2016, revised Contract Administrator contact information, clarified contract language and revised the Scope of Work;
- Amendment No. 15, issued August 29, 2016, extended Proposal due date to October 13, 2016, revised submittal requirements, revised Schedule of Quantities and Prices form, added SP-32 Limitation of Liability Arising from Contractor's Performance, added Dispute Resolution provisions, and clarified Contract language;
- Amendment No. 16, issued September 23, 2016, clarified evaluation criteria, and revised Submittal Requirements, Schedule of Quantities and Prices Forms, and the Scope of Work;
- Amendment No. 17, issued September 28, 2016, extended the Proposals due date to October 20, 2016, and revised Regulatory Requirements and Federal Certificates such as Buy America, Compliance with Federal Lobbying Requirements, and revised Schedule of Quantities and Prices forms;
- Amendment No. 18, issued October 4, 2016, clarified the Schedule of Quantities and Prices forms;
- Amendment No. 19, issued October 7, 2016, removed Federal Requirement Certificates such as Compliance with 49 CFR part 655 , Prevention of Alcohol Misuse and Prohibited Drug Use in Transit Operations, and Certificate of Debarment, Suspension and Other Responsibility Matters;
- Amendment No. 20, issued on December 29, 2016, requested from both Proposers a Revised Proposal with a due date of February 7, 2017. The amendment deleted Washington Siding and Del Amo Scope of Work, revised Schedule of Quantities and Prices Forms and reduced SBE goal requirements;
- Amendment No. 21, issued on January 11, 2017, extended the Proposals due date to February 21, 2017, revised Schedule of Quantities and Prices forms and requested validity period of the revised Proposals.

Initial proposals were received on October 20, 2016 from the following firms:

1. Balfour Beatty Infrastructure, Inc.
2. Mass. Electric Construction Co.

Only two of the three pre-qualified firms submitted proposals. C3M/Clark Joint Venture did not submit a proposal because, among some of their reasons cited, there were unfavorable contract terms and conditions to the Contractor, expensive insurance coverage requirements for subcontractor and many unknown risks associated with the construction.

Mass. Electric Construction Co. submitted an alternative proposal in addition to a base proposal.  
Final revised proposals were received on February 21, 2017, from both Proposers.

## **B. Evaluation of Proposals**

A Proposal Evaluation Team (PET) consisting of staff from Metro Rail Operations, Metro Facilities Engineering Operations, and Systems Engineering conducted a comprehensive and robust evaluation of the proposals received.

The PET performed a detailed evaluation of the proposals in accordance with the factors and sub-factors set forth in the RFP to assign a score and ranking. The evaluation considered all technical and price factors defined in the RFP and Source Selection Plan.

The proposals were evaluated based on the following evaluation criteria and weights:

- |   |            |
|---|------------|
| • Project Management                                    | 40 percent |
| • Technical Approach                                    | 30 percent |
| • Price   | 30 percent |
| • A Prompt Payment to Subcontractors Initiative (Bonus) | 5 percent  |

The Proposers could opt for prompt payment initiative, noted above, that requires the prime Contractor to pay its first tier subcontractors for work completed prior to submitting its monthly billing to Metro. This triggers the cascading of earlier payments where each subcontractor must make payment to their subcontractors of undisputed amounts within seven days of having received payment. In return, Metro provides terms of Net 21 days payment of undisputed amounts to the Contractor.

Each Proposer received written Requests for Clarification regarding topics such as construction schedule, cutover and staging plans.

Each proposing team was invited to make an oral presentation to the PET for the purpose of clarifying their proposal and demonstrating their understanding of Metro's requirements, thus allowing the PET to refine technical scoring. The presentation meeting format, the amount of time allowed, and general questions asked were standardized.

Following a review of the initial proposals and oral presentations both proposals were determined to be within the competitive range and the PET and the Director of Contract Administration of Construction held discussions with each Proposer between November 28, 2016, and December 1, 2016, to address potential deficiencies, understand concerns about risk, and review assumptions taken in relation to their price proposal.

Discussions confirmed each Proposer's understanding of the scope and appropriate approaches and plans to complete the scope of work. After concluding discussions with the Proposers, Metro issued amendments Nos. 20 and 21. Amendment No. 20 deleted major scope of work for the Washington Siding and related facilities, and Division 11 Yard Train Control System was removed from the Option Schedule and included in the Base Work. This major change in scope of work required Metro to request both Proposers to submit revised Proposals. Amendment No. 21 extended the proposals due date to February 21, 2017, and provided revised Schedule of Quantities and Prices forms.

Mass Electric Construction Co. elected not to submit a Revised Alternative Proposal. Both Proposers elected to participate in the Voluntary Payment to Subcontractor Initiative per the RFP requirements.

### **Qualifications Summary of Firms within the Competitive Range**

#### **Mass Electric Construction Co. (MEC)**

Mass Electric Construction Co. is the design-builder and general contractor, Parsons Transportation Group is the principal engineer and Architect of Record. MEC has based its operations in Los Angeles since 1987. MEC is the installer of the original Blue Line Signal System. Other projects for Metro include the Green Line, Red Line, Gold Line, both Expo Line Extensions, Metro Gold Line Foothill Extension Phase 2A, MBL Pedestrian and Swing Gates, and the Regional Connector.

Parsons is headquartered in Pasadena, CA and is a full-service engineering firm providing services and contract deliveries to transportation agencies and railroads for more than 80 years including Metro. Parsons has been consistently ranked in the top 10 transportation design firms by ENR in the past nine years. MEC and Parsons have worked together on 15 projects.

#### **Balfour Beatty Infrastructure, Inc.(BB)**

BB is the Design-Build contractor. WSP/Parsons Brinckerhoff is the lead designer and principal engineer, Wabtec Integrated Systems, Inc. is the train control, communications, signal supplier.

WSP/PB is the largest provider of fixed rail infrastructure globally. BB provides construction and maintenance services for numerous rails projects involving grade crossings, signals, and communications systems. BB's work for Metro includes the Gold Line Eastside Extension - trackwork, and OCS Expo Line Phase 1 LRT Design-Build trackwork, and dual mainline track.

WSP/PB for the past 35 years has supported LACTMA in the planning, designing, and constructing of its rail system. WSP/PB has provided planning, engineering, and/or program management services including the Pasadena Gold Line LRT, Gold



Line Eastside Extension LRT, Westside Extension Subway, Regional Connector LRT and Exposition Line.

Wabtec has extensive engineering experience and specializes in performing systems, signals, crossings and communications engineering services.

**Evaluation Outcome**

Based on a thorough evaluation of the proposals, as performed and determined by the Proposal Evaluation Team, the Mass Electric Construction Co. proposal offers the “Best Value” and is the most advantageous to Metro.

Mass Electric Construction Co. demonstrated strengths in factors and sub-factors under Project Management and Technical Approach of Proposer’s capabilities, skill and experience, management approach, risk management, cutover and staging plan. MEC was the original installer of the original Metro Blue Line Signal System which is both a benefit to Metro, as well as a fair competitive advantage for MEC.

MEC provided a thorough and detailed cutover plan for connecting the project to the existing rail system. In addition, MEC developed a set of preliminary plan at 35% design level which is a benefit to Metro and reflects upon MEC in their thorough knowledge of the project, numerous studies performed and construction approach.

The final scores and ranking of the proposals is summarized in the table below.

**Final Evaluation Scoring**

<b>1</b>	<b>Firm</b>	<b>Average Score</b>	<b>Factor Weight</b>	<b>Weighted Avg. Score</b>	<b>Rank</b>
<b>2</b>	<b>Mass Electric Construction Co.</b>				
<b>3</b>	Project Management	89.25	40.00%	35.70	
<b>4</b>	Technical Approach	88.60	30.00%	26.58	
<b>5</b>	Price	100.00	30.00%	30.00	
<b>6</b>	Voluntary Payment to Subcontractors Initiative*	100.00	5.00%	5.00	
<b>7</b>	<b>Total</b>		<b>105.00%</b>	<b>97.28</b>	<b>1</b>
<b>8</b>	<b>Balfour Beatty Infrastructure, Inc.</b>				
<b>9</b>	Project Management	89.63	40.00%	35.85	
<b>10</b>	Technical Approach	87.37	30.00%	26.21	
<b>11</b>	Price	36.63	30.00%	10.99	
<b>12</b>	Voluntary Payment to Subcontractors Initiative*	100.00	5.00%	5.00	
<b>13</b>	<b>Total</b>		<b>105.00%</b>	<b>78.05</b>	<b>2</b>

All Scores rounded to the second decimal.

\*Proposers received full credit.

### **C. Cost/Price Analysis**

A line by line proposal pricing evaluation was performed, with certain line items of each proposal being identified as of interest. The line items of interests were the same for each Proposer. The respective line items were addressed during the commercial and technical discussions with Proposers.

The price of the recommended award is determined to be fair and reasonable based on adequate price competition and comparison to the independent cost estimate which was submitted concurrently with the proposals.

	Proposer Name	Total Price Proposal <sup>1</sup>	Metro ICE <sup>2</sup>	Award Price <sup>3</sup>
1.	Mass Electric Construction Co.	\$84,856,283	\$74,152,855	\$81,513,000
2.	Balfour Beatty Infrastructure, Inc.	\$237,603,811		\$212,630,000

Note<sup>1</sup>: The Total Price Proposal includes the Base Work, Provisional Sums, Delay Compensation, Life Cycle Costs, and Unit Prices.

Note<sup>2</sup>: The Independent Cost Estimate (ICE) amounts are submitted before the due date and opened concurrently with the other Proposals.

Note<sup>3</sup>: The Award Price only includes Base Work and Provisional Sums.

### **D. Background on Recommended Contractor**

Mass Electric Construction Co. team includes Parsons Transportation Group, Inc. and B & C Transit, Inc. MEC has based operations in Los Angeles since 1987. MEC was the installer of the original Blue Line Signal System. Other projects for Metro include Green Line, Red Line, Gold Line, both Expo Line Extensions, Metro Gold Line Foothill Extension Phase 2A, MBL Pedestrian and Swing Gates, and the Regional Connector.

Parsons is headquartered in Pasadena, CA and is a full-service engineering firm providing services and contract deliveries to transportation agencies and railroads for more than 80 years including Metro. Parsons has been consistently ranked in the top 10 transportation design firms by ENR in the past nine years. MEC and Parsons have worked together in 15 projects.

B & C has completed the Foothill Extension Phase 2A and Expo Phase 2 projects and is currently contracted to MEC on the Regional Connector.

## DEOD SUMMARY

**METRO BLUE LINE SIGNAL SYSTEM REHABILITATION PROJECT –  
DESIGN/BUILD / C1081**

**A. (1) Small Business Participation - Design**

The Diversity and Economic Opportunity Department (DEOD) established a 15% goal, inclusive of a 12% Small Business Enterprise (SBE) goal and 3% Disabled Veteran Business Enterprise (DVBE) goal for Design. Mass. Electric Construction made a 12% SBE and 3% DVBE commitment.

<b>Small Business Goal</b>	<b>12% SBE &amp; 3% DVBE</b>	<b>Small Business Commitment</b>	<b>12% SBE &amp; 3% DVBE</b>
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<b>SBE Subcontractors</b>		<b>% Committed</b>
1.	Wagner Engineering & Survey Inc.	1.36%
2.	JM Fiber Optics	2.94%
3.	Fariba Nation Consulting	7.70%
<b>Total Commitment</b>		<b>12.00%</b>

<b>DVBE Subcontractors</b>		<b>% Committed</b>
1.	MA Engineering	3.00%
<b>Total Commitment</b>		<b>3.00%</b>

**(2) Small Business Participation - Construction**

The Diversity and Economic Opportunity Department (DEOD) established a 15% goal, inclusive of a 12% Small Business Enterprise (SBE) goal and 3% Disabled Veteran Business Enterprise (DVBE) goal for Construction. Mass. Electric Construction made a 12% SBE and 3% DVBE commitment.

<b>Small Business Goal</b>	<b>12% SBE &amp; 3% DVBE</b>	<b>Small Business Commitment</b>	<b>12% SBE &amp; 3% DVBE</b>
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<b>SBE Subcontractors</b>		<b>% Committed</b>
1.	TSG Enterprises Inc. dba The Solis Group	0.21%
2.	TBD	11.79%
<b>Total Commitment</b>		<b>12.00%</b>

<b>DVBE Subcontractors</b>		<b>% Committed</b>
1.	TBD	3.00%
<b>Total Commitment</b>		<b>3.00%</b>

**B. Contracting Outreach and Mentoring Plan**

To be responsive to DBE requirements, Mass. Electric Company was required to submit a DBE Contracting Outreach and Mentoring Plan (COMP), which included the minimum requirement to apply 25% of the total DBE commitment dollars for Design and 15% of the DBE commitment dollars for Construction for participation in the mentor protégé program.

**C. Project Labor Agreement/Construction Careers Policy (PLA/CCP)**

The PLA/CCP requires that contractors commit to meet the following targeted hiring goals for select construction contracts over 2.5 million dollars:

Non-Federally Funded Projects		
Community / Local Area Worker Goal	Apprentice Worker Goal	Disadvantaged Worker Goal
40%	20%	10%

**D. Prevailing Wage Applicability**

Prevailing Wage requirements are applicable to this project. DEOD will monitor contractors' compliance with the State of California Department of Industrial Relations (DIR), California Labor Code, and, if federally funded, the U S Department of Labor (DOL) Davis Bacon and Related Acts (DBRA).

**E. Living Wage Service Contract Worker Retention Policy Applicability**

The Living Wage and Service Contract Worker Retention Policy is not applicable to this contract.



**Board Report**

**File #:** 2017-0226, **File Type:** Motion / Motion Response

**Agenda Number:** 39

**REGULAR BOARD MEETING  
MAY 25, 2017**

**SUBJECT:                   RESPONSE TO MOTION - DRAFT MEASURE M LOCAL RETURN  
GUIDELINES**

**ACTION:                   RECEIVE AND FILE**

**RECOMMENDATION**

RECEIVE AND FILE the **status report on Measure M Local Return allocation alternatives.**

**ISSUE**

At the March 2017 Board meeting, Motion to Item #8, Directors Garcia, Hahn, and Garcetti was adopted to direct the CEO to:

- A. Evaluate additional Local Return allocations to assist small cities
  - 1. Setting a floor
  - 2. Daytime and nighttime population
  - 3. Employment population
  - 4. Proportion of Measure M sales tax generated
- B. Identify other eligible funding sources that can supplement the Measure M Local Return subfund
- C. Evaluate the reliability and validity of data sources considered
- D. Report back on the Local Return distribution for public review in May, and
- E. Incorporate feedback from the Measure M Policy Advisory Council.

The full text of the motion is included in Attachment A.

**DISCUSSION**

Below is in response to the Motion.

## **A. Evaluate additional Local Return allocations**

Local Return funds from Proposition A, Proposition C, and Measure R are allocated on the basis of residential population, using annual estimates from the State Department of Finance. Similarly, the Measure M Ordinance states that Local Return funds are to be returned to the cities within Los Angeles and Los Angeles County “based on population.” However, population is not defined in the Measure M Ordinance.

County Counsel has determined that a population-related allocation is required to comply with the terms of the Measure M Ordinance, ruling out alternative measures such as lane miles. However, variables that more accurately reflect the wear and tear on jurisdictions’ local infrastructure caused by surges in daytime population or through traffic may be considered if the association/correlation to population, as required by Ordinance, can be substantiated. Alternative allocation variables used in the scenarios described herein include daytime population, employment, and sales tax generated. The reliability and frequency of the data sources for these alternative allocation variables varies:

- Residential population and sales tax base allocation variables are the most reliable as they are annually updated by the State of California.
- Employment at the jurisdictional level is based, in part, on modeled data from SCAG and is only updated every two years.
- Daytime population is based on U.S. Census data through the American Community Survey and is updated every five years.

These four allocation variables - residential population, daytime population, employment, sales tax base - have been used together with the concept of a minimum allocation (“floor”) to develop twenty (20) different allocation scenarios for consideration.

**These scenarios are described in detail in Attachment B, and the results of the allocation methodologies are shown in Attachment C.**

## **B. Identify other eligible funding sources to supplement Measure M Local Return**

Just recently, Senate Bill 1 (SB-1), “The Road Recovery and Accountability Act of 2017” was signed into law. Preliminary estimates indicate that SB-1 transportation funding package will add an estimated \$263 million annually to Los Angeles County for local streets and roads.

With the addition of SB-1, over \$1.2 billion from various funding sources are allocated to cities for local transportation projects. In FY18, Metro allocates an estimated \$633 million in Local Return funds from Proposition A, Proposition C, Measure R, Measure M, TDA Article 3 and 8 to the 88 jurisdictions and LA County. Federal STP-L and State Highway funds, not allocated through Metro, provides for another \$389 million in available funding. Attachment D details estimated annual allocations of these funding sources to local jurisdictions.

In addition to these funds, alternatives are available to assist smaller cities in their need to advance transit projects. These include borrowing and financing mechanisms and Measure M Multiyear

Subregional funds. Attachment E provides details of these alternatives.

**C. Evaluate the reliability and validity of data sources considered**

An evaluation of the data sources are described in item A and are included in Attachment B with each of the scenarios presented.

**D/E. Report back in May and Incorporate feedback from the Measure M Policy Advisory Committee**

The Policy Advisory Committee (PAC) held a meeting on May 2<sup>nd</sup> and conducted break-out sessions to discuss various key issues. The Local Return break-out group concluded and reported to the PAC, that they were not in support of minimum allocations. The PAC will provide their comments and feedback to the Board on the Local Return allocation as a separate item.

**FINANCIAL IMPACT**

There is no financial impact to MTA of one local return allocation formula versus another. The formula, when selected, will be incorporated into the annual Transit Fund Allocation process.

**NEXT STEPS**

Staff will continue to receive comments on alternative allocation methodologies for Measure M Local Return, and report this to the Board in June.

**ATTACHMENTS**

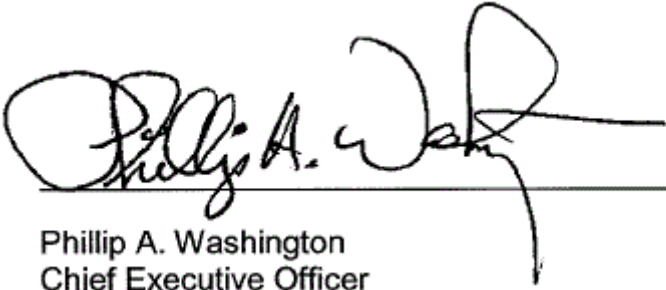
- A. Item 8: Motion on Draft Measure M Guidelines (March 2017 Regular Board Meeting)
- B. Summary of Alternative Allocation Formulas
- C. Alternative Allocation Formulas
- D. Funding Available for Local Transportation Projects
- E. Alternative Funding Mechanisms

Prepared by:

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Reviewed by:

Nalini Ahuja, Chief Financial Officer, (213) 922-3088



Phillip A. Washington  
Chief Executive Officer



**MOTION BY:**

**DIRECTORS ROBERT GARCIA, JANICE HAHN AND ERIC GARCETTI**

**MTA Board Meeting**

**March 23, 2017**

**Item 8: Draft Measure M Guidelines**

Move that the Board direct the CEO to:

A. Evaluate additional Local Return allocations to assist small cities, including but not limited to the following factors:

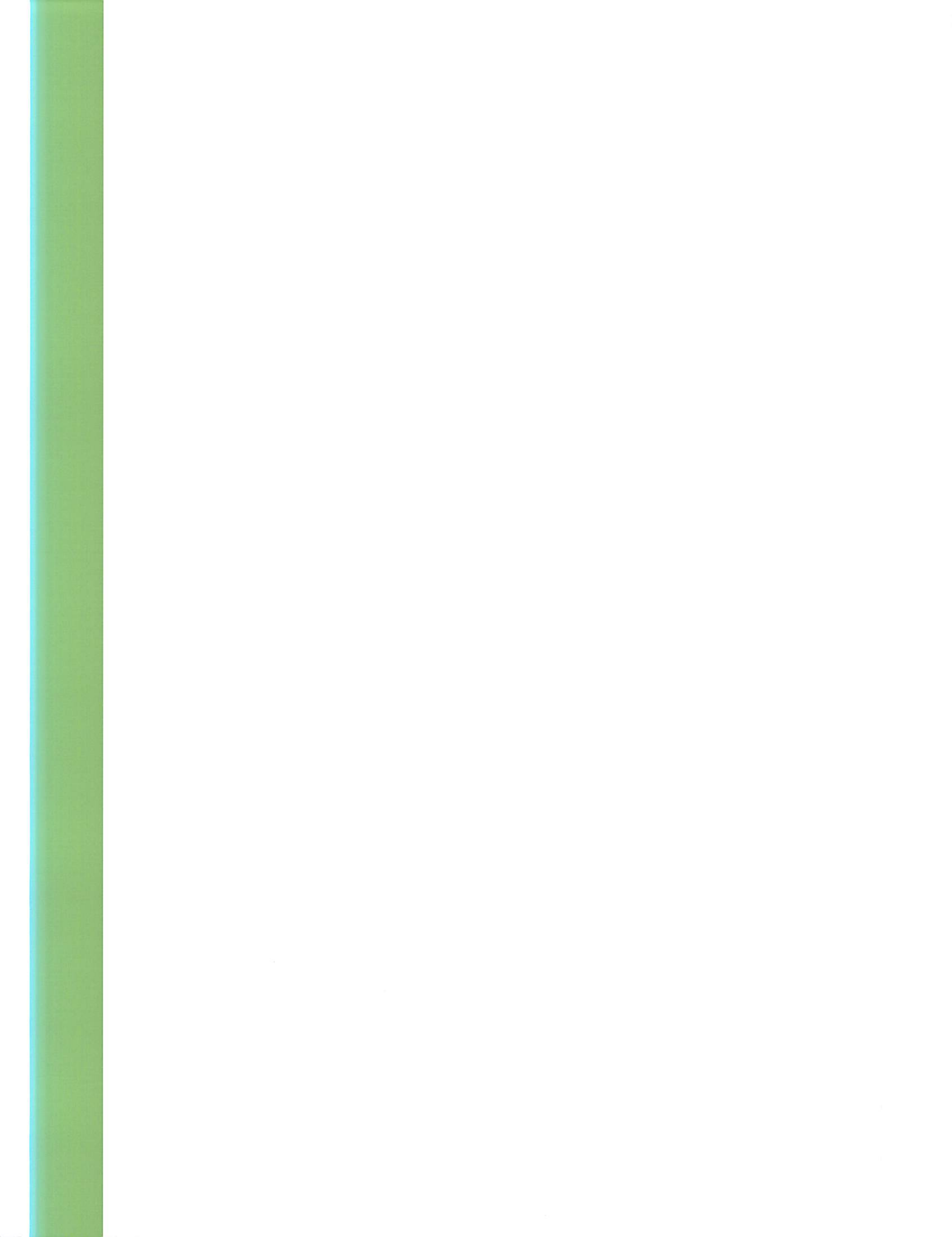
1. Setting a floor which allows small cities to invest in critical transportation/infrastructure projects
2. Daytime and nighttime population
3. Employment population
4. Proportion of Measure M sales tax generated

