

Metro

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



Agenda - Final

Thursday, October 20, 2016

11:30 AM

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

Executive Management Committee

John Fasana, Chair

Eric Garcetti, Vice Chair

James Butts

Sheila Kuehl

Mark Ridley-Thomas

Carrie Bowen, non-voting member

Phillip A. Washington, Chief Executive Officer

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.

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.



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Copies of Agendas/Record of Board Action/Recordings of Meetings - (213) 922-4880 (Records Management Department)

General Information/Rules of the Board - (213) 922-4600

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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: 33, 34, 35, 36 and 42.

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

CONSENT CALENDAR

33. RECEIVE AND FILE **State and Federal Legislative Report.** [2016-0791](#)
Attachments: [October 2016 Leg Matrix](#)
34. RECEIVE AND FILE **the Chief Communications Officer's Quarterly Report.** [2016-0766](#)
35. RECEIVE AND FILE report on **Federal Freight Funding Program Update.** [2016-0748](#)
Attachments: [Attachment A - August 25, 2016 Motion #52 \(File #2016-0487\)](#)
[Attachment B – July 1, 2016 Letter from USDOT Secretary Foxx to Chairman SI](#)
[Attachment C – US DOT Proposed FY 2016 FASTLANE Project Awards](#)
[Attachment D - Letter from Federal Delegation to USDOT Secretary Foxx](#)
[Attachment E -- FUTURE FASTLANE GRANT CANDIDATE PROJECT INFORM](#)
[Attachment F – Metro Freight Corridor Implementation Working Group Roster](#)
36. RECEIVE AND FILE report back on **sustainability strategies, accomplishments and short and long-term plans related to green infrastructure, sustainability transportation and workforce development and resources** needs to implement Metro's sustainability program. [2016-0503](#)
Attachments: [Attachment A - Motion 57, Environmental and Sustainability Efforts](#)
[Attachment B - 2016 Energy and Resource Report Cover Page](#)
[Attachment C - Energy Management](#)
[Attachment D - Green Construction](#)

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42. RECEIVE AND FILE status report on Metro's Zero Emission Bus Plans. [2016-0778](#)

Attachments: [ATTACHMENT A BOARD MOTION APRIL 28, 2016](#)
[ATTACHMENT B - RESPONSES TO BOARD REQUEST FOR ZEB PLANS AP](#)
[ATTACHMENT C RAMBOLL ENVIRON REPORT SEPTEMBER 29 2016](#)
[ATTACHMENT D LIST OF TRANSIT OPERATORS RUNNING ZEBs](#)
[ATTACHMENT E IDENTIFIED ZEB SUPPLIERS](#)
[ATTACHMENT F NOISE LEVEL COMPARISON OF ZEB AND CONVENTION/](#)
[ATTACHMENT G METRO ROUTES MOST SUITABLE TO ZE OPS](#)
[ATTACHMENT H SUMMARY OF ZEB FUNDING OPPORTUNITIES](#)

(ALSO ON SYSTEM SAFETY, SECURITY AND OPERATIONS COMMITTEE)

NON-CONSENT

14. RECEIVE AND FILE report on **Metro's Program Management Plan**. [2016-0706](#)

Attachments: [Attachment A -Program Management Plan Board Presentation](#)
[Attachment B - Program Management Plan Executive Summary](#)

(ALSO ON CONSTRUCTION COMMITTEE)

37. RECEIVE oral report on **the potential role of public-private partnerships in delivering Metro projects**. [2016-0737](#)

Attachments: [P3 Presentation](#)

38. APPROVE revised **Property Naming Policy** with the addition of guidelines to implement and manage a Corporate Sponsorship/Naming Rights Program for the purpose of generating revenue or valued assets. (Attachment B) [2016-0789](#)

Attachments: [Attachment A - Property Naming Policy](#)
[Attachment B- Property Naming-Corporate Sponsorship Policy](#)
[Attachment C - ActiveSponsorshipsInTransit](#)
[Attachment D PropertyNamingCorporateSponsorship Presentation](#)

39. AUTHORIZE the Chief Executive Officer (CEO) to execute two five-year lease agreements ("Lease Agreements"), including an additional five (5) year option, with Peggy Nairn, dba Penny and Peggy Nairn 24-Hour Child Care, Inc., ("Nairn") to **develop, finance, and operate two childcare facilities in Metro-owned buildings located in Chatsworth and Sylmar**, at a first year annual lease amount of sixty thousand dollars [2016-0743](#)

20. CONSIDER AUTHORIZING the Chief Executive Officer: [2016-0765](#)

- A. to award a two-year, firm fixed price Contract No. PS2890900 to Del Richardson & Associates, Inc. for **professional services to operate the Metro Pilot Crenshaw/LAX Transit Project Business Solution Center** (BSC) in the amount of \$849,008 for the two-year period, subject to resolution of protest(s), if any; and
- B. to amend the FY17 budget in the amount of \$380,000 to fund the award of Contract No. PS2890900 for professional services to operate the pilot BSC.

Attachments: [Attachment A - Procurement Summary](#)
 [Attachment B - Motion 79](#)
 [Attachment C - DEOD Summary](#)

(ALSO ON CONSTRUCTION COMMITTEE)

- 43. APPROVE Motion by Directors Ridley-Thomas, Fasana and Bonin** [2016-0838](#)
that the Board of Directors direct the Chief Executive Officer (CEO) to dedicate up to \$1.2M towards the deployment of two or more multidisciplinary homeless outreach teams that are dedicated exclusively to the Metro system, take all actions necessary to transfer the funds to the County of Los Angeles to administer the program in coordination with the implementation of the Countywide Homeless Strategy Initiative, and report back to the Board of Directors during the FY17/18 budget cycle on whether ongoing funds for this initiative are warranted and recommended.

Adjournment

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.



Board Report

File #: 2016-0791, **File Type:** Informational Report

Agenda Number: 33.

**EXECUTIVE MANAGEMENT COMMITTEE
OCTOBER 20, 2016**

SUBJECT: STATE AND FEDERAL REPORT

ACTION: RECEIVE AND FILE

RECOMMENDATION

RECEIVE AND FILE **State and Federal Legislative Report.**

DISCUSSION

**Executive Management Committee
Remarks Prepared By Raffi Haig Hamparian
Government Relations Director, Federal Affairs**

Chairman Fasana and members of the Executive Management Committee, I am pleased to provide an update on a number of federal matters of interest to our agency. This report was prepared on October 6, 2016 and will be updated, as appropriate, at the Executive Management Committee meeting on October 20, 2016.

Federal Grants for Fiscal Year 2016

As you are well aware Chairman Fasana, Metro celebrated the award of the largest TIGER Grant received in the State of California at the end of August. Following the award of \$15 million through the U.S. Department of Transportation's TIGER Grant program for the Rosecrans/Marquardt Grade Separation Project, Metro was awarded another grant in September through the Federal Transit Administration under the Bus and Bus Facilities Program in the amount of \$10.5 million. Similar to TIGER, this award was the largest award in the State of California. The Federal funding will be used to replace some of the last remaining diesel buses being used by contract services (Bus Routes 125, 128, 130, 205, 232, 607 and 625). Metro's grant request also included an innovative workforce development component.

Most recently, just yesterday in fact, we were notified that our agency will be receiving a \$2 million Transit Oriented Development Grant from the Federal Transit Administration for the West Santa Ana Branch project. This is welcome news.

We are very appreciative of the strong partnership and confidence that U.S. Department of

Transportation has had and continues to have in our agency to delivery these and other critical federally funded projects.

Metro's Government Relations team will continue to actively seek Congressional support for our other grant applications which include an FTA Mobility on Demand Sandbox Program grant and an FHWA Advanced Transportation and Congestion Management Technology Grant. Both grants are expected to be announced in the near future.

Federal Appropriations for Fiscal Year 2017

As Federal Fiscal Year 2016 came to a close on September 30th, Congress was unable to agree on passing a full year funding bill and instead approved a short term Continuing Resolution that will fund the Federal Government at Fiscal Year 2016 levels until December 9, 2016.

We will be working to make sure the final federal spending bill includes \$100 million for the Regional Connector, \$100 million for Purple Line Extension (Segment 1), and \$100 million for Purple Line Extension (Section 2).

Local Hire

We are very pleased that our Board of Directors is circulating a letter calling on the Obama Administration - through the U.S. Department of Transportation - to make permanent their Local Hire Pilot Program.

At present, the U.S. Department of Transportation's (USDOT) Local Hire Pilot Program is slated to expire in March of 2017. Metro - through our America Fast Forward initiative - has been at the forefront of efforts to reform the USDOT's local hire rules. Specifically - in September of 2011 - our Board added the reforming of federal local hire rules to our existing America Fast Forward initiative. In November of 2013 Congresswoman Karen Bass introduced - after consulting with Metro - H.R. 3620 - The Local Hire Act. In December of 2014 - Congresswoman Bass was successful in embedding language in the Fiscal Year 2015 federal spending bill that permitted the use of local hire practices around the nation. The following year - in 2015 - the USDOT announced that they would be launching a Local Hire Pilot Program.

We look forward to securing a favorable reply to our Board's letter requesting that the Local Hire Pilot Program be made permanent.

Conclusion

I look forward to expanding on this brief report at the Executive Management Committee meeting with any new developments that occur in the days ahead.

This concludes my remarks before the committee. I would welcome the opportunity to answer any questions from you Mr. Chairman or from members of this committee.

Executive Management Committee

**Remarks Prepared By Michael Turner
Deputy Executive Officer Government Relations**

Conclusion of the 2015-16 Legislative Session

As of the writing of this report the Governor has concluded acting on all bills passed by the Legislature. The following summarizes some of the key actions taken by the Governor.

AB 2710 (Frazier) Vetoed

As expected Governor Brown issued a veto notice on AB 2710 (Frazier). The legislation would have outlined provisions for federal freight funds to be allocated through the Trade Corridors Improvement Fund (TCIF) program. The Governor, in the accompanying, directed the Secretary of Transportation to continue to work with the CTC, author to ensure that these funds are allocated to high-priority trade projects.

AB 1889 (Mullin) Signed into Law

The Governor also signed AB 1889 (Mullin), a Metro Board supported bill, into law. This bill clarifies language that secures funding for the “bookend” projects for the High Speed Rail project.

AB 620 (Hernandez) Signed into Law

Governor Brown also signed AB 620 (Hernandez) into law. The bill requires that Metro report to the legislature on outreach efforts to increase participation in the ExpressLanes Low Income Assistance Plan program in 2018. Metro Board of Directors opposed the original form of the bill that would have made substantial changes to the administration of the ExpressLanes program. The final version of the bill was amended to remove those provisions that would have negatively impacted program operations.

Major Greenhouse Gas Emissions Reduction Legislation Passes

At the end of session the Legislature passed and the Governor also signed a series of bills advancing the state’s GHG reductions programs. These include the following:

- SB 32 (Pavley) which extends the state’s basic GHG law and requires further emission reductions in that period.
- AB 197 (Garcia) which reforms the California Air Resources Board and implements additional legislative oversight.
- AB 1550 (Gomez) which restructures the requirements for allocating funds to disadvantaged communities.
- SB 824 (Beall) which will allow local agencies more flexibility in managing the cap and trade funds.
- AB 1613 (Committee on Budget) amends the Budget Act of 2016 to make

appropriations to GHG reduction programs, GGRF, including TIRCP, Sustainable Communities, Strategic Growth Council and other sustainability programs.

Assemblymember Chris Holden Holds Oversight Hearing at Metro

The Assembly Select Committee on Regional Transportation and Interconnectivity Solutions conducted an oversight hearing titled "Funding Transportation: Meeting the Challenge" on September 29th. Assemblymember Chris Holden who Chairs the Assembly Select Committee on Regional Transportation and Interconnectivity Solutions invited state government officials and a number of other members discussed timely transportation funding and policy issues for the state.

Potential Special Session on Transportation Funding

Legislative leadership in Sacramento continues to explore the possibility of acting in special session on a transportation funding proposal by the end of the year. While no date is scheduled for a vote the Chairmen of both policy committees are continuing discussions on their joint proposal and exploring the possibility of securing a two-thirds vote in each house. Metro's advocacy team is actively briefing key offices on our priorities to support a robust funding package that aggressively addresses Metro's key priorities.

The Legislative Analyst's Office issues The 2016-17 Budget: California Spending Plan

Each year, the Legislative Analyst's Office (LAO) publishes the California Spending Plan, a summary of the State's budget. This report highlights the evolution of the 2016-17 Budget Act from its January proposal, May revision and other major budget actions approved during 2016. The LAO finds that General Fund spending is up 6 percent from 2015-16 at \$122.5 billion with the State's reserve balance at \$8.5 billion as included in the June 2016 Budget package.

The Governor approved increases in spending for affordable housing, university funding, public safety, and Proposition 98. The LAO report makes mention of the Governor's special legislative session being unsuccessful in passing a comprehensive package to increase transportation funding. For transportation, the Governor and legislature approved \$15.5 billion in spending for transportation programs, a decrease of 3 percent from 2015-16 spending. The budget package was revised in August to include provisions that are outlined in Assembly Bill 1613 and Senate Bill 838, which detailed how state funds and cap-and-trade funds will be apportioned to transportation programs throughout the state.

Conclusion

We will expand on this brief report at the Executive Management Committee meeting with any new developments that occur in the days ahead.

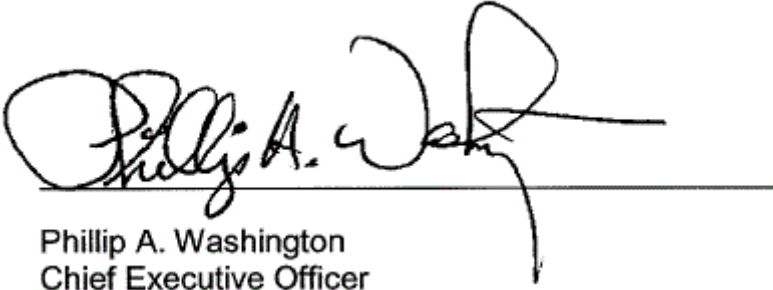
We welcome the opportunity to answer any questions from Mr. Chairman or from members of this committee.

ATTACHMENTS

Attachment A - October 2016 - Legislative Matrix

Prepared by: Michael Turner, DEO, Government Relations, (213) 922-2122
Raffi Hamparian, Director, Government Relations, (213) 922-3769

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



Phillip A. Washington
Chief Executive Officer

Los Angeles County Metropolitan Transportation Authority (Metro)
State and Federal Legislative Matrix
OCTOBER 2016
Metro Government Relations

STATE LEGISLATION

Bill ID/Topic	Location	Summary	Position
AB 33 Quirk D Electrical corporations: energy storage systems: long duration bulk energy storage resources.	9/26/2016-A. CHAPTERED 9/26/2016-Chaptered by Secretary of State - Chapter 680, Statutes of 2016.	Current law requires the Public Utilities Commission to open a proceeding to determine appropriate targets, if any, for each load-serving entity, as defined, to procure viable and cost-effective energy storage systems to be achieved by December 31, 2020. This bill would require the commission to evaluate and analyze the potential for all types of long duration bulk energy storage resources to help integrate renewable generation into the electrical grid, as specified. SUPPORT: Brookfield Renewable, Clean Power Campaign, EDF Renewable Energy, Eagle Crest Energy, Inc., San Diego County Water Authority OPPOSITION: None received	Monitor
AB 133 Committee on Budget Budget Act of 2015.	3/1/2016-A. CHAPTERED 3/1/2016-Chaptered by Secretary of State - Chapter No. 2, Statutes of 2016	The Budget Act of 2015 appropriated specified amounts for the support of state government for the 2015-16 fiscal year. This bill would amend the Budget Act of 2015 by adding and amending items of appropriation. This bill contains other related provisions. SUPPORT: None received OPPOSITION: None received	Monitor

**Los Angeles County Metropolitan Transportation Authority (Metro)
State and Federal Legislative Matrix
OCTOBER 2016
Metro Government Relations**

Bill ID/Topic	Location	Summary	Position
<p>AB 156 McCarty D</p> <p>Ammunition.</p>	<p>8/31/2016-A. DEAD 8/31/2016-Failed Deadline pursuant to Joint Rule 61(b)(17). (Last location was INACTIVE FILE on 6/30/2016)</p>	<p>Current law requires the Attorney General to maintain records, including fingerprints, licenses to carry concealed firearms, and information from firearms dealers pertaining to firearms, for purposes of assisting in the investigation of crimes and specified civil actions. In regard to certain of those records, current law authorizes specified peace officers to disseminate the name of the subject of the record, the number of firearms listed in the record, the description of any firearm, and other information reported to the Department of Justice, as specified, if the subject of the record has been arraigned, is being prosecuted, or is serving a sentence for domestic violence or is the subject of specified protective orders. This bill would require the Attorney General to also maintain information about ammunition transactions and ammunition vendor licenses for those purposes.</p> <p>SUPPORT: California Chapters of the Brady Campaign to Prevent Gun Violence, Coalition Against Gun Violence, a Santa Barbara County Coalition, Law Center to Prevent Gun Violence</p> <p>OPPOSITION: California Sportsman’s Lobby, California State Sheriffs’ Association, Crossroads of the Wes, Firearms Policy Coalition, National Rifle Association, National Shooting Sports Foundation, Outdoor Sportsmen’s Coalition of California, Safari Club International, Several individuals</p>	<p>Monitor</p>

Deferred=bill will be brought up at another time; Chaptered=bill has become law; LA=Last Amended; Enrolled=bill sent to Governor for approval or veto
Note: "Status" will provide most recent action on the legislation and current position in the legislative process. 10/7/2016

**Los Angeles County Metropolitan Transportation Authority (Metro)
State and Federal Legislative Matrix
OCTOBER 2016
Metro Government Relations**

Bill ID/Topic	Location	Summary	Position
<p>AB 326 Frazier D</p> <p>Public works: prevailing wage rates: wage and penalty assessments.</p>	<p>9/14/2016-A. CHAPTERED 9/14/2016-Chaptered by Secretary of State - Chapter 345, Statutes of 2016.</p>	<p>Current law provides that there is no liability for liquidated damages if a contractor, subcontractor, or surety deposits the full amount of the assessment or notice, including penalties, with the Department of Industrial Relations to hold in escrow pending administrative or judicial review. This bill would require the department to release the funds deposited in escrow plus interest earned to those persons and entities within 30 days following either the conclusion of all administrative and judicial review or upon the department receiving written notice from the Labor Commissioner or his or her designee of a settlement or other final disposition of an assessment issued, as specified, or from the authorized representative of the awarding body of a settlement or other final disposition of a notice issued, as specified.</p> <p>SUPPORT: Associated General Contractors (source), Associated Builders & Contractors of California, Construction Employers' Association, California Professional Association of Specialty Contractors, Southern California Contractors Association</p> <p>OPPOSITION: None received</p>	<p>Monitor</p>
<p>AB 338 Hernández, Roger D</p> <p>Los Angeles County Metropolitan Transportation Authority: transactions and use tax.</p>	<p>7/1/2016-S. DEAD 7/1/2016-Failed Deadline pursuant to Joint Rule 61(b)(13). (Last location was 2 YEAR on 7/17/2015)</p>	<p>Would authorize the Los Angeles County Metropolitan Transportation Authority (MTA) to impose an additional transportation transactions and use tax at a rate of 0.5%, for a period not to exceed 30 years, subject to various requirements, including the adoption of an expenditure plan and voter approval. This bill contains other related provisions and other existing laws.</p>	<p>Monitor</p>

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**Los Angeles County Metropolitan Transportation Authority (Metro)
State and Federal Legislative Matrix
OCTOBER 2016
Metro Government Relations**

Bill ID/Topic	Location	Summary	Position
AB 620 Hernández, Roger D High-occupancy toll lanes: exemptions from tolls.	9/28/2016-A. CHAPTERED 9/28/2016-Chaptered by Secretary of State - Chapter 738, Statutes of 2016.	Would require Los Angeles County Metropolitan Transportation Authority to take additional steps, beyond the previous implementation of a low-income assistance program, to increase enrollment and participation in the low-income assistance program, as specified, through advertising and work with community organizations and social service agencies. The bill would also require LACMTA and the Department of Transportation to report to the Legislature by December 31, 2018, on efforts to improve the HOT lane program, including efforts to increase participation in the low-income assistance program. This bill contains other existing laws. SUPPORT: None received OPPOSITION: None received	Neutral

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<p>AB 626 Chiu D</p> <p>Public contracts: claim resolution.</p>	<p>9/29/2016-A. CHAPTERED 9/29/2016-Chaptered by Secretary of State - Chapter 810, Statutes of 2016.</p>	<p>Current law applicable to state public contracts generally requires that the resolution of claims related to those contracts be subject to arbitration. Current law applicable to local agency contracts prescribes a process for the resolution of claims related to those contracts of \$375,000 or less. This bill would establish, for contracts entered into on or after January 1, 2017, a claim resolution process applicable to any claim by a contractor in connection with a public works project.</p> <p>SUPPORT: Air Conditioning Sheet Metal Association, Air-Conditioning & Refrigeration Contractors Association, Advanced Cable Solutions, Inc., Architectural Glass & Aluminum, Associated General Contractors, Ayoub & Perry Plumbing Co., Baker Electric, Big Sky Electric, California Chapters of the National Electrical Contractors Association, California Legislative Conference of the Plumbing, California-Nevada Conference of Operating Engineers, California State Association of Electrical Workers, California State Pipe Trades Council, Collins Electrical Company, Inc., Creative Shower Door Corp., Cupertino Electric, Inc., Electro Construction Corp., Finishing Contractors Association of Southern California, Fuller Electric, Giroux Glass, Inc., Heating and Piping Industry, International Union of Elevator Constructors, KBI Painting, Inc., Mike Cox Electric Company, Inc., Morrow-Meadows Corporation, Neal Electric Corp., Neubauer Electric, Inc., Northern California Allied Trades, Pacific Glazing Contractors, Painting and Decorating Contractors Association of Sacramento, Piping Industry Progress & Education Trust Fund, Pyramid Painting, Inc., Roundtree Glass Company, Santa Barbara Glass Company, Schetter Electric, Inc., Smith and Sons Electric, Inc., State Building and Construction Trades Council, AFL-CI, TNT Industrial Contractors, Inc., Wall and Ceiling Alliance, Western States Council of Sheet Metal Workers, 44 individuals</p> <p>OPPOSITION: San Diego County Regional Airport Authority</p>	<p>Monitor</p>

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Bill ID/Topic	Location	Summary	Position
<p>AB 779 Garcia, Cristina D</p> <p>Local government: financial disclosures.</p>	<p>8/18/2016-A. L. GOV. 8/25/2016-From committee: That the Senate amendments be concurring in. (Ayes 8. Noes 0.) .</p>	<p>Would require a city, county, city and county, or special district, on or before April 30 of each year, to post compensation information in a conspicuous location on its Internet Web site that contains the names, positions, and total compensation, including a breakdown of the types of compensation provided, of each elected official within that entity for the previous calendar year. By increasing the duties of local officials, this bill would impose a state-mandated local program. This bill contains other related provisions and other existing laws.</p> <p>SUPPORT: California League of Conservation Voters, Sierra Club California</p> <p>OPPOSITION: Association of California Healthcare Districts, California Special Districts Association, California State Association of Counties, Cities of Cloverdale, Hesperia, Indian Wells, Lake Elsinore, Murrieta, Rocklin, and San Carlos, League of California Cities, Rural County Representatives of California, Urban Counties of California</p>	<p>Monitor</p>
<p>AB 869 Cooper D</p> <p>Public transportation agencies: fare evasion and prohibited conduct.</p>	<p>8/31/2016-S. DEAD 8/31/2016-Failed Deadline pursuant to Joint Rule 61(b)(17). (Last location was INACTIVE FILE on 8/30/2016)</p>	<p>Current law authorizes a public transportation agency to adopt and enforce an ordinance to impose and enforce civil administrative penalties for fare evasion or other passenger misconduct, other than by minors, on or in a transit facility or vehicle in lieu of the criminal penalties otherwise applicable, with specified administrative procedures for the imposition and enforcement of the administrative penalties, including an initial review and opportunity for a subsequent administrative hearing. This bill would provide that a person who fails to pay the administrative penalty when due or successfully complete the administrative process to dismiss the notice of fare evasion or passenger conduct violation may be subject to those criminal penalties.</p> <p>SUPPORT: Amalgamated Transit Union, Sacramento Regional Transit District OPPOSITION: None received</p>	<p>Support</p>

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Bill ID/Topic	Location	Summary	Position
<p>AB 1419 Eggman D</p> <p>Hazardous waste: cathode ray tube glass.</p>	<p>9/22/2016-A. CHAPTERED 9/22/2016-Chaptered by Secretary of State - Chapter 445, Statutes of 2016.</p>	<p>Current law requires the Department of Toxic Substances Control to regulate the management and disposal of hazardous waste. Under current regulations, the department classifies a waste as hazardous waste if the waste exceeds certain total threshold limitation concentrations, which are established by the department for various substances, including barium. This bill, except as specified, would provide that used, broken cathode ray tube (CRT) panel glass and processed CRT panel glass that exceeds the total threshold limit concentration only for barium is not a waste and is not subject to regulation by the department if that panel glass meets certain requirements.</p> <p>SUPPORT: Californians Against Waste – sponsor, All eWaste, Inc., Association of California Recycling Industries, Cali Resources, Inc., California Association of Local Conservation Corps, California Electronic Asset Recovery, California League of Conservation Voters, Cal Micro Recycling, Ecology Action, ECS Refining, Electronic Recyclers International, E-Recycling of California, Environmental Working Group, Fireclay Tile, Institute of Scrap Recycling Industries (ISRI), West Coast Chapter, Kleen Blast Abrasives, Marin County Hazardous & Solid Waste Management Joint Powers Authority, Napa Recycling & Waste Services, Northern California Recycling Association (NCRA), Rural County Representatives of California (RCRC), Sonoma County AB 939 Local Task Force, Sonoma County Waste Management Agency Stopwaste, Technologies Displays Americas, LLC, Tycoon Materials, Inc. DBA Happy Recyclers</p> <p>OPPOSITION: None on file</p>	<p>Monitor</p>

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Bill ID/Topic	Location	Summary	Position
<p>AB 1550 Gomez D</p> <p>Greenhouse gases: investment plan: disadvantaged communities.</p>	<p>9/14/2016-A. CHAPTERED 9/14/2016-Chaptered by Secretary of State - Chapter 365, Statutes of 2016.</p>	<p>Current law requires the Department of Finance, in consultation with the State Air Resources Board and any other relevant state agency, to develop, as specified, a 3-year investment plan for the moneys deposited in the Greenhouse Gas Reduction Fund. This bill would require the investment plan to allocate (1) a minimum of 25% of the available moneys in the fund to projects located within, and benefiting individuals living in, disadvantaged communities, (2) an additional minimum of 5% to projects that benefit low-income households or to projects located within, and benefiting individuals living in, low-income communities located anywhere in the state, and (3) an additional minimum of 5% either to projects that benefit low-income households that are outside of, but within a 1/2 mile of, disadvantaged communities, or to projects located within the boundaries of, and benefiting individuals living in, low-income communities that are outside of, but within a 1/2 mile of, disadvantaged communities.</p> <p>SUPPORT: Alameda County Board of Supervisors, Amigos de los Rios, Asian Pacific Environmental Network, Asian Pacific Policy and Planning Council, California Association of Local Conservation Corps, California Bicycle Coalition, California Black Health Network, California Center for Public Health Advocacy, California Environmental Justice Alliance, California Housing Partnership Corporation, California Interfaith Power & Light, California League of Conservation Voters, California ReLeaf, California Urban Forests Council, California Vanpool Authority, California Voices for Progress, Canopy, Catholic Charities Catholic Charities, Diocese of Stockton, Center for Community Action and Environmental Justice, Center on Race, Poverty and the Environment, Central California Asthma Collaborative, Central Coast Alliance United for a Sustainable Economy, Central Coast Energy Services, City Project, Coalition for Clean Air, Communities for a Better Environment, Community Action to Fight Asthma, Community Health for Asian Americans, Defenders of Wildlife, Energy Solidarity Cooperative, Environment California, Environmental Defense Fund, Environmental Health Coalition, Fallbrook Land Conservancy, Filipino/American Coalition for Environmental Solidarity, Fresno Economic Opportunities Commission,</p>	<p>Monitor</p>

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Bill ID/Topic	Location	Summary	Position
		<p>Fresno Interdenominational Refugee Ministries, Friends Committee on Legislation of California, Grayson Neighborhood Council, Green Education, Inc., Green for All, Greenlining Institute, Greenspace-The Cambria Land Trust, GRID Alternatives, Growing Together, Huntington Beach Tree Society, Inc., Liberty Hill Foundation, Little Tokyo Service Center, Los Angeles Conservation Corps, Los Angeles Neighborhood Land Trust, Move LA, National Parks Conservation Association, Natural Resources Defense Council, Pacific Asian Consortium in Employment, Pacoima Beautiful, People Organizing to Demand Environmental and Economic Rights, Physicians for Social Responsibility – Los Angeles, Placer Land Trust, Propel Fuels, Public Advocates, Regional Asthma Management and Prevention, Rising Sun Energy Center, Rural County Representatives of California, Sacramento Tree Foundation, Safe Routes to School National Partnership, Santa Clara Valley Open Space Authority, Save the Bay, SCOPE, Sierra Business Council, Sierra Climate Adaptation and Mitigation Partnership, Sierra Club California, Sierra Foothill Conservancy, Solar-Oversight, Stone Soup Fresno, Strategic Actions for a Just Economy, Strategic Concepts in Organizing and Policy Education, The Nature Conservancy, TransForm, Tree Davis, Tree San Diego, Truckee Donner Land Trust, Trust for Public Land, TRUST South LA, Union of Concerned Scientists, Urban Releaf, Valley Clean Air Now, Watershed Conservation Authority</p> <p>OPPOSITION: Bay Area Air Quality Management District Legislative Committee, California Chamber of Commerce, California Taxpayers Association, Metropolitan Transportation Commission</p>	