B. Identify other eligible funding sources that can supplement the Measure M Local Return subfund.

C. Evaluate the reliability and validity of data sources considered in the above allocations

D. Report back on Local Return distribution for public review at the May 2017 MTA Board cycle

E. Incorporate feedback from the Measure M Policy Advisory Council into the May 2017 Board report.



SUMMARY OF ALLOCATION ALTERNATIVES

Scenario	Description	Impact	Benefit	Negative Impact
<b>1</b>	<b>Population</b>	<b>Source: Department of Finance (DOF)</b>		
<b>Guaranteed Minimums</b>				
<b>1a</b>	A guaranteed minimum will be established.  Additional funding to benefitting cities to be shared proportionately by all donor jurisdictions.	<b>\$50K</b>	Reallocation of \$210K	<u>7 cities</u> Avalon Bradbury Hidden Hills Industry Irwindale Rolling Hills Vernon City of LA: (\$82K) -0.15%
<b>1b</b>		<b>\$100K</b>	Reallocation of \$588K	<u>8 cities (including 1a)</u> La Habra Heights City of LA: (\$232K) -0.44%
<b>1c</b>		<b>\$150K</b>	Reallocation of \$1M	<u>11 cities (including 1a-1b)</u> Rolling Hills Estates Sierra Madre Westlake Village City of LA: (\$426K) -0.80%
<b>1d</b>		<b>\$175K</b>	Reallocation of \$1.3M	<u>14 cities (including 1a-1c)</u> Commerce Signal Hill Malibu City of LA: (\$551K) -1.04%
<b>1e</b>		<b>\$200K</b>	Reallocation of \$1.7M	<u>17 cities (including 1a-1d)</u> Hawaiian Gardens Palos Verdes Estates San Marino City of LA: (\$712K) -1.35%
<b>1f</b>		<b>\$300K</b>	Reallocation of \$3.8M	<u>26 cities (including 1a-1e)</u> Agoura Hills Artesia Duarte El Segundo Hermosa Beach LA Canada-Flintridge Lomita Santa Fe Springs South El Monte City of LA: (\$1.5M) -2.97%
<b>1g</b>		<b>\$350K</b>	Reallocation of \$5.3M	<u>30 cities (including 1a-1f)</u> Calabasas San Fernando Cudahy South Pasadena City of LA: (\$2.1M) -4.09%
<b>1h</b>		<b>\$400K</b>	Reallocation of \$6.8M	<u>32 cities (including 1a-1g)</u> Maywood Walnut City of LA: (\$2.8M) -5.32%
<b>PROS</b> <ul style="list-style-type: none"> <li>- Reliable data source, updated annually</li> <li>- Consistent with Prop A, Prop C, and Measure R allocation method</li> <li>- Complies with Ordinance which states return of funding on the basis of population</li> </ul>				
<b>CONS</b>				

SUMMARY OF ALLOCATION ALTERNATIVES

Scenario	Description	Impact	Benefit	Negative Impact
<ul style="list-style-type: none"> <li>- Does not consider transportation impacts to jurisdictions resulting from employment and through traffic</li> <li>- Does not consider amount of sales tax generated by jurisdiction</li> </ul>				
<b>2</b>	<b>Population Staggered minimums</b>			
<b>2a</b>		\$50K, 100K, 150K	Reallocation of \$330K	<u>11 jurisdictions</u> Avalon Bradbury Hidden Hills Industry Irwindale La Habra Heights Rolling Hills Rolling Hills Estate Sierra Madre Vernon Westlake Village City of LA: (\$130K) -0.24%
<b>2b</b>	Cities allocated less than \$50K, would receive \$50K; Cities allocated between \$51K and \$99K, would receive \$100K; etc.  Additional funding to benefitting cities to be shared proportionately by all donor jurisdictions.	\$100K, 150K, 200K	Reallocation of \$837K	<u>17 jurisdictions</u> Avalon Bradbury Hidden Hills Industry Irwindale Rolling Hills Vernon La Habra Heights Rolling Hills Estates Commerce Malibu Signal Hill Hawaiian Gardens Palos Verdes Estates San Marino Westlake Village Sierra Madre City of LA: (\$333K) -0.63%
<b>2c</b>		\$50K, 100K, 150K, 200K	Reallocation of \$488K	Same 17 jurisdictions as 2b City of LA: (\$194K) -0.37%
<p><b>PROS</b></p> <ul style="list-style-type: none"> <li>- Same as above</li> <li>- Provides for more of a range in minimums with larger (but still small) cities receiving higher minimums</li> </ul> <p><b>CONS</b></p> <ul style="list-style-type: none"> <li>- Same as above</li> </ul>				

SUMMARY OF ALLOCATION ALTERNATIVES

Scenario	Description	Impact	Benefit	Negative Impact
<b>3</b>	<b>Population Subregional minimums – Minimums funded by subregion</b>			
<b>3a</b>	<p>A guaranteed minimum will be established.</p> <p>Additional funding to benefitting cities to be shared proportionately by all jurisdictions in that <i>subregion only</i>.</p>	<b>\$50K</b>	<p>Reallocation of \$210K</p> <p><u>7 jurisdictions</u></p> <p>Avalon Bradbury Hidden Hills Industry</p> <p>Irwindale Rolling Hills Vernon</p>	<p>Unincorporated: (\$34K) City of LA: (\$10K)</p> <p>Rest shared by the Gateway, San Gabriel, Las Virgenes and South Bay cities.</p>
<b>3b</b>		<b>\$100K</b>	<p>Reallocation of \$588K</p> <p><u>8 jurisdictions (including 3a)</u></p> <p>La Habra Heights</p>	<p>Unincorporated: (\$93K) City of LA: (\$32K)</p> <p>Rest shared by the Gateway, San Gabriel, Las Virgenes and South Bay cities.</p>
<b>3c</b>		<b>\$200K</b>	<p>Reallocation of \$1.7M</p> <p><u>17 jurisdictions (including 3a-3b)</u></p> <p>Rolling Hills Estate Commerce Malibu Signal Hill Hawaiian Gardens</p> <p>Palos Verdes Estates San Marino West Lake Village Sierra Madre</p>	<p>Unincorporated: (\$305K) City of LA: (\$127K)</p> <p>Rest shared by the Gateway, San Gabriel, Las Virgenes and South Bay cities.</p>
<p>No impact to Arroyo Verdugo, Westside, North County cities.</p> <p>Largest financial impact shifts from City of Los Angeles to County of Los Angeles as unincorporated county is a part of more subregions than City of Los Angeles.</p> <p><b>PROS</b></p> <ul style="list-style-type: none"> <li>- Funding stays within subregion</li> <li>- Reallocation within subregion</li> <li>- Only impacts subregions that have cities with guaranteed minimums</li> </ul> <p><b>CONS</b></p> <ul style="list-style-type: none"> <li>- Requires city of LA and County of Los Angeles to be subdivided by subregion before allocation to the subregions (population is only variable that allows this)</li> </ul>				

SUMMARY OF ALLOCATION ALTERNATIVES

Scenario	Description	Impact	Benefit	Negative Impact
- Annual allocation process is more complex				
<b>Daytime population</b>			<b>Source: American Community Survey (ACS)</b>	
4	Daytime population	New method, using daytime population, which refers to the number of people who are present in an area during normal business hours, including workers.	Some small jurisdictions benefit, but their subregions are negatively impacted. (e.g. Industry and Vernon benefit, but other cities within the subregion lose more, such that the subregion, as a whole receives less funding	<p><u>30 jurisdictions</u></p> <p>Arcadia Beverly Hills Burbank Calabasas Carson Cerritos Claremont Commerce Culver City El Segundo Gardena Industry Irwindale Los Angeles City Malibu</p> <p>Manhattan Beach Monrovia Monterey Park Pasadena Rolling Hills Estates San Dimas San Fernando Santa Fe Springs Santa Monica Signal Hill South El Monte Torrance Vernon West Hollywood Westlake Village</p> <p><u>59 jurisdictions</u></p> <p>Gateway: (\$670K) North County: (\$1.2M) Unincorporated: (\$1.8M)</p>
<p><b>PROS</b></p> <ul style="list-style-type: none"> <li>- Factors in daytime population as surrogate for employment and sales tax generated</li> </ul> <p><b>CONS</b></p> <ul style="list-style-type: none"> <li>- Unreliable data</li> <li>- Data is published every 5 years, but is already dated when published</li> <li>- Data not available for 5 cities (Avalon, Bradbury, Hidden Hills, La Habra Heights, Rolling Hills)</li> </ul>				

SUMMARY OF ALLOCATION ALTERNATIVES

Scenario	Description	Impact	Benefit	Negative Impact
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<b>Employment data</b>		<b>Source: SCAG Local Profiles</b>		
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<p><b>5</b></p>	<p>Employment (surrogate for daytime)</p>	<p>New method using employment as a surrogate for daytime population. Estimating employment by jurisdiction.</p>	<p>Some small jurisdictions benefit, but their subregions are negatively impacted. (e.g. Industry and Vernon benefit, but other cities within the subregion lose more such that the subregion, as a whole, receives less funding)</p> <p>North County, Gateway, and San Gabriel subregions negatively impacted in any scenario incorporating employment</p>	<p><u>36 jurisdictions</u></p> <p>Agoura Hills Arcadia Avalon Beverly Hills Burbank Calabasas Carson Cerritos Claremont Commerce Covina Culver City Downey Duarte El Segundo Gardena Glendale Industry</p> <p>Irwindale Los Angeles City Malibu Manhattan Beach Monrovia Montebello Monterey Park Pasadena Rolling Hills Estates San Fernando Santa Fe Springs Santa Monica Signal Hill South El Monte Torrance Vernon West Hollywood Westlake Village</p>	<p><u>53 jurisdictions</u></p> <p>Gateway: (\$2.3M) San Gabriel: (\$169K) North County: (\$2.3M) Unincorporated: (\$7M)</p>
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Need legal opinion on whether employment could be used as a surrogate for daytime population

**PROS**

- Factors in daytime population

**CONS**

- Data is not updated annually
- Released every 2 years, up to a maximum of 3 year old data
- Combines Employment Development Department (EDD) with modeled SCAG data to get to jurisdictional level

SUMMARY OF ALLOCATION ALTERNATIVES

Scenario	Description	Impact	Benefit	Negative Impact
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<b>Return to Source</b>		<b>Source: Board of Equalization (BOE)</b>		
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<b>6</b>	Return to Source	New method, using taxable sales by jurisdiction. This allocation method returns the Measure M sales taxes generated back to that jurisdiction.	<p>Dramatic change in allocations</p> <p>Some small jurisdictions benefit, but their subregions are negatively impacted. (e.g. Industry and Vernon benefit, but other cities within the subregion lose more such that the subregion, as a whole, receives less funding)</p> <p>North County and City of Los Angeles are most negatively impacted</p>	<p><u>35 jurisdictions</u></p> <p>Arroyo Verdugo: \$2.7M                  South Bay: \$1.5M                  Westside: \$5.4M                  Las Virgenes/Malibu: \$408K                  Unincorporated: \$7M</p>	<p><u>54 jurisdictions</u></p> <p>City of LA: (\$13.6M)                  Gateway: (\$968K)                  San Gabriel: (\$1.2M)                  North County: (\$1.4M)</p>
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Need legal opinion on whether this could be used as a surrogate to daytime/employment population

Taxable sales base instead of sales tax generated must be used because of the varying sales tax rates of each jurisdiction

**PROS**

- Factors in taxes generated

**CONS**

Two-year lag on data



SUMMARY OF ALLOCATION ALTERNATIVES

Scenario	Description	Impact	Benefit	Negative Impact	
<b>Combined</b> <span style="float: right;">Source: DOF, SCAG, BOE</span>					
<b>7</b>	Combined population/employment (varying weights)	50% population 50% employment	<p>Some small jurisdictions benefit, but their subregions are negatively impacted. (e.g. Industry and Vernon benefit, but other cities within the subregion lose more such that the subregion, as a whole, receives less funding)</p> <p>North County, Gateway, and San Gabriel subregions negatively impacted in any scenario incorporating employment</p>	<p><u>36 jurisdictions</u></p> <p>Agoura Hills Arcadia Avalon Beverly Hills Burbank Calabasas Carson Cerritos Claremont Commerce Covina Culver City Downey Duarte El Segundo Gardena Glendale Industry</p> <p>Irwindale Los Angeles City Malibu Manhattan Beach Monrovia Montebello Monterey Park Pasadena Rolling Hills Estates San Fernando Santa Fe Springs Santa Monica Signal hill South El Monte Torrance Vernon West Hollywood Westlake Village</p>	<p><u>53 jurisdictions</u></p> <p>Unincorporated: (\$3.5M) Gateway: (\$1.2M) San Gabriel: (\$85K) North County: (\$1.2M)</p>
Need to establish weighting					
Pros and Cons of various allocation factors same as above.					

SUMMARY OF ALLOCATION ALTERNATIVES

	Scenario	Description	Impact	Benefit	Negative Impact
<b>8</b>	Combined population/employment/return to source (varying weights)	33% population 33% employment 33% return to source	Some small jurisdictions benefit, but their subregions are negatively impacted. (e.g.. Industry and Vernon benefit, but other cities within the subregion lose more such that the subregion, as a whole, receives less funding)  North County and City of Los Angeles are most negatively impacted	<u>34 jurisdictions</u> Westside: \$3.3M Arroyo Verdugo: \$2.4M South Bay COG: \$972K Las Virgnes/Malibu: \$376K Unincorporated: \$2K	<u>55 jurisdictions</u> City of LA: (\$4.2M) North County: (\$1.2M) Gateway: (\$1.1M) San Gabriel: (\$468K)
Need to establish weighting					
Pros and Cons of various allocation factors same as above.					

ALTERNATIVE ALLOCATION FORMULAS

ATTACHMENT C

(Based on FY18 Revenue estimates, actual receipts is estimated to be 95% of this amount in FY18, remainder to be allocated in FY19)

LEGEND: Increased allocation

LOCAL JURISDICTION	BASELINE - 1	1a	1b	1c	1d	1e	1f	1g	1h
	Pop. Based Measure M Local Return Estimate	Minimum \$50,000	Minimum \$100,000	Minimum \$150,000	Minimum \$175,000	Minimum \$200,000	Minimum \$300,000	Minimum \$350,000	Minimum \$400,000
BURBANK	\$ 1,374,873	\$ 1,372,713	\$ 1,368,820	\$ 1,363,740	\$ 1,360,498	\$ 1,356,304	\$ 1,333,908	\$ 1,318,548	\$ 1,301,704
GLENDALE	\$ 2,637,883	\$ 2,633,738	\$ 2,626,269	\$ 2,616,523	\$ 2,610,302	\$ 2,602,255	\$ 2,559,286	\$ 2,529,816	\$ 2,497,499
LA CANADA-FLINTRIDGE	\$ 268,879	\$ 268,457	\$ 267,695	\$ 266,702	\$ 266,068	\$ 265,248	\$ 300,000	\$ 350,000	\$ 400,000
PASADENA	\$ 1,844,627	\$ 1,841,728	\$ 1,836,505	\$ 1,829,690	\$ 1,825,340	\$ 1,819,713	\$ 1,789,665	\$ 1,769,057	\$ 1,746,459
SAN FERNANDO	\$ 320,900	\$ 320,395	\$ 319,487	\$ 318,301	\$ 317,544	\$ 316,566	\$ 311,338	\$ 350,000	\$ 400,000
SOUTH PASADENA	\$ 340,455	\$ 339,920	\$ 338,956	\$ 337,698	\$ 336,895	\$ 335,856	\$ 330,311	\$ 350,000	\$ 400,000
<b>ARROYO VERDUGO TOTAL</b>	<b>\$ 6,787,617</b>	<b>\$ 6,776,951</b>	<b>\$ 6,757,732</b>	<b>\$ 6,732,653</b>	<b>\$ 6,716,648</b>	<b>\$ 6,695,942</b>	<b>\$ 6,624,509</b>	<b>\$ 6,667,421</b>	<b>\$ 6,745,662</b>

ARTESIA	\$ 220,835	\$ 220,488	\$ 219,863	\$ 219,047	\$ 218,526	\$ 217,853	\$ 300,000	\$ 350,000	\$ 400,000
AVALON	\$ 48,109	\$ 50,000	\$ 100,000	\$ 150,000	\$ 175,000	\$ 200,000	\$ 300,000	\$ 350,000	\$ 400,000
BELL	\$ 480,257	\$ 479,503	\$ 478,143	\$ 476,368	\$ 475,236	\$ 473,771	\$ 465,948	\$ 460,582	\$ 454,699
BELLFLOWER	\$ 998,853	\$ 997,283	\$ 994,455	\$ 990,765	\$ 988,409	\$ 985,362	\$ 969,092	\$ 957,932	\$ 945,696
BELL GARDENS	\$ 561,826	\$ 560,943	\$ 559,353	\$ 557,277	\$ 555,952	\$ 554,238	\$ 545,086	\$ 538,810	\$ 531,927
CERRITOS	\$ 646,325	\$ 645,309	\$ 643,479	\$ 641,091	\$ 639,567	\$ 637,596	\$ 627,068	\$ 619,847	\$ 611,929
COMMERCE	\$ 171,705	\$ 171,436	\$ 170,949	\$ 170,315	\$ 175,000	\$ 200,000	\$ 300,000	\$ 350,000	\$ 400,000
COMPTON	\$ 1,324,069	\$ 1,321,989	\$ 1,318,239	\$ 1,313,347	\$ 1,310,225	\$ 1,306,186	\$ 1,284,618	\$ 1,269,825	\$ 1,253,604
CUDAHY	\$ 321,802	\$ 321,297	\$ 320,385	\$ 319,196	\$ 318,438	\$ 317,456	\$ 312,214	\$ 350,000	\$ 400,000
DOWNEY	\$ 1,493,525	\$ 1,491,178	\$ 1,486,949	\$ 1,481,431	\$ 1,477,909	\$ 1,473,353	\$ 1,449,025	\$ 1,432,339	\$ 1,414,042
HAWAIIAN GARDENS	\$ 195,237	\$ 194,930	\$ 194,377	\$ 193,656	\$ 193,196	\$ 200,000	\$ 300,000	\$ 350,000	\$ 400,000
HUNTINGTON PARK	\$ 781,131	\$ 779,903	\$ 777,692	\$ 774,806	\$ 772,964	\$ 770,581	\$ 757,857	\$ 749,130	\$ 739,560
LA HABRA HEIGHTS	\$ 71,405	\$ 71,293	\$ 100,000	\$ 150,000	\$ 175,000	\$ 200,000	\$ 300,000	\$ 350,000	\$ 400,000
LA MIRADA	\$ 649,294	\$ 648,274	\$ 646,436	\$ 644,037	\$ 642,506	\$ 640,525	\$ 629,948	\$ 622,694	\$ 614,740
LAKEWOOD	\$ 1,026,426	\$ 1,024,813	\$ 1,021,907	\$ 1,018,115	\$ 1,015,694	\$ 1,012,563	\$ 995,844	\$ 984,376	\$ 971,801
LONG BEACH	\$ 6,343,409	\$ 6,333,441	\$ 6,315,480	\$ 6,292,042	\$ 6,277,084	\$ 6,257,733	\$ 6,154,404	\$ 6,083,535	\$ 6,005,822
LYNWOOD	\$ 948,389	\$ 946,899	\$ 944,213	\$ 940,709	\$ 938,473	\$ 935,580	\$ 920,131	\$ 909,536	\$ 897,917
MAYWOOD	\$ 369,114	\$ 368,534	\$ 367,489	\$ 366,125	\$ 365,254	\$ 364,128	\$ 358,116	\$ 353,992	\$ 400,000
NORWALK	\$ 1,377,254	\$ 1,375,090	\$ 1,371,190	\$ 1,366,101	\$ 1,362,854	\$ 1,358,652	\$ 1,336,218	\$ 1,320,831	\$ 1,303,958
PARAMOUNT	\$ 737,730	\$ 736,571	\$ 734,482	\$ 731,757	\$ 730,017	\$ 727,766	\$ 715,749	\$ 707,507	\$ 698,470
PICO RIVERA	\$ 840,699	\$ 839,378	\$ 836,997	\$ 833,891	\$ 831,909	\$ 829,344	\$ 815,650	\$ 806,257	\$ 795,958
SANTA FE SPRINGS	\$ 241,450	\$ 241,070	\$ 240,387	\$ 239,495	\$ 238,925	\$ 238,189	\$ 300,000	\$ 350,000	\$ 400,000
SIGNAL HILL	\$ 152,687	\$ 152,447	\$ 152,014	\$ 151,450	\$ 175,000	\$ 200,000	\$ 300,000	\$ 350,000	\$ 400,000
SOUTH GATE	\$ 1,302,513	\$ 1,300,466	\$ 1,296,778	\$ 1,291,965	\$ 1,288,894	\$ 1,284,921	\$ 1,263,704	\$ 1,249,152	\$ 1,233,195
VERNON	\$ 2,747	\$ 50,000	\$ 100,000	\$ 150,000	\$ 175,000	\$ 200,000	\$ 300,000	\$ 350,000	\$ 400,000
WHITTIER	\$ 1,155,529	\$ 1,153,713	\$ 1,150,442	\$ 1,146,172	\$ 1,143,447	\$ 1,139,922	\$ 1,121,100	\$ 1,108,190	\$ 1,094,034
<b>GATEWAY CITIES TOTAL</b>	<b>\$ 22,462,321</b>	<b>\$ 22,476,248</b>	<b>\$ 22,541,700</b>	<b>\$ 22,609,157</b>	<b>\$ 22,660,478</b>	<b>\$ 22,725,719</b>	<b>\$ 23,121,771</b>	<b>\$ 23,324,537</b>	<b>\$ 23,567,351</b>

ALTERNATIVE ALLOCATION FORMULAS

ATTACHMENT C

(Based on FY18 Revenue estimates, actual receipts is estimated to be 95% of this amount in FY18, remainder to be allocated in FY19)

LEGEND: Increased allocation

LOCAL JURISDICTION	BASELINE - 1	1a	1b	1c	1d	1e	1f	1g	1h
	Pop. Based Measure M Local Return Estimate	Minimum \$50,000	Minimum \$100,000	Minimum \$150,000	Minimum \$175,000	Minimum \$200,000	Minimum \$300,000	Minimum \$350,000	Minimum \$400,000
AGOURA HILLS	\$ 277,447	\$ 277,011	\$ 276,225	\$ 275,200	\$ 274,546	\$ 273,700	\$ 300,000	\$ 350,000	\$ 400,000
CALABASAS	\$ 317,368	\$ 316,869	\$ 315,971	\$ 314,798	\$ 314,050	\$ 313,082	\$ 307,912	\$ 350,000	\$ 400,000
HIDDEN HILLS	\$ 24,486	\$ 50,000	\$ 100,000	\$ 150,000	\$ 175,000	\$ 200,000	\$ 300,000	\$ 350,000	\$ 400,000
MALIBU	\$ 166,199	\$ 165,937	\$ 165,467	\$ 164,853	\$ 175,000	\$ 200,000	\$ 300,000	\$ 350,000	\$ 400,000
WESTLAKE VILLAGE	\$ 109,665	\$ 109,493	\$ 109,183	\$ 150,000	\$ 175,000	\$ 200,000	\$ 300,000	\$ 350,000	\$ 400,000
<b>LAS VIRGINES/MALIBU TOTAL</b>	<b>\$ 895,165</b>	<b>\$ 919,311</b>	<b>\$ 966,845</b>	<b>\$ 1,054,851</b>	<b>\$ 1,113,596</b>	<b>\$ 1,186,781</b>	<b>\$ 1,507,912</b>	<b>\$ 1,750,000</b>	<b>\$ 2,000,000</b>
<b>LOS ANGELES CITY TOTAL</b>	<b>\$ 52,725,538</b>	<b>\$ 52,642,689</b>	<b>\$ 52,493,398</b>	<b>\$ 52,298,587</b>	<b>\$ 52,174,258</b>	<b>\$ 52,013,417</b>	<b>\$ 51,154,561</b>	<b>\$ 50,565,507</b>	<b>\$ 49,919,566</b>
LANCASTER	\$ 2,054,841	\$ 2,051,612	\$ 2,045,794	\$ 2,038,201	\$ 2,033,356	\$ 2,027,088	\$ 1,993,616	\$ 1,970,659	\$ 1,945,485
PALMDALE	\$ 2,093,794	\$ 2,090,504	\$ 2,084,575	\$ 2,076,839	\$ 2,071,902	\$ 2,065,515	\$ 2,031,409	\$ 2,008,017	\$ 1,982,365
SANTA CLARITA	\$ 2,872,583	\$ 2,868,070	\$ 2,859,936	\$ 2,849,322	\$ 2,842,549	\$ 2,833,786	\$ 2,786,994	\$ 2,754,901	\$ 2,719,709
<b>NORTH COUNTY TOTAL</b>	<b>\$ 7,021,218</b>	<b>\$ 7,010,185</b>	<b>\$ 6,990,305</b>	<b>\$ 6,964,363</b>	<b>\$ 6,947,807</b>	<b>\$ 6,926,388</b>	<b>\$ 6,812,018</b>	<b>\$ 6,733,577</b>	<b>\$ 6,647,560</b>
CARSON	\$ 1,229,459	\$ 1,227,527	\$ 1,224,046	\$ 1,219,503	\$ 1,216,604	\$ 1,212,854	\$ 1,192,827	\$ 1,179,091	\$ 1,164,029
EL SEGUNDO	\$ 217,735	\$ 217,393	\$ 216,776	\$ 215,972	\$ 215,459	\$ 214,794	\$ 300,000	\$ 350,000	\$ 400,000
GARDENA	\$ 795,088	\$ 793,838	\$ 791,587	\$ 788,649	\$ 786,774	\$ 784,349	\$ 771,398	\$ 762,515	\$ 752,774
HAWTHORNE	\$ 1,151,108	\$ 1,149,299	\$ 1,146,040	\$ 1,141,787	\$ 1,139,072	\$ 1,135,561	\$ 1,116,810	\$ 1,103,950	\$ 1,089,848
HERMOSA BEACH	\$ 259,004	\$ 258,597	\$ 257,863	\$ 256,906	\$ 256,295	\$ 255,505	\$ 300,000	\$ 350,000	\$ 400,000
INGLEWOOD	\$ 1,525,794	\$ 1,523,396	\$ 1,519,076	\$ 1,513,439	\$ 1,509,841	\$ 1,505,186	\$ 1,480,332	\$ 1,463,286	\$ 1,444,593
LAWNDALE	\$ 438,139	\$ 437,450	\$ 436,210	\$ 434,591	\$ 433,558	\$ 432,221	\$ 425,084	\$ 420,189	\$ 414,822
LOMITA	\$ 265,400	\$ 264,983	\$ 264,231	\$ 263,251	\$ 262,625	\$ 261,815	\$ 300,000	\$ 350,000	\$ 400,000
MANHATTAN BEACH	\$ 461,696	\$ 460,971	\$ 459,664	\$ 457,958	\$ 456,869	\$ 455,461	\$ 447,940	\$ 442,782	\$ 437,125
PALOS VERDES ESTATES	\$ 179,357	\$ 179,076	\$ 178,568	\$ 177,905	\$ 177,482	\$ 200,000	\$ 300,000	\$ 350,000	\$ 400,000
RANCHO PALOS VERDES	\$ 562,990	\$ 562,106	\$ 560,512	\$ 558,431	\$ 557,104	\$ 555,386	\$ 546,216	\$ 539,926	\$ 533,029
REDONDO BEACH	\$ 909,004	\$ 907,576	\$ 905,002	\$ 901,643	\$ 899,500	\$ 896,727	\$ 881,920	\$ 871,765	\$ 860,628
ROLLING HILLS	\$ 25,415	\$ 50,000	\$ 100,000	\$ 150,000	\$ 175,000	\$ 200,000	\$ 300,000	\$ 350,000	\$ 400,000
ROLLING HILLS ESTATES	\$ 105,009	\$ 104,844	\$ 104,547	\$ 150,000	\$ 175,000	\$ 200,000	\$ 300,000	\$ 350,000	\$ 400,000
TORRANCE	\$ 1,925,097	\$ 1,922,072	\$ 1,916,621	\$ 1,909,508	\$ 1,904,969	\$ 1,899,096	\$ 1,867,738	\$ 1,846,231	\$ 1,822,646
<b>SOUTH BAY CITIES TOTAL</b>	<b>\$ 10,050,295</b>	<b>\$ 10,059,127</b>	<b>\$ 10,080,742</b>	<b>\$ 10,139,543</b>	<b>\$ 10,166,152</b>	<b>\$ 10,208,956</b>	<b>\$ 10,530,265</b>	<b>\$ 10,729,734</b>	<b>\$ 10,919,495</b>

ALTERNATIVE ALLOCATION FORMULAS

ATTACHMENT C

(Based on FY18 Revenue estimates, actual receipts is estimated to be 95% of this amount in FY18, remainder to be allocated in FY19)

LEGEND: Increased allocation

	BASELINE - 1	1a	1b	1c	1d	1e	1f	1g	1h
LOCAL JURISDICTION	Pop. Based Measure M Local Return Estimate	Minimum \$50,000	Minimum \$100,000	Minimum \$150,000	Minimum \$175,000	Minimum \$200,000	Minimum \$300,000	Minimum \$350,000	Minimum \$400,000
<b>UNINCORP LA COUNTY TOTAL</b>	\$ 13,760,359	\$ 13,738,737	\$ 13,699,775	\$ 13,648,933	\$ 13,616,485	\$ 13,574,509	\$ 13,350,364	\$ 13,196,632	\$ 13,028,054
BEVERLY HILLS	\$ 454,711	\$ 453,997	\$ 452,709	\$ 451,029	\$ 449,957	\$ 448,570	\$ 441,163	\$ 436,083	\$ 430,512
CULVER CITY	\$ 529,073	\$ 528,242	\$ 526,744	\$ 524,789	\$ 523,541	\$ 521,927	\$ 513,309	\$ 507,398	\$ 500,917
SANTA MONICA	\$ 1,224,842	\$ 1,222,917	\$ 1,219,449	\$ 1,214,923	\$ 1,212,035	\$ 1,208,299	\$ 1,188,347	\$ 1,174,663	\$ 1,159,658
WEST HOLLYWOOD	\$ 469,885	\$ 469,146	\$ 467,816	\$ 466,080	\$ 464,972	\$ 463,538	\$ 455,884	\$ 450,635	\$ 444,878
<b>WESTSIDE TOTAL</b>	\$ 2,678,511	\$ 2,674,302	\$ 2,666,718	\$ 2,656,821	\$ 2,650,505	\$ 2,642,334	\$ 2,598,703	\$ 2,568,779	\$ 2,535,964
ALHAMBRA	\$ 1,135,137	\$ 1,133,353	\$ 1,130,139	\$ 1,125,945	\$ 1,123,268	\$ 1,119,805	\$ 1,101,315	\$ 1,088,633	\$ 1,074,727
ARCADIA	\$ 746,233	\$ 745,060	\$ 742,947	\$ 740,190	\$ 738,430	\$ 736,154	\$ 723,998	\$ 715,661	\$ 706,519
AZUSA	\$ 647,280	\$ 646,263	\$ 644,430	\$ 642,039	\$ 640,512	\$ 638,538	\$ 627,994	\$ 620,763	\$ 612,833
BALDWIN PARK	\$ 977,597	\$ 976,061	\$ 973,293	\$ 969,681	\$ 967,376	\$ 964,394	\$ 948,470	\$ 937,548	\$ 925,571
BRADBURY	\$ 14,689	\$ 50,000	\$ 100,000	\$ 150,000	\$ 175,000	\$ 200,000	\$ 300,000	\$ 350,000	\$ 400,000
CLAREMONT	\$ 473,743	\$ 472,999	\$ 471,657	\$ 469,907	\$ 468,790	\$ 467,345	\$ 459,628	\$ 454,335	\$ 448,531
COVINA	\$ 644,742	\$ 643,729	\$ 641,904	\$ 639,521	\$ 638,001	\$ 636,034	\$ 625,532	\$ 618,329	\$ 610,430
DIAMOND BAR	\$ 746,638	\$ 745,465	\$ 743,351	\$ 740,592	\$ 738,831	\$ 736,554	\$ 724,392	\$ 716,050	\$ 706,903
DUARTE	\$ 290,082	\$ 289,627	\$ 288,805	\$ 287,733	\$ 287,049	\$ 286,164	\$ 300,000	\$ 350,000	\$ 400,000
EL MONTE	\$ 1,489,653	\$ 1,487,312	\$ 1,483,094	\$ 1,477,590	\$ 1,474,078	\$ 1,469,533	\$ 1,445,268	\$ 1,428,626	\$ 1,410,376
GLENDORA	\$ 684,912	\$ 683,836	\$ 681,896	\$ 679,366	\$ 677,751	\$ 675,661	\$ 664,505	\$ 656,853	\$ 648,462
INDUSTRY	\$ 5,768	\$ 50,000	\$ 100,000	\$ 150,000	\$ 175,000	\$ 200,000	\$ 300,000	\$ 350,000	\$ 400,000
IRWINDALE	\$ 18,509	\$ 50,000	\$ 100,000	\$ 150,000	\$ 175,000	\$ 200,000	\$ 300,000	\$ 350,000	\$ 400,000
LA PUENTE	\$ 530,028	\$ 529,195	\$ 527,694	\$ 525,736	\$ 524,486	\$ 522,869	\$ 514,236	\$ 508,314	\$ 501,821
LA VERNE	\$ 434,267	\$ 433,584	\$ 432,355	\$ 430,750	\$ 429,726	\$ 428,402	\$ 421,328	\$ 416,476	\$ 411,156
MONROVIA	\$ 490,918	\$ 490,146	\$ 488,756	\$ 486,942	\$ 485,785	\$ 484,287	\$ 476,291	\$ 470,806	\$ 464,792
MONTEBELLO	\$ 836,147	\$ 834,833	\$ 832,465	\$ 829,376	\$ 827,404	\$ 824,854	\$ 811,233	\$ 801,892	\$ 791,648
MONTEREY PARK	\$ 802,426	\$ 801,165	\$ 798,893	\$ 795,928	\$ 794,036	\$ 791,588	\$ 778,517	\$ 769,552	\$ 759,722
POMONA	\$ 2,035,351	\$ 2,032,153	\$ 2,026,390	\$ 2,018,870	\$ 2,014,070	\$ 2,007,861	\$ 1,974,707	\$ 1,951,968	\$ 1,927,033
ROSEMEAD	\$ 722,439	\$ 721,304	\$ 719,259	\$ 716,589	\$ 714,886	\$ 712,682	\$ 700,914	\$ 692,843	\$ 683,992
SAN DIMAS	\$ 446,615	\$ 445,913	\$ 444,648	\$ 442,998	\$ 441,945	\$ 440,583	\$ 433,308	\$ 428,318	\$ 422,847
SAN GABRIEL	\$ 528,759	\$ 527,928	\$ 526,431	\$ 524,477	\$ 523,231	\$ 521,618	\$ 513,005	\$ 507,097	\$ 500,619
SAN MARINO	\$ 177,448	\$ 177,169	\$ 176,666	\$ 176,011	\$ 175,592	\$ 200,000	\$ 300,000	\$ 350,000	\$ 400,000
SIERRA MADRE	\$ 144,054	\$ 143,827	\$ 143,419	\$ 150,000	\$ 175,000	\$ 200,000	\$ 300,000	\$ 350,000	\$ 400,000
SOUTH EL MONTE	\$ 272,254	\$ 271,826	\$ 271,055	\$ 270,049	\$ 269,407	\$ 268,577	\$ 300,000	\$ 350,000	\$ 400,000
TEMPLE CITY	\$ 477,877	\$ 477,126	\$ 475,773	\$ 474,007	\$ 472,880	\$ 471,422	\$ 463,638	\$ 458,299	\$ 452,445
WALNUT	\$ 394,398	\$ 393,778	\$ 392,662	\$ 391,204	\$ 390,274	\$ 389,071	\$ 382,647	\$ 378,241	\$ 400,000
WEST COVINA	\$ 1,411,014	\$ 1,408,797	\$ 1,404,802	\$ 1,399,588	\$ 1,396,261	\$ 1,391,957	\$ 1,368,972	\$ 1,353,208	\$ 1,335,922
<b>SAN GABRIEL TOTAL</b>	\$ 17,578,977	\$ 17,662,450	\$ 17,762,785	\$ 17,855,091	\$ 17,914,071	\$ 17,985,953	\$ 18,259,896	\$ 18,423,812	\$ 18,596,348
<b>TOTAL</b>	\$ 133,960,000	\$ 133,960,000	\$ 133,960,000	\$ 133,960,000	\$ 133,960,000	\$ 133,960,000	\$ 133,960,000	\$ 133,960,000	\$ 133,960,000

ALTERNATIVE ALLOCATION FORMULAS

ATTACHMENT C

LEGEND: Increased allocation

LOCAL JURISDICTION	2a	2b	2c	3a	3b	3c	4	5	6	7	8
	Tiered Minimums \$50,000 \$100,000 \$150,000	Tiered Minimums \$100,000 \$150,000 \$200,000	Tiered Minimums \$50,000 \$100,000 \$150,000 \$200,000	Subregional Minimum \$50,000	Subregional Minimum \$100,000	Subregional Minimum \$200,000	Daytime Population 2006-2010 ACS	Employment 2013 SCAG	Return to Source BOE: FY15 Taxable Sales	Combined 50% Population 50% Employment	Combined 33% Population 33% Employment 33% Return to Source
BURBANK	\$ 1,371,470	\$ 1,366,173	\$ 1,369,809	\$ 1,374,873	\$ 1,374,873	\$ 1,374,873	\$ 1,974,361	\$ 3,379,810	\$ 2,418,701	\$ 2,377,342	\$ 2,390,112
GLENDALE	\$ 2,631,354	\$ 2,621,190	\$ 2,628,166	\$ 2,637,883	\$ 2,637,883	\$ 2,637,883	\$ 2,620,215	\$ 3,504,109	\$ 3,744,040	\$ 3,070,996	\$ 3,294,687
LA CANADA-FLINTRIDGE	\$ 268,214	\$ 267,178	\$ 267,889	\$ 268,879	\$ 268,879	\$ 268,879	\$ 232,678	\$ 206,439	\$ 212,523	\$ 237,659	\$ 229,320
PASADENA	\$ 1,840,061	\$ 1,832,954	\$ 1,837,832	\$ 1,844,627	\$ 1,844,627	\$ 1,844,627	\$ 2,526,155	\$ 3,517,682	\$ 2,650,253	\$ 2,681,154	\$ 2,670,028
SAN FERNANDO	\$ 320,105	\$ 318,869	\$ 319,718	\$ 320,900	\$ 320,900	\$ 320,900	\$ 451,885	\$ 343,300	\$ 358,619	\$ 332,100	\$ 340,919
SOUTH PASADENA	\$ 339,612	\$ 338,300	\$ 339,201	\$ 340,455	\$ 340,455	\$ 340,455	\$ 260,218	\$ 294,647	\$ 170,414	\$ 317,551	\$ 268,577
<b>ARROYO VERDUGO TOTAL</b>	<b>\$ 6,770,817</b>	<b>\$ 6,744,664</b>	<b>\$ 6,762,614</b>	<b>\$ 6,787,617</b>	<b>\$ 6,787,617</b>	<b>\$ 6,787,617</b>	<b>\$ 8,065,512</b>	<b>\$ 11,245,987</b>	<b>\$ 9,554,550</b>	<b>\$ 9,016,802</b>	<b>\$ 9,193,643</b>

ARTESIA	\$ 220,289	\$ 219,438	\$ 220,022	\$ 220,408	\$ 219,286	\$ 215,867	\$ 181,891	\$ 157,664	\$ 189,993	\$ 189,249	\$ 189,528
AVALON	\$ 50,000	\$ 100,000	\$ 50,000	\$ 50,000	\$ 100,000	\$ 200,000	\$ -	\$ 80,701	\$ 73,670	\$ 64,405	\$ 67,474
BELL	\$ 479,069	\$ 477,218	\$ 478,488	\$ 479,328	\$ 476,887	\$ 469,454	\$ 405,133	\$ 389,533	\$ 166,087	\$ 434,895	\$ 345,427
BELLFLOWER	\$ 996,381	\$ 992,532	\$ 995,174	\$ 996,920	\$ 991,844	\$ 976,383	\$ 780,708	\$ 430,649	\$ 217,348	\$ 714,751	\$ 549,400
BELL GARDENS	\$ 560,436	\$ 558,271	\$ 559,757	\$ 560,739	\$ 557,884	\$ 549,187	\$ 465,208	\$ 298,568	\$ 442,789	\$ 430,197	\$ 434,522
CERRITOS	\$ 644,725	\$ 642,235	\$ 643,944	\$ 645,075	\$ 641,790	\$ 631,785	\$ 826,188	\$ 956,031	\$ 2,371,504	\$ 801,178	\$ 1,323,942
COMMERCE	\$ 171,280	\$ 200,000	\$ 200,000	\$ 171,373	\$ 170,501	\$ 200,000	\$ 736,826	\$ 1,399,701	\$ 1,526,034	\$ 785,703	\$ 1,031,619
COMPTON	\$ 1,320,792	\$ 1,315,690	\$ 1,319,192	\$ 1,321,507	\$ 1,314,778	\$ 1,294,283	\$ 1,227,543	\$ 798,888	\$ 610,489	\$ 1,061,479	\$ 911,562
CUDAHY	\$ 321,006	\$ 319,766	\$ 320,617	\$ 321,180	\$ 319,544	\$ 314,563	\$ 242,711	\$ 91,118	\$ 91,386	\$ 206,460	\$ 168,256
DOWNEY	\$ 1,489,828	\$ 1,484,074	\$ 1,488,023	\$ 1,490,635	\$ 1,483,044	\$ 1,459,927	\$ 1,398,304	\$ 1,506,322	\$ 1,358,152	\$ 1,499,923	\$ 1,452,707
HAWAIIAN GARDENS	\$ 194,754	\$ 200,000	\$ 200,000	\$ 194,859	\$ 193,867	\$ 200,000	\$ 166,280	\$ 155,090	\$ 68,152	\$ 175,163	\$ 139,549
HUNTINGTON PARK	\$ 779,198	\$ 776,188	\$ 778,254	\$ 779,620	\$ 775,650	\$ 763,559	\$ 696,884	\$ 494,070	\$ 524,727	\$ 637,600	\$ 600,157
LA HABRA HEIGHTS	\$ 100,000	\$ 100,000	\$ 100,000	\$ 71,267	\$ 100,000	\$ 200,000	\$ -	\$ 7,874	\$ 2,640	\$ 39,640	\$ 27,350
LA MIRADA	\$ 647,687	\$ 645,185	\$ 646,903	\$ 648,038	\$ 644,738	\$ 634,688	\$ 605,032	\$ 550,505	\$ 759,381	\$ 599,900	\$ 653,056
LAKEWOOD	\$ 1,023,886	\$ 1,019,931	\$ 1,022,645	\$ 1,024,440	\$ 1,019,224	\$ 1,003,336	\$ 802,087	\$ 598,301	\$ 1,025,214	\$ 812,363	\$ 883,457
LONG BEACH	\$ 6,327,709	\$ 6,303,267	\$ 6,320,042	\$ 6,331,136	\$ 6,298,896	\$ 6,200,709	\$ 5,969,172	\$ 4,847,865	\$ 4,434,656	\$ 5,595,637	\$ 5,209,778
LYNWOOD	\$ 946,042	\$ 942,388	\$ 944,896	\$ 946,554	\$ 941,734	\$ 927,054	\$ 783,050	\$ 291,184	\$ 291,963	\$ 619,787	\$ 510,950
MAYWOOD	\$ 368,200	\$ 366,778	\$ 367,754	\$ 368,400	\$ 366,524	\$ 360,810	\$ 278,307	\$ 112,381	\$ 97,837	\$ 240,747	\$ 193,286
NORWALK	\$ 1,373,845	\$ 1,368,538	\$ 1,372,180	\$ 1,374,589	\$ 1,367,589	\$ 1,346,271	\$ 1,148,810	\$ 761,877	\$ 742,039	\$ 1,069,566	\$ 960,807
PARAMOUNT	\$ 735,904	\$ 733,062	\$ 735,013	\$ 736,303	\$ 732,554	\$ 721,135	\$ 697,751	\$ 618,123	\$ 564,438	\$ 677,927	\$ 640,195
PICO RIVERA	\$ 838,618	\$ 835,379	\$ 837,602	\$ 839,072	\$ 834,799	\$ 821,787	\$ 755,443	\$ 595,176	\$ 641,217	\$ 717,937	\$ 692,512
SANTA FE SPRINGS	\$ 240,852	\$ 239,922	\$ 240,560	\$ 240,983	\$ 239,755	\$ 236,018	\$ 829,207	\$ 1,711,045	\$ 1,981,881	\$ 976,248	\$ 1,310,389
SIGNAL HILL	\$ 152,309	\$ 200,000	\$ 200,000	\$ 152,391	\$ 151,615	\$ 200,000	\$ 218,719	\$ 434,264	\$ 1,395,397	\$ 293,475	\$ 660,275
SOUTH GATE	\$ 1,299,289	\$ 1,294,270	\$ 1,297,715	\$ 1,299,993	\$ 1,293,373	\$ 1,273,212	\$ 1,045,963	\$ 641,439	\$ 769,643	\$ 971,976	\$ 904,930
VERNON	\$ 50,000	\$ 100,000	\$ 50,000	\$ 50,000	\$ 100,000	\$ 200,000	\$ 455,175	\$ 1,341,795	\$ 423,011	\$ 672,271	\$ 588,598
WHITTIER	\$ 1,152,669	\$ 1,148,217	\$ 1,151,273	\$ 1,153,293	\$ 1,147,421	\$ 1,129,535	\$ 1,075,208	\$ 855,967	\$ 724,186	\$ 1,005,748	\$ 912,138
<b>GATEWAY CITIES TOTAL</b>	<b>\$ 22,484,767</b>	<b>\$ 22,582,348</b>	<b>\$ 22,540,053</b>	<b>\$ 22,468,104</b>	<b>\$ 22,483,296</b>	<b>\$ 22,529,563</b>	<b>\$ 21,791,601</b>	<b>\$ 20,126,132</b>	<b>\$ 21,493,834</b>	<b>\$ 21,294,226</b>	<b>\$ 21,361,864</b>