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Bill ID/Topic	Location	Summary	Position
AB 1591 Frazier D Transportation funding.	ASSEMBLY DEAD 8/31/2016 - Failed Deadline pursuant to Joint Rule 61(b)(17). (Last location was TRANS. on 2/1/2016)	<p>Existing law provides various sources of funding for transportation purposes, including funding for the state highway system and the local street and road system. These funding sources include, among others, fuel excise taxes, commercial vehicle weight fees, local transactions and use taxes, and federal funds. Existing law imposes certain registration fees on vehicles, with revenues from these fees deposited in the Motor Vehicle Account and used to fund the Department of Motor Vehicles and the Department of the California Highway Patrol. Existing law provides for the monthly transfer of excess balances in the Motor Vehicle Account to the State Highway Account. This bill would create the Road Maintenance and Rehabilitation Program to address deferred maintenance on the state highway system and the local street and road system. The bill would require the California Transportation Commission to adopt performance criteria to ensure efficient use of the funds available for the program. The bill would provide for the deposit of various funds for the program in the Road Maintenance and Rehabilitation Account, which the bill would create in the State Transportation Fund, including revenues attributable to a \$0.225 per gallon increase in the motor vehicle fuel (gasoline) tax imposed by the bill, including an inflation adjustment as provided, an increase of \$38 in the annual vehicle registration fee, and a new \$165 annual vehicle registration fee applicable to zero-emission motor vehicles, as defined. This bill contains other related provisions and other existing laws.</p> <p>SUPPORT: None listed b/c no analysis</p> <p>OPPOSITION: None listed b/c no analysis</p>	Support

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Bill ID/Topic	Location	Summary	Position
<p>AB 1592 Bonilla D</p> <p>Autonomous vehicles: pilot project.</p>	<p>9/29/2016-A. CHAPTERED 9/29/2016-Chaptered by Secretary of State - Chapter 814, Statutes of 2016.</p>	<p>Current law permits the operation of an autonomous vehicle on public roads for testing purposes if, among other requirements, a driver is seated in the driver's seat and is capable of taking immediate manual control of the vehicle in the event of an autonomous technology failure or other emergency. This bill would, notwithstanding the above provision, until 180 days after the operative date of regulations promulgated by the Department of Motor Vehicles to allow testing of autonomous vehicles without a driver in the vehicle, authorize the Contra Costa Transportation Authority to conduct a pilot project for the testing of autonomous vehicles that do not have a driver seated in the driver's seat and are not equipped with a steering wheel, a brake pedal, or an accelerator if the testing is conducted only at specified locations and the autonomous vehicle operates at speeds of less than 35 miles per hour.</p> <p>SUPPORT: Contra Costa Transportation Authority (source), Alliance for Transportation Innovation, Allstate Insurance Company, American Council of Engineering Companies California, Bay Area Council, Bay Area Rapid Transit District, BestMile, California Department of Insurance, Central Contra Costa Transit Authority, City of Clayton, City of Concord, City of San Ramon, City of Walnut Creek, Congressmember Nancy Pelosi, Contra Costa County Board of Supervisors, East Bay Leadership Council, EasyMile, Honda, Intelligent Transportation Systems California, League of California Cities, Metropolitan Transportation Commission, Personal Insurance Federation of California, San Ramon Police Department, Securing America's Future Energy, Silicon Valley Leadership Group, Stantec, Sunset Development Company, TechNet, Telecommunications Industry Association, Telegra, Inc.</p> <p>OPPOSITION: Amalgated Transit Union, California Manufacturers and Technology Association, California Teamsters Public Affairs Council, CTIA, DMA, Information Technology Industry</p>	<p>Monitor</p>

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Bill ID/Topic	Location	Summary	Position
AB 1595 Campos D Employment: human trafficking training: mass transportation employers.	ASSEMBLY DEAD 5/27/2016 - Failed Deadline pursuant to Joint Rule 61(b)(8). (Last location was APPR. SUSPENSE FILE on 5/11/2016)	Existing law establishes the Division of Labor Standards Enforcement in the Department of Industrial Relations for the enforcement of labor laws, and establishes certain obligations on an employer, including, requiring an employer to post specified wage and hour information in a location where it can be viewed by employees. Under existing law, any person who deprives or violates the personal liberty of another with the intent to obtain forced labor or services is guilty of the crime of human trafficking. This bill would require a private or public employer that provides mass transportation services, as specified, in the state to train its employees, who are likely to interact or come into contact with victims of human trafficking, in recognizing the signs of human trafficking and how to report those signs to the appropriate law enforcement agency. The bill would require the Department of justice to develop guidelines for the training, including, but not limited to, guidance on how to report human trafficking. The bill would require that, by January 1, 2018, the training be incorporated into the initial training process for all new employees and that all existing employees receive the training. Last Amended on 3/29/2016	Support
AB 1610 Committee on Budget Transportation.	8/31/2016-A. DEAD 8/31/2016-Failed Deadline pursuant to Joint Rule 61(b)(17). (Last location was INACTIVE FILE on 8/24/2016)	The net proceeds of the sale of the compact assets are required to be deposited into certain transportation funds in a specified order. This bill would provide that after the amounts described have been fully paid to the transportation funds named, or in any year during which any portion of these amounts are repaid from the General Fund pursuant to specified provisions of the California Constitution in an amount greater than or equal to the amount of tribal gaming revenues remitted pursuant to the amended tribal compacts in that year, the revenues received by the state from the compact would be required to be remitted to the California Gambling Control Commission for deposit in the General Fund. This bill contains other related provisions and other existing laws. SUPPORT: None received OPPOSITION: None received	Monitor

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Bill ID/Topic	Location	Summary	Position
<p>AB 1640 Stone, Mark D</p> <p>Retirement: public employees.</p>	<p>8/31/2016-S. DEAD 8/31/2016-Failed Deadline pursuant to Joint Rule 61(b)(17). (Last location was INACTIVE FILE on 8/29/2016)</p>	<p>PEPRA exempts from its provisions certain public employees whose collective bargaining rights are subject to specified provisions of federal law until a specified federal district court decision on a certification by the United States Secretary of Labor, or until January 1, 2016, whichever is sooner. This bill would extend indefinitely that exemption for those public employees, whose collective bargaining rights are subject to specified provisions of federal law and who became a member of a state or local public retirement system prior to December 30, 2014.</p> <p>SUPPORT: Santa Clara Valley Transportation Authority (source), California Conference Board of the Amalgamated Transit Union, California Teamsters Public Affairs Council, California Transit Association, Monterey-Salinas Transit, Peninsula Corridor Joint Powers Board, San Mateo County Transit District, San Mateo County Transportation Authority</p> <p>OPPOSITION: None received</p>	<p>Work with Author</p>

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Bill ID/Topic	Location	Summary	Position
<p>AB 1641 Allen, Travis R</p> <p>Shuttle services: loading and unloading of passengers.</p>	<p>8/31/2016-A. DEAD 8/31/2016-Failed Deadline pursuant to Joint Rule 61(b)(17). (Last location was TRANS. on 2/4/2016)</p>	<p>Under current law, a person may not stop, park, or leave a vehicle standing alongside a curb space authorized for the loading or unloading of passengers of a bus engaged as a common carrier in local transportation when indicated by a sign or red paint on the curb, except that existing law allows local authorities to permit schoolbuses to stop alongside these curb spaces upon agreement between a transit system operating buses as common carriers in local transportation and a public school district or private school. This bill would also allow local authorities to permit shuttle service vehicles, as defined, to stop for the loading or unloading of passengers.</p> <p>SUPPORT: None on file</p> <p>OPPOSITION: Amalgamated Transit Union, American Federation of State, County and Municipal Employees, California Council of the Blind, Cultural Space Coalition, Haight Ashbury Neighborhood Council, Potrero Hill Democratic Club, San Francisco Green Party, Services Employees International Union, United Transportation Union, 36 private citizens</p>	<p>Monitor</p>

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Bill ID/Topic	Location	Summary	Position
AB 1657 O'Donnell D Air pollution: public ports and intermodal terminals.	8/31/2016-A. DEAD 8/31/2016-Failed Deadline pursuant to Joint Rule 61(b)(17). (Last location was APPR. SUSPENSE FILE on 5/11/2016)	<p>Would establish the Zero- and Near-Zero-Emission Intermodal Terminals Program to be administered by the State Air Resources Board to fund equipment upgrades and investments at intermodal terminals, as defined, to help transition the state's freight system to be zero- and near-zero-emission operations. The bill would authorize the program to be implemented with moneys from the Greenhouse Gas Reduction Fund. This bill contains other related provisions and other existing laws.</p> <p>SUPPORT: APM Terminal, Associated General Contractors, California Association of Port Authorities, California Railroad Industry, Center for Sustainable Energy, Los Angeles County Business Federation, Los Angeles County Economic Development Corporation, Los Angeles County Economic Development Corporation, Maersk Line, Pacific Merchant Shipping Association, Philips Lighting, San Diego County Regional Airport Authority, Wilmington Chamber of Commerce</p> <p>OPPOSITION: None on file</p>	Monitor

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Bill ID/Topic	Location	Summary	Position
<p>AB 1661 McCarty D</p> <p>Local government: sexual harassment prevention training and education.</p>	<p>9/29/2016-A. CHAPTERED 9/29/2016-Chaptered by Secretary of State - Chapter 816, Statutes of 2016.</p>	<p>Would require local agency officials, as defined, to receive sexual harassment prevention training and education if the local agency provides any type of compensation, salary, or stipend to those officials, and would allow a local agency to require employees to receive sexual harassment prevention training or information. The bill would also require an entity that develops curricula to satisfy this requirement to consult with the city attorney or county counsel regarding the sufficiency and accuracy of that proposed content.</p> <p>SUPPORT: Equal Rights Advocates (source), AFSCME, Association of California Water Agencies, California Association of Parks and Recreation Districts, California Fire Chiefs Association, California Women’s Law Center, City of West Hollywood, CSAC Excess Insurance Authority, Fire Districts Association of California, Los Angeles County Professional Peace Officers Association, Organization of SMUD Employees, Sacramento Collective for Women’s Rights, San Diego County Court Employees Association, San Luis Obispo County Employees Association</p> <p>OPPOSITION: None received</p>	<p>Monitor</p>

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Bill ID/Topic	Location	Summary	Position
<p>AB 1669 Hernández, Roger D</p> <p>Displaced employees: service contracts: collection and transportation of solid waste.</p>	<p>9/30/2016-A. CHAPTERED 9/30/2016-Chaptered by Secretary of State - Chapter 874, Statutes of 2016.</p>	<p>Current law requires a local government agency letting a public transit service contract out to bid to give a bidding preference for contractors and subcontractors who agree to retain for a specified period certain employees who were employed to perform essentially the same services by the previous contractor or subcontractor. Such a contractor or subcontractor is required to offer employment to those employees, except for reasonable and substantiated cause. This bill would expand the application of these provisions to exclusive contracts for the collection and transportation of solid waste. The bill would require the information provided to a bona fide bidder to be made available in writing at least 30 days before bids for the service contract are due.</p> <p>SUPPORT: California Teamsters Public Affairs Council (source), California Labor Federation, AFL-CIO, Recology</p> <p>OPPOSITION: California Special Districts Association, California State Association of Counties, Inland Empire Disposal Association, Integrated Waste Management Task Force, League of California Cities, Los Angeles County Solid Waste Management Committee, Los Angeles County Waste Management Association, Solid Waste Association of Northern America, Solid Waste Association of Orange County, Waste Connections Inc.</p>	<p>Monitor</p>

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Bill ID/Topic	Location	Summary	Position
AB 1685 Gomez D Vehicular air pollution: zero-emission vehicles: civil penalties.	9/25/2016-A. CHAPTERED 9/25/2016-Chaptered by Secretary of State - Chapter 604, Statutes of 2016.	<p>Current law provides that a manufacturer or distributor who does not comply with the emission standards or the test procedures adopted by the State Air Resources Board is subject to a civil penalty of \$50 per vehicle. This bill would increase those penalties to up to \$37,500 per violation. The bill would require the state board to adjust those maximum penalties for inflation, as specified, and would exempt those adjustments from the Administrative Procedure Act.</p> <p>SUPPORT: American Lung Association in California, Bay Area Air Quality Management District, Breathe California, California Air Pollution Control Officers Association, CALPIRG, Clean Power Campaign, Coalition for Clean Air, Environment California, Natural Resources Defense Council, Sierra Club California</p> <p>OPPOSITION: None received</p>	Monitor
AB 1725 Wagner R Vehicles: automated traffic enforcement systems.	8/31/2016-S. DEAD 8/31/2016-Failed Deadline pursuant to Joint Rule 61(b)(17). (Last location was APPR. on 8/11/2016)	<p>Current law defines an "official traffic control signal" as any device, whether manually, electrically, or mechanically operated, by which traffic is alternately directed to stop and proceed and which is erected by authority of a public body or official having jurisdiction. This bill would expressly state that a stop is required to be made at an official traffic control signal erected and maintained at a freeway or highway on ramp. This bill would also make technical, nonsubstantive changes to that provision. This bill contains other current laws.</p> <p>SUPPORT: Automobile Club of Southern California, Conference of California Bar Associations, Safer Streets L.A.</p> <p>OPPOSITION: None received</p>	Monitor

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Bill ID/Topic	Location	Summary	Position
AB 1732 Ting D Single-user restrooms.	9/29/2016-A. CHAPTERED 9/29/2016-Chaptered by Secretary of State - Chapter 818, Statutes of 2016.	<p>Would, commencing March 1, 2017, require all single-user toilet facilities in any business establishment, place of public accommodation, or government agency to be identified as all-gender toilet facilities, as specified. The bill would authorize inspectors, building officials, or other local officials responsible for code enforcement to inspect for compliance with these provisions during any inspection.</p> <p>SUPPORT: California NOW (co-source), Equality California (co-source), Transgender Law Center (co-source), American Academy of Pediatrics, American Civil Liberties Union, Anti-Defamation League, City of West Hollywood, HP Inc., National Association of Social Workers, PayPal, SacLEGAL, Salesforce, San Francisco Unified School District, San Mateo County Board of Supervisors, Santa Clara County Board of Supervisors, The Secular Coalition for California</p> <p>OPPOSITION: None received</p>	Monitor

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Bill ID/Topic	Location	Summary	Position
AB 1746 Stone, Mark D Transit buses.	SENATE DEAD 7/1/2016 - Failed Deadline pursuant to Joint Rule 61(b)(13). (Last location was T. & H. on 5/24/2016)	Existing law authorizes the Monterey-Salinas Transit District and the Santa Cruz Metropolitan Transit District to conduct a transit bus-only program using the shoulders of certain state highways as transit bus-only traffic corridors, subject to approval by the Department of Transportation and the Department of the California Highway Patrol. Existing law requires that the highway segments to be used for the program are to be jointly determined by the districts, the department, and the Department of the California Highway Patrol, and imposes other conditions and requirements. This bill would additionally authorize the operation of transit buses on the shoulder of a segment of a state highway designated under the program within the areas served by the transit services of the 8 entities described above, subject to the same conditions and requirements. Two years after commencing the operation of the program, the bill would require a participating entity, in conjunction with the department and the Department of the California Highway Patrol, to submit a report to the Legislature that includes specified information about the program. The bill would also require the participating entity to post the report on its Internet Web site to enable the public to access the report. This bill contains other existing laws. Last Amended on 5/24/2016	Support

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Bill ID/Topic	Location	Summary	Position
AB 1768 Gallagher R Bonds: transportation.	8/31/2016-A. DEAD 8/31/2016-Failed Deadline pursuant to Joint Rule 61(b)(17). (Last location was TRANS. on 4/12/2016)	<p>Would provide that no further bonds shall be sold for high-speed rail purposes pursuant to the Safe, Reliable High-Speed Passenger Train Bond Act for the 21st Century, except as specifically provided with respect to an existing appropriation for high-speed rail purposes for early improvement projects in the Phase 1 blended system. The bill, subject to the above exception, would require redirection of the unspent proceeds received from outstanding bonds issued and sold for other high-speed rail purposes prior to the effective date of these provisions, upon appropriation, for use in retiring the debt incurred from the issuance and sale of those outstanding bonds.</p> <p>SUPPORT: Howard Jarvis Taxpayers Association</p> <p>OPPOSITION: California Conference of Machinists, California Teamsters Public Affairs Council, State Building and Construction Trades Council, AFL-CIO</p>	Monitor
AB 1813 Frazier D High-Speed Rail Authority: membership.	7/25/2016-A. CHAPTERED 7/25/2016-Chaptered by Secretary of State - Chapter 117, Statutes of 2016.	<p>Would provide for appointment of one Member of the Senate by the Senate Committee on Rules and one Member of the Assembly by the Speaker of the Assembly to serve as ex officio members of the High-Speed Rail Authority. The bill would provide that the ex officio members shall participate in the activities of the authority to the extent that participation is not incompatible with their positions as Members of the Legislature.</p> <p>SUPPORT: Association for California High Speed Trains</p> <p>OPPOSITION: None received</p>	Monitor

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Bill ID/Topic	Location	Summary	Position
<p>AB 1866 Wilk R</p> <p>High-speed rail bond proceeds: redirection: water projects.</p>	<p>8/31/2016-A. DEAD 8/31/2016-Failed Deadline pursuant to Joint Rule 61(b)(17). (Last location was TRANS. on 4/12/2016)</p>	<p>Would provide that no further bonds shall be sold for high-speed rail purposes pursuant to the Safe, Reliable High-Speed Passenger Train Bond Act for the 21st Century, except as specifically provided with respect to an existing appropriation for high-speed rail purposes for early improvement projects in the Phase 1 blended system. The bill, subject to the above exception, would require redirection of the unspent proceeds received from outstanding bonds issued and sold for other high-speed rail purposes prior to the effective date of these provisions, upon appropriation, for use in retiring the debt incurred from the issuance and sale of those outstanding bonds.</p> <p>SUPPORT: Associated Builders and Contractors of California, Howard Jarvis Taxpayer Association, Southwest California Legislative Council, Valley Ag Water Coalition</p> <p>OPPOSITION: California Conference of Machinists, California Teamsters Public Affairs Council, Sierra Club California, State Building and Construction Trades Council</p>	<p>Monitor</p>

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Bill ID/Topic	Location	Summary	Position
<p>AB 1889 Mullin D</p> <p>High-Speed Rail Authority: high-speed train operation.</p>	<p>ASSEMBLY CHAPTERED 9/28/2016 - Chaptered by Secretary of State - Chapter 744, Statutes of 2016.</p>	<p>Existing law creates the High-Speed Rail Authority with specified powers and duties relative to the development and implementation of a high-speed train system. Existing law, pursuant to the Safe, Reliable High-Speed Passenger Train Bond Act for the 21st Century, approved by the voters as Proposition 1A at the November 4, 2008, statewide general election, provides for the issuance of \$9.95 billion for high-speed train capital projects and other associated purposes. The bond act requires the authority to expend the proceeds of the bond act pursuant to certain planning and reporting requirements, which require the authority to approve that the corridor or usable segment would be suitable and ready for high-speed train operations. This bill would provide for the purposes of a certain required funding plan that a corridor or usable segment thereof would be "suitable and ready for high-speed train operation" if specified conditions are met. The bill would also require the authority to include in its business plan and project update report information describing the use of these bond proceeds demonstrating that the investments made are consistent with the authority's current business plan and advance the development of the Phase I blended system as described in the business plan. Last Amended on 8/19/2016</p> <p>SUPPORT: Bay Area Council, Metropolitan Transportation Commission, Peninsula Corridor Joint Powers Board, Silicon Valley Leadership Group, Santa Clara County Board of Supervisors, Santa Clara Valley Transportation Authority, San Mateo County Transit District , San Mateo County Transportation Authority, Southern California Association of Governments</p> <p>OPPOSITION: The California Rail Foundation, The Community Coalition on High Speed Rail, Transportation Solution Defense and Education Fund</p>	<p>Support</p>

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Bill ID/Topic	Location	Summary	Position
AB 1908 Harper R High-occupancy vehicle lanes.	ASSEMBLY DEAD 4/22/2016 - Failed Deadline pursuant to Joint Rule 61(b)(5). (Last location was A. TRANS. on 3/28/2016)	<p>Existing law authorizes the Department of Transportation to designate certain lanes for the exclusive or preferential use of high-occupancy vehicles. When those exclusive or preferential use lanes are established and double parallel solid lines are in place to the right thereof, existing law prohibits any person driving a vehicle from crossing over those double lines to enter into or exit from the lanes, and entrance or exit from those lanes is authorized only in areas designated for these purposes or where a single broken line is in place to the right of the lanes, except as specified. This bill would prohibit, commencing July 1, 2017, a high-occupancy vehicle lane from being established on a state highway in southern California, unless that lane is established as a high-occupancy vehicle lane only during the hours of heavy commuter traffic, as determined by the department. The bill would require any existing high-occupancy vehicle lane in southern California to be modified to conform with those requirements. The bill would authorize the department, on or after May 1, 2018, to reinstate 24-hour high-occupancy vehicle lanes in southern California if the department makes a specified determination, and would require the department to report to the Legislature on the impact on traffic of limiting the use of high-occupancy lanes only during the hours of heavy commuter traffic, as provided in the bill. Last Amended on 3/17/2016</p> <p>Support: Automobile Club of Southern California National Motorists Association</p> <p>Opposition: None on file</p>	Oppose

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Bill ID/Topic	Location	Summary	Position
AB 1919 Quirk D Local transportation authorities: bonds.	9/28/2016-A. CHAPTERED 9/28/2016-Chaptered by Secretary of State - Chapter 745, Statutes of 2016.	The Local Transportation Authority and Improvement Act provides for the creation in any county of a local transportation authority and authorizes the imposition of a retail transactions and use tax by ordinance, subject to approval of the ordinance by 2/3 of the voters. Current law requires the bond proceeds to be placed in the treasury of the local transportation authority and to be used for allowable transportation purposes, except that accrued interest and premiums received on the sale of the bonds are required to be placed in a fund to be used for the payment of bond debt service. This bill would require the premiums received on the sale of the bonds to be placed in the treasury of the local transportation authority to be used for allowable transportation purposes. SUPPORT: Alameda County Transportation Commission OPPOSITION: Howard Jarvis Taxpayers Association	Monitor
AB 1943 Linder R Parking: county transportation commissions.	9/23/2016-A. CHAPTERED 9/23/2016-Chaptered by Secretary of State - Chapter 512, Statutes of 2016.	Would authorize the Riverside County Transportation Commission to enter into contracts with private vendors for the enforcement of parking regulations and the removal of vehicles parked in violation of parking regulations adopted by the commission. This bill contains other related provisions and other existing laws. SUPPORT: Riverside County Transportation Commission OPPOSITION: None received	Monitor

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Bill ID/Topic	Location	Summary	Position
<p>AB 1964 Bloom D</p> <p>High-occupancy vehicle lanes: vehicle exceptions.</p>	<p>8/31/2016-S. DEAD 8/31/2016-Failed Deadline pursuant to Joint Rule 61(b)(17). (Last location was THIRD READING on 8/17/2016)</p>	<p>Current authorizes super ultra-low emission vehicles, ultra-low emission vehicles, partial zero-emission vehicles, or transitional zero-emission vehicles, as specified, that display a valid identifier issued by the Department of Motor Vehicles to use these HOV lanes until January 1, 2019, or until the date federal authorization expires, or until the Secretary of State receives a specified notice, whichever occurs first. This bill would extend the operation of the provisions allowing specified vehicles to use HOV lanes until the date federal authorization expires, or until the Secretary of State receives a specified notice, whichever occurs first.</p> <p>SUPPORT: Alliance of Automobile Manufacturers (source), California Electric Transportation Coalition, California Natural Gas Vehicle Coalition, ChargePoint, Clean Energy, Silicon Valley Leadership Group</p> <p>OPPOSITON: Plug In America</p>	<p>Work with Author</p>
<p>AB 2049 Melendez R</p> <p>Bonds: transportation.</p>	<p>8/31/2016-A. DEAD 8/31/2016-Failed Deadline pursuant to Joint Rule 61(b)(17). (Last location was TRANS. on 4/12/2016)</p>	<p>Would provide that no further bonds shall be sold for high-speed rail purposes pursuant to the Safe, Reliable High-Speed Passenger Train Bond Act for the 21st Century, except as specifically provided with respect to an existing appropriation for high-speed rail purposes for early improvement projects in the Phase I blended system.</p> <p>SUPPORT: Howard Jarvis Taxpayer Association, Southwest California Legislative Council</p> <p>OPPOSITION: California Conference Board of the Amalgamated Transit Union, California Conference of Machinists, California Teamsters Public Affairs Council, Engineer and Scientists of California, Local 20, IFPTE Local 20, AFL-CIO, International Longshore and Warehouse Union, Professional and Technical Engineers, IFPTE Local 21, AFL-CIO, State Building and Construction Trades Council of California, UNITE-HERE, AFL-CIO, Utilities Workers Union of America, Local 132, AFL-CIO</p>	<p>Monitor</p>

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Bill ID/Topic	Location	Summary	Position
AB 2126 Mullin D Public contracts: Construction Manager/General Contractor contracts.	9/28/2016-A. CHAPTERED 9/28/2016-Chaptered by Secretary of State - Chapter 750, Statutes of 2016.	Current law authorizes the Department of Transportation to use the Construction Manager/General Contractor method on no more than 6 projects, and requires 4 out of the 6 projects to use department employees or consultants under contract with the department to perform all project design and engineering services, as specified. This bill would authorize the department to use this method on 12 projects and would require 8 out of the 12 projects to use department employees or consultants under contract with the department to perform all project design and engineering services. SUPPORT: Associated General Contractors, Bay Area Council, California Transportation Commission, City/County Association of Governments of San Mateo County, San Mateo County Economic Development Association, San Mateo County Transportation Authority OPPOSITION: None received	Monitor
AB 2152 Gray D Elections: ballots: ballot order.	8/31/2016-A. DEAD 8/31/2016-Failed Deadline pursuant to Joint Rule 61(b)(17). (Last location was E. & R. on 3/8/2016)	Would, for the November 8, 2016, statewide general election only, authorize a county board of supervisors to direct the county elections official to place a local measure related to local transportation finance above state measures. This bill contains other related provisions. SUPPORT: Merced County Association of Governments, Merced County Board of Supervisors, Stanislaus County Board of Supervisors OPPOSITION: None on file	

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Bill ID/Topic	Location	Summary	Position
<p>AB 2170 Frazier D</p> <p>Trade Corridors Improvement Fund: federal funds.</p>	<p>9/28/2016-A. VETOED 9/28/2016-Vetoed by the Governor</p>	<p>The Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006 (Proposition 1B) created the Trade Corridors Improvement Fund and provided for allocation by the California Transportation Commission of \$2 billion in bond funds for infrastructure improvements on highway and rail corridors that have a high volume of freight movement, and specified categories of projects eligible to receive these funds. Existing law continues the Trade Corridors Improvement Fund in existence in order to receive revenues from sources other than the bond act for these purposes. This bill would require revenues apportioned to the state from the National Highway Freight Program established by the federal Fixing America's Surface Transportation Act to be allocated for trade corridor improvement projects approved pursuant to these provisions. This bill contains other related provisions and other existing laws. Last Amended on 8/17/2016</p> <p>SUPPORT: Southern California Association of Governments (source), Alameda Corridor-East Construction Authority, Alameda County Transportation Commission, Automobile Club of Southern California, California Asphalt Pavement Association, California Association of Port Authorities, California Trade Coalition, Imperial County Transportation Commission, Los Angeles Area Chamber of Commerce, Los Angeles County Metropolitan Transportation Authority, Metropolitan Transportation Commission, Mobility 21, Orange County Transportation Authority, Pacific Merchant Shipping Association, Port of Long Beach, Port of Los Angeles, Port of San Diego, Riverside County Transportation Commission, San Bernardino Associated Governments, San Diego Association of Governments, San Gabriel Valley Council of Governments, Ventura County Transportation Commission</p> <p>OPPOSITION: Department of Finance</p>	<p>Support</p>

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Bill ID/Topic	Location	Summary	Position
AB 2222 Holden D Transit Pass Program: free or reduced-fare transit passes.	8/12/2016-S. DEAD 8/12/2016-Failed Deadline pursuant to Joint Rule 61(b)(14). (Last location was APPR. on 8/11/2016)	<p>Existing law establishes the California Community Colleges, under the administration of the Board of Governors of the California Community Colleges, the California State University, under the administration of the Trustees of the California State University, and the University of California, under the administration of the Regents of the University of California, as the 3 segments of public postsecondary education in this state. Each of these segments is authorized to provide instruction and other services to the students who attend the institutions under their respective jurisdictions. Existing law also authorizes the governing board of a school district to provide for the transportation of pupils to and from school whenever in the judgment of the board the transportation is advisable and good reasons exist to do so. This bill would establish the Transit Pass Program to be administered by the Department of Transportation with moneys made available, upon appropriation by the Legislature, to support transit pass programs that provide free or reduced-fare transit passes to specified pupils and students. The bill would require the department to develop guidelines that describe the criteria that eligible transit providers are required to use to make available free or reduced-fare transit passes to eligible participants. The bill would exempt those guidelines from the Administrative Procedure Act. The bill would require eligible transit providers and eligible participants to enter into agreements for the distribution of free or reduced-fare transit passes to students. This bill contains other related provisions. Last Amended on 8/2/2016</p> <p>SUPPORT AND OPPOSITION LISTED AT END OF REPORT</p>	Support

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Bill ID/Topic	Location	Summary	Position
<p>AB 2257 Maienschein R</p> <p>Local agency meetings: agenda: online posting.</p>	<p>9/9/2016-A. CHAPTERED 9/9/2016-Chaptered by Secretary of State - Chapter 265, Statutes of 2016.</p>	<p>The Ralph M. Brown Act requires the legislative body of a local agency to post, at least 72 hours before the meeting, an agenda containing a brief general description of each item of business to be transacted or discussed at a regular meeting, in a location that is freely accessible to members of the public and to provide a notice containing similar information with respect to a special meeting at least 24 hours prior to the special meeting. This bill would require an online posting of an agenda for a meeting occurring on and after January 1, 2019, of a legislative body of a city, county, city and county, special district, school district, or political subdivision established by the state that has an Internet Web site to be posted on the local agency's primary Internet Web site homepage accessible through a prominent, direct link, as specified.</p> <p>SUPPORT: Grassroots Lab (source), AFSCME, California Asian Pacific Chamber of Commerce, California Association of Licensed Investigators, California Business Roundtable, California Independent Oil Marketers Association, California League of Food Processors, California Manufacturers and Technology Association, California Newspaper Publishers Association, California Professional Firefighters, California Retailers Association, Californians Aware, Data Coalition, El Dorado Local Agency Formation Commission, Industrial Environmental Association, Innovate Your State, National Federation of Independent Business, SEIU California, Sunlight Foundation</p> <p>OPPOSITION: California Special Districts Association</p>	

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Bill ID/Topic	Location	Summary	Position
AB 2289 Frazier D Department of Transportation: capital improvement projects.	7/22/2016-A. CHAPTERED 7/22/2016-Chaptered by Secretary of State - Chapter 76, Statutes of 2016.	Current law requires the Department of Transportation to prepare a state highway operation and protection program for the expenditure of transportation funds for major capital improvements that are necessary to preserve and protect the state highway system and that include capital projects relative to maintenance, safety, and rehabilitation of state highways and bridges that do not add a new traffic lane to the system. This bill would add to the program capital projects relative to the operation of those state highways and bridges. SUPPORT: Automobile Club of Southern California, California Transportation Commission, San Diego Association of Governments, San Francisco County Transportation Commission OPPOSITION: None received	Support
AB 2348 Levine D Department of Finance: infrastructure investment.	9/27/2016-A. VETOED 9/27/2016-Vetoed by the Governor	Would authorize the Department of Finance to identify infrastructure projects in the state for which the department will guarantee a rate of return on investment for an investment made in that infrastructure project by the Public Employees' Retirement System. The bill would create the Reinvesting in California Special Fund as a continuously appropriated fund and would require the moneys in the fund to be used to pay the rate of return on investment. The bill would require the rate of return on investment to be subject to the availability of moneys in the fund. SUPPORT: California Association of Port Authorities, California Trade Coalition, Coalition of Adequate School Housing, Pacific Merchant Shipping Association, State Building and Construction Trades Council of California OPPOSITION: None received	Monitor

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Bill ID/Topic	Location	Summary	Position
AB 2374 Chiu D Construction Manager/General Contractor method: regional transportation agency: County of Placer: bridges.	9/28/2016-A. CHAPTERED 9/28/2016-Chaptered by Secretary of State - Chapter 753, Statutes of 2016.	<p>Current law authorizes regional transportation agencies to use the Construction Manager/General Contractor project delivery method, as specified, to design and construct certain expressways that are not on the state highway system if: (1) the expressways are developed in accordance with an expenditure plan approved by voters, (2) there is an evaluation of the traditional design-bid-build method of construction and of the Construction Manager/General Contractor method, and (3) the board of the regional transportation agency adopts the method in a public meeting. This bill would authorize the use of the Construction Manager/General Contractor method for the construction of 2 specified bridges that are not on the state highway system. For the purposes only of this authorization, the bill would include the County of Placer within the definition of a regional transportation agency.</p> <p>SUPPORT: Automobile Club of Southern California, California Transportation Commission, San Francisco County Transportation Authority, Santa Clara Valley Transportation Authority</p> <p>OPPOSITION: None received</p>	Monitor

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Bill ID/Topic	Location	Summary	Position
AB 2411 Frazier D Transportation revenues.	SENATE DEAD 7/1/2016 - Failed Deadline pursuant to Joint Rule 61(b)(13). (Last location was T. & H. on 6/9/2016)	<p>Article XIX of the California Constitution restricts the expenditure of revenues from taxes imposed by the state on fuels used in motor vehicles upon public streets and highways to street and highway and certain mass transit purposes. Existing law requires certain miscellaneous revenues deposited in the State Highway Account that are not restricted as to expenditure by Article XIX of the California Constitution to be transferred to the Transportation Debt Service Fund in the State Transportation Fund, as specified, and requires the Controller to transfer from the fund to the General Fund an amount of those revenues necessary to offset the current year debt service made from the General Fund on general obligation transportation bonds issued pursuant to Proposition 116 of 1990. This bill would, on July 1, 2017, delete the transfer of these miscellaneous revenues to the Transportation Debt Service Fund, thereby eliminating the offsetting transfer to the General Fund for debt service on general obligation transportation bonds issued pursuant to Proposition 116 of 1990. The bill, subject to a specified exception, would, on July 1, 2017, instead require the miscellaneous revenues to be retained in the State Highway Account and to be used solely for transportation expenditures consistent with the restrictions for expenditure of fuel tax revenues in Article XIX of the California Constitution. Last Amended on 5/27/2016</p> <p>SUPPORT: AAA of Southern California (previous version of bill) OPPOSITION: None</p>	Support

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Bill ID/Topic	Location	Summary	Position
AB 2472 Linder R Personal income taxes: credits: disabled veterans: service animals.	8/31/2016-A. DEAD 8/31/2016-Failed Deadline pursuant to Joint Rule 61(b)(17). (Last location was APPR. SUSPENSE FILE on 5/25/2016)	The Personal Income Tax Law allows various credits against the taxes imposed by that law. This bill, for taxable years beginning on or after January 1, 2017, and before January 1, 2019, would allow a credit under the Personal Income Tax Law in an amount equal to 50% of the amounts paid or incurred during the taxable year by a qualified disabled veteran for the ownership and maintenance of a qualified animal, not to exceed \$1,500 for a taxable year. The bill would require the amount of the credit to be multiplied by the tax credit adjustment factor, as specified. This bill would take effect immediately as a tax levy. SUPPORT: None on file OPPOSITION: None on file	Support
AB 2542 Gatto D Streets and highways: reversible lanes.	9/23/2016-A. CHAPTERED 9/23/2016-Chaptered by Secretary of State - Chapter 525, Statutes of 2016.	Would require the Department of Transportation or a regional transportation planning agency, when submitting a capacity-increasing project or a major street or highway lane realignment project to the California Transportation Commission for approval, to demonstrate that reversible lanes were considered for the project. SUPPORT: None received OPPOSITION: None received	

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Bill ID/Topic	Location	Summary	Position
AB 2682 Chang R Registered sex offenders: interactive video games: meeting with minors.	8/31/2016-S. DEAD 8/31/2016-Failed Deadline pursuant to Joint Rule 61(b)(17). (Last location was RLS. on 8/16/2016)	Would make it a crime, punishable by a fine not exceeding \$5,000, by imprisonment in a state prison not exceeding one year, or by both the fine and imprisonment, for a registered sex offender to use an interactive video game to encourage another user of the interactive video game who is a minor to physically travel to a specified location for the purpose of meeting the minor. This bill contains other related provisions and other existing laws. SUPPORT: California Foundation for Independent Living Centers, Personal Insurance Federation of California OPPOSITION: None received	
AB 2690 Ridley-Thomas D Los Angeles County Metropolitan Transportation Authority: contracting.	8/26/2016-A. CHAPTERED 8/26/2016-Chaptered by Secretary of State - Chapter No. 204, Statutes of 2016	Current law creates the Los Angeles County Metropolitan Transportation Authority (LACMTA), with various powers and duties with respect to transportation planning, programming, construction, and operations. This bill would also authorize LACMTA to establish disabled veteran business enterprise participation goals, and would define "disabled veteran business enterprise" for these purposes. This bill contains other related provisions and other current laws. SUPPORT: Los Angeles County Metropolitan Transportation Authority (source), Hispanic Engineers Business Corporation, Redwood Resources, T&T Public Relations OPPOSITION: None received	Sponsor

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Bill ID/Topic	Location	Summary	Position
<p>AB 2693 Dababneh D</p> <p>Financing requirements: property improvements.</p>	<p>9/25/2016-A. CHAPTERED 9/25/2016-Chaptered by Secretary of State - Chapter 618, Statutes of 2016.</p>	<p>Current law authorizes the legislative body of a public agency, as defined, to determine that it would be convenient, advantageous, and in the public interest to designate an area within which authorized public agency officials and property owners may enter into voluntary contractual assessments to finance certain improvements. This bill would also prohibit a public agency from permitting a property owner to participate in a program pursuant to these provisions unless the property owner satisfies certain conditions and the property owner is given the right to cancel the contractual assessment at any time prior to midnight on the 3rd business day after certain events occur without penalty or obligation, consistent with certain requirements.</p> <p>SUPPORT: California Association of County Treasurers and Tax Collectors, California Coast Credit Union, California Community Banking Network, Central Valley Community Bank, Comerica Bank, Commonwealth Central Credit Union, Community West Bank, El Dorado Savings Bank, Farmers and Merchants Bank of Central California, First Choice Bank, First Northern California Credit Union, Heritage Community Credit Union, Neighborhood National Bank, Patelco Credit Union, Provident Credit Union, Renew Financial, Renovate America, Sacramento Credit Union, Safe Credit Union, San Diego County Credit Union, San Francisco Federal Credit Union, Schools Financial Credit Union, Sierra Central Credit Union, Southwest California Legislative Council, Star One Credit Union, Valley First Credit Union, Valley Republic Bank, Two Individuals</p> <p>OPPOSITION: California Solar Energy Industries Association</p>	<p>Monitor</p>

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<p>AB 2722 Burke D</p> <p>Transformative Climate Communities Program.</p>	<p>9/14/2016-A. CHAPTERED 9/14/2016-Chaptered by Secretary of State - Chapter 371, Statutes of 2016.</p>	<p>Would create the Transformative Climate Communities Program, to be administered by the Strategic Growth Council. The bill would require the council to award competitive grants to specified eligible entities for the development and implementation of neighborhood-level transformative climate community plans that include greenhouse gas emissions reduction projects that provide local economic, environmental, and health benefits to disadvantaged communities, as defined. The bill would require the council to develop guidelines and selection criteria for the implementation of the program.</p> <p>SUPPORT: California Environmental Justice Alliance (co-source), Greenling Institute (co-source), Audubon California, California Association of Local Conservation Corps, California Equity Leaders Network, California League of Conservation Voters, California Pan Ethnic Health Network, Coalition for Clean Air, Fresno Economic Opportunities Commission, Health Officers Association of California, Los Angeles Neighborhood Land Trust, Lutheran Office of Public Policy – California, National Audubon Society, PAN North America, Sierra Club California, TransForm, Union of Concerned Scientists, Valley Clean Air Now</p> <p>OPPOSITION: None received</p>	<p>Monitor</p>

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Bill ID/Topic	Location	Summary	Position
<p>AB 2835 Cooper D</p> <p>Public employees: orientation and informational programs: exclusive representatives.</p>	<p>8/31/2016-S. DEAD 8/31/2016-Failed Deadline pursuant to Joint Rule 61(b)(17). (Last location was INACTIVE FILE on 8/31/2016)</p>	<p>Current law, including the Meyers-Milias-Brown Act, the Ralph C. Dills Act, the Trial Court Employment Protection and Governance Act, the Trial Court Interpreter Employment and Labor Relations Act, and the Los Angeles County Metropolitan Transportation Authority Transit Employer-Employee Relations Act, as well as provisions commonly referred to as the Educational Employment Relations Act and the Higher Education Employer-Employee Relations Act, regulates the labor relations of the state, the courts, and specified local public agencies and their employees. Current law establishes the Public Employment Relations Board and prescribes its powers and duties, in relation to these acts. This bill would require the public employers regulated by the acts described above to provide newly hired employees, as defined, a specified public employee orientation within 4 months of hiring, to be conducted in-person, during work hours.</p> <p>SUPPORT: California Labor Federation (co-source), California School Employees Association (co-source), Services Employees International Union (co-source), American Federation of State, County and Municipal Employees, AFL-CIO, CAL FIRE Local, 2881, California Faculty Association, California-Nevada Conference of Operating Engineers, California Nurses Association, California Professional Firefighters, California Teachers Association, Laborers' International Union of North America, Local 777, Laborers' International Union of North America, Local 792, Los Angeles County Professional Peace Officers Association, Orange County Employees Association, Orange County Professional Firefighters Association, Organization of SMUD Employees, San Diego County Court Employees Association, San Luis Obispo County Employees Association</p> <p>OPPOSITION: Association of California Community College Administrators, Association of California School Administrators, California Association of School Business Officials,, California Association of Suburban Schools, California County Superintendents Association, California School Boards Association, California Special Districts Association, California State Association of Counties, City of Diamond Bar, City of La Quinta, City of Long Beach, City of Palmdale, City of Thousand Oaks, Kern County Superintendent of Schools, League of California Cities, Riverside County Superintendent of Schools, Rural County Representatives of California, San Joaquin County Board of Supervisors, Urban Counties of California</p>	

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Bill ID/Topic	Location	Summary	Position
AB 2847 Patterson R High-Speed Rail Authority: reports.	9/28/2016-A. VETOED 9/28/2016-Vetoed by the Governor	<p>Current law requires the High-Speed Rail Authority, on a biennial basis, to prepare a business plan containing specified elements and also requires the preparation of various other reports. This bill would require the business plan to identify projected financing costs for each segment or combination of segments of the high-speed rail system, if financing is proposed by the authority. The bill, in the business plan and in another report, would require the authority to identify any significant changes in scope for segments of the high-speed rail system identified in the previous version of each report and to provide an explanation of adjustments in cost and schedule attributable to the changes.</p> <p>SUPPORT: Californians Advocating Responsible Rail Design, Citizens for California High-Speed Rail Accountability, Mel's Farms, Train Riders Association of California</p> <p>OPPOSITION: Department of Finance</p>	

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Bill ID/Topic	Location	Summary	Position
<p>AB 2868 Gatto D Energy storage.</p>	<p>9/26/2016-A. CHAPTERED 9/26/2016-Chaptered by Secretary of State - Chapter 681, Statutes of 2016.</p>	<p>Would require the PUC, in consultation with the State Air Resources Board and the State Energy Resources Conservation and Development Commission, to direct electrical corporations to file applications for programs and investments to accelerate widespread deployment of distributed energy storage systems, as defined. The bill would authorize the PUC to approve, or modify and approve, programs and investments in distributed energy storage systems, as provided, and would require the PUC to first approve those programs and investments that provide distributed energy storage systems to industrial, commercial, school, military, and low-income customers.</p> <p>SUPPORT: Association of California Water Agencies, California State Association of Electrical Workers, Coalition of California Utility Employees, San Diego County Water Authority, SolarCity, Stem, with amendments</p> <p>OPPOSITION: California Energy Storage Alliance, California Solar Industries Association, Marin Clean Energy, San Francisco Public Utilities Commission, Silicon Valley Leadership Group, Solar Energy Industries Association, Sonoma Clean Power, TechNet, The Alliance for Solar Choice, The Utility Reform Network, oppose unless amended</p>	<p>Monitor</p>

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Bill ID/Topic	Location	Summary	Position
<p>AB 2906 Committee on Transportation Transportation: omnibus bill.</p>	<p>8/26/2016-A. CHAPTERED 8/26/2016-Chaptered by Secretary of State - Chapter No. 208, Statutes of 2016</p>	<p>Current law authorizes the Treasurer and the California Transportation Commission to pledge amounts deposited in the State Highway Account from federal transportation funds for the purposes of issuing federal highway grant anticipation notes, commonly known as GARVEE bonds, to fund transportation projects selected by the commission. Current law requires the commission to prepare an annual analysis of the bonding capacity of those federal transportation funds. This bill would instead require the commission to prepare this analysis when the Department of Transportation anticipates the issuance of new notes and makes a written request in that regard, but not more than once annually.</p> <p>SUPPORT: None received</p> <p>OPPOSITION: None received</p>	
<p>ABX1 25 Allen, Travis R Shuttle services: loading and unloading of passengers.</p>	<p>1/11/2016-A. PRINT 1/12/2016-From printer.</p>	<p>Under current law, a person may not stop, park, or leave a vehicle standing alongside a curb space authorized for the loading or unloading of passengers of a bus engaged as a common carrier in local transportation when indicated by a sign or red paint on the curb, except that current law allows local authorities to permit schoolbuses to stop alongside these curb spaces upon agreement between a transit system operating buses as common carriers in local transportation and a public school district or private school. This bill would also allow local authorities to permit shuttle service vehicles, as defined, to stop for the loading or unloading of passengers alongside these curb spaces upon agreement between a transit system operating buses.</p> <p>SUPPORT: None listed b/c no analysis</p> <p>OPPOSITION: None listed b/c no analysis</p>	

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Bill ID/Topic	Location	Summary	Position
SB 32 Pavley D California Global Warming Solutions Act of 2006: emissions limit.	9/8/2016-S. CHAPTERED 9/8/2016-Chaptered by Secretary of State - Chapter 249, Statutes of 2016.	Would require the State Air Resources Board to ensure that statewide greenhouse gas emissions are reduced to 40% below the 1990 level by 2030. This bill contains other related provisions. SUPPORT/OPPOSITION: <i>See last pages of document.</i>	Monitor
SB 86 Committee on Budget and Fiscal Review Budget Act of 2015.	8/31/2016-S. DEAD 8/31/2016-Failed Deadline pursuant to Joint Rule 61(b)(17). (Last location was INACTIVE FILE on 3/7/2016)	The Budget Act of 2015 appropriated specified amounts for the support of state government for the 2015-16 fiscal year. This bill would amend the Budget Act of 2015 by adding and amending items of appropriation. This bill contains other related provisions. SUPPORT: None received OPPOSITION: None received	

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Bill ID/Topic	Location	Summary	Position
<p>SB 122 Jackson D</p> <p>California Environmental Quality Act: record of proceedings.</p>	<p>9/22/2016-S. CHAPTERED 9/22/2016-Chaptered by Secretary of State - Chapter 476, Statutes of 2016.</p>	<p>CEQA establishes a procedure for the preparation and certification of the record of proceedings upon the filing of an action or proceeding challenging a lead agency's action on the grounds of noncompliance with CEQA. This bill would require the lead agency, at the request of a project applicant and consent of the lead agency, to prepare a record of proceedings concurrently with the preparation of a negative declaration, mitigated negative declaration, EIR, or other environmental document for projects. This bill contains other related provisions.</p> <p>SUPPORT: American Planning Association, California Chapter, Association of Environmental Professionals, California Labor Federation, California League of Conservation Voters, City of Camarillo, County of Santa Barbara, Environmental Defense Center, Planning and Conservation League, State Building and Construction Trades Council</p> <p>OPPOSITION: Associated General Contractors of California, Association of California Cities, Orange County, Bay Area Council, Bay Planning Coalition, California Business Properties Association, California Business Roundtable, California Construction and Industrial Materials Association, California Retailers Association, Central City Association of Los Angeles, Engineering Contractors' Association, Harbor Association of Industry and Commerce, Humboldt Association of Realtors, Los Angeles Area Chamber of Commerce, Los Angeles County Economic Development Corporation, National Federation of Independent Business, Orange County Business Council, Pleasanton Chamber of Commerce, San Diego Regional Chamber of Commerce, San Francisco Chamber of Commerce, San Gabriel Valley Economic Partnership, San Mateo County Association of Realtors, Santa Clara Chamber of Commerce, Santa Clarita Valley Economic Development Corporation, Sonoma County Alliance, Southern</p>	<p>Monitor</p>

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Bill ID/Topic	Location	Summary	Position
<p>SB 254 Allen D</p> <p>Campaign finance: voter instruction.</p>	<p>6/8/2016-S. CHAPTERED 6/8/2016-Chaptered by Secretary of State - Chapter No. 20, Statutes of 2016</p>	<p>Would call a special election to be consolidated with the November 8, 2016, statewide general election. The bill would require the Secretary of State to submit to the voters at the November 8, 2016, consolidated election a voter instruction asking whether California's elected officials should use all of their constitutional authority, including proposing and ratifying one or more amendments to the United States Constitution, to overturn Citizens United v. Federal Election Commission (2010) 558 U.S. 310, and other applicable judicial precedents, as specified.</p> <p>SUPPORT: California Common Cause (co-source), MOVI, Money Out Voters In (co-source), American Family Voices, American Sustainable Business Council, California Alliance for Retired Americans, California Clean Money Campaign, California Labor Federation, California Teachers Association, CALPIRG, Consumer Watchdog, Courage Campaign, Democracy for America, Franciscan Action Network, Free Speech for People, Friends of the Earth U.S., Move to Amend Coalition, Public Citizen, Topanga Peace Alliance</p> <p>OPPOSITION: California Taxpayers Association, Howard Jarvis Taxpayers Association</p>	<p>Monitor</p>

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Bill ID/Topic	Location	Summary	Position
<p>SB 321 Beall D</p> <p>Motor vehicle fuel taxes: rates: adjustments.</p>	<p>SENATE DEAD 8/31/2016 - Failed Deadline pursuant to Joint Rule 61(b)(17). (Last location was INACTIVE FILE on 6/27/2016)</p>	<p>Would, for the 2016- 17 fiscal year and each fiscal year thereafter, require the State Board of Equalization on March 1 of the fiscal year immediately preceding the applicable fiscal year, as specified, to adjust the rate in a manner as to generate an amount of revenue equal to the amount of revenue loss attributable to the exemption, based on estimates made by the board that reflect the combined average of the actual fuel price over the previous 4 fiscal years and the estimated fuel price for the current fiscal year, and continuing to take into account adjustments required by existing law to maintain revenue neutrality for each year. This bill contains other existing laws.</p> <p>SUPPORT: American Public Works Association, Associated General Contractors, Bay Area Rapid Transit District, Board of Equalization, California Alliance for Jobs, California Association of Councils of Government, California State Association of Counties, California State Council of Laborers, California Transit Association, California Transportation Commission, City of Camarillo, City of Crescent City, City of Eureka, City of Fountain Valley, City of Glendale, City Goleta, City of Indian Wells, City of Lakewood, City of Livermore, City of Lomita, City of Moreno, City of Rolling Hills Estates, City of Roseville, City of San Jose, City of Saratoga, City of West Hollywood, City/County Association of Governments of San Mateo County, County of Alpine, County of Contra Costa, County of Los Angeles, County of Mono, County of Monterey, County of Santa Cruz, Glendale City Employees Association, Kern Council of Governments, League of California Cities, Metropolitan Transportation Commission, Orange County Transportation Authority, Organization of SMUD Employees, Planning and Conservation League, Rural County Representatives of California, Sacramento Metropolitan Chamber of Commerce, San Bernardino Public Employees Association, San Diego Association of Governments (SANDAG) San Diego County Court Employees Association, San Joaquin Valley Regional Transportation Planning Agencies San Luis Obispo Council of Governments, San Luis Obispo County Employees Association Santa Clara Valley Transportation Authority, Self-Help Counties Coalition, Town of Los Altos Hills, Transportation Agency for Monterey County, Transportation Authority of Marin, Transportation California, United Contractors, Urban Counties Caucus, Ventura County Transportation Commission</p> <p>OPPOSITION: None received</p>	<p>Support</p>

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Bill ID/Topic	Location	Summary	Position
SB 824 Beall D Low Carbon Transit Operations Program.	SENATE CHAPTERED 9/22/2016 - Chaptered by Secretary of State - Chapter 479, Statutes of 2016.	<p>Existing law requires all moneys, except for fines and penalties, collected by the State Air Resources Board from the auction or sale of allowances as part of a market-based compliance mechanism relative to reduction of greenhouse gas emissions to be deposited in the Greenhouse Gas Reduction Fund. This bill would require a recipient transit agency to demonstrate that each expenditure of program moneys allocated to the agency does not supplant another source of funds. The bill would authorize a recipient transit agency that does not submit an expenditure for funding under the program in a particular fiscal year to retain its funding share for expenditure in a subsequent fiscal year for a maximum of 4 years. The bill would allow a recipient transit agency to loan or transfer its funding share in any particular fiscal year to another recipient transit agency within the same region, or to apply to the department to reassign, to other eligible expenditures under the program, any savings of surplus moneys from an approved and completed expenditure under the program or from an approved expenditure that is no longer a priority, as specified. The bill would also allow a recipient transit agency to apply to the department for a letter of no prejudice for any eligible expenditures under the program for which the department has authorized a disbursement of funds, and, if granted, would allow the recipient transit agency to expend its own moneys and to be eligible for future reimbursement from the program, under specified conditions. The bill would also require a recipient transit agency to provide additional information to the department to the extent funding is sought for capital projects. This bill contains other existing laws. Last Amended on 8/18/2016</p> <p>SUPPORT: Santa Clara Valley Transportation Authority (source), Alameda-Contra Costa Transit District, Asian Pacific Environmental Network, Associated General Contractors, Bay Area Rapid Transit District, California Bicycle Coalition, California ReLeaf, California Transit Association, California Walks, Central Contra Costa Transit Authority, Coalition for Clean Air, Foothill Transit, Gamaliel of California, Housing California, Investing in Place, Long Beach Transit, Los Angeles County Metropolitan Transportation Authority, Metropolitan Transportation Commission, Monterey-Salinas Transit, Move L.A., Napa Valley Transportation Authority, North Bay Organizing Project, Orange County Transportation Authority, Peninsula Corridor Joint Powers Board (Caltrain), Public Advocates, Safe Routes to School National Partnership, San Bernardino Associated Governments, Santa Cruz Metropolitan Transit District, San Mateo County Transit District, San Mateo County Transportation Authority, Santa Monica Big Blue Bus, Solano County Transit, TransForm</p>	Support

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Bill ID/Topic	Location	Summary	Position
SB 838 Committee on Budget and Fiscal Review Transportation.	9/13/2016-S. CHAPTERED 9/13/2016-Chaptered by Secretary of State - Chapter 339, Statutes of 2016.	<p>The net proceeds of the sale of the compact assets are required to be deposited into certain transportation funds in a specified order. This bill would instead provide that after the amounts described have been fully paid to the transportation funds named, or in any year during which any portion of these amounts are repaid from the General Fund pursuant to specified provisions of the California Constitution in an amount greater than or equal to the amount of tribal gaming revenues remitted pursuant to the amended tribal compacts in that year, the revenues received by the state from the compact would be required to be remitted to the California Gambling Control Commission for deposit in the General Fund.</p> <p>SUPPORT: None received</p> <p>OPPOSITION: None received</p>	

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Bill ID/Topic	Location	Summary	Position
<p>SB 882 Hertzberg D</p> <p>Crimes: public transportation: minors.</p>	<p>8/22/2016-S. CHAPTERED 8/22/2016-Chaptered by Secretary of State - Chapter No. 167, Statutes of 2016</p>	<p>Current law makes it an infraction or a misdemeanor to evade the payment of a fare on a public transit system, to misuse a transfer, pass, ticket, or token with the intent to evade the payment of a fare, or to use a discount ticket without authorization or fail to present, upon request from a transit system representative, acceptable proof of eligibility to use a discount ticket. This bill would prohibit a minor from being charged with an infraction or a misdemeanor for those acts.</p> <p>SUPPORT: Children's Defense Fund of California (Co-Sponsor), Western Center on Law and Poverty (Co-Sponsor), Youth Justice Coalition (Co-Sponsor), Alliance for Boys and Men of Color, A New Way of Life Reentry Project, Aspiranet, California Association of Local Conservation Corps, California Coalition for Youth, California Equity Leaders Network, California Pan-Ethnic Health Network, California Public Defenders Association, California School-Based Health Alliance, Californians United for a Responsible Budget, Center for Juvenile Law and Policy, Loyola Law School, Children Now, Children's Advocacy Institute, University of San Diego Law School, Coalition of California Welfare Rights Organizations, Inc., Comite Civico del Valle, Community Asset Development Redefining Education, Courage Campaign, Ella Baker Center for Human Rights, El Rancho Unified School District, First Place for Youth, Larkin Street Youth Services, Laborers' International Union of North America Locals 777 & 792, Lawyers Committee for Civil Rights of San Francisco Bay Area, Legal Services for Prisoners with Children, National Association of Social Workers, California Chapter, National Center for Youth Law, Pacific Juvenile Defender Center, Policy Link, Public Counsel, Root and Rebound, Rubicon Programs, One Private Individual</p> <p>OPPOSITION: California Police Chiefs Association, California State Sheriffs Association, California Transit Association, Riverside Transit Agency, Sacramento Regional Transit District</p>	<p>Monitor</p>