ALTERNATIVE ALLOCATION FORMULAS

ATTACHMENT C

LEGEND: Increased allocation

LOCAL JURISDICTION	2a	2b	2c	3a	3b	3c	4	5	6	7	8
	Tiered Minimums \$50,000 \$100,000 \$150,000	Tiered Minimums \$100,000 \$150,000 \$200,000	Tiered Minimums \$50,000 \$100,000 \$150,000 \$200,000	Subregional Minimum \$50,000	Subregional Minimum \$100,000	Subregional Minimum \$200,000	Daytime Population 2006-2010 ACS	Employment 2013 SCAG	Return to Source BOE: FY15 Taxable Sales	Combined 50% Population 50% Employment	Combined 33% Population 33% Employment 33% Return to Source
AGOURA HILLS	\$ 276,760	\$ 275,691	\$ 276,425	\$ 271,314	\$ 259,297	\$ 182,806	\$ 271,348	\$ 394,833	\$ 303,789	\$ 336,140	\$ 325,308
CALABASAS	\$ 316,582	\$ 315,360	\$ 316,199	\$ 310,353	\$ 296,606	\$ 209,109	\$ 366,409	\$ 525,351	\$ 411,640	\$ 421,360	\$ 418,019
HIDDEN HILLS	\$ 50,000	\$ 100,000	\$ 50,000	\$ 50,000	\$ 100,000	\$ 200,000	\$ -	\$ 8,334	\$ 845	\$ 16,410	\$ 11,235
MALIBU	\$ 165,787	\$ 200,000	\$ 200,000	\$ 162,525	\$ 155,326	\$ 200,000	\$ 244,715	\$ 269,554	\$ 262,887	\$ 217,876	\$ 232,813
WESTLAKE VILLAGE	\$ 150,000	\$ 150,000	\$ 150,000	\$ 107,242	\$ 102,491	\$ 200,000	\$ 207,183	\$ 419,558	\$ 324,582	\$ 264,612	\$ 284,427
<b>LAS VIRGINES/MALIBU TOTAL</b>	<b>\$ 959,130</b>	<b>\$ 1,041,051</b>	<b>\$ 992,624</b>	<b>\$ 901,434</b>	<b>\$ 913,720</b>	<b>\$ 991,915</b>	<b>\$ 1,089,655</b>	<b>\$ 1,617,630</b>	<b>\$ 1,303,742</b>	<b>\$ 1,256,398</b>	<b>\$ 1,271,802</b>
<b>LOS ANGELES CITY TOTAL</b>	<b>\$ 52,595,042</b>	<b>\$ 52,391,885</b>	<b>\$ 52,531,321</b>	<b>\$ 52,714,921</b>	<b>\$ 52,693,327</b>	<b>\$ 52,598,400</b>	<b>\$ 53,381,028</b>	<b>\$ 53,725,671</b>	<b>\$ 39,067,390</b>	<b>\$ 53,225,604</b>	<b>\$ 48,510,419</b>
LANCASTER	\$ 2,049,755	\$ 2,041,837	\$ 2,047,272	\$ 2,054,841	\$ 2,054,841	\$ 2,054,841	\$ 1,980,698	\$ 1,454,329	\$ 1,468,508	\$ 1,754,585	\$ 1,659,622
PALMDALE	\$ 2,088,612	\$ 2,080,544	\$ 2,086,081	\$ 2,093,794	\$ 2,093,794	\$ 2,093,794	\$ 1,743,727	\$ 928,886	\$ 1,382,858	\$ 1,511,340	\$ 1,469,138
SANTA CLARITA	\$ 2,865,474	\$ 2,854,405	\$ 2,862,002	\$ 2,872,583	\$ 2,872,583	\$ 2,872,583	\$ 2,073,106	\$ 2,329,751	\$ 2,746,527	\$ 2,601,167	\$ 2,649,843
<b>NORTH COUNTY TOTAL</b>	<b>\$ 7,003,841</b>	<b>\$ 6,976,787</b>	<b>\$ 6,995,355</b>	<b>\$ 7,021,218</b>	<b>\$ 7,021,218</b>	<b>\$ 7,021,218</b>	<b>\$ 5,797,531</b>	<b>\$ 4,712,966</b>	<b>\$ 5,597,893</b>	<b>\$ 5,867,092</b>	<b>\$ 5,778,603</b>
CARSON	\$ 1,226,416	\$ 1,221,679	\$ 1,224,930	\$ 1,227,953	\$ 1,224,890	\$ 1,211,425	\$ 1,472,353	\$ 1,838,776	\$ 1,811,923	\$ 1,534,117	\$ 1,626,322
EL SEGUNDO	\$ 217,196	\$ 216,357	\$ 216,933	\$ 217,468	\$ 216,926	\$ 214,541	\$ 880,008	\$ 1,211,859	\$ 833,433	\$ 714,797	\$ 753,806
GARDENA	\$ 793,120	\$ 790,056	\$ 792,159	\$ 794,114	\$ 792,133	\$ 783,425	\$ 873,224	\$ 910,656	\$ 834,825	\$ 852,872	\$ 846,805
HAWTHORNE	\$ 1,148,259	\$ 1,143,824	\$ 1,146,868	\$ 1,149,698	\$ 1,146,830	\$ 1,134,223	\$ 973,986	\$ 856,641	\$ 1,163,589	\$ 1,003,874	\$ 1,057,207
HERMOSA BEACH	\$ 258,362	\$ 257,365	\$ 258,049	\$ 258,686	\$ 258,041	\$ 255,204	\$ 200,657	\$ 233,524	\$ 214,160	\$ 246,264	\$ 235,586
INGLEWOOD	\$ 1,522,018	\$ 1,516,138	\$ 1,520,174	\$ 1,523,925	\$ 1,520,123	\$ 1,503,413	\$ 1,262,624	\$ 985,076	\$ 1,037,199	\$ 1,255,435	\$ 1,183,033
LAWNDALE	\$ 437,054	\$ 435,366	\$ 436,525	\$ 437,602	\$ 436,510	\$ 431,712	\$ 340,752	\$ 212,199	\$ 222,472	\$ 325,169	\$ 291,084
LOMITA	\$ 264,743	\$ 263,720	\$ 264,422	\$ 265,075	\$ 264,413	\$ 261,507	\$ 198,856	\$ 145,562	\$ 135,764	\$ 205,481	\$ 182,325
MANHATTAN BEACH	\$ 460,554	\$ 458,775	\$ 459,996	\$ 461,131	\$ 459,980	\$ 454,924	\$ 506,856	\$ 569,072	\$ 721,776	\$ 515,384	\$ 584,059
PALOS VERDES ESTATES	\$ 178,914	\$ 200,000	\$ 200,000	\$ 179,138	\$ 178,691	\$ 200,000	\$ 147,785	\$ 73,715	\$ 20,001	\$ 126,536	\$ 91,113
RANCHO PALOS VERDES	\$ 561,597	\$ 559,428	\$ 560,917	\$ 562,301	\$ 560,898	\$ 554,732	\$ 413,757	\$ 184,503	\$ 177,433	\$ 373,746	\$ 308,563
REDONDO BEACH	\$ 906,754	\$ 903,252	\$ 905,656	\$ 907,891	\$ 905,626	\$ 895,670	\$ 799,582	\$ 762,705	\$ 868,388	\$ 835,854	\$ 846,761
ROLLING HILLS	\$ 50,000	\$ 100,000	\$ 50,000	\$ 50,000	\$ 100,000	\$ 200,000	\$ -	\$ 3,094	\$ 763	\$ 14,255	\$ 9,773
ROLLING HILLS ESTATES	\$ 150,000	\$ 150,000	\$ 150,000	\$ 104,880	\$ 104,619	\$ 200,000	\$ 121,261	\$ 187,046	\$ 91,272	\$ 146,027	\$ 127,753
TORRANCE	\$ 1,920,332	\$ 1,912,915	\$ 1,918,006	\$ 1,922,739	\$ 1,917,943	\$ 1,896,858	\$ 2,466,364	\$ 3,223,832	\$ 3,490,158	\$ 2,574,464	\$ 2,878,741
<b>SOUTH BAY CITIES TOTAL</b>	<b>\$ 10,095,319</b>	<b>\$ 10,128,874</b>	<b>\$ 10,104,634</b>	<b>\$ 10,062,599</b>	<b>\$ 10,087,624</b>	<b>\$ 10,197,633</b>	<b>\$ 10,658,065</b>	<b>\$ 11,398,259</b>	<b>\$ 11,623,158</b>	<b>\$ 10,724,277</b>	<b>\$ 11,022,930</b>

ALTERNATIVE ALLOCATION FORMULAS

ATTACHMENT C

LEGEND: Increased allocation

LOCAL JURISDICTION	2a	2b	2c	3a	3b	3c	4	5	6	7	8
	Tiered Minimums \$50,000 \$100,000 \$150,000	Tiered Minimums \$100,000 \$150,000 \$200,000	Tiered Minimums \$50,000 \$100,000 \$150,000 \$200,000	Subregional Minimum \$50,000	Subregional Minimum \$100,000	Subregional Minimum \$200,000	Daytime Population 2006-2010 ACS	Employment 2013 SCAG	Return to Source BOE: FY15 Taxable Sales	Combined 50% Population 50% Employment	Combined 33% Population 33% Employment 33% Return to Source
<b>UNINCORP LA COUNTY TOTAL</b>	<b>\$ 13,726,302</b>	<b>\$ 13,673,282</b>	<b>\$ 13,709,672</b>	<b>\$ 13,725,842</b>	<b>\$ 13,666,864</b>	<b>\$ 13,454,681</b>	<b>\$ 11,933,024</b>	<b>\$ 6,709,803</b>	<b>\$ 20,816,776</b>	<b>\$ 10,235,081</b>	<b>\$ 13,762,311</b>
BEVERLY HILLS	\$ 453,586	\$ 451,834	\$ 453,036	\$ 454,711	\$ 454,711	\$ 454,711	\$ 1,039,897	\$ 1,828,206	\$ 2,569,074	\$ 1,141,458	\$ 1,616,168
CULVER CITY	\$ 527,764	\$ 525,725	\$ 527,124	\$ 529,073	\$ 529,073	\$ 529,073	\$ 848,000	\$ 1,395,228	\$ 1,537,187	\$ 962,151	\$ 1,153,204
SANTA MONICA	\$ 1,221,810	\$ 1,217,091	\$ 1,220,330	\$ 1,224,842	\$ 1,224,842	\$ 1,224,842	\$ 1,892,853	\$ 2,846,524	\$ 2,871,014	\$ 2,035,683	\$ 2,313,037
WEST HOLLYWOOD	\$ 468,722	\$ 466,911	\$ 468,154	\$ 469,885	\$ 469,885	\$ 469,885	\$ 499,490	\$ 944,358	\$ 1,183,771	\$ 707,121	\$ 865,608
<b>WESTSIDE TOTAL</b>	<b>\$ 2,671,881</b>	<b>\$ 2,661,561</b>	<b>\$ 2,668,644</b>	<b>\$ 2,678,511</b>	<b>\$ 2,678,511</b>	<b>\$ 2,678,511</b>	<b>\$ 4,280,240</b>	<b>\$ 7,014,315</b>	<b>\$ 8,161,046</b>	<b>\$ 4,846,413</b>	<b>\$ 5,948,018</b>
ALHAMBRA	\$ 1,132,327	\$ 1,127,954	\$ 1,130,956	\$ 1,129,296	\$ 1,121,405	\$ 1,100,984	\$ 971,102	\$ 886,237	\$ 1,202,404	\$ 1,010,687	\$ 1,074,653
ARCADIA	\$ 744,386	\$ 741,510	\$ 743,484	\$ 742,393	\$ 737,205	\$ 723,781	\$ 783,037	\$ 913,199	\$ 826,336	\$ 829,716	\$ 828,507
AZUSA	\$ 645,678	\$ 643,184	\$ 644,896	\$ 643,949	\$ 639,450	\$ 627,805	\$ 556,451	\$ 524,463	\$ 396,702	\$ 585,871	\$ 522,940
BALDWIN PARK	\$ 975,178	\$ 971,411	\$ 973,996	\$ 972,567	\$ 965,711	\$ 948,185	\$ 872,872	\$ 523,697	\$ 458,195	\$ 750,647	\$ 653,488
BRADBURY	\$ 50,000	\$ 100,000	\$ 50,000	\$ 50,000	\$ 100,000	\$ 200,000	\$ -	\$ 4,565	\$ 344	\$ 9,627	\$ 6,541
CLAREMONT	\$ 472,571	\$ 470,745	\$ 471,998	\$ 471,305	\$ 468,012	\$ 459,490	\$ 484,461	\$ 556,847	\$ 293,708	\$ 515,295	\$ 441,465
COVINA	\$ 643,147	\$ 640,662	\$ 642,367	\$ 641,425	\$ 636,943	\$ 625,344	\$ 642,252	\$ 801,921	\$ 698,377	\$ 723,332	\$ 714,943
DIAMOND BAR	\$ 744,790	\$ 741,913	\$ 743,888	\$ 742,796	\$ 737,606	\$ 724,174	\$ 586,983	\$ 486,073	\$ 361,661	\$ 616,356	\$ 531,673
DUARTE	\$ 289,364	\$ 288,247	\$ 289,014	\$ 288,590	\$ 286,573	\$ 281,355	\$ 267,827	\$ 319,954	\$ 428,818	\$ 305,018	\$ 346,228
EL MONTE	\$ 1,485,966	\$ 1,480,226	\$ 1,484,166	\$ 1,481,988	\$ 1,471,632	\$ 1,444,834	\$ 1,428,525	\$ 884,614	\$ 1,261,131	\$ 1,187,133	\$ 1,212,077
GLENDORA	\$ 683,217	\$ 680,578	\$ 682,389	\$ 681,388	\$ 676,626	\$ 664,305	\$ 621,767	\$ 635,220	\$ 635,341	\$ 660,066	\$ 651,857
INDUSTRY	\$ 50,000	\$ 100,000	\$ 50,000	\$ 50,000	\$ 100,000	\$ 200,000	\$ 520,639	\$ 2,115,254	\$ 2,326,955	\$ 1,060,511	\$ 1,481,182
IRWINDALE	\$ 50,000	\$ 100,000	\$ 50,000	\$ 50,000	\$ 100,000	\$ 200,000	\$ 300,079	\$ 596,616	\$ 317,063	\$ 307,562	\$ 310,437
LA PUENTE	\$ 528,716	\$ 526,674	\$ 528,075	\$ 527,301	\$ 523,616	\$ 514,081	\$ 458,262	\$ 199,025	\$ 222,704	\$ 364,526	\$ 317,465
LA VERNE	\$ 433,192	\$ 431,519	\$ 432,667	\$ 432,032	\$ 429,013	\$ 421,201	\$ 359,274	\$ 384,385	\$ 333,659	\$ 409,326	\$ 384,154
MONROVIA	\$ 489,703	\$ 487,811	\$ 489,109	\$ 488,392	\$ 484,979	\$ 476,148	\$ 516,496	\$ 622,719	\$ 747,857	\$ 556,818	\$ 620,368
MONTEBELLO	\$ 834,077	\$ 830,856	\$ 833,067	\$ 831,844	\$ 826,032	\$ 810,990	\$ 806,515	\$ 867,089	\$ 994,712	\$ 851,618	\$ 899,253
MONTEREY PARK	\$ 800,440	\$ 797,348	\$ 799,470	\$ 798,297	\$ 792,718	\$ 778,283	\$ 817,834	\$ 1,011,486	\$ 456,508	\$ 906,956	\$ 756,852
POMONA	\$ 2,030,314	\$ 2,022,471	\$ 2,027,854	\$ 2,024,878	\$ 2,010,729	\$ 1,974,114	\$ 1,905,499	\$ 1,750,415	\$ 1,200,550	\$ 1,892,883	\$ 1,662,479
ROSEMEAD	\$ 720,651	\$ 717,868	\$ 719,778	\$ 718,722	\$ 713,700	\$ 700,704	\$ 651,405	\$ 434,019	\$ 362,819	\$ 578,229	\$ 506,642
SAN DIMAS	\$ 445,509	\$ 443,788	\$ 444,970	\$ 444,316	\$ 441,212	\$ 433,178	\$ 476,879	\$ 354,023	\$ 432,028	\$ 400,319	\$ 410,924
SAN GABRIEL	\$ 527,450	\$ 525,413	\$ 526,811	\$ 526,038	\$ 522,363	\$ 512,851	\$ 482,782	\$ 447,408	\$ 296,880	\$ 488,084	\$ 424,454
SAN MARINO	\$ 177,009	\$ 200,000	\$ 200,000	\$ 176,535	\$ 175,301	\$ 200,000	\$ 162,543	\$ 114,403	\$ 35,665	\$ 145,925	\$ 109,240
SIERRA MADRE	\$ 150,000	\$ 150,000	\$ 150,000	\$ 143,312	\$ 142,311	\$ 200,000	\$ 109,211	\$ 60,449	\$ 24,912	\$ 102,251	\$ 76,539
SOUTH EL MONTE	\$ 271,580	\$ 270,531	\$ 271,251	\$ 270,853	\$ 268,960	\$ 264,063	\$ 337,516	\$ 492,752	\$ 371,022	\$ 382,503	\$ 378,570
TEMPLE CITY	\$ 476,694	\$ 474,853	\$ 476,116	\$ 475,418	\$ 472,096	\$ 463,499	\$ 337,665	\$ 217,377	\$ 146,420	\$ 347,627	\$ 280,755
WALNUT	\$ 393,422	\$ 391,902	\$ 392,945	\$ 392,369	\$ 389,627	\$ 382,532	\$ 343,690	\$ 267,808	\$ 158,173	\$ 331,103	\$ 273,580
WEST COVINA	\$ 1,407,522	\$ 1,402,085	\$ 1,405,816	\$ 1,403,753	\$ 1,393,945	\$ 1,368,561	\$ 1,161,781	\$ 937,219	\$ 1,350,665	\$ 1,174,117	\$ 1,233,144
<b>SAN GABRIEL TOTAL</b>	<b>\$ 17,652,902</b>	<b>\$ 17,759,549</b>	<b>\$ 17,655,084</b>	<b>\$ 17,599,755</b>	<b>\$ 17,627,824</b>	<b>\$ 17,700,462</b>	<b>\$ 16,963,345</b>	<b>\$ 17,409,238</b>	<b>\$ 16,341,610</b>	<b>\$ 17,494,107</b>	<b>\$ 17,110,411</b>
<b>TOTAL</b>	<b>\$ 133,960,000</b>	<b>\$ 133,960,000</b>	<b>\$ 133,960,000</b>	<b>\$ 133,960,000</b>	<b>\$ 133,960,000</b>	<b>\$ 133,960,000</b>	<b>\$ 133,960,000</b>	<b>\$ 133,960,000</b>	<b>\$ 133,960,000</b>	<b>\$ 133,960,000</b>	<b>\$ 133,960,000</b>



**Funding Available for Local Transportation Projects  
Annual Estimates**

LOCAL JURISDICTION	Proposition A	Proposition C	Measure R	TDA Article 3	TDA Article 8	TOTAL PA, PC, MR, TDA Art 3&8	Federal	Highways Users Tax	TOTAL Federal STP-L & HUTA	NEW FUNDING			Annual Estimated Total Funding
	Local Return	Local Return	Local Return	Ped & Bike	S & H		\$31.7 M/yr	Account		Measure M Local	PRELIMINARY	TOTAL NEW	
	Estimate <sup>(3)</sup>	Estimate <sup>(3)</sup>	Estimate <sup>(3)</sup>	[1]			\$ 31,700,000	HUTA <sup>(4)</sup>		Return	Road Maintenance	FUNDING	
										Estimate <sup>(2)</sup>	& Rehab Acct <sup>(5)</sup>		
1 AGOURA HILLS	\$ 394,496	\$ 327,224	\$ 245,423	\$ 13,826	\$ -	\$ 980,969	\$ 65,654	\$ 476,001	541,655	\$ 277,447	\$ 364,365	\$ 641,812	2,164,436
2 ALHAMBRA	1,614,028	1,338,794	1,004,115	56,516		4,013,453	268,616	1,919,701	2,188,317	1,135,137	1,490,752	2,625,889	8,827,659
3 ARCADIA	1,061,053	880,116	660,100	37,159		2,638,427	176,587	1,266,215	1,442,802	746,233	980,012	1,726,245	5,807,473
4 ARTESIA	314,001	260,456	195,346	11,008		780,810	52,258	379,875	432,133	220,835	290,018	510,853	1,723,796
5 AVALON	68,406	56,741	42,556	5,000	141,320	314,023	11,385	87,739	99,124	48,109	64,040	112,149	525,296
6 AZUSA	920,354	763,410	572,569	32,234		2,288,566	153,171	1,098,442	1,251,613	647,280	850,060	1,497,340	5,037,519
7 BALDWIN PARK	1,390,026	1,152,990	864,760	48,674		3,456,450	231,337	1,669,314	1,900,651	977,597	1,295,059	2,272,656	7,629,757
8 BELL	682,868	566,421	424,824	23,920		1,698,034	113,647	817,789	931,436	480,257	630,712	1,110,969	3,740,439
9 BELLFLOWER	1,420,249	1,178,059	883,562	49,732		3,531,602	236,366	1,696,129	1,932,495	998,853	1,316,016	2,314,869	7,778,966
10 BELL GARDENS	798,849	662,624	496,978	27,980		1,986,432	132,949	954,852	1,087,801	561,826	737,835	1,299,661	4,373,895
11 BEVERLY HILLS	646,545	536,292	402,227	22,649		1,607,713	107,602	774,864	882,466	454,711	597,163	1,051,874	3,542,053
12 BRADBURY	20,886	17,325	12,994	5,000		56,205	3,476	30,483	33,959	14,689	19,291	33,980	124,144
13 BURBANK	1,954,904	1,621,541	1,216,181	68,448		4,861,074	325,347	2,325,037	2,650,384	1,374,873	1,805,593	3,180,466	10,691,924
14 CALABASAS	451,259	374,307	280,736	15,813		1,122,116	75,101	543,082	618,183	317,368	618,183	734,161	2,474,460
15 CARSON	1,748,143	1,450,039	1,087,551	61,210		4,346,942	290,936	2,078,194	2,369,130	1,229,459	1,614,624	2,844,083	9,560,156
16 CERRITOS	918,996	762,283	571,724	32,186		2,285,190	152,945	1,098,338	1,251,283	646,325	848,806	1,495,131	5,031,604
17 CLAREMONT	673,606	558,738	419,062	23,596		1,675,002	112,106	806,844	918,950	473,743	622,157	1,095,900	3,689,852
18 COMMERCE	244,144	202,511	151,887	8,563		607,105	40,632	296,321	336,953	171,705	225,497	397,202	1,341,261
19 COMPTON	1,882,667	1,561,623	1,171,240	65,919		4,681,449	313,325	2,237,169	2,550,494	1,324,069	1,738,873	3,062,942	10,294,885
20 COVINA	916,746	760,417	570,324	32,107		2,279,594	152,570	1,094,178	1,246,748	644,742	846,727	1,491,469	5,017,812
21 CUDAHY	457,564	379,537	284,659	16,033		1,137,793	76,151	551,533	627,684	321,802	422,616	744,418	2,509,895
22 CULVER CITY	752,278	623,995	468,006	26,350		1,870,629	125,199	899,816	1,025,015	529,073	694,821	1,223,894	4,119,537
23 DIAMOND BAR	1,061,630	880,594	660,459	37,179		2,639,861	176,683	1,266,896	1,443,579	746,638	980,545	1,727,183	5,810,623
24 DOWNEY	2,123,612	1,761,481	1,321,137	74,354		5,280,584	353,424	2,524,410	2,877,834	1,493,525	1,961,416	3,454,941	11,613,359
25 DUARTE	412,462	342,127	256,600	14,455		1,025,644	68,644	497,233	565,877	290,082	380,959	671,041	2,262,562
26 EL MONTE	2,118,107	1,756,914	1,317,712	74,161		5,266,894	352,508	2,517,904	2,870,412	1,489,653	1,956,331	3,445,984	11,583,291
27 EL SEGUNDO	309,593	256,799	192,603	10,854		769,850	51,524	374,666	426,190	217,735	285,947	503,682	1,699,722
28 GARDENA	1,130,519	937,736	703,316	39,590		2,811,161	188,148	1,348,307	1,536,455	795,088	1,044,172	1,839,260	6,186,875
29 GLENDALE	3,750,752	3,111,150	2,333,410	131,312		9,326,625	624,223	4,447,307	5,071,530	2,637,883	3,464,279	6,102,162	20,500,317
30 GLEN DORA	973,862	807,793	605,857	34,107		2,421,620	162,076	1,163,176	1,325,252	684,912	899,481	1,584,393	5,331,265
31 HAWAIIAN GARDENS	277,603	230,265	172,702	9,734		690,304	46,200	336,862	383,062	195,237	256,401	451,638	1,525,005
32 HAWTHORNE	1,636,737	1,357,630	1,018,243	57,311		4,069,921	272,396	1,946,538	2,218,934	1,151,108	1,511,727	2,662,835	8,951,689
33 HERMOSA BEACH	368,272	305,472	229,108	12,908		915,760	61,290	444,011	505,301	259,004	340,144	599,148	2,020,208
34 HIDDEN HILLS	34,817	28,880	21,660	5,000		90,356	5,794	46,945	52,739	24,486	32,157	56,643	199,739
35 HUNTINGTON PARK	1,110,674	921,275	690,970	38,896		2,761,815	184,845	1,324,856	1,509,701	781,131	1,025,843	1,806,974	6,078,490
36 INDUSTRY [2]	8,202	6,803	5,103	-		20,108	1,365	15,713	17,078	5,768	7,747	13,515	50,701
37 INGLEWOOD	2,169,495	1,799,539	1,349,682	75,960		5,394,676	361,061	2,578,633	2,939,694	1,525,794	2,003,794	3,529,588	11,863,957
38 IRVINDALE	26,317	21,829	16,372	5,000		69,519	4,380	37,054	41,434	18,509	42,936	153,888	553,888
39 LA CANADA-FLINTRIDGE	382,314	317,119	237,844	13,399		950,677	63,627	461,605	525,232	268,879	353,114	621,993	2,097,902
40 LA HABRA HEIGHTS	101,530	84,216	63,164	5,000		253,910	16,897	126,785	143,682	71,405	93,775	165,180	562,773
41 LAKEWOOD	1,459,455	1,210,579	907,953	51,105		3,629,091	242,891	1,771,693	2,014,584	1,026,426	1,375,075	2,401,501	8,045,177
42 LA MIRADA	923,218	765,785	574,351	32,334		2,295,688	153,648	1,103,327	1,256,975	649,294	852,705	1,501,999	5,054,662
43 LANCASTER	2,921,736	2,423,503	1,817,664	102,292	6,036,022	13,301,217	486,253	3,467,605	3,953,858	2,054,841	2,698,581	4,753,422	22,008,497
44 LA PUENTE	753,636	625,121	468,850	26,398		1,874,005	125,425	901,420	1,026,845	530,028	696,075	1,226,103	4,126,952
45 LA VERNE	617,475	512,179	384,142	21,631		1,535,428	102,764	740,510	843,274	434,267	570,314	1,004,581	3,383,283
46 LAWDALE	622,980	516,746	387,567	21,824		1,549,117	103,680	747,016	850,696	438,139	575,399	1,013,538	3,413,351
47 LOMITA	377,367	313,016	234,766	13,226		938,375	62,804	455,759	518,563	265,400	348,544	613,944	2,070,881
48 LONG BEACH	9,019,564	7,481,491	5,611,231	315,747		22,428,033	1,501,090	10,673,803	12,174,893	6,343,409	8,330,670	14,674,079	49,277,005
49 LOS ANGELES CITY	74,969,371	62,185,120	46,639,776	2,977,318		186,771,586	12,476,855	88,620,959	101,097,814	52,725,538	69,243,382	121,968,920	409,838,320
50 LYNWOOD	1,348,495	1,118,541	838,923	47,221		3,353,180	224,425	1,605,904	1,830,329	948,389	1,245,500	2,193,889	7,377,397