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Bill ID/Topic	Location	Summary	Position
SB 903 Nguyen R Transportation funds: loan repayment.	8/31/2016-S. DEAD 8/31/2016-Failed Deadline pursuant to Joint Rule 61(b)(17). (Last location was T. & H. on 2/4/2016)	Would acknowledge, as of June 30, 2015, \$879,000,000 in outstanding loans of certain transportation revenues, and would require this amount to be repaid from the General Fund by June 30, 2016, to the Traffic Congestion Relief Fund for allocation to the Traffic Congestion Relief Program, the Trade Corridors Improvement Fund, the Public Transportation Account, and the State Highway Account, as specified. The bill would thereby make an appropriation. This bill contains other related provisions and other existing laws. SUPPORT: None b/c no bill analysis OPPOSITION: None b/c no bill analysis	Monitor
SB 951 McGuire D Transportation: Golden State Patriot Passes Program.	SENATE DEAD 5/27/2016 - Failed Deadline pursuant to Joint Rule 61(b)(8). (Last location was APPR. SUSPENSE FILE on 5/9/2016)	Existing law creates various state transportation agencies, including the Department of Transportation, with specified powers and duties, including, but not limited to, coordinating and assisting, upon request of, the various public and private transportation entities to strengthen their development and operation of balanced integrated mass transportation, highway, aviation, maritime, railroad, and other transportation facilities and services in support of statewide and regional goals. This bill would create the Golden State Patriot Passes Program to be administered by the Department of Transportation to provide veterans with free access to transit services. The bill would require the department to develop guidelines that describe the methodologies that a participating transit operator would use to demonstrate that proposed expenditures would increase veteran mobility and fulfill specified requirements. The bill would require the department to select 3 transit operators to participate, and would require a transit operator selected to participate in the program to match any state moneys that it receives through the program with local moneys. The bill would require the participating transit operators and the department to report on the program. The bill would repeal the program on January 1, 2022. Last Amended on 4/26/2016	Support

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Bill ID/Topic	Location	Summary	Position
<p>SB 998 Wieckowski D</p> <p>Vehicles: public transit bus lanes.</p>	<p>9/27/2016-S. CHAPTERED 9/27/2016-Chaptered by Secretary of State - Chapter 716, Statutes of 2016.</p>	<p>Would prohibit a person from operating a motor vehicle, or stopping, parking, or leaving a vehicle standing, on a portion of the highway designated for the exclusive use of public transit buses, subject to specified exceptions. Because a violation of these provisions would be a crime, this bill would impose a state-mandated local program. The bill would also require a public transit agency to place and maintain signs and traffic control devices indicating that a portion of a highway is designated for the exclusive use of public transit buses, as specified. This bill contains other related provisions and other existing laws.</p> <p>SUPPORT: Alameda-Contra Costa Transit District (co-source), Santa Clara Valley Transportation Authority (co-source), California Transit Association</p> <p>OPPOSITION: None received</p>	<p>Monitor</p>

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Bill ID/Topic	Location	Summary	Position
SB 1018 Liu D Interstate 710 North Gap Closure project: cost-benefit analysis.	SENATE DEAD 8/31/2016 - Failed Deadline pursuant to Joint Rule 61(b)(17). (Last location was T. & H. on 4/11/2016)	Current law creates the Los Angeles County Metropolitan Transportation Authority with specified powers and duties relative to transportation planning, programming, and operations in Los Angeles County. This bill would require the Board of Directors of the Los Angeles County Metropolitan Transportation Authority, before making a final decision on the Interstate 710 North Gap Closure project, to take specified actions on a specified cost-benefit analysis for the project. This bill contains other related provisions and other current laws. SUPPORT: City of Glendale, City of La Canada Flintridge, City of South Pasadena OPPOSITION: City of Alhambra (prior version), City of Monterey Park (prior version), City of Rosemead (prior version), City of San Marino (prior version), Ironworkers Local 416 (prior version), Ironworkers Local 433 (prior version), Los Angeles Metropolitan Transportation Authority (LA Metro), Los Angeles/Orange Counties Building and Construction Trades Council (prior version), Sprinkler Fitters U.A. Local 709 (prior version), State Building and Construction Trades of California (prior version), U.A. Local 78 (prior version)	Oppose
SB 1216 Hueso D Trade Corridors Improvement Fund: federal funds.	ASSEMBLY DEAD 8/31/2016 - Failed Deadline pursuant to Joint Rule 61(b)(17). (Last location was RLS. on 8/19/2016)	Would require revenues apportioned to the state from the National Highway Freight Program established by the federal Fixing America's Surface Transportation Act to be allocated for trade corridor improvement projects approved pursuant to specified provisions. This bill contains other related provisions and other existing laws. SUPPORT: None listed b/c no bill analysis (We know LA Metro, PMSA support.) OPPOSITION: None listed b/c no bill analysis	Support

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Bill ID/Topic	Location	Summary	Position
<p>SB 1379 Mendoza D</p> <p>Los Angeles County Metropolitan Transportation Authority.</p>	<p>8/19/2016-A. APPR. 8/25/2016-August 25 set for first hearing canceled at the request of author.</p>	<p>The Los Angeles County Metropolitan Transportation Authority is governed by a 14-member board of directors, including the Mayor of the City of Los Angeles. This bill would restructure the board of directors to include the Mayor of the City of Los Angeles, 2 Los Angeles City Council Members, 2 public members who are residents of the City of Los Angeles, the Mayor of the City of Long Beach, 5 mayors or city council members from the other cities in the county, 2 members of the board of supervisors appointed by that board, and one nonvoting member appointed by the Governor.</p> <p>SUPPORT: Graciela Ortiz, Mayor, City of Huntington Park</p> <p>OPPOSITION: Ara Najarian, Director, MTA, Councilmember, City of Glendale, California State Association of Counties, Central City Association, Century City Chamber of Commerce, County of Los Angeles, Eric Garcetti, Mayor, City of Los Angeles, Fixing Angelenos Stuck in Traffic (FAST), John Fasana, Chair, MTA, Councilmember, City of Duarte, Los Angeles and Orange Counties Building and Construction Trades Council, Los Angeles County Metropolitan Transportation Authority Board of Directors, State Building and Construction Trades Council, Urban Counties of California</p>	<p>Oppose</p>

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Bill ID/Topic	Location	Summary	Position
<p>SB 1379 Mendoza D AS AMENDED 8/29/2016</p> <p>Community colleges: part-time, temporary employees.</p>	<p>SENATE CHAPTERED 9/30/2016 - Chaptered by Secretary of State. Chapter 891, Statutes of 2016.</p>	<p>Existing law establishes the California Community Colleges under the administration of the Board of Governors of the California Community Colleges. Existing law authorizes the establishment of community college districts under the administration of community college governing boards, and authorizes these districts to provide instruction at community college campuses throughout the state. Existing law requires that a person employed to teach adult or community college classes for not more than 67% of the hours per week of a full-time employee having comparable duties, excluding substitute service, be classified as a temporary employee and not a contract employee. This bill would instead, among other things, require that minimum standards be established for the terms of reemployment preference for part-time, temporary faculty assignments, extend the time frame for compliance to July 1, 2017, and make compliance with the provisions a condition of receiving funds allocated for the Student Success and Support Program in the annual Budget Act. This bill contains other related provisions and other existing laws. Last Amended on 8/29/2016</p>	
<p>SB 1383 Lara D</p> <p>Short-lived climate pollutants: methane emissions: organic waste: landfills.</p>	<p>8/19/2016-A. NAT. RES. 8/19/2016-Read third time and amended. Ordered to third reading. Re-referred to Com. on NAT. RES. pursuant to Assembly Rule 77.2.</p>	<p>Would require the State Air Resources Board, no later than January 1, 2018, to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants to achieve a reduction in methane by 40%, hydrofluorocarbon gases by 40%, and anthropogenic black carbon by 50% below 2013 levels by 2030, as specified. The bill also would establish specified targets for reducing organic waste in landfills. This bill contains other related provisions and other existing laws.</p> <p>SUPPORT/OPPOSITION: <i>See last pages of document.</i></p>	

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Bill ID/Topic	Location	Summary	Position
<p>SB 1398 Leyva D</p> <p>Public water systems: lead user service lines.</p>	<p>8/18/2016-A. THIRD READING 8/18/2016-Read third time and amended. Ordered to third reading.</p>	<p>Would require a public water system to compile an inventory of known lead user service lines in use in its distribution system and identify areas that may have lead user service lines in use in its distribution system by July 1, 2018. This bill would require a public water system, after completing the inventory, to provide a timeline for replacement of known lead user service lines in the distribution system to the State Water Resources Control Board.</p> <p>SUPPORT: California Association of Environmental Health Administrators, California Environmental Justice Alliance, California League of Conservation Voters, California Public Interest Group, Center for Food Safety, Community Water Center, East Bay Municipal Water District, Environment California, Environmental Justice Coalition for Water, Environmental Working Group, Food and Water Watch, Natural Resources Defense Council, Pacific Water Quality Association, Rural Community Assistance Corporation, Sierra Club California, Water Program Manager</p> <p>OPPOSITION: None on file</p>	

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Bill ID/Topic	Location	Summary	Position
<p>SB 1464 De León D</p> <p>California Global Warming Solutions Act of 2006: greenhouse gas emissions reduction.</p>	<p>9/26/2016-S. CHAPTERED 9/26/2016-Chaptered by Secretary of State - Chapter 679, Statutes of 2016.</p>	<p>Current law requires the Department of Finance, in consultation with the state board and any other relevant state agency, to develop and update, as specified, a 3-year investment plan for the moneys deposited in the Greenhouse Gas Reduction Fund. Current law requires the investment plan to, among other things, identify priority programmatic investments of moneys that will facilitate the achievement of feasible and cost-effective greenhouse gas emissions reductions toward achievement of greenhouse gas reduction goals and targets by sector. This bill would require, in identifying priority programmatic investments, that the investment plan assess how proposed investments interact with current state regulations, policies, and programs, and evaluate if and how the proposed investments could be incorporated into existing programs.</p> <p>SUPPORT: None on file</p> <p>OPPOSITION: None on file</p>	

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Bill ID/Topic	Location	Summary	Position
<p>SB 1472 Mendoza D</p> <p>Los Angeles County Metropolitan Transportation Authority.</p>	<p>SENATE DEAD 6/3/2016 - Failed Deadline pursuant to Joint Rule 61(b)(11). (Last location was INACTIVE FILE on 6/2/2016)</p>	<p>Existing law creates the Los Angeles County Metropolitan Transportation Authority with specified powers and duties relative to transportation planning, programming, and operations in the County of Los Angeles. The authority is governed by a 14-member board of directors, including the Mayor of the City of Los Angeles, 2 public members and one Los Angeles city council member appointed by the mayor, 4 members appointed from the other cities in the county, the 5 members of the board of supervisors, and one nonvoting member appointed by the Governor. This bill would expand the board of directors to 22 members by adding 2 members that reside in the County of Los Angeles, one member appointed by the Speaker of the Assembly and one member appointed by the Senate Committee on Rules, selected from a list of candidates submitted by the Los Angeles County City Selection Committee, and would prohibit these members from residing in the same city as another member of the authority, as specified. The bill would instead provide for the appointment of 8 members from the other cities in the county, 2 from each sector, as prescribed. The bill would also add as members of the board of directors the Mayor of the City of Long Beach and one additional public member. This bill contains other related provisions and other existing laws. Last Amended on 6/1/2016</p> <p>SUPPORT: (Verified 6/1/16) City of Bellflower City of Buena Park City of Downey City of Pico Rivera City of Torrance Eco-Rapid Transit Board of Directors</p>	<p>Oppose</p>

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Bill ID/Topic	Location	Summary	Position
		<p>OPPOSITION: (Verified 6/2/16) Ara Najarian, Councilmember, City of Glendale City of Los Angeles Honorable Eric Garcetti, Second Vice-Chair, METRO Board of Directors Honorable John Fasana, First Vice-Chair, METRO Board of Directors Honorable Mark Ridley-Thomas, Chair, METRO Board of Directors International Brotherhood of Electrical Workers, Local 11 Los Angeles County Board of Supervisors Los Angeles and Orange County Building and Construction Trades Council Hilda Solis, Los Angeles County Supervisor, First District Mobility 21</p>	
SBX1 1 Beall D Transportation funding.	8/24/2016-S. APPR. 8/24/2016-From committee with author's amendments. Read second time and amended. Re- referred to Com. on APPR.	Would create the Road Maintenance and Rehabilitation Program to address deferred maintenance on the state highway system and the local street and road system. The bill would require the California Transportation Commission to adopt performance criteria, consistent with a specified asset management plan, to ensure efficient use of certain funds available for the program. SUPPORT/OPPOSITION: None listed on new version	Monitor
SCA 5 Hancock D Local government finance.	4/12/2016-S. GOV. & F. 4/12/2016-From committee with author's amendments. Read second time and amended. Re- referred to Com. on GOV. & F.	Would exempt from taxation for each taxpayer an amount up to \$500,000 of tangible personal property used for business purposes. This measure would prohibit the Legislature from lowering this exemption amount or from changing its application, but would authorize it to be increased consistent with the authority described above. This measure would provide that this provision shall become operative on January 1, 2019. This bill contains other related provisions and other existing laws. SUPPORT/OPPOSITION: None listed b/c no bill analysis	Monitor

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SCA 7 Huff R Motor vehicle fees and taxes: restriction on expenditures.	5/28/2015-S. E. & C.A. 1/12/2016-Set for hearing January 19 in E. & C.A. pending receipt.	<p>Would prohibit the Legislature from borrowing revenues from fees and taxes imposed by the state on vehicles or their use or operation, and from using those revenues other than as specifically permitted by Article XIX. The measure would also provide that none of those revenues may be pledged or used for the payment of principal and interest on bonds or other indebtedness.</p> <p>SUPPORT: Alameda Corridor — East Construction Authority, California Association of Harbor Masters and Port Captains, California Yacht Brokers Association, County of Riverside, Howard Jarvis Taxpayers Association, Kern County Board of Supervisors, Madera County Board of Supervisors, Marina Recreation Association, National Marine Manufacturers Association, Orange County Taxpayers Association, San Bernardino County, San Joaquin Valley Regional Transportation Agencies, Transportation Agency for Monterey County, Worldwide Boaters Safety Group</p> <p>OPPOSITION: None received</p>	Support

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Bill ID/Topic	Location	Summary
ABX1 1 Alejo D Transportation funding.	6/23/2015-A. PRINT 6/24/2015-From printer.	Existing law provides for loans of revenues from various transportation funds and accounts to the General Fund, with various repayment dates specified. This bill, with respect to any loans made to the General Fund from specified transportation funds and accounts with a repayment date of January 1, 2019, or later, would require the loans to be repaid by December 31, 2018. This bill contains other related provisions and other existing laws.
ABX1 2 Perea D Transportation projects: comprehensive development lease agreements.	6/25/2015-A. PRINT 6/26/2015-From printer.	Existing law authorizes the Department of Transportation and regional transportation agencies, as defined, to enter into comprehensive development lease agreements with public and private entities, or consortia of those entities, for certain transportation projects that may charge certain users of those projects tolls and user fees, subject to various terms and requirements. These arrangements are commonly known as public-private partnerships. Existing law provides that a lease agreement may not be entered into under these provisions on or after January 1, 2017. This bill would extend this authorization indefinitely and would include within the definition of "regional transportation agency" the Santa Clara Valley Transportation Authority, thereby authorizing the authority to enter into public-private partnerships under these provisions. The bill would also delete obsolete cross-references and make technical changes to these provisions.
ABX1 3 Frazier D Transportation funding.	9/24/2015- A. CONFERENCE COMMITTEE 9/24/2015-Senators Beall (Co-Chair), Allen, Leyva, Cannella, and Gaines appointed to Conference Committee.	Existing law requires the Department of Transportation to improve and maintain the state's highways, and establishes various programs to fund the development, construction, and repair of local roads, bridges, and other critical transportation infrastructure in the state. This bill would declare the intent of the Legislature to enact legislation to establish permanent, sustainable sources of transportation funding to maintain and repair highways, local roads, bridges, and other critical infrastructure.
ABX1 4 Frazier D Transportation funding.	9/3/2015-S. RLS. 9/3/2015-Referred to Com. on RLS.	Existing law establishes various programs to fund the development, construction, and repair of local roads, bridges, and other critical transportation infrastructure in the state. This bill would declare the intent of the Legislature to enact legislation to establish permanent, sustainable sources of transportation funding to improve the state's key trade corridors and support efforts by local governments to repair and improve local transportation infrastructure.

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Bill ID/Topic	Location	Summary
<p>ABX1 5 Hernández, Roger D</p> <p>Income taxes: credits: low-income housing: farmworker housing assistance.</p>	<p>7/16/2015-A. PRINT 7/17/2015-From printer.</p>	<p>Existing law establishes a low-income housing tax credit program pursuant to which the California Tax Credit Allocation Committee provides procedures and requirements for the allocation of state insurance, personal income, and corporation income tax credit amounts among low-income housing projects based on federal law. Existing law allows the credit for buildings located in designated difficult development areas or qualified census tracts that are restricted to having 50% of its occupants be special needs households, as defined, even if the taxpayer receives specified federal credits, if the credit allowed under this section does not exceed 30% of the eligible basis of that building. Existing law limits the total annual amount of the credit that the committee may allocate to \$70 million per year and allows \$500,000 per year of that amount to be allocated for projects to provide farmworker housing, as specified. Existing law defines farmworker housing to mean housing for agricultural workers that is available to, and occupied by, only farmworkers and their households. This bill, under the insurance taxation law, the Personal Income Tax Law, and the Corporation Tax Law, would modify the definition of applicable percentage relating to qualified low-income buildings that are farmworker housing projects, as provided. The bill would authorize the California Tax Credit Allocation Committee to allocate that credit even if the taxpayer receives specified federal and state credits or only state credits. The bill would increase the amount the committee may allocate to farmworker housing projects from \$500,000 to \$25,000,000 per year. The bill would also redefine farmworker housing to mean housing for agricultural workers that is available to, and occupied by, not less than 50% of farmworkers and their households. This bill contains other related provisions.</p>

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Bill ID/Topic	Location	Summary
ABX1 6 Hernández, Roger D Affordable Housing and Sustainable Communities Program.	7/16/2015-A. PRINT 7/17/2015-From printer.	Existing law requires all moneys, except for fines and penalties, collected by the state board from the auction or sale of allowances as part of a market-based compliance mechanism to be deposited in the Greenhouse Gas Reduction Fund and to be available upon appropriation by the Legislature. Existing law continuously appropriates 20% of the annual proceeds of the fund to the Affordable Housing and Sustainable Communities Program, administered by the Strategic Growth Council, to reduce greenhouse gas emissions through projects that implement land use, housing, transportation, and agricultural land preservation practices to support infill and compact development and that support other related and coordinated public policy objectives. This bill would require 20% of moneys available for allocation under the program to be allocated to eligible projects in rural areas, as defined. The bill would further require at least 50% of those moneys to be allocated to eligible affordable housing projects. The bill would require the council to amend its guidelines and selection criteria consistent with these requirements and to consult with interested stakeholders in this regard.
ABX1 7 Nazarian D Public transit: funding.	7/16/2015-A. PRINT 7/17/2015-From printer.	Existing law requires all moneys, except for fines and penalties, collected by the State Air Resources Board from the auction or sale of allowances as part of a market-based compliance mechanism relative to reduction of greenhouse gas emissions to be deposited in the Greenhouse Gas Reduction Fund. This bill would instead continuously appropriate 20% of those annual proceeds to the Transit and Intercity Rail Capital Program, and 10% of those annual proceeds to the Low Carbon Transit Operations Program, thereby making an appropriation. This bill contains other existing laws.
ABX1 8 Chiu D Diesel sales and use tax.	7/16/2015-A. PRINT 7/17/2015-From printer.	Existing law, beyond the sales and use tax rate generally applicable, imposes an additional sales and use tax on diesel fuel at the rate of 1.75%, subject to certain exemptions, and provides for the net revenues collected from the additional tax to be transferred to the Public Transportation Account. Existing law continuously appropriates these revenues to the Controller, for allocation by formula to transportation agencies for public transit purposes. This bill, effective July 1, 2016, would increase the additional sales and use tax rate on diesel fuel to 5.25%. By increasing the revenues deposited in a continuously appropriated fund, the bill would thereby make an appropriation. This bill contains other related provisions.

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ABX1 9 Levine D Richmond-San Rafael Bridge.	8/17/2015-A. PRINT 8/18/2015-From printer.	Existing law specifies the powers and duties of the Department of Transportation, the Metropolitan Transportation Commission, and the Bay Area Toll Authority with respect to the collection and expenditure of toll revenue from the 7 state-owned toll bridges within the geographic jurisdiction of the commission, including the Richmond-San Rafael Bridge. This bill would require the department, immediately, or as soon as practically feasible, but no later than September 30, 2015, to implement an operational improvement project that temporarily restores the third eastbound lane on State Highway Route 580 from the beginning of the Richmond-San Rafael Bridge in the County of Marin to Marine Street in the County of Contra Costa to automobile traffic and that temporarily converts a specified portion of an existing one-way bicycle lane along the north side of State Highway Route 580 in the County of Contra Costa into a bidirectional bicycle and pedestrian lane. The bill would require the department to keep the temporary lanes in place until the department has completed a specified project relating to the Richmond-San Rafael Bridge or until construction activity for that project necessitates removal of the temporary lanes. This bill contains other related provisions.
ABX1 10 Levine D Public works: contracts: extra compensation.	8/19/2015-A. PRINT 8/20/2015-From printer.	Existing law sets forth requirements for provisions in public works contracts awarded by a state entity. Under existing law, the state or any other public entity in any competitively bid public works contract may provide for the payment of extra compensation to the contractor for cost reduction changes. This bill would provide that a state entity in a megainfrastructure project contract, as defined, may not provide for the payment of extra compensation to the contractor until the megainfrastructure project, as defined, has been completed and an independent third party has verified that the megainfrastructure project meets all architectural or engineering plans and safety specifications of the contract. This bill would apply to contracts entered into or amended on or after the effective date of this bill.

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ABX1 11 Gray D Transportation projects: County of Merced: campus parkway project.	8/20/2015-A. PRINT 8/21/2015-From printer.	Existing law provides various sources of funding for transportation projects. This bill would appropriate \$97,600,000 from the General Fund to the Merced County Association of Governments for construction of phase 2 and 3 of the Campus Parkway Project, a planned road project to connect the University of California, Merced to State Highway 99, in the County of Merced.
ABX1 12 Nazarian D Los Angeles County Metropolitan Transportation Authority.	8/26/2015-A. PRINT 8/27/2015-From printer.	Existing law creates the Los Angeles County Metropolitan Transportation Authority with specified powers and duties relative to transportation planning, programming, and operations in Los Angeles County. This bill would authorize the Los Angeles County Metropolitan Transportation Authority to enter into agreements with private entities for certain transportation projects in Los Angeles County, including on the state highway system, subject to various terms and requirements. The bill would authorize the authority to impose tolls and user fees for use of those projects. For any project on the state highway system, the bill would require the authority to implement the project in cooperation with the Department of Transportation pursuant to an agreement that addresses specified matters. The bill would provide that a facility constructed by a private entity would at all times be owned by a governmental agency, except as provided. The bill would authorize the authority to issue bonds to finance any costs necessary to implement a project and to finance any expenditures, payable from the revenues generated from the project or other available resources, as specified. This bill contains other related provisions.

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ABX1 13 Grove R Greenhouse Gas Reduction Fund: streets and highways.	8/31/2015-A. PRINT 9/1/2015-From printer.	The California Global Warming Solutions Act of 2006 designates the State Air Resources Board as the state agency charged with monitoring and regulating sources of emissions of greenhouse gases. The state board is required to adopt a statewide greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions level in 1990 to be achieved by 2020. The act authorizes the state board to include the use of market-based compliance mechanisms. Existing law requires all moneys, except for fines and penalties, collected by the state board from the auction or sale of allowances as part of a market-based compliance mechanism to be deposited in the Greenhouse Gas Reduction Fund and to be available upon appropriation. Existing law continuously appropriates 20% of the annual proceeds of the fund to the Strategic Growth Council for the Affordable Housing and Sustainable Communities Program, as provided. This bill would reduce the continuous appropriation to the Strategic Growth Council for the Affordable Housing and Sustainable Communities Program by half. This bill contains other related provisions.
ABX1 14 Waldron R State Highway Operation and Protection Program: local streets and roads: appropriation.	8/31/2015-A. PRINT 9/1/2015-From printer.	Existing law requires the Department of Transportation to prepare a State Highway Operation and Protection Program every other year for the expenditure of transportation capital improvement funds for projects that are necessary to preserve and protect the state highway system, excluding projects that add new traffic lanes. Existing law provides for apportionment of specified portions of revenues in the Highway Users Tax Account derived from gasoline and diesel excise taxes to cities and counties by formula, with the remaining revenues to be deposited in the State Highway Account for expenditure on various state transportation programs, including maintenance of state highways and transportation capital improvement projects. This bill would continuously appropriate \$1 billion from the General Fund, with 50% to be made available to the Department of Transportation for maintenance of the state highway system or for purposes of the State Highway Operation and Protection Program, and 50% to be made available to the Controller for apportionment to cities and counties by a specified formula for street and road purposes.

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ABX1 15 Patterson R State Highway Operation and Protection Program: local streets and roads: appropriation.	8/31/2015-A. PRINT 9/1/2015-From printer.	Existing law appropriates the sum of \$663,287,000 for the 2015-16 fiscal year from the State Highway Account to the Department of Transportation for Capital Outlay Support. This bill would reduce the \$663,287,000 appropriation for Capital Outlay Support by \$500 million, and would appropriate \$500 million from the State Highway Account for the 2015-16 fiscal year, with 50% to be made available to the Department of Transportation for maintenance of the state highway system or for purposes of the State Highway Operation and Protection Program, and 50% to be made available to the Controller for apportionment to cities and counties by formula for street and road purposes. This bill contains other existing laws.
ABX1 16 Patterson R State highways: transfer to local agencies: pilot program.	8/31/2015-A. PRINT 9/1/2015-From printer.	Existing law provides that the Department of Transportation has full possession and control of all state highways and associated property, and sets forth the powers and duties with respect to operation, maintenance, and improvement of state highways. Existing law authorizes the California Transportation Commission to exercise various powers and duties on transportation matters, including the allocation of certain transportation capital improvement funds available to the state. This bill would require the department to participate in a pilot program over a 5-year period under which 2 counties, one in northern California and one in southern California, are selected to operate, maintain, and make improvements to all state highways, including freeways, in the affected county. The bill would require the department, with respect to those counties, for the duration of the pilot program, to convey all of its authority and responsibility over state highways in the county to a county, or a regional transportation agency that has jurisdiction in the county. The bill would require the commission to administer and oversee the pilot program, and to select the counties that will participate in the program. The bill would require certain moneys to be appropriated for these purposes as a block grant in the annual Budget Act to a participating county, as specified. The bill would authorize any cost savings realized by a participating county to be used by the county for other transportation priorities. The bill would require the participating counties to report to the Legislature upon the conclusion of the pilot program.

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ABX1 17 Achadjian R Greenhouse Gas Reduction Fund: state highway operation and protection program.	8/31/2015-A. PRINT 9/1/2015-From printer.	The California Global Warming Solutions Act of 2006 designates the State Air Resources Board as the state agency charged with monitoring and regulating sources of emissions of greenhouse gases. The state board is required to adopt a statewide greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions level in 1990 to be achieved by 2020. The act authorizes the state board to include the use of market-based compliance mechanisms. Existing law requires all moneys, except for fines and penalties, collected by the state board from the auction or sale of allowances as part of a market-based compliance mechanism to be deposited in the Greenhouse Gas Reduction Fund and to be available upon appropriation. Existing law continuously appropriates 60% of the annual proceeds of the fund for transit, affordable housing, sustainable communities, and high-speed rail purposes. This bill, beginning in the 2016-17 fiscal year, would continuously appropriate 25% of the annual proceeds of the fund to fund projects in the state highway operation and protection program.
ABX1 18 Linder R Vehicle weight fees: transportation bond debt service.	8/31/2015-A. PRINT 9/1/2015-From printer.	Existing law imposes weight fees on the registration of commercial motor vehicles and provides for the deposit of net weight fee revenues into the State Highway Account. Existing law provides for the transfer of certain weight fee revenues from the State Highway Account to the Transportation Debt Service Account to reimburse the General Fund for payment of debt service on general obligation bonds issued for transportation purposes. Existing law also provides for the transfer of certain weight fee revenues to the Transportation Bond Direct Payment Account for direct payment of debt service on designated bonds, which are defined to be certain transportation general obligation bonds issued pursuant to Proposition 1B of 2006. This bill, notwithstanding these provisions or any other law, effective January 1, 2016, would prohibit weight fee revenue from being transferred from the State Highway Account to the Transportation Debt Service Fund or to the Transportation Bond Direct Payment Account, and from being used to pay the debt service on transportation general obligation bonds.

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ABX1 19 Linder R California Transportation Commission.	8/31/2015-A. PRINT 9/1/2015-From printer.	Existing law establishes in the state government the Transportation Agency, which includes various departments and state entities, including the California Transportation Commission. Existing law vests the California Transportation Commission with specified powers, duties, and functions relative to transportation matters. Existing law requires the commission to retain independent authority to perform the duties and functions prescribed to it under any provision of law. This bill would exclude the California Transportation Commission from the Transportation Agency and establish it as an entity in the state government. The bill would also make conforming changes.
ABX1 20 Gaines, Beth R State government: elimination of vacant positions: transportation: appropriation.	8/31/2015-A. PRINT 9/1/2015-From printer.	Existing law establishes the Department of Human Resources in state government to operate the state civil service system. This bill would require the department to eliminate 25% of the vacant positions in state government that are funded by the General Fund. This bill contains other related provisions and other existing laws.
ABX1 21 Obernolte R Environmental quality: highway projects.	8/31/2015-A. PRINT 9/1/2015-From printer.	The California Environmental Quality Act (CEQA) requires a lead agency, as defined, to prepare, or cause to be prepared, and certify the completion of, an environmental impact report on a project that it proposes to carry out or approve that may have a significant effect on the environment or to adopt a negative declaration if it finds that the project will not have that effect. CEQA also requires a lead agency to prepare a mitigated negative declaration for a project that may have a significant effect on the environment if revisions in the project would avoid or mitigate that effect and there is no substantial evidence that the project, as revised, would have a significant effect on the environment. CEQA establishes a procedure by which a person may seek judicial review of the decision of the lead agency made pursuant to CEQA or proceeding challenging a lead agency's action on the grounds of noncompliance with CEQA. The bill would prohibit a court in a judicial action or proceeding under CEQA from staying or enjoining the construction or improvement of a highway unless it makes specified findings.

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ABX1 22 Patterson R Design-build: highways.	9/1/2015-A. PRINT 9/2/2015-From printer.	Existing law authorizes the Department of Transportation to utilize design-build procurement for up to 10 projects on the state highway system, based on either best value or lowest responsible bid. Existing law requires the department to perform construction inspection services for those projects that are on or interfacing with the state highway system, as specified. Existing law establishes a procedure for submitting bids that includes a requirement that design-build entities provide a statement of qualifications submitted to the transportation entity that is verified under oath, subject to penalty of perjury. This bill would authorize the department to utilize design-build procurement on an unlimited number of projects and would require the department to contract with consultants to perform construction inspection services for those authorized projects. The bill would eliminate the requirement that the department perform the construction inspection services for the projects on or interfacing with the state highway system. By authorizing the design-build method of procurement to be utilized in an unlimited number of projects, the bill would expand the number of projects in which the statement of qualifications requirement, subject to penalty of perjury, is applicable, thereby expanding the scope of an existing crime and imposing a state-mandated local program. This bill contains other related provisions and other existing laws.
ABX1 23 Garcia, Eduardo D Transportation.	9/4/2015-A. PRINT 9/5/2015-From printer.	Existing law requires the Department of Transportation to prepare a State Highway Operation and Protection Program every other year for the expenditure of transportation capital improvement funds for projects that are necessary to preserve and protect the state highway system, excluding projects that add new traffic lanes. Existing law provides for the programming of transportation capital improvement funds for other objectives through the State Transportation Improvement Program administered by the California Transportation Commission, which includes projects recommended by regional transportation planning agencies through adoption of a regional transportation improvement program and projects recommended by the department through adoption of an interregional transportation improvement program, as specified. This bill, by January 1, 2017, would require the California Transportation Commission to establish a process whereby the department and local agencies receiving funding for highway capital improvements from the State Highway Operation and Protection Program or the State Transportation Improvement Program prioritize projects that provide meaningful benefits to the mobility and safety needs of disadvantaged community residents, as specified. This bill contains other related provisions and other existing laws.

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ABX1 24 Levine D Bay Area Transportation Commission: election of commissioners.	9/11/2015-A. PRINT 9/12/2015-From printer.	Existing law designates the Metropolitan Transportation Commission as the regional transportation planning agency for the San Francisco Bay area, with various powers and duties with respect to transportation planning and programming, as specified, in the 9-county San Francisco Bay area region. Existing law creates the Bay Area Toll Authority, governed by the same board as the commission, but created as a separate entity, with specified powers and duties relative to the administration of certain toll revenues from state-owned toll bridges within the geographic jurisdiction of the commission. Under existing law, the commission is comprised of 21 appointed members, as specified. This bill, effective January 1, 2017, would redesignate the Metropolitan Transportation Commission as the Bay Area Transportation Commission. The bill would require commissioners to be elected by districts comprised of approximately 750,000 residents. The bill would require each district to elect one commissioner, except that a district with a toll bridge, as defined, within the boundaries of the district would elect 2 commissioners. The bill would require commissioner elections to occur in 2016, with new commissioners to take office on January 1, 2017. The bill would state the intent of the Legislature for district boundaries to be drawn by a citizens' redistricting commission and campaigns for commissioners to be publicly financed. This bill contains other related provisions and other existing laws.
ABX1 25 Allen, Travis R Shuttle services: loading and unloading of passengers.	1/11/2016-A. PRINT 1/12/2016-From printer.	Under existing law, a person may not stop, park, or leave a vehicle standing alongside a curb space authorized for the loading or unloading of passengers of a bus engaged as a common carrier in local transportation when indicated by a sign or red paint on the curb, except that existing law allows local authorities to permit schoolbuses to stop alongside these curb spaces upon agreement between a transit system operating buses as common carriers in local transportation and a public school district or private school. This bill would also allow local authorities to permit shuttle service vehicles, as defined, to stop for the loading or unloading of passengers alongside these curb spaces upon agreement between a transit system operating buses engaged as common carriers in local transportation and a shuttle service provider, as defined. The bill would state that it is the intent of the Legislature to not replace public transit services. This bill contains other related provisions.

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ABX1 26 Frazier D Transportation funding.	8/24/2016-A. PRINT 8/25/2016-From printer.	<p>Existing law provides various sources of funding for transportation purposes, including funding for the state highway system and the local street and road system. These funding sources include, among others, fuel excise taxes, commercial vehicle weight fees, local transactions and use taxes, and federal funds. Existing law imposes certain registration fees on vehicles, with revenues from these fees deposited in the Motor Vehicle Account and used to fund the Department of Motor Vehicles and the Department of the California Highway Patrol. Existing law provides for the monthly transfer of excess balances in the Motor Vehicle Account to the State Highway Account. This bill would create the Road Maintenance and Rehabilitation Program to address deferred maintenance on the state highway system and the local street and road system. The bill would require the California Transportation Commission to adopt performance criteria, consistent with a specified asset management plan, to ensure efficient use of certain funds available for the program. The bill would provide for the deposit of various funds for the program in the Road Maintenance and Rehabilitation Account, which the bill would create in the State Transportation Fund, including revenues attributable to a \$0.17 per gallon increase in the motor vehicle fuel (gasoline) tax imposed by the bill with an inflation adjustment, as provided, an increase of \$38 in the annual vehicle registration fee with an inflation adjustment, as provided, a new \$165 annual vehicle registration fee with an inflation adjustment, as provided, applicable to zero-emission motor vehicles, as defined, and certain miscellaneous revenues described in (7) below that are not restricted as to expenditure by Article XIX of the California Constitution. This bill contains other related provisions and other existing laws.</p>

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Bill ID/Topic	Location	Summary
SBX1 1 Beall D Transportation funding.	8/24/2016-S. APPR. 8/24/2016-From committee with author's amendments. Read second time and amended. Re-referred to Com. on APPR.	Existing law provides various sources of funding for transportation purposes, including funding for the state highway system and the local street and road system. These funding sources include, among others, fuel excise taxes, commercial vehicle weight fees, local transactions and use taxes, and federal funds. Existing law imposes certain registration fees on vehicles, with revenues from these fees deposited in the Motor Vehicle Account and used to fund the Department of Motor Vehicles and the Department of the California Highway Patrol. Existing law provides for the monthly transfer of excess balances in the Motor Vehicle Account to the State Highway Account. This bill would create the Road Maintenance and Rehabilitation Program to address deferred maintenance on the state highway system and the local street and road system. The bill would require the California Transportation Commission to adopt performance criteria, consistent with a specified asset management plan, to ensure efficient use of certain funds available for the program. The bill would provide for the deposit of various funds for the program in the Road Maintenance and Rehabilitation Account, which the bill would create in the State Transportation Fund, including revenues attributable to a \$0.17 per gallon increase in the motor vehicle fuel (gasoline) tax imposed by the bill with an inflation adjustment, as provided, an increase of \$38 in the annual vehicle registration fee with an inflation adjustment, as provided, a new \$165 annual vehicle registration fee with an inflation adjustment, as provided, applicable to zero-emission motor vehicles, as defined, and certain miscellaneous revenues described in (7) below that are not restricted as to expenditure by Article XIX of the California Constitution. This bill contains other related provisions and other existing laws.
SBX1 2 Huff R Greenhouse Gas Reduction Fund.	6/30/2015-S. T. & I.D. 9/1/2015-September 1 set for first hearing. Failed passage in committee. (Ayes 3. Noes 9. Page 56.) Reconsideration granted.	Existing law requires all moneys, except for fines and penalties, collected by the State Air Resources Board from the auction or sale of allowances as part of a market-based compliance mechanism relative to reduction of greenhouse gas emissions to be deposited in the Greenhouse Gas Reduction Fund. This bill would exclude from allocation under these provisions the annual proceeds of the fund generated from the transportation fuels sector. The bill would instead provide that those annual proceeds shall be appropriated by the Legislature for transportation infrastructure, including public streets and highways, but excluding high-speed rail. This bill contains other existing laws.

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Bill ID/Topic	Location	Summary
SBX1 3 Vidak R Transportation bonds: highway, street, and road projects.	9/14/2015-S. DEAD 9/14/2015-Returned to Secretary of Senate pursuant to Joint Rule 62(a).	Existing law, the Safe, Reliable High-Speed Passenger Train Bond Act for the 21st Century, approved by the voters as Proposition 1A at the November 4, 2008, general election, provides for the issuance of general obligation bonds in the amount of \$9 billion for high-speed rail purposes and \$950 million for other related rail purposes. Article XVI of the California Constitution requires measures authorizing general obligation bonds to specify the single object or work to be funded by the bonds and further requires a bond act to be approved by a 2/3 vote of each house of the Legislature and a majority of the voters. This bill would provide that no further bonds shall be sold for high-speed rail purposes pursuant to the Safe, Reliable High-Speed Passenger Train Bond Act for the 21st Century, except as specifically provided with respect to an existing appropriation for high-speed rail purposes for early improvement projects in the Phase 1 blended system. The bill, subject to the above exception, would require redirection of the unspent proceeds from outstanding bonds issued and sold for other high-speed rail purposes prior to the effective date of these provisions, upon appropriation, for use in retiring the debt incurred from the issuance and sale of those outstanding bonds. The bill, subject to the above exception, would also require the net proceeds of bonds subsequently issued and sold under the high-speed rail portion of the bond act, upon appropriation, to be made available to the Department of Transportation for repair and new construction projects on state highways and freeways, and for repair and new construction projects on local streets and roads, as specified. The bill would make no changes to the authorization under the bond act for the issuance of \$950 million in bonds for rail purposes other than high-speed rail. These provisions would become effective only upon approval by the voters at the June 7, 2016, statewide primary election.
SBX1 4 Beall D Transportation funding.	9/24/2015-S. CONFERENCE COMMITTEE 9/24/2015-Senators Beall (Co-Chair), Allen, Leyva, Cannella and Gaines appointed to Conference Committee.	Existing law requires the Department of Transportation to improve and maintain the state's highways, and establishes various programs to fund the development, construction, and repair of local roads, bridges, and other critical transportation infrastructure in the state. This bill would declare the intent of the Legislature to enact statutory changes to establish permanent, sustainable sources of transportation funding to maintain and repair the state's highways, local roads, bridges, and other critical transportation infrastructure.

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Bill ID/Topic	Location	Summary
SBX1 5 Beall D Transportation funding.	9/1/2015-A. DESK 9/1/2015-In Assembly. Read first time. Held at Desk.	Existing law establishes various programs to fund the development, construction, and repair of local roads, bridges, and other critical transportation infrastructure in the state. This bill would declare the intent of the Legislature to enact legislation to establish permanent, sustainable sources of transportation funding to improve the state's key trade corridors and support efforts by local governments to repair and improve local transportation infrastructure.
SBX1 6 Runner R Greenhouse Gas Reduction Fund: transportation expenditures.	9/14/2015-S. DEAD 9/14/2015-Returned to Secretary of Senate pursuant to Joint Rule 62(a).	Existing law requires all moneys, except for fines and penalties, collected by the State Air Resources Board from the auction or sale of allowances as part of a market-based compliance mechanism relative to reduction of greenhouse gas emissions to be deposited in the Greenhouse Gas Reduction Fund. This bill would delete the continuous appropriations from the fund for the high-speed rail project, and would prohibit any of the proceeds from the fund from being used for that project. The bill would continuously appropriate the remaining 65% of annual proceeds of the fund to the California Transportation Commission for allocation to high-priority transportation projects, as determined by the commission, with 40% of those moneys to be allocated to state highway projects, 40% to local street and road projects divided equally between cities and counties, and 20% to public transit projects. This bill contains other related provisions and other existing laws.
SBX1 7 Allen D Diesel sales and use tax.	9/3/2015-S. APPR. 9/3/2015-Read second time and amended. Re-referred to Com. on APPR.	Existing law, beyond the sales and use tax rate generally applicable, imposes an additional sales and use tax on diesel fuel at the rate of 1.75%, subject to certain exemptions, and provides for the net revenues collected from the additional tax to be transferred to the Public Transportation Account. Existing law continuously appropriates these revenues to the Controller, for allocation by formula to transportation agencies for public transit purposes. This bill, as of July 1, 2016, would increase the additional sales and use tax rate on diesel fuel to 5.25%. By increasing the revenues deposited in a continuously appropriated fund, the bill would thereby make an appropriation. The bill would restrict expenditures of revenues from the July 1, 2016, increase in the sales and use tax on diesel fuel to transit capital purposes and certain transit services. The bill would require an existing required audit of transit operator finances to verify that these new revenues have been expended in conformance with these specific restrictions and all other generally applicable requirements. This bill contains other related provisions and other existing laws.

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Bill ID/Topic	Location	Summary
SBX1 8 Hill D Public transit: funding.	9/2/2015-S. APPR. 9/2/2015-From committee: Do pass and re-refer to Com. on APPR. (Ayes 8. Noes 0. Page 57.) (September 1). Re-referred to Com. on APPR.	Existing law requires all moneys, except for fines and penalties, collected by the State Air Resources Board from the auction or sale of allowances as part of a market-based compliance mechanism relative to reduction of greenhouse gas emissions to be deposited in the Greenhouse Gas Reduction Fund. This bill would instead continuously appropriate 20% of those annual proceeds to the Transit and Intercity Rail Capital Program, and 10% of those annual proceeds to the Low Carbon Transit Operations Program, thereby making an appropriation. This bill contains other existing laws.
SBX1 9 Moorlach R Department of Transportation.	9/14/2015-S. DEAD 9/14/2015-Returned to Secretary of Senate pursuant to Joint Rule 62(a).	Existing law creates the Department of Transportation with various powers and duties relative to the state highway system and other transportation programs. This bill would prohibit the department from using any nonrecurring funds, including, but not limited to, loan repayments, bond funds, or grant funds, to pay the salaries or benefits of any permanent civil service position within the department. This bill contains other related provisions and other existing laws.

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Bill ID/Topic	Location	Summary
<p>SBX1 10 Bates R</p> <p>Regional transportation capital improvement funds.</p>	<p>7/16/2015-S. T. & I.D. 9/9/2015-September 8 hearing: Testimony taken. Hearing postponed by committee.</p>	<p>Existing law establishes the state transportation improvement program process, pursuant to which the California Transportation Commission generally programs and allocates available state and federal funds for transportation capital improvement projects, other than state highway rehabilitation and repair projects, over a multiyear period based on estimates of funds expected to be available. Existing law provides funding for these interregional and regional transportation capital improvement projects through the state transportation improvement program process, with 25% of funds available for interregional projects selected by the Department of Transportation through preparation of an interregional transportation improvement program and 75% for regional projects selected by transportation planning agencies through preparation of a regional transportation improvement program. Existing law requires funds available for regional projects to be programmed by the commission pursuant to the county shares formula, under which a certain amount of funding is available for programming in each county, based on population and miles of state highway. Existing law specifies the various types of projects that may be funded with the regional share of funds to include state highways, local roads, transit, and others. This bill would revise the process for programming and allocating the 75% share of state and federal funds available for regional transportation improvement projects. The bill would require the department to annually apportion, by the existing formula, the county share for each county to the applicable metropolitan planning organization, transportation planning agency, or county transportation commission, as a block grant. These transportation capital improvement funds, along with an appropriate amount of capital outlay support funds, would be appropriated annually through the annual Budget Act to regional transportation agencies. The bill would require the regional transportation agencies, in their regional transportation improvement programs, to identify the transportation capital improvement projects to be funded with these moneys, and would require the California Transportation Commission to incorporate the regional transportation improvement programs into the state transportation improvement program. The bill would eliminate the role of the California Transportation Commission in programming and allocating funds to these regional projects, but would retain certain oversight roles of the commission with respect to expenditure of the funds. The bill would repeal provisions governing computation of county shares over multiple years and make various other conforming changes.</p>

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Bill ID/Topic	Location	Summary
SBX1 11 Berryhill R Environmental quality: transportation infrastructure.	9/4/2015-S. T. & I.D. 9/4/2015-From committee with author's amendments. Read second time and amended. Re-referred to Com. on T. & I.D.	The California Environmental Quality Act (CEQA) requires a lead agency, as defined, to prepare, or cause to be prepared, and certify the completion of, an environmental impact report (EIR) on a project that it proposes to carry out or approve that may have a significant effect on the environment or to adopt a negative declaration if it finds that the project will not have that effect. CEQA establishes a procedure by which a person may seek judicial review of the decision of the lead agency made pursuant to CEQA. This bill would exempt from these CEQA provisions a project that consists of the inspection, maintenance, repair, restoration, reconditioning, relocation, replacement, or removal of existing transportation infrastructure if certain conditions are met, and would require the person undertaking these projects to take certain actions, including providing notice to an affected public agency of the project's exemption. Because a lead agency would be required to determine if a project qualifies for this exemption, this bill would impose a state-mandated local program. This bill contains other related provisions and other existing laws.
SBX1 12 Runner R California Transportation Commission.	8/20/2015-S. APPR. 8/20/2015-Read second time and amended. Re-referred to Com. on APPR.	Existing law establishes in state government the Transportation Agency, which includes various departments and state entities, including the California Transportation Commission. Existing law vests the California Transportation Commission with specified powers, duties, and functions relative to transportation matters. Existing law requires the commission to retain independent authority to perform the duties and functions prescribed to it under any provision of law. This bill would exclude the California Transportation Commission from the Transportation Agency, establish it as an entity in state government, and require it to act in an independent oversight role. The bill would also make conforming changes. This bill contains other related provisions and other existing laws.

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Bill ID/Topic	Location	Summary
SBX1 13 Vidak R Office of the Transportation Inspector General.	9/3/2015-S. APPR. 9/3/2015-From committee with author's amendments. Read second time and amended. Re-referred to Com. on APPR.	Existing law creates various state transportation agencies, including the Department of Transportation and the High-Speed Rail Authority, with specified powers and duties. Existing law provides for the allocation of state transportation funds to various transportation purposes. This bill would create the Office of the Transportation Inspector General in state government, as an independent office that would not be a subdivision of any other government entity, to build capacity for self-correction into the government itself and to ensure that all state agencies expending state transportation funds are operating efficiently, effectively, and in compliance with federal and state laws. The bill would provide for the Governor to appoint the Transportation Inspector General for a 6-year term, subject to confirmation by the Senate, and would provide that the Transportation Inspector General may not be removed from office during the term except for good cause. The bill would specify the duties and responsibilities of the Transportation Inspector General, would require an annual report to the Legislature and Governor, and would provide that funding for the office shall, to the extent possible, be from federal transportation funds, with other necessary funding to be made available from the State Highway Account and an account from which high-speed rail activities may be funded.
SBX1 14 Cannella R Transportation projects: comprehensive development lease agreements.	7/16/2015-S. T. & I.D. 8/17/2015-August 19 set for first hearing canceled at the request of author.	Existing law authorizes the Department of Transportation and regional transportation agencies, as defined, to enter into comprehensive development lease agreements with public and private entities, or consortia of those entities, for certain transportation projects that may charge certain users of those projects tolls and user fees, subject to various terms and requirements. These arrangements are commonly known as public-private partnerships. Existing law provides that a lease agreement may not be entered into under these provisions on or after January 1, 2017. This bill would extend this authorization indefinitely and would include within the definition of "regional transportation agency" the Santa Clara Valley Transportation Authority, thereby authorizing the authority to enter into public-private partnerships under these provisions. The bill would also delete obsolete cross-references and make technical changes to these provisions.

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Bill ID/Topic	Location	Summary
SCAX1 1 Huff R Motor vehicle fees and taxes: restriction on expenditures.	9/9/2015-S. APPR. 9/9/2015-From committee: Be adopted and re-refer to Com. on APPR. (Ayes 13. Noes 0. Page 72.) (September 8). Re-referred to Com. on APPR.	(1) Article XIX of the California Constitution restricts the expenditure of revenues from taxes imposed by the state on fuels used in motor vehicles upon public streets and highways to street and highway and certain mass transit purposes, and restricts the expenditure of revenues from fees and taxes imposed by the state upon vehicles or their use or operation to state administration and enforcement of laws regulating the use, operation, or registration of vehicles used upon the public streets and highways, as well as to street and highway and certain mass transit purposes. These restrictions do not apply to revenues from taxes or fees imposed under the Sales and Use Tax Law or the Vehicle License Fee Law. This measure would prohibit the Legislature from borrowing revenues from fees and taxes imposed by the state on vehicles or their use or operation, and from using those revenues other than as specifically permitted by Article XIX. The measure would also prohibit those revenues from being pledged or used for the payment of principal and interest on bonds or other indebtedness. The measure would delete the provision that provides for use of any fuel tax revenues allocated to mass transit purposes to be pledged or used for payment of principal and interest on voter-approved bonds issued for those mass transit purposes, and would instead subject those expenditures to the existing 25% limitation applicable to the use of fuel tax revenues for street and highway bond purposes. O This bill contains other related provisions and other existing laws.
SCRX1 1 De León D 2015-16 First Extraordinary Session: Joint Rules.	6/23/2015-A. DESK 6/23/2015-In Assembly. Held at Desk.	This measure adopts the Joint Rules of the Senate and Assembly for the 2015-16 Regular Session, as set forth in Senate Concurrent Resolution No. 37, as the Joint Rules, except as specified, for the 2015-16 First Extraordinary Session.

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Bill ID/Topic	Location	Summary
SRX1 1 De León D Relative to the Standing Rules of the Senate for the 2015-16 First Extraordinary Session	6/30/2015-S. ADOPTED 6/30/2015-Unanimous consent granted to take up without reference to file. Read. Adopted. (Ayes 25. Noes 0.)	This measure adopts the Joint Rules of the Senate and Assembly for the 2015-16 Regular Session, as set forth in Senate Concurrent Resolution No. 37, as the Joint Rules, except as specified, for the 2015-16 First Extraordinary Session.

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AB 2222 (Holden) Verified 7/29/2016

SUPPORT:

Amigos de los Rios
Aspiranet
Association for Commuter Transportation, Southern California Chapter
Bike San Gabriel
California Bicycle Coalition
California Federation of Teachers
California Housing Partnership Corporation
California Pan Ethnic Health Network
California ReLEAF
California State Polytechnic University, Pomona
California State Student Association
California State University
CalPIRG
Catholic Charities of the diocese of Stockton
Center for Community Action and Environmental Justice
Circulate San Diego
Climate Resolve
Coalition for Clean Air
East LA Community Corporation
East Los Angeles College
FAST

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Housing California
Investing in Place
Kings Canyon Unified School District
LA Mas
LAANE
Leadership Council for Justice and Accountability
Long Beach Community College District
Los Angeles Business Council
Los Angeles Community College District
Los Angeles County Bicycle Coalition
Gamaliel of California
Los Angeles County Metropolitan Transportation Authority
Los Angeles Neighborhood Initiative
Los Angeles Urban League
Los Angeles Walks
Los Rios Community College District
Mt. San Antonio College
Orange County Transportation Authority
Pacoima Beautiful
Pasadena Area Community College District
Peralta Community College District
PolicyLink
Prevention Institute
Public Advocates
Safe Routes to School
San Diego Community College District
San Francisco Bay Area Rapid Transit District
San Jose Evergreen Community College District
SLATE Z

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Southeast Asian Community Alliance
The Trust for Public Land
Union of Concerned Scientists
University of California, Los Angeles
University of Southern California (USC)
Ventura County Transportation Commission
Youth Policy Institute
1 Individual

OPPOSITION:

California Taxpayers Association

SB 32 (Pavley)

SUPPORT: (Verified 8/23/16)

State Controller Betty Yee
350 Bay Area
350 Sacramento
Access to Independence
Advanced Energy Economy
Agility Fuel Systems
Agoura Hills Mayor Ilce Buckley
American Academy of Pediatrics - California District IX
American Cancer Society, California Division
American College of Physicians, California Service Chapter
American Farmland Trust
American Heart Association
American Lung Association in California

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American Stroke Association
Annie's Inc.
Applied LNG Technologies
Apricus Inc.
Asthma Coalition of Los Angeles County
Atmos Energy
Audubon Society of California
Autodesk, Inc.
Azul
Bagito
Bay Area Air Quality Management District
Baz Allergy, Asthma & Sinus Center (San Joaquin Valley)
Ben & Jerry's
Benicia Mayor Elizabeth Patterson
Big Sur Land Trust
Biodico Sustainable Biorefineries
Bioenergy Association of California
Biosynthetic Technologies
Blue Sky Biochar
Bonnie J. Adario Lung Cancer Foundation
Breathe California
Building Doctors
Business for Innovative Climate and Energy Policy
C&C Development Co.
Calabasas Mayor Lucy Martin
California Bicycle Coalition
California Biodiesel Alliance
California Biomass Energy Alliance
California Black Health Network

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California Catholic Conference, Inc.
California Climate and Agriculture Network
California Conference of Directors of Environmental Health
California Contract Cities Association
California Electric Transportation Coalition
California Energy Efficiency Industry Council
California Energy Storage Alliance
California Equity Leaders Network
California Green Business Network
California Interfaith Power & Light
California League of Conservation Voters
California Municipal Utilities Association
California Natural Gas Vehicle Coalition
California Nurses Association
California Pan-Ethnic Health Network
California Public Health Association, North
California Ski Industry Association
California Solar Energy Industries Association
California Solar Energy Industry Association
California State Council of Laborers
California Thoracic Society
California Transit Association
California Trout
California Urban Forests Council
California Wind Energy Association
Californians Against Waste
Calpine Corporation
CalPIRG
CALSTART

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Carbon Cycle Institute
Cathedral City Mayor Pro Tem Greg Pettis
Catholic Charities, Diocese of Stockton
Center for Biological Diversity
Center for Climate Change and Health
Center for Climate Protection
Center for Sustainable Suburban Development at University California, Riverside
Central California Asthma Collaborative
Ceres
ChargePoint
Chart Industries
Circulate San Diego
City and County of San Francisco
City Heights Community Development Corporation
City of Arcata
City of Berkeley
City of Los Angeles
City of Maywood
City of Moorpark
City of Oxnard
City of Santa Monica
City of Santa Rosa
City of Sebastopol
City of Simi Valley
City of Thousand Oaks
City of West Hollywood
Clean Energy
Clean Power Finance
Clean Water Action

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CleanTech San Diego
Cleveland National Forest Foundation
Clif Bar, Inc
Climate Action Campaign
Climate Action Reserve
Climate Parents
Climate Ready Solutions LLC
Climate Resolve
Communications Workers of American, AFL-CIO District 9
Communitas Financial Planning
Community Action to Fight Asthma
Consumers Union
Cosmodyne
County of Los Angeles
County of Marin
County of Santa Barbara
County of Sonoma
County of Ventura
Covanta Energy Corporation
Cummins Westport Inc.
Davis Mayor Dan Wolk
Dignity Health
Distance Learning Consulting
Doctors for Climate Health
Eagle Creek
East Bay Municipal Utility District
eBay
Ecogate, Inc.
El Proyecto del Barrio, Inc

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Endangered Habitats League
Environment California
Environmental Action Committee of West Marin
Environmental Defense Fund
Environmental Entrepreneurs (E2)
Environmental Health Coalition
Environmental Health Department, County of Los Angeles
EtaGen
FastTech
Fiat Chrysler Automobiles
Ford Motor Company
Freightliner
Fresno Mayor Ashley Swearengin
Friends Committee on Legislation of California
Friends of the River
Gap, Inc.
General Motors Company
Gladstein Neandross & Associates
Global Green USA
Grand Boulevard Initiative
Green Education
Greenbelt Alliance
Harvest Power
Health Care Without Harm
Health Officers Association of California
Honda
House Kombucha
Housing California
Humane Society International

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Humane Society of the United States
Impco Automotive
Jewish Family Services of Los Angeles
KB Home
Klean Kanteen
Lancaster Mayor R. Rex Parris
Land Trust of Santa Cruz County
Landirengo
Large-Scale Solar Association
Leadership Counsel for Justice and Accountability
League of Women Voters of California
League of Women Voters of Orange Coast
Levi Strauss & Co
Liberty Hill Foundation
Long Beach Mayor Robert Garcia
Los Angeles Alliance for a New Economy
Los Angeles Business Council
Los Angeles County Medical Association
Los Angeles County Supervisor Hilda Solis
Los Angeles County Supervisor Mark Ridley-Thomas
Los Angeles County Supervisor Sheila Kuehl
Los Angeles Mayor Eric Garcetti
Lyft
MAAC
Marin Agricultural Land Trust
Marin Clean Energy
Mars Incorporated
Medical Advocates for Healthy Air
Member of Congress, Adam B. Schiff

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Member of Congress, Alan Lowenthal
Member of Congress, Ted W. Lieu
Mercury Press International
Moms Clean Air Force
Morgner Construction
Motiv
Mountains Recreation and Conservation Authority
Move LA
National Parks Conservation Association
Natural Resources Defense Council
Nature Conservancy
NextGen Climate
Oakland Mayor Libby Schaaf
Pacific Forest Trust
Pacific Gas and Electric
Pacoima Beautiful
Patagonia Works
Patagonia, Inc.
Peninsula Open Space Trust
People Organizing to Demand Environmental and Economic Rights
Physicians for Social Responsibility, Los Angeles
Physicians for Social Responsibility--SF-Bay Area Chapter
Planning and Conservation League
Plug In America
Power2Sustain
Prevention Institute
Progressive Asset Management, Inc.
Progressive Baptist State Convention of California and the West
Proterra Inc.