LOCAL JURISDICTION	Proposition A	Proposition C	Measure R	TDA Article 3 Ped & Bike [1]	TDA Article 8 S & H	TOTAL PA, PC, MR, TDA Art 3&8	Federal	Highways Users Tax Account HUTA (4)	TOTAL Federal STP-L & HUTA	NEW FUNDING			Annual Estimated Total Funding
	Local Return	Local Return	Local Return				\$ 31.7 M/yr			Measure M Local	PRELIMINARY	TOTAL NEW	
	Estimate (3)	Estimate (3)	Estimate (3)							Return	Road Maintenance	FUNDING	
							\$ 31,700,000			Estimate (2)	& Rehab Acct (5)		
51 MALIBU	236,314	196,017	147,015	8,289		587,635	39,329	291,568	330,897	166,199	218,265	384,464	1,302,996
52 MANHATTAN BEACH	656,477	544,530	408,406	22,996		1,632,409	109,255	786,601	895,856	461,696	606,336	1,068,032	3,596,297
53 MAYWOOD	524,835	435,337	326,509	18,388		1,305,070	87,346	631,032	718,378	369,114	484,570	853,864	2,877,312
54 MONROVIA	698,026	578,994	434,254	24,451		1,735,725	116,170	835,702	951,872	490,918	644,712	1,135,630	3,823,227
55 MONTEBELLO	1,188,900	986,161	739,636	41,634		2,956,331	197,864	1,417,300	1,615,164	836,147	1,098,095	1,934,242	6,505,737
56 MONTEREY PARK	1,140,953	946,390	709,807	39,956		2,837,106	189,884	1,360,638	1,550,522	802,426	1,053,809	1,856,235	6,243,863
57 NORWALK	1,958,289	1,624,349	1,218,286	68,567		4,869,491	325,910	2,329,037	2,654,947	1,377,254	1,808,719	3,185,973	10,710,411
58 PALMDALE	2,977,123	2,469,445	1,852,121	104,231	6,150,445	13,553,366	495,471	3,533,059	4,028,530	2,093,794	2,749,737	4,843,531	22,425,426
59 PALOS VERDES ESTATES	255,025	211,536	158,655	8,944		634,160	42,443	309,179	351,622	179,357	235,546	414,903	1,400,685
60 PARAMOUNT	1,048,964	870,088	652,579	36,736		2,608,366	174,575	1,521,928	1,696,503	737,730	968,846	1,706,576	6,011,446
61 PASADENA	2,622,837	2,175,575	1,631,714	91,829		6,521,955	436,508	3,114,377	3,550,885	1,844,627	2,422,511	4,267,138	14,339,978
62 PICO RIVERA	1,195,372	991,530	743,662	41,861		2,972,425	198,941	1,424,949	1,623,890	840,699	1,104,073	1,944,772	6,541,087
63 POMONA	2,894,024	2,400,517	1,800,424	101,322		7,196,287	481,641	3,434,856	3,916,497	2,035,351	2,672,985	4,708,336	15,821,120
64 RANCHO PALOS VERDES	800,504	663,997	498,008	28,038		1,990,548	133,225	956,808	1,090,033	562,990	739,364	1,302,354	4,382,935
65 REDONDO BEACH	1,292,495	1,072,090	804,084	45,260		3,213,929	215,105	1,539,724	1,754,829	909,004	1,193,777	2,102,781	7,071,539
66 ROLLING HILLS	36,137	29,975	22,482	5,000		93,594	6,014	-	6,014	25,415	-	25,415	125,023
67 ROLLING HILLS ESTATES	149,310	123,849	92,888	5,243		371,290	24,849	184,106	208,955	105,009	138,576	243,585	823,830
68 ROSEMEAD	1,027,222	852,054	639,053	35,974		2,554,303	170,956	1,226,235	1,397,191	722,439	948,765	1,671,204	5,622,699
69 SAN DIMAS	635,032	526,743	395,065	22,246		1,579,086	105,686	761,259	866,945	446,615	586,530	1,033,145	3,479,175
70 SAN FERNANDO	456,281	378,473	283,860	15,989		1,134,602	75,937	550,016	625,953	320,900	421,431	742,331	2,502,886
71 SAN GABRIEL	751,832	623,625	467,728	26,334		1,869,519	125,124	899,288	1,024,412	528,759	694,409	1,223,168	4,117,099
72 SAN MARINO	252,309	209,284	156,966	8,849		627,408	41,991	305,970	347,961	177,448	233,038	410,486	1,385,854
73 SANTA CLARITA	4,084,468	3,387,959	2,541,020	142,994	8,438,112	18,594,552	679,762	4,971,380	5,651,142	2,872,583	3,873,874	6,746,457	30,992,152
74 SANTA FE SPRINGS	343,312	284,769	213,581	12,034		853,696	57,136	414,515	471,651	241,450	317,091	558,541	1,883,888
75 SANTA MONICA	1,741,578	1,444,593	1,083,466	60,981		4,330,617	289,844	2,070,435	2,360,279	1,224,842	1,608,560	2,833,402	9,524,298
76 SIERRA MADRE	204,827	169,899	127,426	7,186		509,338	34,089	249,857	283,946	144,054	189,183	333,237	1,126,520
77 SIGNAL HILL	217,102	180,080	135,063	7,616		539,862	36,131	264,364	300,495	152,687	200,520	353,207	1,193,564
78 SOUTH EL MONTE	387,112	321,099	240,829	13,567		962,608	64,426	467,264	531,702	272,254	357,546	629,800	2,124,110
79 SOUTH GATE	1,852,016	1,536,199	1,152,172	64,846		4,605,234	308,224	2,203,448	2,511,672	1,302,513	1,710,564	3,013,077	10,129,982
80 SOUTH PASADENA	484,086	401,536	301,158	16,962		1,203,742	80,564	582,875	663,439	340,455	447,112	787,567	2,654,748
81 TEMPLE CITY	679,483	563,613	422,718	23,802		1,689,617	113,084	813,789	926,873	477,877	627,586	1,105,463	3,721,952
82 TORRANCE	2,737,256	2,270,482	1,702,896	95,834		6,806,468	455,551	3,249,593	3,705,144	1,925,097	2,528,191	4,453,288	14,964,900
83 VERNON [3]	3,906	3,240	5,000	5,000		12,145	650	10,416	11,066	2,747	3,607	6,354	29,565
84 WALNUT	560,786	465,158	348,875	19,647		1,394,466	93,329	673,518	766,847	394,398	517,955	912,353	3,073,667
85 WEST COVINA	2,006,292	1,664,167	1,248,150	70,247		4,988,855	333,899	2,385,765	2,719,664	1,411,014	1,853,056	3,264,070	10,972,590
86 WEST HOLLYWOOD	668,119	554,187	415,649	23,404		1,661,360	111,192	800,360	911,552	469,885	617,090	1,086,975	3,659,887
87 WESTLAKE VILLAGE	155,931	129,341	97,007	5,475		387,754	25,951	191,074	217,025	109,665	144,021	253,686	858,466
88 WHITTIER	1,643,023	1,362,845	1,022,154	57,531		4,085,552	273,442	1,953,967	2,227,409	1,155,529	1,517,533	2,673,062	8,986,023
89 UNINCORP LA COUNTY	19,565,575	16,229,129	12,172,091	1,508,556	4,207,471	53,682,823	3,256,221	154,210,407	157,466,628	13,760,359	105,522,373	119,282,732	330,432,183
90 TOTAL	\$ 190,475,000	\$ 157,994,000	\$ 118,495,449	\$ 7,870,055	\$ 24,973,370	\$ 499,807,874	\$ 31,700,000	\$ 357,575,484	\$ 389,275,484	\$ 133,960,000	\$ 263,490,470	\$ 397,450,470	\$ 1,286,533,828

**NOTES:**  
 (2) Measure M revenues are estimated at \$133.9M, of which 95% (\$127.5M) is expected to be collected in FY2018. The remaining 5% will carryover and be allocated in FY19. Allocations are based on population, similar to Prop A, Prop C, and Measure R.  
 (3) Proposition A, Proposition C and Measure R Local Return funds are allocated their share of estimated revenues (minus administration) without carryover since payments are made based on actual revenues received.  
 (4) Proposed Funding for Highways Users Tax Account (HUTA). Estimates are based FY2017-18 on CaliforniaCityFinance.com (April 6, 2017 projections).  
 (5) Estimates are based on CaliforniaCityFinance.com (April 6, 2017 projections). FY2017-18 is a partial year of funding from these new sources. For the purpose of providing an accurate picture of the annual funding available for local transportation projects, 'the estimated revenues for the first full year of funding, FY2018-19, have been presented in this table.

**TDA Article 3 Allocation:**  
 [1] 15% of the estimated revenue is first awarded to the City of Los Angeles and Los Angeles County (30%-70% split) as Supplemental  
 [2] City of Industry has opted out of the TDA Article 3 program indefinitely.  
 [3] City of Vernon has opted out of the Measure R Local Return program indefinitely.

**Alternative Funding Mechanisms**

**Borrowing/Financing**

1. Jurisdictions may issue debt directly, using the Measure M local return as the source of repayment for the debt. Typically, this structure would require the use of a conduit borrowing entity such as a joint powers authority, because of potential legal restrictions or validation actions required for issuing the debt directly.
2. A jurisdiction may request that the MTA issue the debt on behalf of the Jurisdiction. This structure requires the MTA to be a party to the borrowing, requires findings by the Measure M Oversight Committee and the approval by the MTA Board.
3. Jurisdictions may request to pool their resources and have the MTA issue the debt on behalf of the Jurisdictions (i.e. Community Infrastructure Partnership Program – CIPP). This would allow Los Angeles County cities to participate in a bond pool that would allow a participating city to obtain cash to fund transportation projects exceeding the cities' available annual Local Return revenues. This structure requires the MTA to be a party to the borrowing, requires findings by the Measure M Oversight Committee and the approval by the MTA Board.
4. Borrow directly from MTA. This structure requires MTA Board approval and MTA has full control of execution of any bond sale, or advancing of funds from other sources not yet ready to be spent, at a rate of return and administrative costs, not less than what Metro is able to get from investing funds (timely use of funds).

**Measure M Multiyear Subregional Program funds**

Measure M provides for Multiyear Subregional program funds. Subregions can fund their smaller cities from this funding source. Each subregion can allocate to their cities an established minimum from their Measure M Multiyear Subregional allocation to be used for capital expenditures only.

**Board Report**

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**File #:** 2017-0085, **File Type:** Policy**Agenda Number:** 40

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**REGULAR BOARD MEETING  
MAY 25, 2017****SUBJECT: PURPLE LINE WESTSIDE SUBWAY EXTENSION TRANSIT PROJECT SECTION 2****ACTION: ADOPT RESOLUTION OF NECESSITY TO ACQUIRE PARCEL W-3002****RECOMMENDATION**

CONSIDER:

- A. HOLDING a public hearing on the proposed Resolution of Necessity; and
- B. ADOPTING the **Resolution of Necessity authorizing the commencement of an eminent domain action to acquire Project Parcel W-3002 (APN: 4343-005-004), for Purple Line Westside Subway Extension Transit Project Section 2**, consisting of the real property and the improvements pertaining to the realty (hereinafter the "Property" as identified in Attachment A).

(REQUIRES 2/3 VOTE OF THE BOARD)

**BACKGROUND**

Acquisition of the Property is required for the construction of and operation of the Purple Line Westside Subway Extension Project, Section 2 (Project). A written offer was presented to the Owner of Record, New Pacific Canon, LLC (Owner), as required by California Government Code Section 7267.2. The Owner has rejected the offer made by the Los Angeles County Metropolitan Transportation Authority (LACMTA), and requested that we initiate the eminent domain process to determine the value of the property. The Property is necessary for construction of the Project; therefore, staff recommends the acquisition of the Property through eminent domain to determine the value of the Property and to maintain the Project schedule.

In accordance with the provisions of the California Eminent Domain law and Sections 30503, 30600, 130051.13, 130220.5 and 132610 of the California Public Utilities Code (which authorize the public acquisition of private property by eminent domain), LACMTA has prepared and mailed notice of this hearing to the Owner informing them of their right to appear at this hearing and be heard on the following issues: (1) whether the public interest and necessity require the Project; (2) whether the Project is planned or located in the manner that will be most compatible with the greatest good and the least private injury; (3) whether the Property is necessary for the Project; (4) whether either the offer required by Section 7267.2 of the Government Code has been made to the Owner, or the offer

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has not been made because the Owner cannot be located with reasonable diligence; and (5) whether environmental review of the Project has complied with the California Environmental Quality Act (CEQA).

Attached is the Staff Report prepared by staff and legal counsel setting forth the required findings for acquiring the Property through the use of eminent domain (Attachment B). After LACMTA receives testimony and evidence from all interested parties, the LACMTA must make a determination as to whether to acquire the Property by eminent domain and adopt the proposed Resolution of Necessity (Attachment C). The Board must find and determine that, based upon all the evidence and the existence of the above stated conditions, acquisition by eminent domain is necessary; and a two-thirds vote of all the members of its governing body is required to adopt the Resolution of Necessity.

### **DETERMINATION OF SAFETY IMPACT**

This Board action will not have an impact on LACMTA's safety standards.

### **FINANCIAL IMPACT**

The funding for the acquisition of the Property is included in the approved fiscal year 2017 budget under Measure R Project 865522 (Purple Line Westside Extension Project, Section 2), in Cost Center 8510, and Account Number 53013 (Acquisition of Land).

#### **Impact to Budget**

The approved FY17 budget using Measure R 35% cash is designated for the Westside Purple Line Extension, Section 2, and does not have an impact to operations funding sources. These funds were assumed in the Long Range Transportation Plan for the Project. This Project is not eligible for Propositions A and C funding due to the proposed tunneling element of the Project. No other funds were considered.

### **NEXT STEPS**

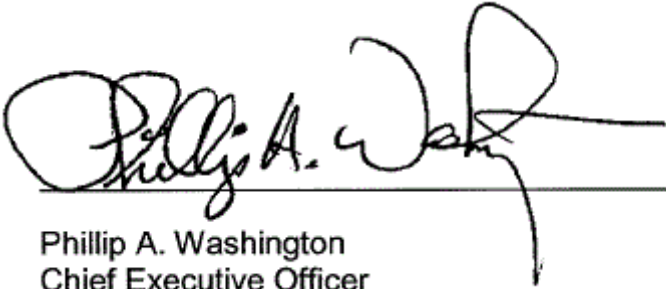
If this action is approved by the Board, the LACMTA's condemnation counsel will be instructed to take all steps necessary to commence legal proceedings in a court of competent jurisdiction to acquire the Property interest by eminent domain. Counsel will also be directed to seek and obtain an Order of Prejudgment Possession in accordance with the provisions of the eminent domain law.

### **ATTACHMENTS**

Attachment A - Site Plan  
Attachment B - Staff Report  
Attachment C - Resolution of Necessity

Prepared by: Velma C. Marshall, DEO, Real Estate Administration, (213) 922-2415  
Calvin E. Hollis, SEO, Countywide Planning and Development, (213) 922-7319

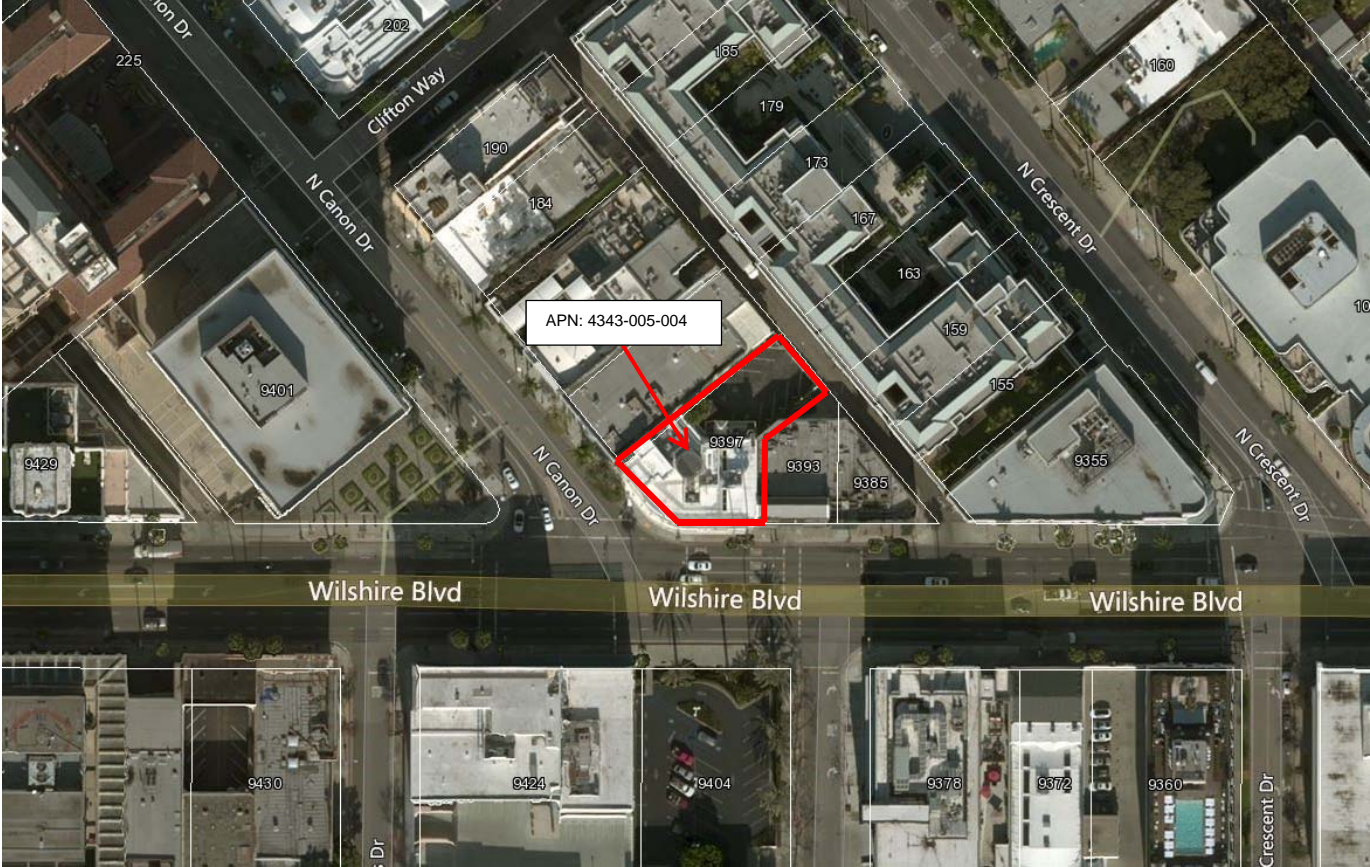
Reviewed by:       Therese W. McMillan, Chief Planning Officer, (213) 922-7077



Phillip A. Washington  
Chief Executive Officer

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**ATTACHMENT A**



New Pacific Canon, LLC, a Delaware limited liability company  
9397 Wilshire Boulevard, Beverly Hills, CA 90210  
APN: 4343-005-004

**ATTACHMENT B**

**STAFF REPORT REGARDING THE NECESSITY FOR THE ACQUISITION OF PARCEL NO. W-3002 (THE “PROPERTY”) FOR THE PURPLE LINE (WESTSIDE) SUBWAY EXTENSION TRANSIT PROJECT SECTION 2**

**BACKGROUND**

The Property is required for the construction and operation of the Purple Line Westside Extension Project Section 2 ("Project"). The address, record owner, physical description, and nature of the property interest sought to be acquired for the Project are summarized as follows:

<b>Assessor's Parcel</b>	<b>Parcel Address</b>	<b>Property Owner</b>	<b>Purpose of Acquisition</b>	<b>Property Interest(s)</b>
4343-005-004	9397 Wilshire Blvd Beverly Hills, CA 90210	New Pacific Canon, LLC	Construction Staging, surface equipment and construction of an access shaft for the construction of the Wilshire/Rodeo Station	Temporary Construction Easement for 92 months

A written offer for the Property comprising Parcel W-3002 was mailed to the owner by letter dated November 10, 2016 for acquisition of a Temporary Construction Easement for a period of 92 months. The Owner did not accept the offer of just compensation and requested that the eminent domain process be initiated to determine the value of the Property.

A written offer was also made to the Owner of the Property on November 10, 2016 for the acquisition of the Improvements Pertaining to Realty as identified in Exhibit “C” attached to the Resolution of Necessity.

**A. The public interest and necessity require the Project.**

The need for the Project is based on population and employment growth, the high number of major activity centers served by the Project, high existing transit usage, and severe traffic congestion. The Project area bisects 12 large population and employment centers, all of which are served by extremely congested road networks that will deteriorate further with the projected increase in population and jobs. This anticipated growth will further affect transit travel speeds and reliability, even with a dedicated lane for express bus service on Wilshire Boulevard. The public interest and necessity require the Project for the following specific reasons:



1. The population and employment densities in the Project area are among the highest in the metropolitan region. Approximately five percent of the Los Angeles County population and 10 percent of the jobs are concentrated in the Project area.
2. Implementation of the Project will result in a reduction of vehicle miles per day and reduction of auto air pollutants.
3. The Project will relieve congestion on the already over capacity I-405 San Diego and the I-10 Santa Monica Freeways and surrounding major thoroughfares. In addition, it will reduce the parking demands in the Westside area by providing an alternative means of transportation, competitive in rush-hour travel times with the automobile.
4. The Project will be a major link in the existing county-wide rail transit system, and will thereby provide alternative means of transportation during fuel crises and increased future traffic congestion.
5. The Project will improve transportation equity by meeting the need for improved transit service of the significant transit-dependent population within the Project area.
6. The Project will help meet Regional Transit Objectives through the Southern California Association of Governments' (SCAG's) Performance Indicators of mobility, accessibility, reliability, and safety.

It is recommended that based on the above evidence, the Board find and determine that the public interest and necessity require the Project.

**B The Project is planned or located in the manner that will be most compatible with the greatest public good and least private injury.**

An Alternatives Analysis (AA) Study was initiated in 2007 to identify all reasonable, fixed-guideway, alternative alignments and transit technologies within the proposed Project Area. The fixed-guideway alternative alignments studied and analyzed during the AA process were heavy rail transit (HRT), light rail transit (LRT), bus rapid transit (BRT), and monorail (MR). Due to its capacity to meet the anticipated ridership demand and limit the number of transfers, HRT was identified as the preferred technology for further study.