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Public Health Institute
Puma Springs Vineyards
Purple Wine & Spirits
Quest
Questar Fueling
RC Cubed, Inc.
Redlands Area Democratic Club
Redlands Mayor Pro Tempore Jon Harrison
ReFuel
Regional Asthma Management and Prevention
Republic Services, Inc.
Sacramento Mayor Kevin Johnson
Sacramento Municipal Utility District
San Diego Housing Federation
San Diego-Imperial Counties Labor Council
San Francisco Asthma Task Force
San Francisco Mayor Edwin Lee
San Jose Mayor Sam Liccardo
Santa Ana Mayor Miguel Pulido
Santa Clara County Medical Society
Santa Clara Valley Open Space Authority
Santa Clarita Organization for Planning and the Environment
Santa Monica Mountains Conservancy
Save the Redwoods League
Sempra Energy
Sequoia Riverlands Trust
Service Employees International Union
Sidel Systems USA
Sierra Business Council

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**Los Angeles County Metropolitan Transportation Authority (Metro)
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Sierra Club California
Silicon Valley Leadership Group
SmartWool
Solano County Transit
Solar Energy Industries Association
Sonoma Agricultural Preservation and Open Space District
Sonoma Clean Power
Sonoma County Asthma Coalition
Sonoma County Water Agency
South Coast Air Quality Management District
Southern California Edison
Southern California Gas Company
Southern California Public Power Authority
Southwest Wetlands Interpretive Association
Spectrum LNG
Stop Waste
Sustainable North Bay
Symantec
Tamalpais Nature Works
The Added Edge
The Hampstead Companies
The North Face
TransForm
TreePeople
Trillium CNG
Trust for Public Land
U.S. Green Building Council California
Union of Concerned Scientists
United States Senator Barbara Boxer

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United States Senator Dianne Feinstein
UPS
VNG
Voices for Progress
Wakeland Housing & Development Corporation
Waste Management, Inc.
Waterplanet Alliance
WaterSmart Software
Westport Innovations

OPPOSITION: (Verified 8/23/16)

African American Farmers of California
Agricultural Council of California
American Alliance Authority and Compliance
American Alliance Drug Testing
American Forest and Paper Association
American Wood Council
Apartment Association of Greater Los Angeles
Apartment Association of Orange County
Apartment Association, California Southern Cities
Associated Builders and Contractors of California
Brea Chamber of Commerce
Building Owners and Managers Association
California Agricultural Aircraft Association
California Apartment Association
California Association of Nurseries and Garden Centers
California Association of Realtors
California Building Industry Association

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California Business Properties Association
California Business Roundtable
California Cattlemen's Association
California Chamber of Commerce
California Concrete Pumpers Alliance
California Construction Trucking Association
California Cotton Ginners Association
California Cotton Growers Association
California Dairies, Inc.
California Dairy Campaign
California Farm Bureau Association
California Farm Bureau Federation
California Fresh Fruit Association
California Independent Oil Marketers Association
California Independent Petroleum Association
California League of Food Processors
California Manufacturers and Technology Association
California Political Consulting Group
California Small Business Association
California Taxpayers Association
California Trucking Association
Californians for Affordable and Reliable Energy
Camarillo Chamber of Commerce
Chambers of Commerce Alliance of Ventura & Santa Barbara Counties
Coalition of American Latino Truckers
East Bay Rental Housing Association
Family Business Association
Fullerton Chamber of Commerce
Greater Bakersfield Chamber of Commerce

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Greater Fresno Area Chamber of Commerce
Greater Riverside Chamber of Commerce
Heavy-Haul Conference
Inland Empire Economic Partnership
International Council of Shopping Centers
Irvine Chamber of Commerce
Kern County Board of Supervisors
Los Angeles County Business Federation
Milk Producers Council
NAIOP of California, the Commercial Real Estate Development Association
National Federation of Independent Business
National Hmong American Farmers
Nisei Farmers League
North Orange County Chamber
North Valley Property Owners Association
Orange County Business Council
Oxnard Chamber of Commerce
Rancho Cordova Chamber of Commerce
Redondo Beach Chamber of Commerce & Visitors Bureau
San Jose Silicon Valley Chamber of Commerce
Santa Barbara Rental Property Association
Santa Maria Valley Chamber of Commerce and Visitors Convention Bureau
Simi Valley Chamber of Commerce
South Bay Association of Chambers of Commerce
Southwest California Legislative Council
Torrance Chamber of Commerce
Valley Industry and Commerce Association
Ventura County Economic Development Association
Western Agricultural Processors Association

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Western Growers Association
Western Plant Health Association
Western States Petroleum Association
Western Trucking Alliance
Western United Dairymen

SB 1383 (Lara)

Support (6/27/16)

Alliance of Nurses for Healthy Environment
American Academy of Pediatrics – California
American Cancer Society Cancer Action Network, California
American Lung Association
American Heart Association, California
Asthma Coalition of Los Angeles County
Bay Area Regional Health Inequities Initiative
Baz Allergy, Asthma and Sinus Center
Ben & Jerry's
Bloom Energy
Bonnie J. Addario Lung Cancer Foundation
Breathe California
Burton
California Black Health Network, Inc.
Californians Against Waste

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Los Angeles County Metropolitan Transportation Authority (Metro)
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California Conference of Directors of Environmental Health
California Environmental Justice Alliance
California Medical Association
California Nurses Association
California Pan-Ethic Health Network
California Public Health Association – North
California State PTA
California Thoracic Society
California Walks
Center for Climate Change and Health , Public Health Institute
Center for Food Safety
Center on Race, Poverty & the Environment
Central California Asthma Collaborative
Central California Environmental Justice Network
Clean Power Campaign
Clif Bar & Company
Climate 911
Common Sense Kids Action
Community Alliance for Agroecology
Dignity Health
Eileen Fisher
Environmental Defense Fund
Environmental Health Coalition

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Fetzer Vineyards
Food & Water Watch
Health African American Families II
Health Care Without Harm
Health Officers Association of California
Institute for Agriculture and Trade Policy
Leadership Counsel for Justice and Accountability
Levi Strauss & Co.
Long Beach Alliance for Children with Asthma
Maternal and Child Health Access (Los Angeles)
Medical Advocates for Healthy Air
Network of Ethnic Physician Organizations
Nike, Inc.
Patagonia
Placer Land Trust
PSE Healthy Energy (Physicians, Scientists and Engineers)
Physicians for Social Responsibility, Sacramento
Physicians for Social Responsibility, San Francisco Bay Area Chapter
Prevention Institute
St. John's Well Child and Family Centers (Los Angeles)
Santa Clara County Board of Supervisors
Santa Clara County Public Health Department
Seventh Generation

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Sierra Business Council
Sierra Club California
Sierra Foothill Conservancy
The North Face
Timberland
Truckee Donner Land Trust
Vans
VF Corporation
Voices for Progress
30 Individuals

Opposition (6/27/16)

Agricultural Council of California
Association of California Egg Farmers
Association of Home Appliance Manufacturers
California Poultry
California Business Properties Association
California Cattlemen's Association
California Chamber of Commerce
California Citrus Mutual
California Cattlemen's Association
California Cotton Ginners and Growers Association
California Council for Environmental and Economic Balance

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California Dairies, Inc.
 California Farm Bureau Federation
 California Fresh Fruit Association
 California Grain & Feed Association
 California Manufacturers & Technology Association
 California Poultry
 California Retailers Association
 CIPA
 Milk Producers Council
 NFIB
 Nisei Farmers League
 Pacific Coast Rendering Association
 Western Agricultural Processors Association
 Western Growers
 Western Plant Health Association
 WSPA
 Waste Management
 Western United Dairymen

H.R. 3620	Would permit transportation agencies to consider the hiring of local workers in	January 2014 – SUPPORT
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Bass D	the evaluation of bids and proposals for highway and transit projects where federal funds are being used.	Referred to House Transportation and Infrastructure Subcommittees on Highways and Transit and Railroads, Pipelines, and Hazardous Materials
H.R. 680 Blumenauer D	Would gradually increase the federal gas tax by 15-cents, index the gas tax to inflation and seek to replace the federal gas tax with a more stable alternative by 2024. <i>Board previously supported HR 3636 bill last session.</i>	May 2015 – SUPPORT Referred to the House Committees on Ways and Means and House Transportation and Infrastructure
H.R. 935 Hahn D-CA	Would direct 5% of all import duties collected by Customs and Border Protection (CBP) at Ports of Entry to be spent on freight transportation through the creation of the National Freight Network Trust Fund. <i>Board previously supported HR 5101 bill last session.</i>	May 2015 – SUPPORT WORK WITH AUTHOR Subcommittee on Rail, House Transportation and Infrastructure Committee House Ways and Means Committee

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BILL/AUTHOR	DESCRIPTION	STATUS
H.R. 990 King R-NY	Would authorize and bring parity between the parking and transit commuter tax benefits available for employees, including cash payments from employers, to the level of \$235 per month. The legislation also includes a tax benefit for bicycle commuters in the amount of \$35 per month.	May 2015 – SUPPORT House Ways and Means Committee
H.R. 1308 Lowenthal D-CA	Would establish a Freight Transportation Infrastructure Trust Fund and create a freight specific formula and competitive grant program for multimodal projects. <i>Board previously supported HR 5624 bill last session.</i>	May 2015 – SUPPORT WORK WITH AUTHOR Subcommittee on Water, House Transportation and Infrastructure Committee House Ways and Means Committee
H.R. 1461 Massie R-KY	Would end the longstanding practice of the mass transit account receiving funding through the Highway Trust Fund. Additionally, it repeals the Transportation	May 2015 – OPPOSE House Transportation and Infrastructure Committee House Ways and Means Committee

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**Los Angeles County Metropolitan Transportation Authority (Metro)
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<p>H.R. 1551 Sanford R-SC</p>	<p>Would phase out the Mass Transit Account from receiving any funding through the Highway Trust Fund by incrementally decreasing funding from 2016-2020.</p>	<p>May 2015 – OPPOSE House Ways and Means Committee</p>
<p>H.R. 2485 Torres D-CA</p>	<p>The Regional Infrastructure Accelerator Act of 2015 would, if enacted into federal law, create a two-tiered grant program aimed at increasing private investment in public infrastructure projects. The legislation seeks to establish and fund regional infrastructure accelerator organizations to provide regional analysis of potential Public-Private Partnership (P3) Infrastructure projects. The regional accelerators would then have the ability to provide technical expertise and funding to states, cities and public entities for pre-development activities on a potential P3 project. This legislation authorizes, subject to appropriations, funding in the amount of \$25 million for the two-tiered grant program outlined in the Regional Infrastructure Accelerator Act of 2015.</p>	<p>June 2015 – SUPPORT 5/21/15 Subcommittee on Water Resources and Environment for House Transportation and Infrastructure Committee</p>
<p>H.R. 2495 Waters D-CA</p>	<p>The TIGER Grants for Job Creation Act would, if enacted into federal law, provide an emergency supplemental appropriation of \$7.5 billion over the next 6 years for the Transportation Investment Generating Economic Recovery (TIGER) discretionary grant program.</p>	<p>June 2015 – SUPPORT 5/21/15 House Appropriation and Budget Committees</p>

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**Los Angeles County Metropolitan Transportation Authority (Metro)
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<p>H.R. 2410 DeFazio D-OR</p>	<p>The GROW America Act would, if enacted into federal law, authorize a six-year \$478 billion surface transportation bill. H.R. 2410 represents President Obama’s surface transportation bill that his Administration has transmitted to Congress through his Fiscal Year 2016 Budget. The authorized funding level of \$478 billion in the bill is the same funding figure that the U.S. Department of Transportation has determined is needed to assist in funding our nation’s state-of-good-repair backlog maintenance as well as continue to invest in new transportation projects required to properly address America’s future population growth.</p> <p>Co-sponsors of H.R. 2410 from the Los Angeles Congressional Delegation include Congresswoman Grace Napolitano (D-32) and Congresswoman Julia Brownley (D-26).</p>	<p>June 2015 - SUPPORT</p>
<p>H.R. 4343</p>	<p>H.R. 4343 (Blumenauer) – The Bikeshare Transit Act of 2016 would, if enacted into federal law, clarify the definition of bikeshare projects that qualify as an “associated transit improvement” under Title 49 of U.S. Code, add bikeshare projects to the definition of “capital project” under Title 49 of U.S. Code, and make bikeshare projects eligible for funding under the Congestion Mitigation and Air Quality Improvement Program (CMAQ) under Title 23 of U.S. Code. The legislation seeks to add bikeshare projects to the formal definition of transit projects as well as make clear to states that administer Federal Highway Administration funding that bikeshare is eligible to receive federal funding.</p>	<p>MARCH 2016 - SUPPORT</p>
<p>S. 650 Blunt R-MO</p>	<p>Extends the national deadline by five years to implement PTC, from December 31, 2015 to December 31, 2020. Two one year extensions beyond 2020 are included in the legislation, but the extensions are at the discretion of the Secretary of the U.S. Department of Transportation.</p>	<p>MAY 2015 – OPPOSE</p> <p>Senate Commerce, Science and Transportation Committee</p>
<p>S. 797 Booker D-NJ</p>	<p>Amends the Railroad Rehabilitation and Improvement Financing Program (RRIF) to expand the eligibility for financing transit oriented development.</p>	<p>May 2015 – SUPPORT WORK WITH AUTHOR</p>

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**Los Angeles County Metropolitan Transportation Authority (Metro)
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		Senate Commerce, Science and Transportation Committee
S. 880 (Schatz-D-HI)	Amends the TIFIA program, as authorized in MAP-21, to include TOD as an eligible expense to finance through the TIFIA program.	May 2015- SUPPORT Senate Environment and Public Works Committee
S. 1006 (Feinstein-D-CA)	Extend the national deadline to implement Positive Train Control by one year	MAY 2015 – SUPPORT Senate Commerce, Science and Transportation Committee
Omnibus Appropriations Bill For Fiscal Year 2016	An omnibus appropriations bill that keeps all federal programs, agencies, and services funded until September 30, 2016.	Signed into law by President Obama, December 18, 2015
HR 22 (formerly known as the DRIVE Act) Fixing America’s Surface Transportation Act (FAST Act)	Fixing America’s Surface Transportation Act (FAST Act), the long-term surface transportation authorization bill authorizes approximately \$305 billion for Highway, Transit and Railroad programs over 5 years (\$61 billion per year).	Signed into law by President Obama, December 4, 2015

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**Board Report**

File #: 2016-0748, **File Type:** Motion / Motion Response**Agenda Number:** 35.

**EXECUTIVE MANAGEMENT COMMITTEE
OCTOBER 20, 2016****SUBJECT: FEDERAL FREIGHT FUNDING PROGRAM UPDATE****ACTION: RECEIVE AND FILE****RECOMMENDATION**RECEIVE AND FILE report on **Federal Freight Funding Program Update**.**ISSUE**

At the August 25, 2016 Metro Board meeting, the Board unanimously approved Motion #52 by Directors Garcetti, Knabe, Antonovich, Solis, Dubois and Fasana (**Attachment A**) that directed the CEO to provide an update on federal freight funding opportunities at the October Metro Board of Directors meeting, including efforts made for the first year of the federal FASTLANE grant competition, lessons learned and strategies to secure future FASTLANE funding, and the creation of a Freight Corridor Implementation Working Group (Working Group).

Background

The Fixing America's Surface Transportation Act (FAST Act), a five-year transportation authorization bill funded at \$305 billion and signed into law on December 4, 2015, established the Nationally Significant Freight and Highway Projects (NSFHP) program to provide federal financial assistance to projects of national or regional significance. This grant program, also known as the Fostering Advancements in Shipping and Transportation for the Long-term Achievement of National Efficiencies (FASTLANE) grant program, was authorized at \$4.5 billion for fiscal years (FY) 2016 through 2020, with \$800 million for FY 16 to be awarded by the Secretary of Transportation and vetted by Congress.

On March 2, 2016 a Notice of Funding Opportunity (NOFO) was published by the Office of the Secretary of Transportation that provided information to solicit applications for FY 16 FASTLANE grants. The NOFO provided eligibility criteria for agencies and projects as well as application requirements. The deadline for grant applications to be submitted was April 14, 2016, providing approximately six weeks for agencies to submit their application(s).

Metro as lead sponsor submitted its maximum of three projects to be considered for a total of \$68.8 million in FASTLANE grants. The projects selected for consideration were as follows:

- State Route 71 Freeway Conversion Project (SR 71 Project)
- I-110/I-405 Interchange Improvements Project (110/405 Project)
- Freight Advanced Traveler Information System (FRATIS) project, developed in partnership with the Gateway Cities Council of Governments (GCCOG)

Metro also worked with the California Department of Transportation (Caltrans) to submit an additional application for the Rosecrans/Marquardt Grade Separation Project as one of Caltrans' three FASTLANE project submissions.

In addition to these projects, other agencies in Los Angeles County submitted projects for FASTLANE grants, including the following:

Alameda Corridor-East Construction Authority (ACE)

- Montebello Boulevard Grade Separation
- Durfee Avenue Grade Separation

Cities of Diamond Bar and Industry

- 57/60 Confluence Project

Port of Long Beach

- Middle Harbor Upgrades and Expansion
- Terminal Island Wye Track and Realignment

Port of Los Angeles

- On-Dock Rail Improvements

Overall, the United States Department of Transportation (USDOT) received 212 applications submitted for a total of \$9.8 billion for the FY 16 FASTLANE cycle.

On July 6, 2016, USDOT Secretary Anthony R. Foxx submitted a letter to House Transportation and Infrastructure Committee Chairman Bill Shuster (**Attachment B**), Senate Environment and Public Works Chairman Jim Inhofe, and ranking members Congressman Peter DeFazio and Senator Barbara Boxer, respectively, informing them of the 18 projects that would be awarded a total of \$759.2 million in FASTLANE grants for FY 16 (**Attachment C**).

Metro's three projects were not selected for a FASTLANE grant for FY 16, nor was any other project in Los Angeles County or in the six-county Southern California Association of Governments (SCAG) region, despite the presence of nationally significant and major freight infrastructure facilities such as:

- The Ports of Los Angeles and Long Beach, which combined constitute the 9th largest port in the world for container traffic and handle 40% of the nation's container traffic
- Major highways like I-710, I-5 and SR-60 that are congested by thousands of trucks a day in support of the movement of freight nationally and regionally
- Two major Class I freight railroad operators moving containers to and from the rest of

the country

The only project selected in California was the State Route 11/Otay Mesa East Port of Entry Project located in San Diego County which received \$49.3 million, constituting only 6.5% of the FASTLANE grant funding available for FY 16.

California-particularly Los Angeles County-plays a primary role as the international trade gateway moving goods throughout the country. California's gross state product of \$2.46 trillion makes it the world's sixth largest economy following the United States as a whole, China, Japan, Germany, and the United Kingdom.

Los Angeles County's population of 10.2 million would make it the country's eighth largest state (approximately), after Ohio and before Georgia, with a gross county product of \$670 billion that would make it the world's 20th largest economy on its own.

Consequently, the outcome for the FY 16 FASTLANE grant cycle has caused concern among local, state, and federal officials. On July 13, 2016, a letter signed by 16 members of Congress raising concerns with the lack of FY 16 FASTLANE grant funding being awarded to the Los Angeles County region was submitted by Congressmember Janice Hahn to Secretary Foxx (**Attachment D**).

In response to the results of the FY 16 FASTLANE grant, and to assist Metro in preparation for competing for federal funding during the remaining four years of the FASTLANE program, Metro Board Directors Garcetti, Knabe, Antonovich, Solis, Dubois and Fasana submitted Motion #52 in August 2016.

DISCUSSION

Motion #52 called for several tasks to be completed, as detailed in Sections A through E (Attachment A). Metro's staff response is as follows:

A. Review MTA's process for selecting the three projects presented for the first year of FASTLANE grants, including the list of projects and selection process.

Metro staff reviewed the different elements of the FASTLANE program to determine which projects would be most competitive to submit for consideration. The review determined the following:

- Pursuant to the FASTLANE program, up to \$500 million of the \$4.5 billion may be used for freight rail, ports, or other freight intermodal projects that make significant improvements to freight movement on the National Highway Freight Network. Only the non-highway portion(s) of multimodal projects count toward the \$500 million maximum. With the exception of the Interstate 710 Freight Corridor project, there are no eligible projects that would match this element.
- Grade crossing and grade separation projects do not count toward the \$500 million maximum for freight rail, port and intermodal projects.
- FASTLANE earmarks at least 25% of funding (e.g. \$190 million in FY 16) for projects located in rural areas.

- FASTLANE authorizes funding for Intelligent Transportation Systems (ITS) programs that conduct research to advance transportation safety, mobility and environmental sustainability through electronic and information technology applications.
- One of the key requirements in the NOFO is Project Readiness. Projects are required to demonstrate the ability to begin construction **within 18 months** of obligating FASTLANE funding. For the FY 16 FASTLANE cycle, the expected obligation deadline is September 30, 2019.

Future cycles of FASTLANE are expected to follow the same approximate process, thus creating a reasonable guide for project eligibility for upcoming cycles.

FASTLANE Grant Deadlines* for Start of Project Construction

FASTLANE APPLICATION CYCLE BY FISCAL YEAR	REQUIRED CONSTRUCTION START DATE*
2016	September 2019
2017	September 2020
2018	September 2021
2019	September 2022
2020	September 2023

**Extrapolated dates based on FY16 FASTLANE grant deadline to begin construction.*

This sharp focus on projects being “shelf ready” eliminated several projects for consideration for submittal, particularly on major freight corridors I-710, I-5 and I-605 that would not have been ready to go to construction by the FY 16 FASTLANE deadline.

SELECTION PROCESS

Based on the parameters defined in the FASTLANE grant NOFO guidelines, Metro staff found it difficult to identify highly competitive projects for FY 16. However, to seize the opportunity, staff decided to select the projects that could reasonably demonstrate eligibility and be submitted for consideration.

A rigorous two-step screening and selection process was used to identify candidate projects for the FY16 FASTLANE grant funding cycle. The **first step** in the process involved reviewing and compiling a preliminary list of eligible projects, with particular importance attached to existing facilities with the following challenges:

- Constrained roadway geometrics
- High average daily traffic (ADT) and truck volumes
- Levels of Service (LOS) reported to be E (or worse) on designated freight corridors

Emphasis was placed on identifying projects that would do the following:

- Improve mobility
- Facilitate goods movement
- Correct deficient roadway geometrics
- Eliminate bottlenecks
- Enhance truck movement and access.

In addition, non-traditional operational improvement projects that apply new and innovative technologies to support and optimize freight/goods movement, and improve the overall efficiency of the freeway system were also identified.

The **second step** in the selection process involved screening and evaluating the preliminary list of projects against the FASTLANE goals and grant requirements (e.g. review of project schedules, funding, etc.) to develop a final list of candidate projects for submission.

The inventory of highway projects conducted during the screening and selection process for the FASTLANE grant revealed that a number of potentially qualified projects were either delayed in the environmental phase of the project development process, lacked project funding or simply were not project ready. For example, the Interstate 710 Freight Corridor (I-710 South) project, one of our most competitive project corridors based on project impact, **has been in the environmental process since 2008** and will not be cleared until 2018, with a potential construction start date well beyond the September 2019 deadline. Completion of this regionally significant project will also be contingent on funding which has not yet been secured.

Other highway projects considered were also precluded from consideration due to similar circumstances, such as a major funding shortfall or an extended or too nascent environmental process driving a potential construction start date beyond the FY 16 FASTLANE requirement.

After deliberation, staff selected the following projects to be submitted by Metro for the FY16 FASTLANE grant cycle. A brief narrative and other information about the projects considered but not selected for the FY 16 FASTLANE grant cycle funding are included in Attachments A and B.

- **Interstate 110/405 Interchange Improvements Project** - an operational improvement on I-110 that includes construction of an auxiliary lane and other improvements on southbound I-110 at the I-405 interchange.
 - Total Project Cost \$ 45,200,000
 - Funds Available \$ 18,800,000
 - FASTLANE Grant Request \$ 15,000,000

Justification for eligibility of this project: I-110 is a direct access route to the Port of Los Angeles.

- **State Route 71 Mission Boulevard to SR 60 Conversion Project** - an upgrade of the existing 4-lane expressway to an 8-lane, grade-separated freeway by adding mixed flow lanes

and High Occupancy Vehicle (HOV) lanes and closing off at-grade intersections on the facility.

- Total Project Cost \$ 181,500,000
- Funds Available \$ 0
- FASTLANE Grant Request \$ 40,000,000

Justification for eligibility of this project: Helps eliminate the bottleneck at the SR 71/SR 60 interchange and provides an important link between two major east-west freight corridors (SR 60 and I-10).

- **Freight Advanced Traveler Information System (FRATIS) Project** - applies advanced transportation technologies to optimize truck and terminal operations between the San Pedro Bay Ports and helps improve overall freeway system performance.

- Total Project Cost \$ 23,000,000
- Funds Available \$ 9,200,000
- FASTLANE Grant Request \$ 13,800,000

Justification for eligibility of this project: The innovative technology used to optimize freight operations would improve the overall freeway system performance and add capacity.

B. Present on lessons learned from the first FASTLANE grant cycle, outlook for the future FASTLANE grant cycles, and strategies for better positioning MTA to secure funding from future FASTLANE cycles.

Lessons learned from FY 16 and strategies for future FASTLANE grant cycles

State DOTs were very successful as lead applicants

FASTLANE allowed a broad spectrum of eligible applicants to submit grant applications, including local governments and political subdivisions of a state or local government in addition to port authorities and state Departments of Transportation. Each eligible applicant was allowed three applications as the lead applicant.

Despite this expanded opportunity for local government agencies to compete for FASTLANE funding, only two were successful in securing a grant - the cities of Seattle and Tukwila in Washington State. The remaining 16 FASTLANE grants were awarded to applications submitted by a state Department of Transportation (DOT) or a Port Authority.

Eleven large projects and seven small projects received a FASTLANE grant. Of these projects, state DOTs submitted successful grant applications for eight large projects and four small projects, for a total of 12 of the 18 FASTLANE grant awards. Port Authorities submitted four successful applications.

Strategy: In future FASTLANE grant cycles, Metro should consider seeking support from Caltrans to serve as lead applicant for at least one of our projects, especially one that is highly competitive and

seeks a large award.

Stand-alone Grade Separation projects were not as successful as expected

Grade Separation projects overall were minimally successful in the FY 16 FASTLANE cycle. Of the 18 projects selected, only two stand-alone grade separation projects (both in Washington State) were selected for funding, for a total of \$50 million (6.6% of total funding available) combined. Another project in Oklahoma with a grade separation feature was also selected for funding.

Three grade separation projects in Los Angeles County - two submitted by ACE and one by Caltrans for the Rosecrans/Marquardt Project - were unsuccessful in this FASTLANE round. Metro submitted the Rosecrans/Marquardt Project for a USDOT Transportation Investment Generating Economic Recovery (TIGER) grant as well, and subsequently secured a \$15 million TIGER grant for this vital safety and capacity project in the Gateway Cities subregion.

Grade separations have enjoyed success in previous federal authorization bills, given their role in improving highway safety and mobility more so than providing enhanced capacity for freight railroad activity. While other factors, including geographical diversity, may have played more significant roles in final project selection, understanding USDOT project priorities up front could be helpful.

Strategy: In future FASTLANE grant cycles, Metro should consider incorporating grade separation and bridge replacement/repair projects into larger corridor projects wherever possible and practical instead of submitting projects as stand-alone grade separations to provide for a stronger application.

Rural Projects Were More Successful than Expected

The FAST Act included direction that at least 25% of each fiscal year's FASTLANE grants be set aside for projects - whether large or small - located in rural areas, defined as an area outside of a U.S. Census Bureau designated urbanized area with a population over 200,000. [23 U.S.C. 117(i)].

For the FY 16 cycle of FASTLANE grants, \$268.5 million was allocated to eight rural projects - constituting over 35% of funding available, well above the 25% minimum.