In January 2009, the Metro Board approved the AA Study and authorized preparation of a Draft Environmental Impact Statement/Draft Environmental Impact Report (DEIS/DEIR). A total of seven alternatives, including five heavy rail subway (HRT) Build Alternatives, a No Build Alternative, and a relatively low-cost Transportation System Management (TSM) Alternative, were presented in the DEIS/DEIR. The DEIS/DEIR was circulated and reviewed by interested and concerned parties, including private citizens, community groups, the business community, elected officials and public agencies. Public hearings were held to solicit citizen and agency comments.

In October 2010, the Board approved the DEIS/DEIR and the Wilshire Boulevard to Santa Monica HRT option was selected as the Locally Preferred Alternative (LPA) for further analysis in the FEIS/FEIR. The FEIS/FEIR was released in March 2012 for public review. On April 26, 2012, the Board certified the FEIS/FEIR, and in May 24, 2012, it approved the route and station locations for the Project. A Record of Decision was received from the Federal Transit Administration in August of 2012.

The approved LPA will extend HRT (as subway) approximately nine (9) miles from the existing Metro Purple Line terminus at the Wilshire/ Western Station to a new western terminus at the West Los Angeles Veterans Affairs Hospital (Westwood/ VA Hospital Station). The LPA will include seven new stations spaced in approximately one-mile intervals, as follows:

- Wilshire/La Brea
- Wilshire/Fairfax
- Wilshire/La Cienega
- Wilshire/Rodeo
- Century City
- Westwood/UCLA
- Westwood/VA Hospital

The Project will cause private injury, including the displacement or relocation of certain owners and users of private property. However, no other alternative locations for the Project provide greater public good with less private injury. Therefore, the Project is planned or located in the manner that will be most compatible with the greatest public good and the least private injury.

Due to its bulk, the FEIS/FEIR is not physically included in the Board's agenda packet for this public hearing. However, the FEIS/FEIR documents should be considered in connection with this matter. It is recommended that, based upon the foregoing, the Board find and determine that the Project is planned or located in the manner that will be most compatible with the greatest public good and the least private injury.

**C. The Property is necessary for the Project.**

The Property consists of a temporary construction easement over the entire Parcel W-3002, which consist of 9,126 square feet. The Property is improved with a two-story building that has a total building area of 9,631 square feet that will be demolished. The Property is described in Exhibit A and is depicted on the Plat Map attached as Exhibit B to the Resolution of Necessity. The Property is required for construction staging and construction of an access shaft in connection with the Wilshire/Rodeo Station. The Property was chosen based upon the approved FEIS/FEIR for the Project.

Staff recommends that the Board find that the acquisition of the Property is necessary for the Project.

**D. Offers were made in compliance with Government Code Section 7267.2.**

California Code of Civil Procedure Section 1245.230 requires that a Resolution of Necessity contain a declaration that the governing body has found and determined that either the offer required by Section 7267.2 of the California Government Code has been made to the Owner, or the offer has not been made because the Owner cannot be located with reasonable diligence.

California Government Code Section 7267.2 requires that an offer be made to the Owner and in an amount which the agency believes to be just compensation. The amount must not be less than the agency's approved appraisal of the fair market value of the property. In addition, the agency is required to provide the Owner with a written statement of, and summary of the basis for, the amount it established as just compensation.

Staff has taken the following actions in order to satisfy this requirement:

1. Obtained appraisals to determine the fair market value of the Property, which included consideration of all improvements pertaining to the realty, including the immovable fixtures and equipment;
2. Reviewed and approved the appraisals, and established the amount it believes to be just compensation;
3. Determined the Owner of the Property by examining the county assessor's record, a preliminary title report, and occupancy of the Property;
4. Made a written offer to the Owner for the full amount of just compensation - which was not less than the approved appraised value;
5. Provided the Owner with a written statement of, and summary of the basis for, the amount established as just compensation with respect to the foregoing offer.

It is recommended that based on the above evidence, the Board find and determine that the offer required by Section 7267.2 of the California Government Code has been made to the Owner.

**E. Metro has fulfilled the necessary statutory prerequisites.**

Metro is authorized to acquire property by eminent domain for the purposes contemplated by the Project under Public Utilities Code §§ 30503, 30600, 130051.13, and 130220.5; Code of Civil Procedure §§ 1230.010-1273.050; and Article I, § 19 of the California Constitution.

**F. Metro has complied with the California Environmental Quality Act.**

A draft EIR/EIS was circulated for public review and comment. The FEIS/FEIR was released in March 2012 for public review. On April 26, 2012, the Board certified the FEIS/FEIR, and in May 24, 2012, it approved the route and station locations for the Project. A Record of Decision was received from the Federal Transit Administration in August of 2012. The FEIS/FEIR documents therefore comply with the California Environmental Quality Act. Since that time, none of the circumstances identified in CEQA Guidelines Section 15162 have occurred which would require the preparation of a subsequent EIR. As set forth above, Metro has also fulfilled the statutory prerequisites under Code of Civil Procedure § 1240.030 and Government Code § 7267.2.

Accordingly, Metro has fulfilled the necessary statutory prerequisites to acquire the Property by eminent domain.

**CONCLUSION**

Staff recommends that the Board adopt the Resolution of Necessity.

**ATTACHMENT C**

**RESOLUTION OF THE  
LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
DECLARING CERTAIN REAL PROPERTY NECESSARY FOR PUBLIC PURPOSES  
AND AUTHORIZING THE ACQUISITION THEREOF  
PURPLE LINE WESTSIDE EXTENSION PROJECT, SECTION 2 - PARCEL NO. W-3002**

THE LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY HEREBY FINDS, DETERMINES, AND RESOLVES AS FOLLOWS:

Section 1.

THE LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY ("LACMTA") is a public entity organized and existing pursuant to Chapter 2 of Division 12 of the California Public Utilities Code (commencing with Section 130050).

Section 2.

The property interest described hereinafter is to be taken for public use, namely, for public transportation purposes and all uses necessary, incidental or convenient thereto, and for all public purposes pursuant to the authority conferred upon the Board to acquire property by eminent domain by California Public Utilities Code Sections 30000-33027, inclusive, and particularly Section 30503 and 30600, Sections 130000-132650, inclusive, and particularly Sections 130051.13 and 130220.5, Code of Civil Procedure Sections 1230.010-1273.050, inclusive, and particularly Sections 1240.510 and 1240.610, and Article I, Section 19 of the California Constitution.

Section 3.

The property interest consists of the acquisition of a temporary construction easement for 92 months, along with all improvements located thereon, as described more specifically in the legal description (Exhibit A-1), depicted on the Plat Map (Exhibit B-1), and described in Improvements Pertaining to the Realty (Exhibit C) attached hereto (hereinafter, the "Property"), all of which are incorporated herein by this reference.

Section 4.

(a.) The acquisition of the above-described Property is necessary for the development, construction, operation, and maintenance of the Purple Line (Westside) Subway Extension Project Section 2 ("Project");

(b.) The environmental impacts of the Project were evaluated in the Final Environmental Impact Statement/Final Environmental Impact Report (FEIS/FEIR), which was certified by the Board on April 26, 2012 and May 24, 2012. The Board found that in

accordance with the California Environmental Quality Act (CEQA) Guidelines, Section 15162, no subsequent or supplemental Environmental Impact Report is required for the Project, and the FEIS/FEIR documents are consistent with CEQA; and;

(c.) The Board has reviewed and considered the FEIS/FEIR, before and as part of the process of determining whether to acquire the above-referenced Property.

#### Section 5.

The Board hereby declares that it has found and determined each of the following:

(a.) The public interest and necessity require the proposed Project;

(b.) The proposed Project is planned or located in the manner that will be most compatible with the greatest public good and the least private injury;

(c.) The Property sought to be acquired, which has been described herein, is necessary for the proposed Project;

(d.) The offer required by Section 7267.2 of the Government Code has been made to the Owner; and

(e.) Environmental review consistent with the California Environmental Quality Act (CEQA) for the Project has been previously certified by this Board.

#### Section 6.

Pursuant to Sections 1240.510 and 1240.610 of the Code of Civil Procedure, to the extent that the Property is already devoted to a public use, the use to which the Property is to be put is a more necessary public use than the use to which the Property is already devoted, or, in the alternative, is a compatible public use which will not unreasonably interfere with or impair the continuance of the public use to which the Property is already devoted.

#### Section 7.

That notice of intention to adopt this resolution was given by first class mail to each person whose Property is to be acquired by eminent domain in accordance with Section 1245.235 of the Code of Civil Procedure and a hearing was conducted by the Board on the matters contained herein.

#### Section 8.

Legal Counsel is hereby authorized and directed to take all steps necessary to commence legal proceedings, in a court of competent jurisdiction, to acquire the Property described above by eminent domain. Counsel is also authorized and directed to seek and

obtain an Order for Prejudgment Possession of said Property in accordance with the provisions of the eminent domain law and is directed that the total sum of probable just compensation be deposited with the State Treasurer or the Clerk of the Superior Court. Counsel may enter into stipulated Orders for Prejudgment Possession and/or Possession and Use Agreements, where such agreements constitute the functional equivalent of an Order for Prejudgment Possession. Counsel is further authorized to correct any errors or to make or agree to any non-material changes to the legal description of the real property that are deemed necessary for the conduct of the condemnation action or other proceedings or transactions required to acquire the Property.

Counsel is further authorized to compromise and settle such eminent domain proceedings, if such settlement can be reached, and in that event, to take all necessary action to complete the acquisition, including stipulations as to judgment and other matters, and causing all payments to be made. Counsel is further authorized to associate with, at its election, a private law firm for the preparation and prosecution of said proceedings.

I, MICHELLE JACKSON, Secretary of the Los Angeles County Metropolitan Transportation Authority, do hereby certify that the foregoing Resolution was duly and regularly adopted by a vote of two-thirds of all the members of the Board of the Metropolitan Transportation Authority at a meeting held on the 25th day of May, 2017.

\_\_\_\_\_  
MICHELLE JACKSON  
LACMTA Secretary

Date: \_\_\_\_\_

**ATTACHMENTS**

- 1 - Legal Description (Exhibit "A-1 ")
- 2 - Plat Map (Exhibit "B-1")
- 3 – Improvements Pertaining to the Realty (Exhibit "C")

**LEGAL DESCRIPTION  
EXHIBIT A-1**



LEGAL DESCRIPTION

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EXHIBIT "A"

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF BEVERLY HILLS, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, SAID LAND CONVEYED TO NEW PACIFIC CANON, LLC BY GRANT DEED RECORDED NOVEMBER 21, 2007 AS DOCUMENT NO. 20072588327, OFFICIAL RECORDS OF SAID COUNTY, AND IS DESCRIBED AS FOLLOWS:

ALL OF LOTS 6 AND 7 IN BLOCK 13 OF BEVERLY, IN THE CITY OF BEVERLY HILLS, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 11, PAGE 94 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

EXCEPTING THEREFROM THAT PORTION OF LOT 7 IN BLOCK 13, BEGINNING AT THE SOUTHEAST CORNER OF SAID LOT 7, THENCE NORTH 39°31'30" WEST 120.97 FEET TO THE MOST NORTHERLY CORNER OF SAID LOT; THENCE SOUTH 50°28'30" WEST 55.66 FEET ALONG THE NORTHERLY LINE OF SAID LOT; THENCE SOUTH 0°05'0" WEST 57.71 FEET TO A POINT ON THE SOUTHERLY LINE OF SAID LOT; THENCE SOUTH 89°55'0" EAST 120 FEET TO THE POINT OF BEGINNING.

AFFECTS APN: 4343-005-004

NOTE:

THIS LEGAL DESCRIPTION WAS NOT PREPARED FOR ANY PURPOSE THAT WOULD BE IN VIOLATION OF THE STATE OF CALIFORNIA SUBDIVISION MAP ACT OR LOCAL ORDINANCES OF THE GOVERNING BODY HAVING JURISDICTION.

PREPARED BY:

  
JANEEN NEDLIK, P.L.S. 7563



  
DATE

**PLAT MAP  
EXHIBIT B-1**



**EXHIBIT C  
IMPROVEMENTS PERTAINING  
TO THE REALTY**

## EXHIBIT C

Furniture, Fixtures & Equipment Certification  
*Westside Subway Extension, Section 2*  
 W-3002, 9399 Wilshire Boulevard, Beverly Hills, CA 90210  
 Page 1

LAMETRO  
 PURPLE LINE EXTENSION  
 PARCEL NO. W-3002

NEW PACIFIC REALTY  
 FAIR MARKET VALUE IN-PLACE  
 DATE OF VALUE: APRIL 27, 2016

L I N E	Q T Y	DESCRIPTION:	C O N D L	Q U A L I T Y	P L U S #	RCN	FMV IN PLACE	FLV
1								
2	1	LOT C/O FLOORING THROUGHOUT:						
3		(1952)SF CARPET, COMMERCIAL GRADE, LOW CUT	G	G	798			
4		(2958)SF WOOD FLOORING, PREMIUM, 15% OF AREA IS CURVED PLANK, ASSUME 3/4" THCK	G	V	819			
5		(1000)SF, STONE TILE FLOORING, 10"X24" RESTROOM, STOREFRONT, REAR EXTERIOR RAMP		G				
6								
7	1	LOT C/O COUNTERS, CABINETS, BOOK/MEDIA SHELVING, WALL COVER, WITH ASSOCIATED CUSTOM MATCHING DESKS	V	V	798			
8		THROUGHOUT	G	G				
9		(151.3)LF OF COUNTER TOP, SOLID ASH WOOD PLANK, 2" THCK						
10		(53.3)LF OF MATCHING BASE CABINETS						
11		(261)SF MATCHING WALL PANELING(ASSUME SOLID WOOD PANELS, ALL PUSH PIN FABRIC COVER INCLUDED)						
12		(46) LF OF MATCHING WALL BOOK/MEDIA SHELVING AND CABINETS (COST AT WALL HEIGHT)						
13		(1) TABLE, CONFERENCE, CUSTOM, SOLID WOOD ASH, NATURAL FINISH, 2" THCK, BEVELED EDGE, 51"X102", TRIPLE PED, 2 SS LEGS, 1 WOOD W/ACCESS PANEL, AC AND DATA CABLE OUTLETS						
14		(2) WORKSTATIONS:						
15		(1) DESK, ASH, L-SHAPE, CUSTOM, 2"THCK TOP, (1) CPU CUBBY, SINGLE PED, 76"X30" W/42" RETURN, 42"HX48"W, SOLID WOOD PARTITION, (1) FILE CAB, 3 DRWR, MTL POWDER COAT, LOCKING 15"WX28"H	V	V	884			
16		(5) DESK TOPS, OPEN BASE C/O (45)LF X 27" SOLID ASH 2" THCK PEDESTAL INCLUDED						
17		(1) DESK, EXEC, CUSTOM, SOLID ASH WOOD, NATURAL FINISH, SINGLE PED, CPU CUBBY, 90"LX34"D, MEDIA ACCES, 2"THCK TOP (EXEC OFFICES)						
18		LOBBY						
19		(1) CREDENZA, BUILT-IN, CUSTOM, MATCHING, 8 DOORS, (4 PAIR), LOCKING 10.5"X18"DX30"H						
20		(1) RECEPTION DESK, CUSTOM, MATCHING, SINGLE PED W/3 DRAWER WOOD FILE CABINET, CPU CUBBY, 8"X23"DX30"H W/FRONT PARTITION, WOOD FRAME, SS SUPPORT, GLASS INSET PANEL, 42"X10"DX8"L						

Furniture, Fixtures & Equipment Certification  
*Westside Subway Extension, Section 2*  
 W-3002, 9399 Wilshire Boulevard, Beverly Hills, CA 90210  
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LAMETRO  
 PURPLE LINE EXTENSION  
 PARCEL NO. W-3002

NEW PACIFIC REALTY  
 FAIR MARKET VALUE IN-PLACE  
 DATE OF VALUE: APRIL 27, 2016

L I N E	Q T Y	DESCRIPTION:	C O N D	Q U A L	PIC #	RCN	FMV IN PLACE	FLV
21		(1) DBL POCKET DOOR, 11'X9' INCLUDES WALL FRAME/POCKET/HARDWARE						
22		OVAL CONFERENCE ROOM 21'X20' (ALL SF IS CURVED, EXTERIOR AND INTERIOR)						
23		(23)LF OF COUNTER TOP, SOLID ASH WOOD PLANK, 2" THCK,						
24		(20)LF OF MATCHING BASE CABINETS						
25		( 567)SF MATCHING WALL PANELING(ASSUME SOLID WOOD PANELS (PUSH PIN FABRIC COVER INCLUDED)						
26		(26) LF OF MATCHING WALL BOOK/MEDIA SHELVING AND CABINETS COST AT WALL HEIGHT						
27		(1) SLIDE POCKET DOOR, MATCHING 42"X7'H						
28		(1) DOOR, MATCHING, SWING, 41"X108"						
29		(33)LF OF COUNTER TOP, SOLID ASH WOOD PLANK, 3" THCK,						
30		(1) CONFERENCE TABLE, MATCHING, CUSTOM, 2"THCK, BEVEL EDGE, 8'DIA, TRIPLE PED. (2) SS LEGS, (1) WOOD W/ACCES PANEL, TABLE AC OUTLETS AND DATA CABLE PANEL						
31		<b>ELEVATOR</b>						
32		(1)ASH WOOD, 1/2" THCK WALL COVER, ELEVATOR (91)SF, WITH STL TRIM ACCENTS, W/3 INSET CAN LIGHTS, AND ACCENT FLUOR LIGHTING (5)LF						
33								
34	1	LOT C/O WALL BUILD OUT FRAMING:	G	G				
35		(567)SF OVAL CONFERENCE ROOM-ALL CURVED						
36								
37	2	TV LIFT KIT 40" & 60"			809			
38								
39	1	LOT THROUGHOUT C/O WALL BUILD OUT FRAMING AND WALL COVER, (1025)SF, ASSUME WOOD FRAMING, DBL DRYWALL COVER, SANDED, PAINTED (NOT INCLUDE MAIN WALLS FOR EXEC OFFICES, LOBBY, BREAK ROOM	V	V				
40			G	G				
41	1	LOT C/O ELECTRICAL AND SPECIAL LIGHTING FIXTURES:						
42		(177)LF OF WALL WASH ACCENT LIGHTING, FLUOR MOSTLY LOCATED AT TOP OF INTERIOR WALL PERIMETER THROUGHOUT CONFERENCE ROOMS AND OFFICES			795			
43		(6) LIGHT FIXTURES, WALL MOUNT HALOGEN-OVAL CONF ROOM			818			
44		(3) FLUOR LIGHT FIXTURES, DIRECTIONAL, 10"			873			
45		(8) RECESSED CAN LIGHTS, 8" ANGLED						

Furniture, Fixtures & Equipment Certification  
*Westside Subway Extension, Section 2*  
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LAMETRO  
 PURPLE LINE EXTENSION  
 PARCEL NO. W-3002

NEW PACIFIC REALTY  
 FAIR MARKET VALUE IN-PLACE  
 DATE OF VALUE: APRIL 27, 2016

L I N E	Q T Y	DESCRIPTION:	C O N D L	Q U A L	#	RCN	FMV IN PLACE	FLV
46	(12)	RECESSED CAN LIGHTS, 8"-EXT CANOPY			879			
47	(1)	WASH LIGHT, ADDRESS-EXT CANOPY						
48	(6)	TOPSIDE WALL WASH LIGHTS-EXT CANOPY						
49	(18)	TRACK LIGHTS, 4FT-SALES ROOM			895			
50	(11)	FLUSH MOUNT WALL FIXTURES, PORTHOLE STYLE, 8"DIA			897			
51	(7)	OUTDOOR LIGHT FIXTURES, DECORATIVE, HALOGEN, DOWN LIGHTS			843			
52	(2)	PARKING LOT LIGHT FIXTURES, HI PRESSURE SODIUM OR EQUIVALENT			844			
53								
54	1	LOT C/O EXTERIOR/INTERIOR GLASS WINDOWS/PARTIONS:						
55	(174)	SF GLASS WALL (WINDOW), STEEL FRAME, DUAL GLAZED						
56	(174.5)	SF OF INTERIOR GLASS WINDOWS AND SINGLE PANE						
57	(333)	SF OF GLASS WALL, BENDHEIM ASNI 2.97- 2004, FORMED CHANNEL GLASS, CUSTOM, 1'WX9'H APROX 3" THCK, TRANSLUCENT	V G	V G	851			
58	(230)	SF OF PLATE GLASS WALL	V G	G	851			
59	(35.5)	SF OF CURVED PLATE GLASS WALL						
60	(25)	LFX20" CURVED GLASS PARTION-OVAL CONF RM			817			
61								
62	1	LOT C/O WINDOW COVER, (433.5)SF FURLING, ELECTRIC W/ REMOTE SWITCH, EST. 80% UV REDUCTION, INSTALLED RECESSED INTO WALL OR CEILING COVER	G G	V G	888			
63	(225)	SF OF FIXED SUNSHADE SUNBRELLA OR EQUIVALENT-1ST FLOOR	G	A	895			
64								
65	1	SKYLIGHT AND ASSOCIATED STRUCTURES C/O:			818			
66	(EST 14')	DIA) INCLUDING DBL GLAZE WINDOW,			825			
67	(1)	ROOF TOP CIRCULAR WALL PARTITION AROUND SKYLIGHT, CONCRETE CAST PANELS, 7" THCK, 18'DX7'H	G G	V G				
68	(1)	ROOF TOP COVER, LOUVER COVER, ELECTRIC MTR ACTUATED, 4" SQ STL FRAME UPRIGHTS, 8" U CHANNEL CROSS BEAMS, 18'X18'						
69								
70	1	LOT C/O OF DOORS THROUGHOUT (NOT SPECIFICALLY LISTED ABOVE)	V G	V G				
71	(2)	GLASS DOOR, EXTERIOR, DBL GLAZE, 39" STEEL FRAME, POWDER COAT OR SIMILAR			849			

Furniture, Fixtures & Equipment Certification  
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LAMETRO  
 PURPLE LINE EXTENSION  
 PARCEL NO. W-3002

NEW PACIFIC REALTY  
 FAIR MARKET VALUE IN-PLACE  
 DATE OF VALUE: APRIL 27, 2016

L I N E	Q T Y	DESCRIPTION:	C O N D	Q U A L	P I C #	RCN	FMV IN PLACE	FLV
72	(7)	INTERIOR DOORS, 42"X9', WOOD ENAMEL PAINT AND HARDWARE			850			
73	(1)	GLASS DOOR, SS KICK, 1/2"			851			
74	(2)	POCKET DOORS, 44"X108"(BREAKROOM) INSULATED W/ AIRSEAL, SOLID CORE, BAKED RESIN OR ENAMEL FINISH						
75								
76	1	LOT C/O INTERIOR CONSTRUCTION (BREAKROOM) BAKED RESIN OR ENAMEL FINISH	V	G	853			
77	(7.2)	LF WALL CABINETS, WOOD/PLASTIC VENEER EXTERIOR, 30"H	G		857			
78	(7)	LF UNDER CABINET LIGHTING, FLUOR,						
79	(9)	LF CABINETS, MATCHING, 36"H						
80	(9)	LF MATCHING COUNTER/BASE CABINETS, 12"X12" SS SINK, SGF, WATER FILTRATION SYSTEM						
81	(1)	REFER ENCLOSURE CABINET, OPEN FACE, 28"X88"H						
82	(1)	REFER, FAGOR INNOVATION, SS, O/UNDER, 24"X77"						
83								
84	1	ROOF TOP HVAC PARTITIONS, WELDED STL FRAME AND SHEET MTL LOUVERS (FIXED), POWDER COATED OR EQUIVALENT FINISH (195)LFX5'H	V	G	826			
85								
86	1	LOT C/O SKYLIGHTS, DBL GLAZE	G	V	828			
87	(1)	6'X12'						
88	(2)	17'X4'						
89								
90	4	CELL ZONE EXTENDER, Z BOOST SYSTEM, (BASIS MDL ZB560Y 7500SF)	G	V	831			
91								
92		EXTERIOR STOREFRONT						
93	1	CONSTRUCTION C/O:	V	V				
94	(1)	CANOPY, 100LFX8 7', WELDED STL PLATE COVER, CURVED TO BUILDING PERIMETER	G	G	883			
95	(1)	STOREFRONT ACCENT TRIM, 2" STL TUBE, POWDER COATED OR EQUIVALENT, EST 5" O.C., 2 SECTIONS, (111'X10'H) AND (111'X4'H)			827			
96	(94)	LF STOREFRONT WINDOW AND PARTIONS, 3/8", (30)LF OF GLASS IS CURVED TO BUILDING CONTOUR, STL/POWDER COATED FRAME						
97								
98		EXTERIOR REAR PARKING						