Los Angeles County did not submit a project that qualified as rural, primarily because nearly all of Los Angeles County is located in what is considered an "urbanized area". However, certain portions of unincorporated North Los Angeles County outside the city limits of Lancaster, Palmdale, and Santa Clarita are considered rural according to FASTLANE rules and could yield a project that could compete for funding from this portion of the FASTLANE program, which could be as much as \$1.5 billion of the \$4.5 billion available over its five-year span, that would otherwise go to the rest of the country.

Strategy: Metro should consider working with Caltrans District 7 and Los Angeles County to develop an eligible rural project to compete for a FASTLANE grant in future fiscal year cycles. To provide maximum flexibility for Metro, this discussion should determine whether such a project should be submitted by Metro or Los Angeles County as the lead applicant.

Multimodal Projects Performed Well

FASTLANE provides up to \$500 million total over the life of the grant program (FY 16 to FY 20) for non-highway portions of multimodal projects to be used for freight rail, port, or other freight intermodal projects that make significant improvements to freight movement on the National Highway Freight Network. This provision requires that these portions funded by FASTLANE must provide public benefit.

Seven of the 18 projects selected for a FASTLANE grant included a multimodal element that qualified for this funding, including the Atlantic Gateway project in Virginia which received the largest award (\$165.0 million) overall and had a \$45.0 million non-highway multimodal component.

Strategy: Metro should consider working with Union Pacific, BNSF, the Port of Los Angeles and the Port of Long Beach to determine if there are opportunities to combine project elements into a multimodal project that would be deemed more competitive for a FASTLANE grant and access the remaining \$326.5 million (65.3%) of the \$500.0 million capacity for these types of project elements.

Large Projects received 90% of FASTLANE funding, as anticipated

FASTLANE provides guidance that grants will be divided into large and small projects, with specific requirements for determining under which category a project will fall. Regardless of project size, FASTLANE grants may not exceed 60% of future eligible project costs.

Of great importance is that under FASTLANE, 90% of funding (\$4.05 billion over five years) is made available for Large Projects, with 10% set aside for Small Projects. The definition for Small and Large Projects, how they fared in the FY 16 FASTLANE cycle, and how Metro’s projects were categorized is found in the following chart:

FASTLANE Grants: Project Size Categories		
Project Size	Small	Large
Minimum Grant Award	\$5 million	\$25 million
Project Cost	Under \$100 million	\$100 million or more
Portion of FASTLANE funding cycle available	10%	90%
Overall Amount Awarded in FY 16	\$75.92 million (10%)	\$683.28 million (90%)
Number of Projects Awarded Funding	7	11
Average Project Award	\$7.59 million	\$62.12 million
Urban Projects	3 of 7 (42.9%)	7 of 11 (63.6%)
Rural Projects	4 of 7 (57.1%)	4 of 11 (36.4%)
Metro FASTLANE Grant Applications	Small	Large

FRATIS	\$23.0 million Project Cost \$13.8 million Request	
110/405	\$45.2 million Project Cost \$15.0 million Request	
SR 71		\$181.5 million Project Cost \$40.0 million Request

\$100 million cost threshold applies to California projects per the FASTLANE Notice of Funding Opportunity (pp. 9-10, Attachment B)

Of the three grants Metro submitted for FASTLANE awards in FY 16, two of the grant applications (FRATIS and 110/405) were considered Small Projects and competed against other Small Projects nationally, while only the SR 71 Project was eligible for a Large Project FASTLANE grant award.

Strategy: Metro should consider submitting at least two Large Projects per FASTLANE cycle, leaving the third project open for a Small Project (like FRATIS), in order to have the best opportunity to access the 90% of funding available for Large Projects.

Outlook for future FASTLANE grant cycles

The remaining four years of FASTLANE grants (FY 17-20) will provide up to \$3.7 billion in funding for which Metro will have an opportunity to compete. Given the requirements for project readiness for construction within 18 months of obligation of a FASTLANE grant, some of Metro’s larger freight-focused highway projects-such as I-5 South and I-710 South-were not yet ready for submission for the FY 16 FASTLANE cycle.

With each year that passes, more of Metro’s projects, especially the larger ones under environmental review, will become eligible to submit for a FASTLANE grant. Additionally, creating early action elements for these larger projects could provide opportunities to obtain FASTLANE funding for larger projects before the entire project can be cleared environmentally.

Metro staff has reviewed the list of current highway projects that would be considered eligible for future FASTLANE cycles and has identified several - including early action projects - that could contend for a future FASTLANE grant award (**Attachment F**). Staff will continue to seek opportunities to expand this list of projects for future freight funding opportunities.

FAST Act National Highway Freight Program formula funds - California

In addition to the FASTLANE grant program, the FAST Act also authorized the National Highway Freight Program (NHFP) which allocates funding to each state by formula. These funds are designed to improve the condition of and performance of the National Highway Freight Network.

California will receive up to \$582.36 million with an allocation provided each federal FY, according to the legislation.

California's Share of NHFP Formula Funds					
FY 16	FY 17	FY 18	FY 19	FY 20	TOTAL
\$106.3 M	\$101.7 M	\$110.9 M	\$124.8 M	\$138.7 M	\$582.4 M

To date these funds have not yet been distributed, as the process by which they will be allocated within the state has been a focus of discussion and legislation in Sacramento over the past year.

Metro has a strong interest in securing these funds for goods movement projects within the region. Of particular interest for Metro's FASTLANE strategy is the potential for these funds to be used as matching funds for FASTLANE grant applications, thus creating additional opportunities to provide a financial strategy to support future FASTLANE grant applications.

On September 28, 2016 Governor Brown vetoed AB 2170 (Frazier) that sought to allocate these funds through the Trade Corridor Improvement Fund (TCIF) process administered by the California Transportation Commission (CTC). The Governor's veto message provided direction to the California State Transportation Agency to work with the CTC and the author to ensure these funds are allocated to high-priority trade projects as soon as practicable.

Metro will continue to develop a strategy to access these funds in support of the region's goods movement priorities and in accordance with the process laid out by the state.

C. Establish a Freight Corridor Implementation Working Group which includes representatives from the following:

1. MTA Deputy Executive Officer for Goods Movement
2. Representatives from the Gateway Cities Council of Governments
3. The I-5 Joint Powers Authority
4. Caltrans District 7
5. Southern California Association of Governments (SCAG)
6. Alameda Corridor-East Construction Authority (ACE)
7. Alameda Corridor Transportation Authority (ACTA)
8. Port of Long Beach & Port of Los Angeles

On September 13, 2016, Metro CEO Phil Washington sent a letter to the leadership of each of the agencies identified in Section B to request a high-level representative be selected and confirmed by September 23, 2016 for the Working Group.

Each agency responded by the deadline and provided its representatives (**Attachment F**).

Following the identification of a representative from each stakeholder agency, Metro set up the Working Group's first meeting on October 13, 2016.

D. Activation of "charter" for the Working Group, including but not limited to, the following:

1. Development of early action implementation projects with advanced environmental planning in place
2. Identification of actions to accelerate and expedite the Early Action Projects which shall include Public Private Partnership (P3) opportunities and strategy
3. Preparation of a strategic action program targeted to access the maximum amount of federal freight formula funds apportioned by FHWA to the state, including proposed criteria for the State to use in a project selection process, i.e., Trade Corridor Improvement Fund (TCIF)

At the first meeting of the Working Group the “charter” will be discussed, with the outcome of the discussion presented by oral report to the Metro Board in October.

E. A comprehensive review of federal advocacy in support of Metro’s FASTLANE grant applications, including an assessment of our communications, outreach, and strategies employed to secure these grant funds.

Summary:

The Los Angeles County Metropolitan Transportation Authority’s (Metro) Federal Affairs Team strategically advocates for all of Metro’s federal grant applications by seeking support through the key steps of educating our congressional delegation, relevant congressional committee members, officials at the White House and USDOT, and by building a coalition of stakeholders to express support for the projects submitted for funding opportunities. As a result of Metro’s strategic efforts with respect to federal grants over the last several years, our agency has had the most successful track record in the nation with respect to securing federal transportation grants.

With respect to the USDOT’s FY 16 FASTLANE grants cited in Motion #52, Metro’s Federal Affairs staff coordinated with Metro’s Planning Department staff to identify key aspects of the project applications that include cost, financing, scope, project partners, goals, and project justification/benefits. This information was used to develop suggested draft support letters and to create easy to understand fact sheets for each grant application. These fact sheets and draft support letters assisted Metro’s staff in explaining the projects and to garner support from elected officials and stakeholders. Once all materials were developed for each project application, Metro’s team reached out to request support letters from the congressional members that represent the projects within their congressional district as well as California’s two U.S. senators which represent all projects that Metro submits for federal funding.

Actions:

Congressional Outreach - Metro’s staff used a combination of meeting with both District and Washington, DC offices to inform our congressional delegation of the projects that we had applied for under the FASTLANE Grant program and to request letters of support for each of the projects. The fact sheets and suggested draft support letters were provided to each office and Metro staff followed up to answer any supplemental questions those offices had on the projects. Metro received letters of support from U.S. Senator Dianne Feinstein, Congresswoman Maxine Waters, Congresswoman Hahn, and Congresswoman Torres - all members who represent areas that would be favorably impacted by our FASTLANE projects. Lastly, Metro staff met and advocated for our projects with key

staff on the relevant congressional committees that worked to create the FASTLANE program within the FAST Act - specifically, the U.S. Senate's Environment and Public Works Committee and the U.S. House Transportation and Infrastructure Committee.

White House and U.S. Department of Transportation - Metro staff met with the White House Intergovernmental Affairs Office, Office of Management and Budget and with U.S. Transportation Secretary Anthony Foxx to advocate for Metro's FASTLANE projects and answer any and all questions related to our grant requests. In addition, Metro staff communicated support letters we received from our congressional delegation and stakeholders to key staffers within the Obama Administration.

Stakeholder Outreach - Metro's staff worked with a wide range of stakeholders to build awareness within Congress of the need to improve the movement of freight in and across Southern California. In addition, Metro coordinated with the Coalition of America's Gateways and Trade Corridors in Washington, DC to advocate for our specific grant applications as well as to advocate for the USDOT to select projects with the strongest performance measures that would have the greatest impact for the funding being awarded.

Conclusion:

Through the strategic approach of advocating for Metro's FASTLANE projects before Congress, the Administration, and with local, regional and national stakeholders, Metro developed a base of support for Metro's FASTLANE applications. While we were not successful in winning an award this year, we look forward to developing an advocacy strategy for the next round of FASTLANE grants in order to be successful in future years.

Similar to the FASTLANE grant program, Metro has not won TIGER Grant awards every year the program has been offered, but by employing proven, coordinated advocacy strategies, Metro has won five out of the eight rounds of TIGER Grant funding as well as securing the largest TIGER Grants awarded in California for the past three years in a row. We have employed similar advocacy strategies with respect to our New Starts grants, which has resulted in our agency securing nearly five times our historical annual share of New Starts funds (\$300 million annually).

F. Presentation of an interim report and recommendations by the working group to the October MTA Board meeting of the Board of Directors.

As the first meeting of the Working Group was scheduled for October 13, 2016 this report will be provided under separate cover to the Board.

DETERMINATION OF SAFETY IMPACT

No impact to safety exists as a result of this report. Success in acquiring federal funding for freight movement projects in Los Angeles County will provide opportunities to improve the safety of the highway and rail system in Los Angeles County.

ALTERNATIVES CONSIDERED

Alternatives for FASTLANE strategies will be developed within the Working Group and in consultation with various Metro departments to secure as much funding as possible with every freight funding opportunity that becomes available.

NEXT STEPS

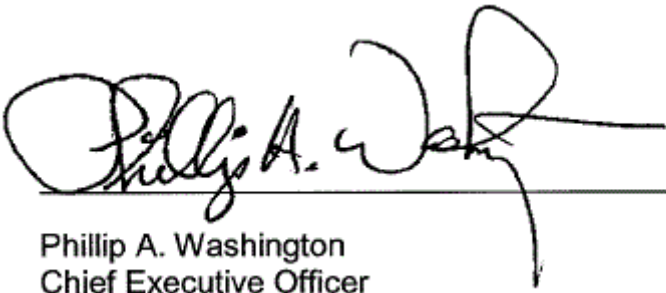
With receipt of this report by the Board, staff will continue to develop recommendations through the Working Group and prepare for securing funding from the FASTLANE federal freight grant program, the Freight Formula funds allocated to California, and additional funds wherever possible to implement the recommendations of the Working Group.

ATTACHMENTS

- Attachment A - August 25, 2016 Motion #52 (File #2016-0487)
- Attachment B - July 1, 2016 Letter from USDOT Secretary Foxx to Chairman Shuster
- Attachment C - US DOT Proposed FY 2016 FASTLANE Project Awards
- Attachment D - Letter from Federal Delegation to USDOT Secretary Foxx
- Attachment E - Future FASTLANE Grant Candidate Project Information
- Attachment F - Metro Freight Corridor Implementation Working Group Roster

Prepared by: Michael C. Cano, Deputy Executive Officer, Goods Movement, (213) 418-3010

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



Phillip A. Washington
Chief Executive Officer



Board Report

File #:2016-0632, File Type:Motion / Motion
Response

Agenda Number:52.

EXECUTIVE MANAGEMENT COMMITTEE
AUGUST 18, 2016

Motion by:

**MOTION BY GARCETTI, KNABE, ANTONOVICH, SOLIS,
DUBOIS & FASANA**

August 18, 2016

Federal Freight Funding Program Update

In December 2015, Congress passed a multi-year surface transportation-funding bill known as the Fixing America's Surface Transportation Act (FAST Act).

The FAST Act contains provision, National Highway Freight Program (NHFP) which provides funds to support freight related projects.

The funds are both apportioned a formula basis to the states and distributed on competitive basis under provisions of the FASTLANE program.

This year, eighteen projects were selected nationwide to receive \$760 million in total FASTLANE grant dollars.

Of the twenty-four projects that California submitted to USDOT for funding, nine of which were located in Los Angeles County, only one project received FASTLANE grant money-SR 11 Enrico Fermin to Otay Mesa East Point of Entry Improvement Project in San Diego, a project that promotes faster border crossing by commercial trucks at the U.S.- Mexico border.

The six-county area that stretches from Ventura to Imperial Counties and include Los Angeles, Riverside, Orange and San Bernardino Counties did not receive a single funded project.

Yet, the Ports of Los Angeles and Long Beach make up close to 40% of the nation's freight movement at approximately \$400 billion dollars a year and the volume of goods is expected to more than double over the next thirty years.

Being that the FAST Act authorized the FASTLANE Program for \$4.5 billion dollars through 2020 with competitive years for projects each year, it is incumbent upon this Board to approach these grant

opportunities with the utmost urgency in planning and strategy to allow us to reduce congestion and pollution and move freight more efficiently through the region.

Over the authorization period of the FAST Act the Federal Highway Administration (FHWA) is anticipated to apportion to the State of California over \$500 million of freight formula related funds.

In response to provisions of the FAST Act the U.S. Department of Transportation has released an "Interim National Multimodal Freight Network", which includes major freight and goods movement corridors of national significance, including I-5 and the I-710 (south).

The Federal Highway Administrator recently stated: "I-5 is key to international commerce since it reaches U.S. borders with both Canada and Mexico. The interstate links some of America's largest urban areas, industrial operations, agricultural communities and freight facilities to the nation and to Pacific Rim markets, fueling the West Coast's strong economic recovery and low unemployment rate."

There is an urgent need for MTA to demonstrate a strong leadership role in accessing the maximum amount of FAST Act federal freight funds apportioned to California in order to support the implementation critical and congested national freight infrastructure projects located in the I-5 and I-710 (south), the County's freight corridors along with implementation of the innovative zero emission technology program outlined in the Metro "Pilot Project."

MOTION by Garcetti, Knabe, Antonovich, Solis, DuBois and Fasana that the Board direct the CEO on the following:

- A. Review MTA's process for selecting the three projects presented for the first year of FASTLANE grants, including the list of projects and selection process.
- B. Present on lessons learned from the first FASTLANE grant cycle, outlook for future FASTLANE grant cycles, and strategies for better positioning MTA to secure funding from future FASTLANE cycles.
- C. Establish a freight corridor implementation working group which includes representatives from the following:
 1. MTA Deputy Executive Officer for Goods Movement
 2. Representatives from the Gateway Cities Council of Governments
 3. The I-5 Joint Powers Authority
 4. Caltrans District 7
 5. Southern California Association of Governments

6. Alameda Corridor East Construction Authority ("ACE")
 7. Alameda Corridor Transportation Authority ("ACTA")
 8. Port of Long Beach & Port of Los Angeles
- D. Activation of "charter" for the working group, including but are not limited to, the following:
1. Development of early action implementation projects with advanced environmental planning in place.
 2. Identification of actions to accelerate and expedite the early action projects which shall include a Public Private Partnership ("P3") opportunities and strategy.
 3. Preparation of a strategic action program targeted to access the maximum amount of federal freight formula funds apportioned by FHWA to the State, including proposed criteria for the State to use in a project selection process, e.g., Trade Corridor Improvement Program (TCIF).
- E. A comprehensive review of federal advocacy in support of MTA's FASTLANE grant applications, including an assessment of our communications, outreach, and strategies employed to secure these grant funds.
- F. Presentation of an interim report and recommendations by the working group to the October MTA Board meeting of Board of Directors.



THE SECRETARY OF TRANSPORTATION
WASHINGTON, DC 20590

July 1, 2016

The Honorable Bill Shuster
Chairman
Committee on Transportation and Infrastructure
U.S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

I am pleased to submit this notification to Congress, prepared in accordance with Section 1105 of the Fixing America's Surface Transportation (FAST) Act, with proposed Fiscal Year 2016 Fostering Advancements in Shipping and Transportation for the Long-term Achievement of National Efficiencies (FASTLANE) grants, authorized by the FAST Act's Nationally Significant Freight and Highway Projects program. The FAST Act requires written notification of proposed grants to the House Committee on Transportation and Infrastructure and the Senate Committee on Environment and Public Works at least 60 days before making a grant. This notification includes an evaluation and justification for each project and the amount of the proposed grant award.

I have sent a similar letter to the Ranking Member of the House Committee on Transportation and Infrastructure and to the Chairman and Ranking Member of Senate Committee on Environment and Public Works.

If I can provide further information or assistance, please feel free to call me.

Sincerely,

A handwritten signature in blue ink, appearing to read "Anthony R. Foxx", is positioned below the word "Sincerely,". The signature is fluid and cursive, with a large loop at the top.

Anthony R. Foxx

Enclosure

FASTLANE FY 2016 Proposed Awards

Pursuant to Section 1105 of the FAST Act, the Department is providing this list of proposed awards to the authorizing committees of jurisdiction. The list must remain with the committees for 60 days before issuing the awards.

The U.S. Department of Transportation conducted a thorough and fully documented review process to choose projects that will have significant regional and national impacts by reducing congestion, expanding capacity, using innovative technology, improving safety, or moving freight more efficiently.

This list of proposed Fostering Advancements in Shipping and Transportation for the Long-term Achievement of National Efficiencies (FASTLANE) grant awards is the culmination of a thorough technical assessment of 212 applications requesting a total of \$9.8 billion, more than 10 times the available amount. Due to funding limitations, we were only able to fund a small percentage of the excellent, eligible applications.

Interstate 10 Phoenix to Tucson Improvements

Arizona Department of Transportation
Pinal County, Arizona, Rural

Proposed Grant Amount: \$54,000,000

Project Justification

The Arizona Department of Transportation will be awarded \$54,000,000 of a \$157,500,000 project to make improvements along I-10 between Phoenix and Tucson. The corridor has three bottleneck areas where I-10 is only two lanes in each direction. Additionally, two interchanges within the corridor have substandard geometric features such as narrow lane widths and inadequate acceleration and deceleration lanes. In the summer and fall, dust storms create hazardous conditions for motorists and pose a public safety risk because they are quick-moving and hard to predict. The project will 1) Realign and widen approximately four miles of I-10 from two to three lanes in each direction near Picacho, including utility relocation, two new bridges, drainage, traffic signals, and lighting; 2) Widen approximately three miles of I-10 near milepost 196 from two to three lanes in each direction, including two bridges and construction of auxiliary lanes; and 3) Install dust storm early warning technology along I-10. The application included a fourth improvement, preliminary engineering and planning for widening I-10 from milepost 160 to milepost 187 but this is not included in the proposed award.

Project Evaluation

Between Tucson and Phoenix, I-10 carries as many as 120,000 vehicles per day and as many as 30 percent of the vehicles are trucks. The corridor averages 10,000 units (165,000 tons) of freight per day. By addressing geometric deficiencies along the corridor, including narrow ramp width, short acceleration/deceleration lengths, and insufficient design speeds, the project is expected to reduce traffic fatalities and serious injuries, generating safety outcomes. Additionally, implementation of the Intelligent Transportation System (ITS) dust storm warning system is expected to significantly reduce the frequency and severity of accidents due to dust storms. Since 2000, eight fatalities and more than 50 crashes occurred in the section of roadway slated for the dust early warning technology. The crash rate is estimated to reduce by half as a result of system construction, improving safety outcomes. By reducing delay and allowing for more efficient through speeds, the project is expected to generate time travel savings, which generates significant mobility benefits.

SR-11 Segment 2 and Southbound Connectors

California Department of Transportation and San Diego Association of Governments
San Diego County, California, Urban

Proposed Grant Amount: \$49,280,000

Project Justification

The California Department of Transportation, in partnership with the San Diego Association of Governments, will be awarded \$49,280,000 in funding to construct SR-11 Segment 2 and Southbound Connectors project. International trade by value has grown by 115 percent since 2003 at the Otay Mesa Port of Entry (POE). Trucks using the Otay Mesa crossing must rely on local roads to access SR-905 and points beyond. The project will construct the final segment of a new freeway (California SR-11) to the future Otay Mesa East Port of Entry, as well as southbound connectors linking SR-125 to both southbound SR-905 (which leads to the existing Otay Mesa POE) and eastbound SR-11. The total project cost is \$172,200,000.

Project Evaluation

The Otay Mesa POE is the second busiest commercial border crossing on the U.S.-Mexico border by number of crossings, and the busiest commercial crossing in California. The project is expected to produce significant travel time for cars and trucks traveling across the border at the existing Otay Mesa POE and at the future Otay Mesa East POE. The project will provide substantial mobility and economic benefits to thousands of trucks and cars diverted to a more direct and efficient highway to travel across the border. The project will also expand overall cross-border capacity, reducing congestion and wait times at other San Diego area crossings, which collectively handle 100,000 vehicles and 5,500 trucks daily.

Arlington Memorial Bridge Reconstruction Project

National Park Service and District of Columbia Department of Transportation
District of Columbia, Urban

Proposed Grant Amount: \$90,000,000

Project Justification

The National Park Service, jointly with the District Department of Transportation, will be awarded \$90,000,000 toward Phase 1 of the reconstruction of the Arlington Memorial Bridge. The Memorial Bridge, which was originally built in 1932, has exceeded its 75-year design life and is structurally deficient, having never undergone a major rehabilitation. It is currently posted with a 10-ton load limit and buses are prohibited from crossing. Without a major overhaul, the project will be closed to vehicular traffic in 2021. Phase 1 will focus on the approach spans, which are the most in need of repairs, at a total cost of \$166,000,000. Completion of Phase 1 will allow the bridge to remain open until 2030 while additional actions are taken to complete Phase 2, the reconstruction of main bascule span.

Project Evaluation

The Memorial Bridge currently carries approximately 68,000 vehicles and thousands of pedestrians and bicyclists daily across the Potomac River. As one of six Potomac bridges in the congested Washington metro area, it is a critical link in the region's transportation network. As such, extending the useful life of the bridge contributes significant mobility benefits. If the bridge were closed to vehicular traffic, it would cause approximately 15,000 hours of vehicle delay per day on the regional transportation network. The additional congestion caused by closure of the bridge is predicted to discourage more than 4,000 total

crossings of the Potomac River, reducing regional economic activity. Phase 1 of the project will forestall these negative economic outcomes for at least nine years and allow the project sponsor to pursue funding to complete Phase 2.

Port of Savannah International Multi-Modal Connector

Georgia Ports Authority
Savannah, Georgia, Urban

Proposed Grant Amount: \$44,000,000

Project Justification

The Georgia Ports Authority will be awarded \$44,000,000 of a \$126,700,000 project to reconfigure the Port of Savannah's on-dock intermodal container transfer facilities to bring rail switching activities inside the Port. Current switching on existing rail infrastructure causes traffic backups on two state highways, and prevents all of the containers that are loaded onto railcars one day from leaving the Port that same day. The current inefficient yard arrangement is the port's largest productivity chokepoint. The project includes the following improvements: 1) building two arrival/departure tracks and extending the track east from Chatham Yard to new arrival/departure tracks; 2) rebuilding a bridge over new yard tracks, Pipemakers Canal; 3) extending Chatham Yard arrival/departure tracks into Mason Yard as working tracks as well as two additional arrival/departure tracks; 4) building two new work tracks at Mason Yard, adding high-capacity cranes, and building new storage tracks; and 5) relocating the Norfolk Southern Foundation Lead track parallel to arrival/departure tracks between Mason Yard and Chatham Yard. We estimate approximately \$32,000,000 of this project will count toward the five-year \$500 million limit for freight rail, port, and intermodal projects, as established in 23 U.S.C. 117(d)(2).

Project Evaluation

In 2015, the Port of Savannah handled more containers than it ever had before, reaching its forecasted 2017 levels. The project will eliminate the current bottleneck, improving the way containerized cargo is transported between the port and cities across the United States, and add enough capacity to handle the port's growth projections well into the next decade. The project will reduce the long wait times for motorists currently associated with the at-grade crossings while trains maneuver in and out of the port.

By bringing rail switching activities inside the port and away from the surrounding community and neighborhoods, the project will reduce highway collisions and related driver injuries and fatalities by reducing potential rail-vehicle grade-crossing collisions and reducing truck traffic on roadways. The project will result in a decrease in the number of times a day that trains cross SR-25 from the 26 to 39 daily occurrences that happen today to just 8 per day. The reduction in risk associated with potential rail-vehicle grade-crossing collisions will also be significant on State Roads (SR) 25 and 21, over which 42,000 vehicles travel daily, and which are designated emergency vehicle access roads for first responders. The project will also build rail capacity at the port and speed service, generating freight mobility and economic outcomes through more direct and efficient movement of containerized freight.

I-10 Freight Corridor Rehabilitation and Expansion (CoRE)

Louisiana Department of Transportation and Development
Lafayette, Louisiana, Rural

Proposed Grant Amount: \$60,000,000

Pursuant to Section 1105 of the FAST Act, the Department is providing this list of proposed awards to the authorizing committees of jurisdiction. The list must remain with the committees for 60 days before issuing the awards.

Project Justification

The Louisiana Department of Transportation and Development (DOTD) will be awarded \$60,000,000 of a \$193,508,409 project to replace pavement and add an additional lane on I-10 in Lafayette, Louisiana between the I-10/I-49 interchange and the Atchafalaya Floodway Bridge. Much of this corridor was last paved in the 1960s, resulting in poor pavement condition. This project will include the approximately seven mile west segment and approximately three mile east segment of the corridor; DOTD will complete the middle segment, approximately five miles, as part of a second phase.

Project Evaluation

Interstate 10 from Lafayette to the Atchafalaya Basin has two-lanes in each direction and carried 120 million tons of freight worth \$204 billion in 2015. The west segment has an annual average daily traffic (AADT) of 74,591 and the east segment an AADT of 52,240, approximately one-third of which are trucks. Truck traffic is projected to grow from 33 percent to 55 percent by 2038 along this corridor. Repaving and widening I-10 to a three-lane interstate configuration with excellent pavement conditions will add capacity to accommodate that projected traffic growth and improve speeds and travel efficiencies as a result of smoother roadway surfaces. Travel time savings from improved operating network speeds and decreased vehicle operating costs, particularly for freight, generate economic and mobility outcomes.

Conley Terminal Intermodal Improvements and Modernization

Massachusetts Port Authority (MASSPORT)

Boston, Massachusetts, Urban

Proposed Grant Amount: \$42,000,000

Project Justification

The Massachusetts Port Authority will be awarded \$42,000,000 of a \$102,890,000 project to improve the facilities and structures of the Paul W. Conley Terminal in the Port of Boston. Elements of the project include: 1) deepening, strengthening and repairs to Berth 11; 2) constructing Berth 12 fender improvements and backland pavement; 3) implementing refrigerated container storage improvements; and 4) building new gate facilities. These improvements are needed to accommodate larger vessels visiting the port as a result of worldwide expansion of freight movement and ocean carriers maximizing the efficiency of their trade routes. We estimate approximately \$42,000,000 of this project will count toward the five-year \$500 million limit for freight rail, port, and intermodal projects, as established in 23 U.S.C. 117(d)(2).

Project Evaluation

Over the past several years, the size of the container vessels calling upon the Port of Boston has grown from 2100-5100 TEU vessels to vessels carrying over 8000 TEUs. Because these larger vessels require more substantial berthing facilities, the Conley terminal is undergoing greater stress with each vessel visit. The current facility has outlived its useful life and is in need of total refurbishment. It is expected that vessels visiting the terminal will increase in size more than 150 percent between now and 2019.

The Conley Terminal Project will generate economic and mobility outcomes throughout the region. It will improve the movement of goods by enhancing the state of good repair for existing port infrastructure, eliminating unnecessary trips on severely congested sections of I-95, and enhancing the resiliency of the largest container terminal in New England. The deepening of the berths will improve safety for the vessels in the port and provide the required margin of safety for operation without the risk of grounding.