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 PARCEL NO. W-3002

NEW PACIFIC REALTY  
 FAIR MARKET VALUE IN-PLACE  
 DATE OF VALUE: APRIL 27, 2016

L I N E	Q T Y	DESCRIPTION:	C O U N T Y	Q U A N T I T Y	PIC #	RCN	FMV IN PLACE	FLV
99		(1) WALKWAY PARTITION, CONCRETE PANEL, MTL CAP, 17'X4'	G	G	897			
100		(2) WALL, GREEN WELDED WIRE MESH GRID PANELS, MTL FRAME, 45'X8' AND 45'X12'H. VINE LATTICE			898			
101		(1) ROLLING GATE, ELECTRIC DORENNE MOTOR, 35LFX6'H, 2'X3" WELDED STL FRAME, WELDED SHT MTL PANEL.			901			
102		(1) MATCHING MAN GATE						
103		(1) MATCHING TRASH BIN ENCLOSURE, 4'X8'						
104								
105	1	EXTERIOR PATIO STRUCTURE C/O:	G	V				
				G				
106		(1) SPIRAL STAIRCASE, W/ 4'X10' CAT WALK, SOLID STL WELDED HAND RAIL AND GUARD, WOOD FLOOR COVER (BRAZILIAN IPE TEAK), 16 STEP, 13'H			844			
107		(1) PATIO DECK, 35'X12', IPE TEAK DECK, W/ 3.5" WELDED STEEL-ROD HAND RAILING AND GUARD			845			
108		(1) EXTERIOR STAIRCASE TO GROUND FLOOR, 4'X15.5' LANDING, W/CONCRETE DECKING, (1) DIRECTIONAL LANDING, 10'H			843			
109								
110	1	SIGNAGE (SS)						
111		(2) INDIVIDUAL LETTERS, MTL WATERJET CUT, SET OF 10 AT 4", AND 14 AT 3"			872			
112		(10) INDIVIDUAL LETTERS, MTL WATERJET CUT, EST 12"H "NEW PACIFIC"						
113		(3) LETTERS, MTL WATERJET CUT, EST 6"			882			
114								
115	1	MOUNTED ART (COULD BE MOVEABLE)(MARKET VALUE ONLY)						
116		(1) CEILING ACCENT, (7'X12') W/1/2"X1/2" WOOD SLAT SECTION PANELS, PAINTED-LOBBY	V	V	852			
			G	G				
117		(1) WALL ART, 14 PANEL, PRINT OVER SHT MTL-FRONT ENTRANCE(EST 110SF)			875			
118		(1) STOREFRONT ART PIECE, SS RECTANGLE, CRUSHED, 1'X1'X8'H			883			
119								
120	1	PREMIUM FEES( THIS IS A PREMIUM ADDITION TO TYPICAL FEES ALREADY INCLUDED)						
121		ARCHITECT						
122		PERMITS						
123								
124	1	DOOR ACCES SYSTEM AT 4 DOORS, INCLUDES ACCES KEY PAD, INTERCOM, INTERIOR PRE RELEASE SENSOR, LOCKING/UNLOCK, REMOTE OPERATION						

Furniture, Fixtures & Equipment Certification  
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LAMETRO  
 PURPLE LINE EXTENSION  
 PARCEL NO. W-3002

NEW PACIFIC REALTY  
 FAIR MARKET VALUE IN-PLACE  
 DATE OF VALUE: APRIL 27, 2016

L I M I T E D	Q T Y	DESCRIPTION:	C O N D I T I O N	Q U A N T I T Y	PIC #	RCN	FMV IN PLACE	FLV
125								
126	1	ALARM SYSTEM ESTIMATE:	A	A				
127		(5) DOOR CONTACTS						
128		(10) MOTION DETECTORS						
129		(12) GLASS BREAK DETECTORS						
130								
131	1	SURVEILLANCE SYSTEM INCLUDING:	A	A				
132		(7) EXTERIOR CAMERAS						
133		(1) RECORDER, CPU OPTIPLEX 755						
134		(1) MONITOR, ACER 17"						
135								
136	1	MISC SIZE SALES ROOM PARTIONS, (30)LFX9'H TOTAL, DBL SIDE WOOD FRAME DRYWALL, SANDED/PAINTED	V	A	892			
137								
138	1	LOT C/O IT AND PHONE EQUIPMENT:	G	A	859			
139		(1) SERVER RACK, ICC, 24"X70"						
140		(1) IP VOICE SYSTEM SHORE TEL, PBX VOIP						
141		SHORE GEAR 30 IP VOICE SWITCH						
142		SHORE GEAR TEL-1						
143		SHORE GEAR CONCENTRATOR 4500, BUNDLE						
144		SHORE GEAR 40/8						
145		(1) PHONE SETS MISC MDLS						
146		(3) SHORETEL 655						
147		(4) SHORETEL 230						
148		(1) SPEAKER PHONE, POLYCOM VOICE STATION						
149		100 (1) SPEAKER PHONE, POLYCOM VOICE STATION						
150		(7) SHORETEL 560						
151		(1) SERVER, DELL, POWER EDGE R610						
152		(1) FIREWALL, DELL, SONIC WALL, TZ210						
153		(1) MODEM, 3 COM, SDSL						
154		(1) ETHERNET SWITCH 3 COM, 2953-SFP PLUS						
155		(1) SMART SWITCH, D-LINK, DES-1526						
156		(1) SWITH, NET GEAR PROSAFE 24						
157		(1) DIGITALCABLE SET TOP BOX, MOTOROLA, DCX3200, HDMI						
158		(1) CPU, REAL COMPUTER, HYPERX						
159		(3) UPS-TRIP LITE, SMART PRO						
160		(1) INSTALLATION-LABOR/MATERIALS INCLUDING (2) CAT 6 48 PORT AND (1) CAT 6 24 PORT PATCH PANEL ESTIMATE 60 LINES AT 70LF/EA						
161								
162								
163		TOTAL IMPROVEMENTS PERTAINING TO THE REALTY ROUNDED						



Board Report

File #: 2017-0287, File Type: Policy

Agenda Number:

REGULAR BOARD MEETING  
MAY 25, 2017

**SUBJECT: PURPLE LINE WESTSIDE SUBWAY EXTENSION TRANSIT PROJECT SECTION 2**

**ACTION: ADOPT RESOLUTION OF NECESSITY TO ACQUIRE PARCEL W-3602**

**RECOMMENDATION**

CONSIDER:

- A. HOLDING a public hearing on the proposed Resolution of Necessity; and
- B. ADOPTING the **Resolution of Necessity authorizing the commencement of an eminent domain action to acquire Project Parcel W-3602 (APN: 4309-001-008), the Purple Line Westside Subway Extension Transit Project Section 2**, consisting of a temporary construction easement and a permanent subsurface tunnel easement (hereinafter the "Property" as identified in Attachment A).

(REQUIRES 2/3 VOTE OF THE BOARD)

**BACKGROUND**

Acquisition of the Property is required for the construction of and operation of the Purple Line Westside Subway Extension Project, Section 2 ("Project"). A written offer was presented to the Owner of Record, Automobile Club of Southern California ("Owner"), as required by California Government Code Section 7267.2. The Owner has rejected the offer made by the Los Angeles County Metropolitan Transportation Authority ("LACMTA"), and requested that we initiate the eminent domain process to determine the value of the property. The Property is necessary for construction of the Project; therefore, staff recommends the acquisition of the Property through eminent domain to determine the value of the Property and to maintain the Project schedule.

In accordance with the provisions of the California Eminent Domain law and Sections 30503, 30600, 130051.13, 130220.5 and 132610 of the California Public Utilities Code (which authorize the public acquisition of private property by eminent domain), LACMTA has prepared and mailed notice of this hearing to the Owner informing them of their right to appear at this hearing and be heard on the following issues: (1) whether the public interest and necessity require the Project; (2) whether the Project is planned or located in the manner that will be most compatible with the greatest good and the least private injury; (3) whether the Property is necessary for the Project; (4) whether either the

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offer required by Section 7267.2 of the Government Code has been made to the Owner, or the offer has not been made because the Owner cannot be located with reasonable diligence; and (5) whether environmental review of the Project has complied with the California Environmental Quality Act (CEQA).

Attached is the Staff Report prepared by staff and legal counsel setting forth the required findings for acquiring the Property through the use of eminent domain (Attachment B). After LACMTA receives testimony and evidence from all interested parties, the LACMTA must make a determination as to whether to acquire the Property by eminent domain and adopt the proposed Resolution of Necessity (Attachment C). The Board must find and determine that based upon all the evidence and the existence of the above stated conditions, acquisition by eminent domain is necessary; and a two-thirds vote of all the members of its governing body is required to adopt the Resolution of Necessity.

### **DETERMINATION OF SAFETY IMPACT**

This Board action will not have an impact on LACMTA's safety standards.

### **FINANCIAL IMPACT**

The funding for the acquisition of the Property is included in the approved fiscal year 2017, Project budget under Measure R Project 865522 (Purple Line Westside Extension Project, Section 2), in Cost Center 8510, and Account Number 53103 (Acquisition of Land).

#### **Impact to Budget**

The approved FY17 Measure R 35% funding budget is designated for the Westside Purple Line Extension, Section 2, and does not have an impact to operations funding sources. The funds were assumed in the Long Range Transportation Plan for the Project. This Project is not eligible for Proposition A and C funding due to the proposed tunneling element of the Project. No other funds were considered.

### **NEXT STEPS**

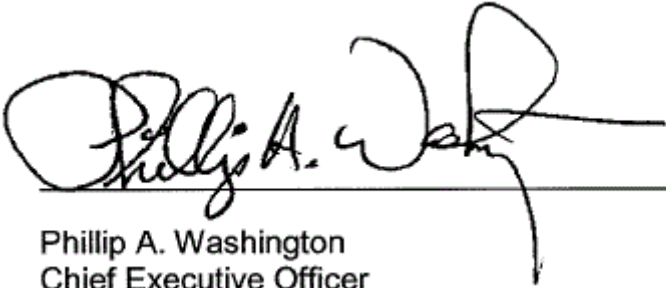
If this action is approved by the Board, LACMTA's condemnation counsel will be instructed to take all steps necessary to commence legal proceedings in a court of competent jurisdiction to acquire the Property interest by eminent domain. Counsel will also be directed to seek and obtain an Order of Prejudgment Possession in accordance with the provisions of the eminent domain law.

### **ATTACHMENTS**

Attachment A - Site Plan  
Attachment B - Staff Report  
Attachment C - Resolution of Necessity

Prepared by: Velma C. Marshall, Deputy Executive Officer - Real Estate, (213) 922-2415  
Calvin E. Hollis, Senior Executive Officer, (213) 922-7319

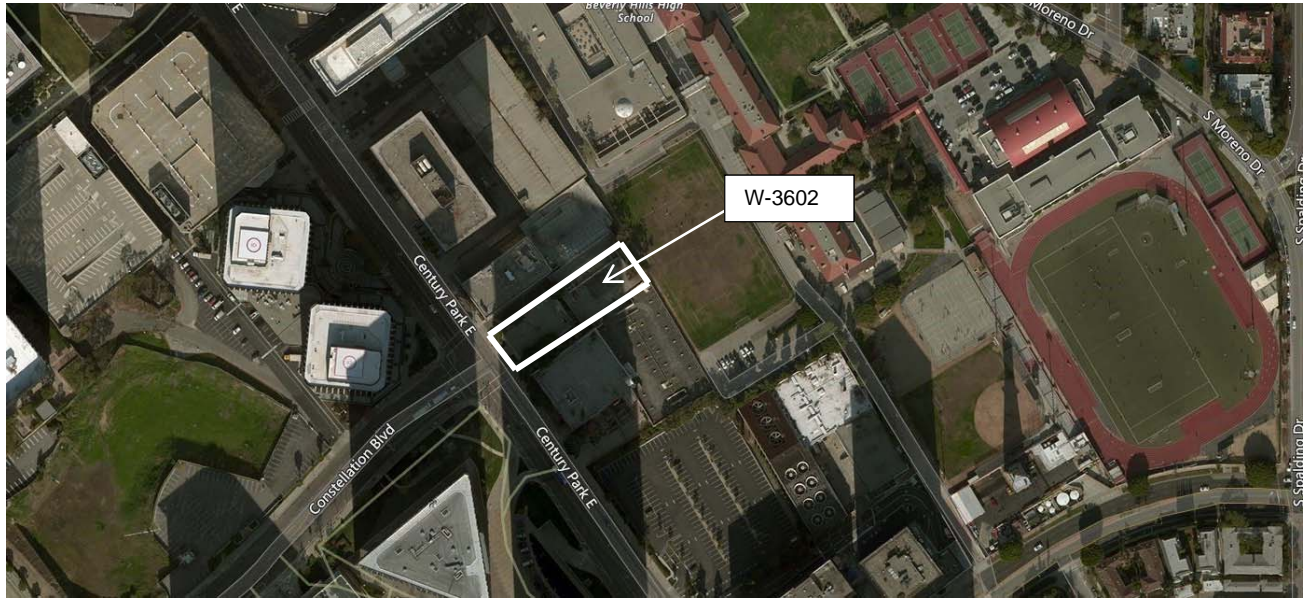
Reviewed by:       Therese W. McMillan, Chief Planning Officer, (213) 922-7077



Phillip A. Washington  
Chief Executive Officer

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**ATTACHMENT A**



Automobile Club of Southern California, a California nonprofit corporation  
1950 Century Park East, Los Angeles, CA  
APN: 4319-001-008

**ATTACHMENT B**

**STAFF REPORT REGARDING THE NECESSITY FOR THE ACQUISITION OF PARCEL NO. W-3602 (THE "PROPERTY") FOR THE PURPLE LINE (WESTSIDE) SUBWAY EXTENSION TRANSIT PROJECT SECTION 2**

**BACKGROUND**

The Property is required for the construction and operation of the Purple Line Westside Extension Project Section 2 ("Project"). The address, record owner, physical description, and nature of the property interest sought to be acquired for the Project are summarized as follows:

<b>Assessor's Parcel</b>	<b>Parcel Address</b>	<b>Property Owner</b>	<b>Purpose of Acquisition</b>	<b>Property Interest(s)</b>
4319-001-008	1950 Century Boulevard, Los Angeles, CA 90067	Automobile Club of Southern California	Construction of an access shaft for the Constellation Station and tunnel alignment.	Temporary Construction Easement for 98 months and a Subsurface Tunnel Easement

A written offer for the Property comprising Parcel W-3602 was mailed to the owner by letter dated February 22, 2017 for acquisition of (a) subsurface tunnel easement encompassing 19,535 square feet; and (b) a temporary construction easement over the entire 29,852 square feet of the Property for 98 months including the use of the office building located on the surface ("Property Interests). The Owner did not accept the offer of just compensation and requested that the eminent domain process be initiated to determine the value of the Property.

**A. The public interest and necessity require the Project.**

The need for the Project is based on population and employment growth, the high number of major activity centers served by the Project, high existing transit usage, and severe traffic congestion. The Project area bisects 12 large population and employment centers, all of which are served by extremely congested road networks that will deteriorate further with the projected increase in population and jobs. This anticipated growth will further affect transit travel speeds and reliability, even with a dedicated lane for express bus service on Wilshire Boulevard. The public interest and necessity require the Project for the following specific reasons:

1. The population and employment densities in the Project area are among the highest in the metropolitan region. Approximately five percent of the Los Angeles County population and 10 percent of the jobs are concentrated in the Project area.

2. Implementation of the Project will result in a reduction of vehicle miles per day and reduction of auto air pollutants.
3. The Project will relieve congestion on the already over capacity 1-405 San Diego and the 1-10 Santa Monica Freeways and surrounding major thoroughfares. In addition, it will reduce the parking demands in the Westside area by providing an alternative means of transportation, competitive in rush-hour travel times with the automobile.
4. The Project will be a major link in the existing county-wide rail transit system, and will thereby provide alternative means of transportation during fuel crises and increased future traffic congestion.
5. The Project will improve transportation equity by meeting the need for improved transit service of the significant transit-dependent population within the Project area.
6. The Project will help meet Regional Transit Objectives through the Southern California Association of Governments' (SCAG's) Performance Indicators of mobility, accessibility, reliability, and safety.

It is recommended that based on the above evidence, the Board find and determine that the public interest and necessity require the Project.

**B The Project is planned or located in the manner that will be most compatible with the greatest public good and least private injury.**

An Alternatives Analysis (AA) Study was initiated in 2007 to identify all reasonable, fixed-guideway, alternative alignments and transit technologies within the proposed Project Area. The fixed-guideway alternative alignments studied and analyzed during the AA process were heavy rail transit (HRT), light rail transit (LRT), bus rapid transit (BRT), and monorail (MR). Due to its capacity to meet the anticipated ridership demand and limit the number of transfers, HRT was identified as the preferred technology for further study.

In January 2009, the Metro Board approved the AA Study and authorized preparation of a Draft Environmental Impact Statement/Draft Environmental Impact Report (DEIS/DEIR). A total of seven alternatives, including five heavy rail subway (HRT) Build Alternatives, a No Build Alternative, and a relatively low-cost Transportation System Management (TSM) Alternative, were presented in the DEIS/DEIR. The DEIS/DEIR was circulated and reviewed by interested and concerned parties, including private citizens, community groups, the business community, elected officials and public agencies. Public hearings were held to solicit citizen and agency comments.

In October 2010, the Board approved the DEIS/DEIR and the Wilshire Boulevard to Santa Monica HRT option was selected as the Locally Preferred Alternative (LPA) for further analysis in the FEIS/FEIR. The FEIS/FEIR was released in March 2012 for public review. On April 26, 2012, the Board certified the FEIS/FEIR, and in May 24,



2012, it approved the route and station locations for the Project. A Record of Decision was received from the Federal Transit Administration in August of 2012.

The approved LPA will extend HRT (as subway) approximately nine (9) miles from the existing Metro Purple Line terminus at the Wilshire/ Western Station to a new western terminus at the West Los Angeles Veterans Affairs Hospital (Westwood/ VA Hospital Station). The LPA will include seven new stations spaced in approximately one-mile intervals, as follows:

- Wilshire/La Brea
- Wilshire/Fairfax
- Wilshire/La Cienega
- Wilshire/Rodeo
- Century City
- Westwood/UCLA
- Westwood/VA Hospital

The Project will cause private injury, including the displacement or relocation of certain owners and users of private property. However, no other alternative locations for the Project provide greater public good with less private injury. Therefore, the Project is planned or located in the manner that will be most compatible with the greatest public good and the least private injury.

Due to its bulk, the FEIS/FEIR is not physically included in the Board's agenda packet for this public hearing. However, the FEIS/FEIR documents should be considered in connection with this matter. It is recommended that, based upon the foregoing, the Board find and determine that the Project is planned or located in the manner that will be most compatible with the greatest public good and the least private injury.

**C. The Property is necessary for the Project.**

The Property is improved with a three-story office building that has a total building area of 24,773 square feet. The building will be maintained during the period of construction and will be used as a field office for the Project construction staff.

The Property Interests required consists of the following:

(a) a temporary construction easement over the entire 29,852 square feet of the Property for 98 months commencing October 31, 2017 or as soon thereafter as possession of the Property may be ordered by the Superior Court, including the use of the office building located on the surface as described in Exhibit A-1 and depicted in Exhibit B-1 for the uses described in Exhibit C of the Resolution of Necessity.

(b) a permanent subsurface tunnel easement encompassing 19,535 square feet as described in Exhibit A and depicted in Exhibits B-2 and B-3 for the uses described in

Exhibit C of the Resolution of Necessity. The easement is also required for construction of an access shaft in connection with the Constellation Station.

The Property was chosen based upon the approved FEIS/FEIR for the Project. Staff recommends that the Board find that the acquisition of the Property is necessary for the Project.

**D. An offer was made in compliance with Government Code Section 7267.2.**

California Code of Civil Procedure Section 1245.230 requires that a Resolution of Necessity contain a declaration that the governing body has found and determined that either the offer required by Section 7267.2 of the California Government Code has been made to the Owner, or the offer has not been made because the Owner cannot be located with reasonable diligence.

California Government Code Section 7267.2 requires that an offer be made to the Owner and in an amount which the agency believes to be just compensation. The amount must not be less than the agency's approved appraisal of the fair market value of the property. In addition, the agency is required to provide the Owner with a written statement of, and summary of the basis for, the amount it established as just compensation.

Staff has taken the following actions as required by California law for the acquisition of the Property:

1. Obtained appraisals to determine the fair market value of the Property, which included consideration of any immovable fixtures and equipment;
2. Reviewed and approved the appraisals, and established the amount it believes to be just compensation;
3. Determined the Owner of the Property by examining the county assessor's record, a preliminary title report, and occupancy of the Property;
4. Made a written offer to the Owner for the full amount of just compensation - which was not less than the approved appraised value;
5. Provided the Owner with a written statement of, and summary of the basis for, the amount established as just compensation with respect to the foregoing offer.

It is recommended that based on the above evidence, the Board find and determine that the offer required by Section 7267.2 of the California Government Code has been made to the Owner.

**E. Metro has fulfilled the necessary statutory prerequisites.**

Metro is authorized to acquire property by eminent domain for the purposes

contemplated by the Project under Public Utilities Code §§ 30503, 30600, 130051.13, and 130220.5; Code of Civil Procedure §§ 1230.010-1273.050; and Article I, § 19 of the California Constitution.

**F. Metro has complied with the California Environmental Quality Act.**

A draft EIR/EIS was circulated for public review and comment. The FEIS/FEIR was released in March 2012 for public review. On April 26, 2012, the Board certified the FEIS/FEIR, and in May 24, 2012, it approved the route and station locations for the Project. A Record of Decision was received from the Federal Transit Administration in August of 2012. The FEIS/FEIR documents therefore comply with the California Environmental Quality Act. Since that time, none of the circumstances identified in CEQA Guidelines Section 15162 have occurred which would require the preparation of a subsequent EIR. As set forth above, Metro has also fulfilled the statutory prerequisites under Code of Civil Procedure § 1240.030 and Government Code § 7267.2.

Accordingly, Metro has fulfilled the necessary statutory prerequisites to acquire the Property by eminent domain.

**CONCLUSION**

Staff recommends that the Board adopt the Resolution of Necessity.

**ATTACHMENT C**

**RESOLUTION OF THE  
LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
DECLARING CERTAIN REAL PROPERTY NECESSARY FOR PUBLIC PURPOSES  
AND AUTHORIZING THE ACQUISITION THEREOF  
PURPLE LINE WESTSIDE EXTENSION PROJECT, SECTION 2 - PARCEL NO. W-3602**

THE LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY HEREBY FINDS, DETERMINES, AND RESOLVES AS FOLLOWS:

Section 1.

THE LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY ("LACMTA") is a public entity organized and existing pursuant to Chapter 2 of Division 12 of the California Public Utilities Code (commencing with Section 130050).

Section 2.

The property interest described hereinafter is to be taken for public use, namely, for public transportation purposes and all uses necessary, incidental or convenient thereto, and for all public purposes pursuant to the authority conferred upon the Board to acquire property by eminent domain by California Public Utilities Code Sections 30000-33027, inclusive, and particularly Section 30503 and 30600, Sections 130000-132650, inclusive, and particularly Sections 130051.13 and 130220.5, Code of Civil Procedure Sections 1230.010-1273.050, inclusive, and particularly Sections 1240.510 and 1240.610, and Article I, Section 19 of the California Constitution.

Section 3.

The property interest consists of the acquisition of (a) subsurface tunnel easement encompassing 19,535 square feet as described more specifically in the legal description (Exhibit A), and depicted on the Plat Map (Exhibits B-2, and B-3); and (b) a temporary construction easement over the entire 29,852 square feet of the Property for 98 months including the use of the office building located on the surface as described more specifically in the legal description (Exhibit A-1) and depicted on the Plat Map (Exhibit B-1) all of which are incorporated herein by this reference.

Section 4.

(a.) The acquisition of the above-described Property is necessary for the development, construction, operation, and maintenance of the Purple Line (Westside) Subway Extension Project Section 2 ("Project");

(b.) The environmental impacts of the Project were evaluated in the Final Environmental Impact Statement/Final Environmental Impact Report (FEIS/FEIR), which was certified by the Board on April 26, 2012 and May 24, 2012. The Board found that in accordance with the California Environmental Quality Act (CEQA) Guidelines, Section 15162, no subsequent or supplemental Environmental Impact Report is required for the Project, and the FEIS/FEIR documents are consistent with CEQA; and;

(c.) The Board has reviewed and considered the FEIS/FEIR, before and as part of the process of determining whether to acquire the above-referenced Property.

#### Section 5.

The Board hereby declares that it has found and determined each of the following:

(a.) The public interest and necessity require the proposed Project;

(b.) The proposed Project is planned or located in the manner that will be most compatible with the greatest public good and the least private injury;

(c.) The Property sought to be acquired, which has been described herein, is necessary for the proposed Project;

(d.) The offer required by Section 7267.2 of the Government Code has been made to the Owner; and

(e.) Environmental review consistent with the California Environmental Quality Act (CEQA) for the Project has been previously certified by this Board.

#### Section 6.

Pursuant to Sections 1240.510 and 1240.610 of the Code of Civil Procedure, to the extent that the Property is already devoted to a public use, the use to which the Property is to be put is a more necessary public use than the use to which the Property is already devoted, or, in the alternative, is a compatible public use which will not unreasonably interfere with or impair the continuance of the public use to which the Property is already devoted.

#### Section 7.

That notice of intention to adopt this resolution was given by first class mail to each person whose Property is to be acquired by eminent domain in accordance with Section 1245.235 of the Code of Civil Procedure and a hearing was conducted by the Board on the matters contained herein.

Section 8.

Legal Counsel is hereby authorized and directed to take all steps necessary to commence legal proceedings, in a court of competent jurisdiction, to acquire the Property described above by eminent domain. Counsel is also authorized and directed to seek and obtain an Order for Prejudgment Possession of said Property in accordance with the provisions of the eminent domain law and is directed that the total sum of probable just compensation be deposited with the State Treasurer or the Clerk of the Superior Court. Counsel may enter into stipulated Orders for Prejudgment Possession and/or Possession and Use Agreements, where such agreements constitute the functional equivalent of an Order for Prejudgment Possession. Counsel is further authorized to correct any errors or to make or agree to any non-material changes to the legal description of the real property that are deemed necessary for the conduct of the condemnation action or other proceedings or transactions required to acquire the Property.

Counsel is further authorized to compromise and settle such eminent domain proceedings, if such settlement can be reached, and in that event, to take all necessary action to complete the acquisition, including stipulations as to judgment and other matters, and causing all payments to be made. Counsel is further authorized to associate with, at its election, a private law firm for the preparation and prosecution of said proceedings.

I, MICHELLE JACKSON, Secretary of the Los Angeles County Metropolitan Transportation Authority, do hereby certify that the foregoing Resolution was duly and regularly adopted by a vote of two-thirds of all the members of the Board of the Metropolitan Transportation Authority at a meeting held on the 25th day of May, 2017.

\_\_\_\_\_  
MICHELLE JACKSON  
LACMTA Secretary

Date: \_\_\_\_\_

**ATTACHMENTS**

- 1 - Exhibit A (Subsurface Tunnel Easement Legal Description)
- 2 - Exhibit A-1 (Office Building Legal Description)
- 3 - Exhibit B-1 (Office Building Plat Map)
- 4 - Exhibit B-2 (Subsurface Tunnel Easement Plat Map)
- 5 - Exhibit B-3 (Subsurface Tunnel Easement Plat Map)
- 6 - Exhibit C (Temporary Construction Easement)

**Exhibit A**  
**Subsurface Tunnel Easement Legal Description**

LEGAL DESCRIPTION

EXHIBIT "A"

THAT PORTION OF LOT 4 OF TRACT NO. 26196, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 684, PAGES 78 THROUGH 86 INCLUSIVE OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, CONVEYED TO AUTOMOBILE CLUB OF SOUTHERN CALIFORNIA BY CORPORATION GRANT DEED RECORDED OCTOBER 25, 1962, AS INSTRUMENT NO. 1590, OFFICIAL RECORDS OF SAID COUNTY, LYING WITHIN THE FOLLOWING DESCRIBED PARCEL OF LAND:

COMMENCING AT THE CENTERLINE INTERSECTION OF CENTURY PARK EAST AND CONSTELLATION BOULEVARD MARKED BY FOUR PUNCHMARKS ON A SEWER MANHOLE AS PER CITY OF LOS ANGELES FIELD BOOK 132-161, PAGE 121; THENCE SOUTH 35°33'52" EAST, 274.91 FEET ALONG SAID CENTERLINE OF CENTURY PARK EAST TO THE WESTERLY PROLONGATION OF THE SOUTHERLY LINE OF SAID LOT 4; THENCE NORTH 59°26'08" EAST 43.16 FEET ALONG SAID WESTERLY PROLONGATION TO THE SOUTHERLY CORNER OF SAID LOT 4; THENCE NORTH 35°33'52" WEST, 322.06 FEET ALONG THE WESTERLY LINE OF SAID LOT 4 TO THE NORTHERLY LINE OF SAID GRANT DEED; THENCE SOUTH 35°33'52" EAST, 16.92 FEET ALONG SAID WESTERLY LINE OF SAID LOT 4 AND THE WESTERLY LINE OF SAID GRANT DEED TO A POINT ON A NON-TANGENT CURVE CONCAVE SOUTHEASTERLY HAVING A RADIUS OF 1875.50 FEET, A RADIAL LINE TO SAID POINT BEARS NORTH 38°50'02" WEST, SAID POINT BEING THE POINT OF BEGINNING; THENCE NORTHEASTERLY ALONG SAID CURVE 229.88 FEET THROUGH A CENTRAL ANGLE OF 07°01'22" TO A POINT ON A NON-TANGENT CURVE CONCAVE SOUTHEASTERLY HAVING A RADIUS OF 3587.35 FEET, A RADIAL LINE TO SAID POINT BEARS NORTH 31°32'43" WEST; THENCE NORTHEASTERLY ALONG SAID CURVE 57.38 FEET THROUGH A CENTRAL ANGLE OF 00°54'59" TO A POINT ON THE EASTERLY LINE OF SAID LOT 4, SAID POINT BEING SOUTH 30°33'52" EAST, 22.45 FEET ALONG SAID EASTERLY LINE FROM THE MOST NORTHERLY CORNER OF SAID GRANT DEED; THENCE SOUTH 30°33'52" EAST, 69.70 FEET ALONG SAID EASTERLY LINE TO A POINT ON A NON-TANGENT CURVE CONCAVE SOUTHEASTERLY HAVING A RADIUS OF 3573.99 FEET, A RADIAL LINE TO SAID POINT BEARS NORTH 30°23'17" WEST; THENCE SOUTHWESTERLY ALONG SAID CURVE 73.15 FEET THROUGH A CENTRAL ANGLE OF 01°10'22" TO A POINT ON A NON-TANGENT CURVE CONCAVE SOUTHEASTERLY HAVING A RADIUS OF 1784.50 FEET, A RADIAL LINE TO SAID POINT BEARS NORTH 31°52'41" WEST; THENCE SOUTHWESTERLY ALONG SAID CURVE 208.07 FEET THROUGH A CENTRAL ANGLE OF 06°40'50" TO SAID WESTERLY LINE OF SAID LOT 4; THENCE NORTH 35°33'52" WEST, 67.78 FEET ALONG SAID WESTERLY LINE TO THE POINT OF BEGINNING.

EXCEPT ALL MINERALS, OIL, GAS AND HYDROCARBONS IN AND UNDER SAID LAND BUT WITHOUT RIGHT OF ENTRY UPON THE SURFACE OR UPPER 500 FEET (MEASURED FROM THE SURFACE) OF SAID LAND, AS RESERVED BY FOX REALTY CORPORATION OF CALIFORNIA, IN DEED RECORDED APRIL 17, 1961 IN BOOK D 1190 PAGE 104, OFFICIAL RECORDS.

THE UPPER ELEVATION LIMIT OF THE SUBSURFACE EASEMENT HEREIN DESCRIBED IS A DIAGONAL PLANE RANGING FROM AN APPROXIMATE ELEVATION OF +228 FEET TO +232 FEET MEAN SEA LEVEL AND THE LOWER ELEVATION LIMIT OF THE SUBSURFACE EASEMENT HEREIN DESCRIBED IS A DIAGONAL PLANE RANGING FROM AN APPROXIMATE ELEVATION OF +191 FEET TO +186 FEET MEAN SEA LEVEL BASED ON THE CITY OF LOS ANGELES PUBLISHED ELEVATION OF 285.39 FT FOR BENCH MARK NO. 13-13450. THE UPPER LIMIT OF THIS EASEMENT IS APPROXIMATELY 49 FEET TO 53 FEET BELOW FINISH GRADE (SURFACE ELEVATION), AND THE LOWER LIMIT OF THIS EASEMENT IS APPROXIMATELY 90 FEET TO 95 FEET BELOW FINISH GRADE (SURFACE ELEVATION). THESE DEPTH ELEVATIONS WERE DETERMINED FROM THE LOS ANGELES METRO WESTSIDE PURPLE LINE EXTENSION PROJECT - SECTION 2 PROJECT DEFINITION DRAWINGS.

AFFECTS APN: 4319-001-008

NOTE:

THIS LEGAL DESCRIPTION WAS NOT PREPARED FOR ANY PURPOSE THAT WOULD BE IN VIOLATION OF THE STATE OF CALIFORNIA SUBDIVISION MAP ACT OR LOCAL ORDINANCES OF THE GOVERNING BODY HAVING JURISDICTION.

PREPARED BY:

Janeen Nedlik  
JANEEN NEDLIK, P.L.S. 7563



May 3, 2017  
DATE



**Exhibit A-1**  
**Office Building Legal Description**

LEGAL DESCRIPTION

EXHIBIT "A"

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, SAID LAND CONVEYED TO AUTOMOBILE CLUB OF SOUTHERN CALIFORNIA BY CORPORATION GRANT DEED RECORDED OCTOBER 25, 1962, AS INSTRUMENT NO. 1590, OFFICIAL RECORDS OF SAID COUNTY, AND IS DESCRIBED AS FOLLOWS:

THAT PORTION OF LOT 4, TRACT NO. 26196, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 684 PAGES 78 THROUGH 86 INCLUSIVE OF MAPS, IN THE OFFICE OF THE RECORDER OF SAID COUNTY, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

**BEGINNING** AT THE MOST SOUTHERLY CORNER OF SAID LOT 4; THENCE NORTH 35° 46' 43" WEST, A DISTANCE OF 217.06 FEET ALONG THE WESTERLY LINE OF LOT 4, TO THE **TRUE POINT OF BEGINNING**; THENCE CONTINUING ALONG SAID WESTERLY LINE, NORTH 35° 46' 43" WEST, 105.00 FEET; THENCE NORTH 54° 13' 17" EAST, A DISTANCE OF 288.86 FEET TO THE EASTERLY LINE OF LOT 4, THENCE ALONG SAID EASTERLY LOT LINE, SOUTH 30° 46' 43" EAST, A DISTANCE OF 105.40 FEET; THENCE SOUTH 54° 13' 17" WEST, A DISTANCE OF 279.67 FEET TO THE **TRUE POINT OF BEGINNING**.

EXCEPT ALL MINERALS, OIL, GAS AND HYDROCARBONS IN AND UNDER SAID LAND BUT WITHOUT RIGHT OF ENTRY UPON THE SURFACE OR UPPER 500 FEET (MEASURED FROM THE SURFACE) OF SAID LAND, AS RESERVED BY FOX REALTY CORPORATION OF CALIFORNIA, IN DEED RECORDED APRIL 17, 1961 IN BOOK D 1190 PAGE 104, OFFICIAL RECORDS.

AFFECTS APN: 4319-001-008

NOTE:

THIS LEGAL DESCRIPTION WAS NOT PREPARED FOR ANY PURPOSE THAT WOULD BE IN VIOLATION OF THE STATE OF CALIFORNIA SUBDIVISION MAP ACT OR LOCAL ORDINANCES OF THE GOVERNING BODY HAVING JURISDICTION.

PREPARED BY:

*Janeen Nedlik*  
\_\_\_\_\_  
JANEEN NEDLIK, P.L.S. 7563



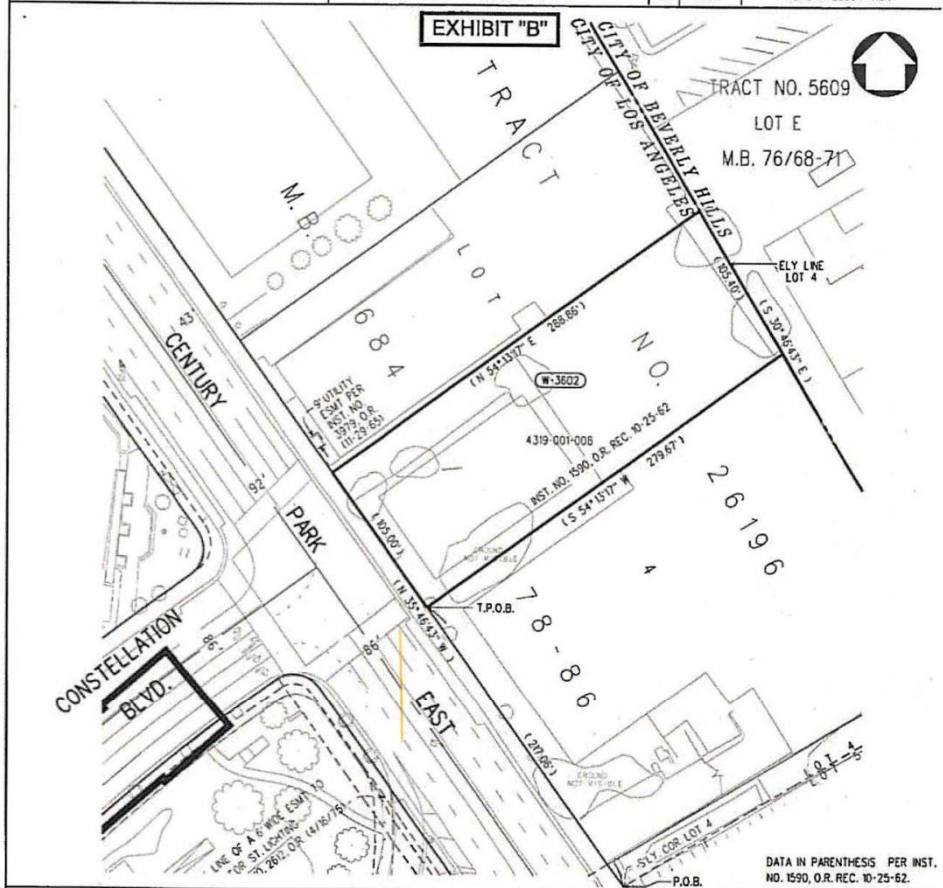
*April 27, 2015*  
\_\_\_\_\_  
DATE

**Exhibit B-1**  
**Office Building Plat Map**

**EXHIBIT B-1**

EXHIBIT B-1

GRANTOR : AUTOMOBILE CLUB OF SOUTHERN CALIFORNIA		The data shown on this map and/or plat are compiled from public sources and are subject to field verification.	
DESCRIPTION : PORTION OF LOT 4 OF TRACT NO. 26196, M.B. 684/78-86			
BENCH MARK :			
TITLE REPORT : ORANGE COAST TITLE NO. 140-1264287-32	ADDRESS : 1950 CENTURY PARK EAST LOS ANGELES 90067		
ASSESSOR'S REF. : 4319-001-009	R.O.W. REFERENCE : R-30361 W-3602	NO.	DATE
			REVISION DESCRIPTION



PARCEL	W-3602		
AREA - SQUARE FEET	29,852		

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY

**APPROVED BY:**

*Michael M. [Signature]* 11/1/14  
 MTA PROJECT MANAGER DATE

**PARCEL PLAT**

W-3602

SHEET 1 OF 1

CONTRACT NO./DESIGN UNIT	
SCALE	1"=80'
DATE	04/27/2015
DRAWN BY	T. RAINEY
CHECKED BY	J. NEOLIK
REV. DATE	REV. NO



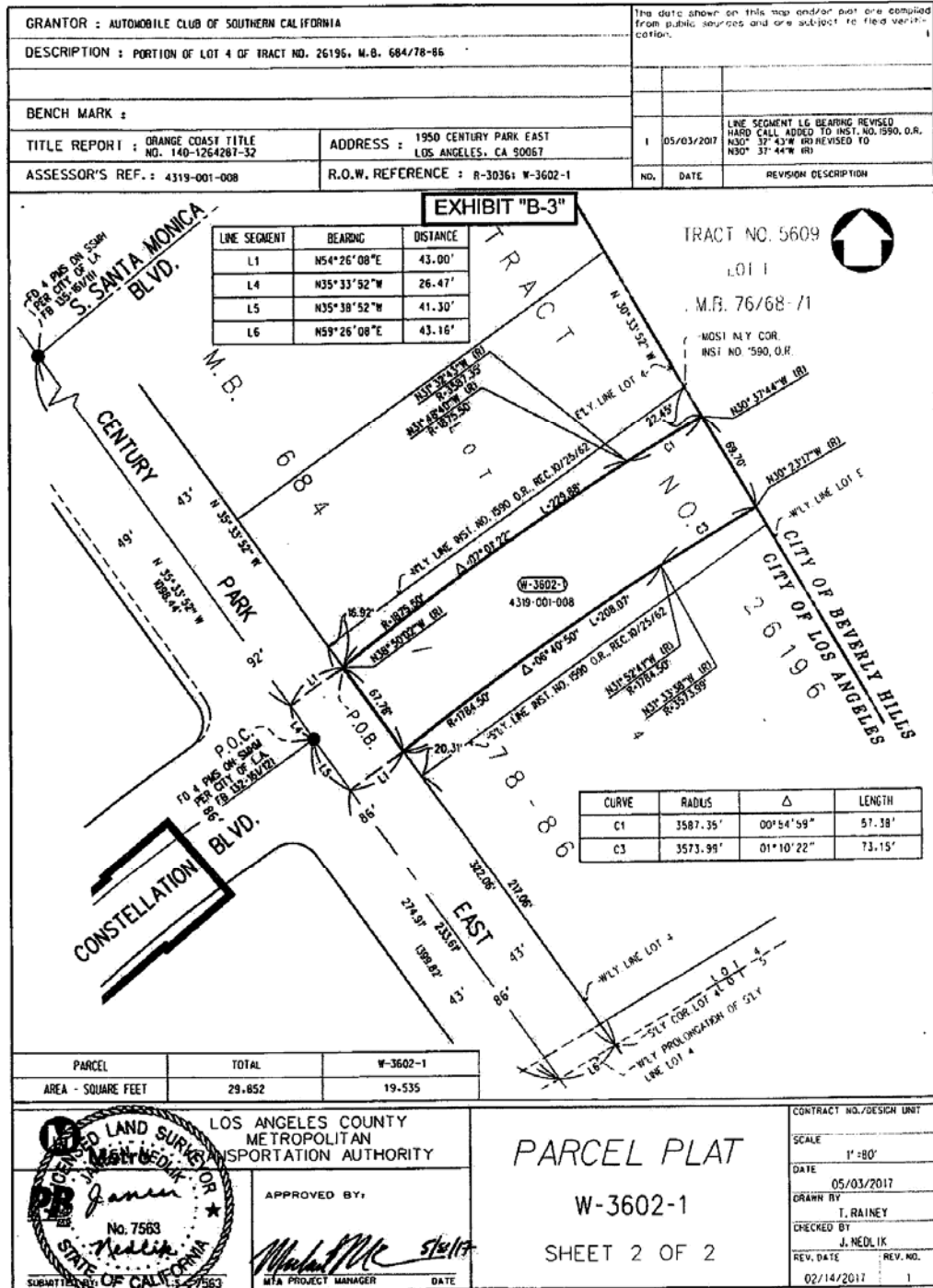
**Exhibit B-2**  
**Subsurface Tunnel Easement Plat Map**

**EXHIBIT B-2**

GRANTOR : AUTOMOBILE CLUB OF SOUTHERN CALIFORNIA		The data shown on this map and/or plat are compiled from public sources and are subject to field verification.	
DESCRIPTION : PORTION OF LOT 4 OF TRACT NO. 26196, M.B. 684/72-86			
BENCH MARK :			
TITLE REPORT : GRANGE COAST TITLE: 140-1264287-32	ADDRESS : 1950 CENTURY PARK EAST, LOS ANGELES, CA 90067	NO.	DATE
ASSESSOR'S REF. : 4319-001-008	R.O.W. REFERENCE : R-3036; W-3602-1	REVISED SO THAT THE SIGNATURE DATE MATCHES PARCEL PLAT SHEET 2 OF 2	
<b>EXHIBIT "B-2"</b>			
PARCEL	TOTAL	W-3602-1	
AREA - SQUARE FEET	29.852	19.535	
	LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY		<b>PARCEL PLAT</b> W-3602-1 SHEET 1 OF 2
	APPROVED BY: <i>Michael W. Steiner</i> METRO PROJECT MANAGER		

**Exhibit B-3**  
**Subsurface Tunnel Easement Plat Map**

**EXHIBIT B-3**





**Exhibit C**  
**Temporary Construction Easement**

**DESCRIPTION OF USES OF TEMPORARY CONSTRUCTION EASEMENT AND  
PERMANENT TUNNEL EASEMENT**

**TEMPORARY CONSTRUCTION EASEMENT**

The purpose and uses of the temporary construction easement shall include the following:

- (1) ingress and egress over, through, across, and under the Easement Area, by persons on foot and by vehicles of all kinds, sizes and weights;
- (2) storage in and upon the Easement Area of vehicles, equipment, and materials of all kinds and natures;
- (3) construction of temporary buildings, structures and other improvements in and upon the Easement Area, for any purpose reasonably related to the construction of a rapid transit system;
- (4) excavation within the Easement Area, or the storage area thereon of material excavated elsewhere, and the alteration of the surface elevation and grade thereof;
- (5) removal of the parking garage on the Property together with any trees, shrubs, or other vegetation from the Easement Area;
- (6) installation of temporary pipes, wires, or lines for water, gas, electric or telephone services, drainage, sewerage or other utilities on, across, over, under or through the Easement Area;
- (7) use of the office building as a field office for project design and construction personnel; and
- (8) all other uses necessary, incidental, convenient or useful to the construction by Grantee of a rapid transit system.

At the expiration of the easement, the easement area shall be restored as nearly as practicable to its condition at the time the easement commenced with the exception of reconstruction of the parking garage and the existence of subsurface foundations and soldier piles utilized in the construction of the access shaft and subsurface tunnels.

## **PERMANENT SUBSURFACE EASEMENT**

The purpose and uses of the permanent subsurface easement shall include the following:

**(a)** any usual, necessary and related uses necessary to construct, maintain, repair, operate, replace, relocate a rapid transit system including the right to remove an access shaft support system, together with the right to review plans and specifications for excavation or construction above or adjacent to the herein described easement area.