Optimizing current and future freight movements will help Conley serve as a viable resource for global container shipments, positively affecting traffic congestion and emissions throughout the Northeast.

I-390/I-490/Route 31 Interchange, Lyell Avenue Corridor Project

New York State Department of Transportation

Town of Gates, New York, Urban

Proposed Grant Amount: \$32,000,000

Project Justification

The New York State Department of Transportation will be awarded \$32,000,000 of a \$162,900,000 project to reconstruct the I490/390/NY 390 and the NY 390 and NY 31 (Lyell Avenue) interchanges in the Town of Gates, west of Rochester, New York. The interstate interchange is the busiest in the Rochester/Finger Lakes Region, supporting 200,000 vehicles per day on the combined routes, with trucks accounting for a significant percentage of daily traffic on some ramps. The current configuration results in bottlenecks and crashes due to short multi-lane weaving sections and unsafe merging maneuvers. The project will: 1) replace the NY 31/Lyell Avenue bridge over NY 390; 2) construct northbound I-390/NY 390 ramp improvements; 3) construct southbound I-390/NY 390 ramp improvements; and 4) realign the I-390 eastbound/I-490 westbound interchange ramp to NY 31 to eliminate an offset intersection.

Project Evaluation

By providing two unimpeded I-390 north and south bound through lanes with isolated exit movements, isolating I-490 ramp movements from mainline flow, and realigning the I490/390/NY 390 interchange, the project will improve geometric deficiencies and traffic flow. The standardized movements will reduce accidents and generate safety improvements. The project will eliminate a major regional bottleneck, resulting in time travel savings and mobility outcomes.

US 69/75 Bryan County

Oklahoma Department of Transportation

Calera, Oklahoma, Rural

Proposed Grant Amount: \$62,000,000

Project Justification

The Oklahoma DOT (ODOT) will be awarded \$62,000,000 of a \$120,625,000 project to improve safety and efficiency of high volume freight traffic along the US 69/75 corridor in southern Oklahoma (Calera, Bryan County). The project will upgrade an existing arterial highway with numerous access points and three signalized intersections to make it a fully controlled access facility with grade separations and functional frontage roads. The project also includes a roadway/rail grade separation in the town of Calera to facilitate east-west movements through the town.

Project Evaluation

US Route 69/75 is a bi-national freight corridor connecting the border crossing at Laredo, Texas to Dallas, St. Louis, and the Canadian border. Removing three traffic signals along US 69/75, eliminating two at-grade railroad/local street crossing conflicts, and increasing the speed limit from 55 to 70 miles per hour generates mobility and economic outcomes through improved safety and freight movement for both rail and commercial vehicles. Reducing congestion facilitates travel time and fuel-cost savings. The project's grade separations will generate positive safety outcomes, including crash prevention and increased safety for non-motorized vehicles and pedestrians. The project also promotes community

Pursuant to Section 1105 of the FAST Act, the Department is providing this list of proposed awards to the authorizing committees of jurisdiction. The list must remain with the committees for 60 days before issuing the awards.

outcomes through increased connections and access from the new overpasses to link a community divided by rail and road facilities.

Atlantic Gateway: Partnering to Unlock the I-95 Corridor

Virginia Department of Transportation
Commonwealth of Virginia, Urban

Proposed Grant Amount: \$165,000,000

Project Justification

The Virginia Department of Transportation will be awarded \$165,000,000 to support the Atlantic Gateway project, a corridor approach to improving mobility across the Eastern seaboard. The total Atlantic Gateway project is \$905,000,000. The FASTLANE award will be combined with other public and private funding from multiple partners to invest in rail and highway capacity, including constructing approximately six miles of a fourth mainline from the South bank of the Potomac River to Alexandria, extending the express lanes on I-395 north to the Pentagon and on I-95 south to Fredericksburg, and improving general purpose lanes on segments of I-395 to add capacity and improve safety. Other elements of the Atlantic Gateway project include constructing a third main rail line between Franconia and Occoquan, expanding I-95 southbound capacity across the Rappahannock River, rest area reconstruction, and truck parking. We estimate approximately \$45,000,000 of this project will count toward the five-year \$500 million limit for freight rail, port, and intermodal projects, as established in 23 U.S.C. 117(d)(2).

Project Evaluation

The project will generate substantial time savings for travelers across the corridor. The expanded express lanes will provide a congestion-free option for drivers traveling on I-395 between the Beltway and the Pentagon, on their way to or from Washington, DC. Truck freight movement will also benefit from reduced congestion on I-95 and I-395. CSX freight trains will benefit from additional operational flexibility provided by the new mainline track. For riders on Amtrak and the Virginia Railway Express, the improvements add capacity, which will be critical to future expansions of intercity passenger and commuter rail service. The additional rail capacity for both freight and passenger traffic helps to unlock the benefits of the highway improvements, and vice-versa. The components of the project work together to improve mobility for people and goods throughout the region.

South Lander Street Grade Separation and Railroad Safety Project

City of Seattle
Seattle, Washington, Urban

Proposed Grant Amount: \$45,000,000

Project Justification

The City of Seattle will be awarded \$45,000,000 of a \$140,000,000 project to grade separate South Lander Street over the north/south BNSF rail line. Located south of downtown Seattle, South Lander Street currently intersects with a major freight rail line, near the port, with more than 3,200 rail cars traversing the line per day. In addition to freight trains, there are eight passenger trains and twenty commuter trains per day. These trains result in hours of daily delay for the 12,900 vehicles that cross the at-grade crossing. More than 1,500 people a day use South Lander Street to cross on foot or by bike. The project supports access between Port of Seattle terminals, intermodal facilities, and the state highway system.

Pursuant to Section 1105 of the FAST Act, the Department is providing this list of proposed awards to the authorizing committees of jurisdiction. The list must remain with the committees for 60 days before issuing the awards.

Project Evaluation

The South Lander Street Project will reduce delay and establish a reliable corridor for all users, generating significant mobility outcomes. The project also generates significant safety outcomes for passenger and freight vehicles, pedestrians, and bikers. Between 2011 and 2015, the crossing experienced seven serious injuries involving bikers and six accidents involving pedestrians, including two rail-related fatalities. In this same period, the crossing was the site of 85 vehicle collisions, 42 of which resulted in injuries. This grade separation will generate mobility, reliability, connectivity, and safety benefits for the pedestrians, bikers, vehicles, trucks, rail traffic, and port traffic that cross this intersection.

I/39/90 Corridor Project

Wisconsin Department of Transportation
Janesville, Wisconsin, Rural

Proposed Grant Amount: \$40,000,000

Project Justification

The Wisconsin Department of Transportation (WisDOT) will be awarded \$40,000,000 toward the construction of several components of the I-39/90 Corridor Expansion project, including the approximately four-mile Janesville segment and two other components. Lack of capacity along the corridor creates major delays with travel times increased by 58 to 82 percent during peak periods. The average annual daily traffic volume for this segment is estimated to be between 55,000 and 59,000 vehicles with approximately 28 percent truck traffic. This section of roadway exceeds the statewide averages of truck-related crashes and fatalities. The project is part of a 45-mile corridor project costing \$1,195,300,000. The project will reconstruct the roadway to expand a four-lane divided highway into an eight-lane divided highway with a separated concrete median barrier. The project includes eight new bridges and the widening, re-decking, or both of approximately four bridges. Noise walls will be constructed on both sides of the interstate for the residential properties bordering the highway. All signage will be replaced, including approximately three new overhead sign structures. The current interstate grade will be raised to meet standard vertical clearances at the four local streets that pass underneath the mainline. The interchange at Avalon Road will be reconstructed into the first Diverging Diamond Interchange configuration in the State, which increases capacity more than conventional designs while decreasing the opportunities for collision as much as 50 percent from diamond interchanges.

Project Evaluation

In 2013, 67 million tons of freight moved through this segment of I-39/90 and growth projections estimate the annual total will exceed 130 million tons by 2040. By eliminating a highway bottleneck, the project produces travel time savings and increases the capacity and volume of the corridor, generating mobility benefits. The project also generates safety outcomes through the construction of a median barrier wall, which is anticipated to reduce the number of crashes on this segment. Overall community benefits include time savings, noise reduction from noise walls, and better access to community facilities and tourist destinations.

Truck Parking Availability Systems

Florida Department of Transportation
State of Florida, Rural (Small Project)

Proposed Grant Amount: \$10,778,237

Project Justification

The Florida Department of Transportation (FDOT) will be awarded \$10,778,237 for the \$23,983,850 Truck Parking Availability System (TPAS) project. The project will install an Intelligent Transportation System (ITS) to detect available truck parking at approximately 74 public facilities across the entire Interstate System in Florida. In addition, the project will collect information on some private locations. This information will be communicated to truckers via dynamic messaging, 511, website and mobile applications, as well as onboard technology in partnership with WAZE and HERE. This will allow truckers to plan their routes to comply with Federal safety regulations, minimize the time spent looking for parking, and prevent parking in unsafe locations. The project will also allow FDOT and private suppliers to maximize usage of existing truck parking facilities.

Project Evaluation

Florida moves 762 million tons of freight annually, approximately 77 percent of which moves by truck. As the movement of freight by truck increases, so does the demand for truck parking. The project will improve the efficiency of regional freight movement by decreasing the amount of time truckers look for parking at the end of their shifts. This will decrease congestion on the highway system and reduce associated emissions, decrease driver fatigue and associated accidents, and decrease wasted travel time. By providing real-time truck parking information, the project will decrease travel time for commercial vehicles, generating economic outcomes through increased efficiency of truck movements. The project also will generate safety outcomes by decreasing travel time and facilitating hours-of-service compliance. The project features strong partnership activity across the public and private sectors, with anticipated innovation and partnership outcomes in interoperability with other regional truck parking information technologies.

Cedar Rapids Logistics Park

Iowa Department of Transportation
Cedar Rapids, Iowa, Rural (Small Project)

Proposed Grant Amount: \$25,650,000

Project Justification

The Iowa Department of Transportation (I-DOT) will be awarded \$25,650,000 of a \$46,500,000 project to build a full service intermodal facility in Cedar Rapids. Cedar Rapids is located between Chicago, Kansas City, and Minneapolis, yet lacks the intermodal capabilities of many other cities of similar size. The project will construct integrated facilities for a container intermodal terminal; a rail-to-truck transload facility for bulk commodities; and a cross-dock facility for consolidating and redistributing truck loads, as well as loading and unloading containers. We estimate approximately \$25,650,000 of this project will count toward the five-year \$500 million limit for freight rail, port, and intermodal projects, as established in 23 U.S.C. 117(d)(2).

Project Evaluation

The intermodal facility is designed to optimize the freight transportation network to: minimize cost and travel time and improve supply chain efficiency; establish new truck cross-docking operations to enable greater opportunities to consolidate truck freight for Iowa shippers; and establish new rail container intermodal and bulk transload facilities to enable access to lower-cost rail services for Iowa businesses.

The project will improve the efficiency and reliability of the regional and national movement of intermodal freight. The proposed project will provide Iowa and surrounding states with access to a high capacity, efficient, and cost-competitive facility to move goods from truck to rail and vice versa, generating economic and mobility outcomes. The project is also projected to generate significant safety benefits through avoided crashes and environmental benefits because efficient freight rail movement will reduce emissions.

U.S. 95 North Corridor Access Improvement Project

Idaho Department of Transportation
Kootenai County, Idaho, Rural (Small Project)

Proposed Grant Amount: \$5,100,000

Project Justification

The Idaho Transportation Department (ITD) will receive \$5,100,000 of an \$8,500,000 project for operational improvements along approximately nine miles of US 95 in Kootenai County, Idaho between Interstate 90 and the US 95 intersection with Idaho State Highway 53. The project will correct traffic signal spacing, implement adaptive signal timing, close vehicle-median crossings at non-signalized locations to reduce the number of crossing conflict points throughout the corridor, and provide better connectivity to adjacent local roads and businesses in the corridor.

Project Evaluation

This project will provide operational improvements to eliminate bottlenecks and congestion caused by inefficient traffic signal spacing and access conflict points with adjacent local roads. With this project's improvements to the corridor, travel times are expected to improve over current conditions, generating mobility benefits. Reducing the number of crossing conflicts with mainline traffic movement, will reduce merge-related accidents, generating safety improvements.

Maine Intermodal Port Productivity Project

Maine Department of Transportation
Portland, Maine, Rural (Small Project)

Proposed Grant Amount: \$7,719,173

Project Justification

The Maine Department of Transportation will be awarded \$7,719,173 towards a \$15,438,347 project to provide infrastructure improvements, equipment, and technology investments for the Port of Portland. Currently, cargo is offloaded at Canadian ports and transshipped to the U.S. via truck, causing highway congestion. Improvements to the Port of Portland consist of: 1) removing existing maintenance facility and infill of the wharf; 2) installing new mobile harbor crane and other cargo handling equipment; 3) constructing a highway and rail crossing upgrade; and 4) building a terminal operations and maintenance

center. We estimate approximately \$7,122,485 of this project will count toward the five-year \$500 million limit for freight rail, port, and intermodal projects, as established in 23 U.S.C. 117(d)(2).

Project Evaluation

By addressing the capacity and infrastructure needs at the Port of Portland, the project will improve freight mobility and relieve highway congestion between Portland and Canadian Ports. Containers brought directly to Portland for U.S. consumption will minimize interstate highway miles and reduce congestion at border crossings. This project will reduce traffic on I-95, highway maintenance requirements, and possible truck-crash related injuries. Capacity and state of good repair improvements for the railroads at the port and the rail line serving the port allow for expansion of intermodal service by rail.

Cross Harbor Freight Program

Port Authority of New York and New Jersey

Jersey City, New Jersey and New York, New York, Urban (Small Project)

Proposed Grant Amount: \$10,672,590

Project Justification

The Port Authority of New York and New Jersey will be awarded \$10,672,590 of a \$17,787,650 project for intermodal rail improvements to help optimize the Port Authority's railcar float system and thus reduce significant existing highway truck traffic in the area. The project includes two components. First, as part of the 65th Street Yard Improvements, the project will extend the existing transloading dock, (increasing its capacity from 3 to 12 railcars), cover the transloading dock with a canopy to protect sensitive cargo from the elements, pave certain areas in the Yard for easier transloading, and install other improvements, including a truck weigh station. Second, as part of the Port Jersey Division Second Track improvements, the project will double-track a portion of the Port Jersey Division of New York New Jersey Rail, LLC ("NYNJRR"), currently a single-track freight line (known as the Port Jersey Lead Track) serving a series of local warehouses and distribution centers adjacent to Greenville Yard, build a second track along NYNJRR's Port Jersey Division, and shift the interchange of railcars for that line between Conrail and NYNJRR out of Greenville Yard and onto the new second track. The application included a Tier II Environmental Review and Preliminary Engineering component consisting of an environmental assessment for Enhanced Carfloat Service and an environmental impact statement for a Rail Tunnel Alternative, but the proposed award does not include funding for that planning component. We estimate approximately \$10,672,590 of this project will count toward the five-year \$500 million limit for freight rail, port, and intermodal projects, as established in 23 U.S.C. 117(d)(2).

Project Evaluation

In 2008, the Port Authority purchased NYNJRR, operator of the last railcar float system in New York Harbor. This system moves freight in loaded railcars, via marine rail barge (carfloat), from Greenville Yard in Jersey City, New Jersey, to 65th Street Yard in Brooklyn, New York, and vice versa. The system has grown from less than 1,000 revenue cars annually to nearly 4,000.

The improved transloading facilities will facilitate more efficient carfloat service, making it more attractive to both shippers and receivers and generating economic outcomes through improved freight mobility. Adding a second track will reduce rail congestion within Greenville Yard. This project is expected to generate economic and mobility outcomes through reductions in highway truck traffic, resulting in travel time savings for highway users in and around the New York/New Jersey area.

Pursuant to Section 1105 of the FAST Act, the Department is providing this list of proposed awards to the authorizing committees of jurisdiction. The list must remain with the committees for 60 days before issuing the awards.

Coos Bay Rail Line – Tunnel Rehabilitation Project

Oregon International Port of Coos Bay

Lane, Douglas, and Coos Counties, Oregon, Rural (Small Project)

Proposed Grant Amount: \$11,000,000

Project Justification

The Oregon International Port of Coos Bay will be awarded \$11,000,000 of a \$19,555,000 project to rehabilitate tunnel infrastructure on the Coos Bay Rail Line (CBRL), as current structural, track, and drainage conditions could pose risks to continued operations on the line. The project will improve nine tunnels between a connection with the Union Pacific Railroad near Eugene, Oregon, and rail shippers in the western Lane, Douglas and Coos Counties region of southwest Oregon. We estimate approximately \$11,000,000 of this project will count toward the five-year \$500 million limit for freight rail, port, and intermodal projects, as established in 23 U.S.C. 117(d)(2).

Project Evaluation

The project will help the port maintain long-term, low-cost rail transportation service to freight rail users served by the CBRL, and to the Port of Coos Bay itself. The project will ensure that structural, track, and drainage conditions in the tunnels do not pose a safety or reliability risk to continued operations on the line, generating economic and mobility outcomes by allowing for efficient traffic flow on the rail line and helping alleviate congestion on US Highway 101, and Oregon State Highways 126, 38 and 42.

Strander Boulevard Extension and Grade Separation Phase 3

City of Tukwila, Washington

City of Tukwila, Washington, Urban (Small Project)

Proposed Grant Amount: \$5,000,000

Project Justification

The City of Tukwila, Washington will be awarded \$5,000,000 of a \$38,000,000 project to construct a grade separated crossing under a freight rail line and an approximately 1,250 linear foot arterial from SR 181 to SW 27th Street, turn lanes, and related facilities in the Green River Valley. Green River Valley's northern portion lacks an east-west corridor, which restricts freight circulation and causes the freeways to be used as connecting arterials. Additionally, Strander Boulevard is currently closed at the freight rail tracks due to the unsafe nature of the grade crossing.

Project Evaluation

The project generates safety outcomes by providing a grade-separated crossing between vehicular traffic and freight and passenger trains and excessive turn movements at key intersections. The project also creates a new east-west link in the Green River Valley, increasing capacity and improving freight mobility by providing an alternate truck route within a quarter mile of I-405 and eliminating delay on other north-south freight corridors. The project removes a freight bottleneck that constrains system performance and capacity, creating travel time savings for roadway users.



U.S. Department of Transportation Proposed FY 2016 FASTLANE Project Awards

Pursuant to Section 1105 of the FAST Act, the Department is providing this list of proposed awards to the authorizing committees of jurisdiction. This list must remain with the committees for 60 days before issuing the awards.

The U.S. Department of Transportation conducted a thorough and fully documented review process to choose projects that will have significant regional and national impacts by reducing congestion, expanding capacity, using innovative technology, improving safety, or moving freight more efficiently.

This list of proposed Fostering Advancements in Shipping and Transportation for the Long-term Achievement of National Efficiencies (FASTLANE) grant awards is the culmination of a thorough technical assessment of 212 applications requesting a total of \$9.8 billion, more than 10 times the available amount. Due to funding limitations, we were only able to fund a small percentage of the excellent, eligible applications.

Project Name	Applicant Organization	State	Project Size	FASTLANE Proposed Award	Total Project Cost	117(d)(2)(A) Limitation*
Interstate 10 Phoenix to Tucson Corridor Improvements	Arizona Department of Transportation	AZ	Large	\$54,000,000	\$157,500,000	-
SR-11 Segment 2 and Southbound Connectors	California Department of Transportation	CA	Large	\$49,280,000	\$172,200,000	-
Arlington Memorial Bridge Reconstruction Project	National Park Service	DC	Large	\$90,000,000	\$166,000,000	-
Port of Savannah International Multi-Modal Connector	Georgia Ports Authority	GA	Large	\$44,000,000	\$126,700,000	\$32,000,000
I-10 Freight CoRE	Louisiana Department of Transportation and Development	LA	Large	\$60,000,000	\$193,508,409	-
Conley Terminal Intermodal Improvements and Modernization	Massachusetts Port Authority	MA	Large	\$42,000,000	\$102,890,000	\$42,000,000
I-390/I-490/Route 31 Interchange, Lyell Avenue Corridor Project	New York State Department of Transportation	NY	Large	\$32,000,000	\$162,900,000	-
US 69/75 Bryan County	Oklahoma Department of Transportation	OK	Large	\$62,000,000	\$120,625,000	-
Atlantic Gateway: Partnering to Unlock the I-95 Corridor	Virginia Department of Transportation	VA	Large	\$165,000,000	\$905,000,000	\$45,000,000
South Lander Street Grade Separation and Railroad Safety Project	City of Seattle	WA	Large	\$45,000,000	\$140,000,000	-
I-39/90 Corridor Project	Wisconsin Department of Transportation	WI	Large	\$40,000,000	\$1,195,300,000	-
Truck Parking Availability System (TPAS)	Florida Department of Transportation	FL	Small	\$10,778,237	\$23,983,850	-
Cedar Rapids Logistics Park	Iowa Department of Transportation	IA	Small	\$25,650,000	\$46,500,000	\$25,650,000
U.S 95 North Corridor Access Improvement Project	U.S 95 North Corridor Access Improvement Project	ID	Small	\$5,100,000	\$8,500,000	-
Maine Intermodal Port Productivity Project	Maine Department of Transportation	ME	Small	\$7,719,173	\$15,438,347	\$7,122,485
Cross Harbor Freight Program (Rail)	The Port Authority of New York and New Jersey	NY	Small	\$10,672,590	\$17,787,650	\$10,672,590
Coos Bay Rail Line - Tunnel Rehabilitation Project	Oregon International Port of Coos Bay	OR	Small	\$11,000,000	\$19,555,000	\$11,000,000
Strander Boulevard Extension and Grade Separation Phase 3	City of Tukwila	WA	Small	\$5,000,000	\$38,000,000	-
Total				\$759,200,000	\$3,612,388,256	\$173,445,075

Legend:
Urban: White
Rural: Gray

*Number is estimated and subject to revision based on final negotiated project budgets

Congress of the United States
Washington, DC 20515

July 13, 2016

The Honorable Anthony Foxx
Secretary
U.S. Department of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Dear Secretary Foxx,

We are writing regarding the Fostering Advancements in Shipping and Transportation for the Long-term Achievement of National Efficiencies (FASTLANE) Grant Program. We were surprised to find out that of the eighteen projects selected, none were from the Los Angeles region. If the goal of FASTLANE grants is to provide funding for projects with significant regional and national impacts by reducing congestion, expanding capacity, using innovative technology, and moving freight more efficiently, then applications from the Los Angeles region should have had priority. We ask that you provide our offices with an explanation of the selection process.

As you know, the Los Angeles region is home to the nation's busiest port complex, which includes the Port of Los Angeles and the Port of Long Beach. Together they are responsible for at least 40 percent of all national container cargo trade and account for \$310 billion in national economic impact. As a result of the responsibility of transporting our nation's goods, Southern California residents suffer the worst traffic in the country. Annually, Angelenos spend on average 81 hours stuck in their cars on freeways and they are in need of relief.

The Los Angeles region submitted more than a dozen applications for nationally and regionally significant freight projects that tested innovative technology, increased capacity, improved multimodal efficiency and reduced congestion. Without FASTLANE funding, the region will now have to move forward with these projects on their own. It is decisions like these that have forced our constituents to willingly tax themselves in order to meet their transportation needs. It is unfair that rather than reward residents with additional needed aid, they are being penalized.

We will never fully achieve the goals of FASTLANE if the Los Angeles region continues to be ignored. By doing so we are not only hurting the local economy, but the national economy. We look forward to hearing the explanation of the selection process.

Sincerely,


Member of Congress

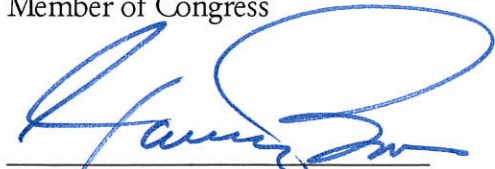

Member of Congress


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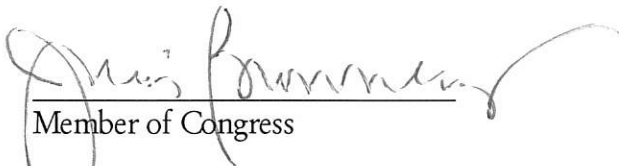

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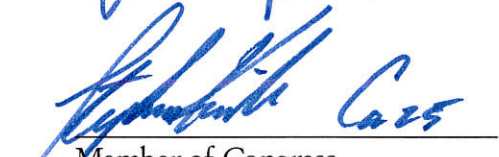

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Future FASTLANE Grant Candidate Project Information

PROJECT NAME	CURRENT PHASE	TARGET DATES		TOTAL COST ESTIMATE	FUNDS AVAILABLE	FUNDING SHORTFALL
		Begin Design (PS&E)	Begin Construction			
Interstate 710 Freight Corridor (I-710 South)	PAED	2018	2023	\$8,000,000,000	Measure R Fund Balance ¹	\$7,710,000,000
Anaheim Street & PCH Interchange Improvements (I-710 South Early Action)	PAED	2018	2021	\$ 300,000,000	Measure R Fund Balance ¹	TBD
Del Amo Blvd Interchange Improvements (I-710 South Early Action)	PAED	2018	2021	\$ 124,000,000	Measure R Fund Balance ¹	TBD
Firestone Blvd Interchange Improvements (I-710 South Early Action)	PAED	2018	2021	\$ 41,000,000	Measure R Fund Balance ¹	TBD
57/60 IC Confluence Relief	PAED	2018	2021	\$ 220,000,000	0	\$220,000,000

¹Balance of I-710 South Measure R allocation in 2nd & 3rd decade (less funds reserved for I-710 South early action arterial projects) is approximately \$290,000,000. These funds are available for I-710 South Freight corridor and the I-710 early action freeway projects noted. Board programming action and project fund assignment is required.

Metro Freight Corridor Implementation Working Group

- Gateway Cities Council of Governments:
GCCOG Engineer – Yvette Kirrin
- The I-5 Joint Powers Authority:
Technical Advisory Committee Chair – Noe Negrete
- Caltrans District 7:
District Director and Metro Board Director – Carrie Bowen
Chief Deputy District Director – Shirley Choate
- Southern California Association of Governments (SCAG):
Manager of Goods Movement and Transportation Finance – Annie Nam
- Alameda Corridor-East Construction Authority (ACE):
Chairman and Montebello Mayor – Jack Hadjinian
Chief Executive Officer – Mark Christoffels
Director of Government and Community Relations – Paul Hubler
- Alameda Corridor Transportation Authority (ACTA):
Director of Government and Community Affairs – Connie Rivera
- Port of Long Beach:
Managing Director, Planning and Environmental Affairs – Rick Cameron
Director of Transportation Planning - Allison Yoh
- Port of Los Angeles:
Director of Goods Movement – Kerry Cartwright
Director of Government Affairs – David Libatique
- Metro:
Deputy Executive Officer, Goods Movement – Michael Cano

**Board Report**

File #: 2016-0503, **File Type:** Motion / Motion Response**Agenda Number:** 36.

**EXECUTIVE MANAGEMENT COMMITTEE
OCTOBER 20, 2016****SUBJECT: SUSTAINABILITY STRATEGIES****ACTION: RECEIVE AND FILE****RECOMMENDATION**

RECEIVE AND FILE report back on **sustainability strategies, accomplishments and short and long-term plans related to green infrastructure, sustainability transportation and workforce development and resources** needs to implement Metro's sustainability program.

ISSUE

In February 2016, the Metro Board of Directors passed Motion #57 by Directors Garcetti, Kuehl, Ridley-Thomas, Fasana, Solis and Bonin to direct the CEO on a number of items related to Metro's environmental and sustainability efforts to further Metro's goals to reduce emissions, clean the air, and improve urban areas (Attachment A).

There are two reports required by the Motion. Staff reported back on May 31, 2016 on Item A of the Motion. This Receive and File document is the second report that is also required by the Motion. This report includes an outline of staff's response for each of the items pertaining to Water Conservation and Green Infrastructure, First and Last Mile Connections to Metro's transit system, and Strategies to better Deploy Technology and promote Green Jobs.

BACKGROUND

Central to Metro's mission of continually improving the effectiveness and efficiency of Los Angeles' transportation system is the process of ensuring the implementation of sustainability-related efforts and infrastructure. Transit systems by definition already form a sustainable air quality strategy as any agency that reduces vehicle miles travelled, congestion, and promotes land use co-benefits as a result of transit investments lead to a reduction in criteria air pollutants and greenhouse gas emissions.

Although Metro has been implementing sustainability strategies, specifically as part of its construction efforts since 2003, sustainability only became a formal part of Metro's priorities in 2007, with our

Board's adoption of the Sustainability and Energy Policy; and the formation of the Ad Hoc Sustainability and Climate Change Committee. In the summer of 2008, the Board adopted the Metro Sustainability Implementation Plan (MSIP), which outlined specific actions to reduce our contribution to climate change and to further increase our sustainability. The MSIP is the cornerstone of our sustainability activities and provides overall guidance in our effort to implement sustainability-related projects in the most cost-effective and efficient manner.

To allow a most systematic implementation of our sustainability programs, the Board adopted an Environmental Policy in 2009 which established an Environmental Management System (EMS) as the tool for reducing environmental liabilities and implementing a continual improvement process with environmental objectives and targets that are measurable, meaningful and understandable. Metro's internationally certified EMS is the common thread in the development, implementation, and operations and maintenance of all sustainability related infrastructure in our agency. It is also the means for us to implement a coordinated sustainability program within Metro.

Our agency has consistently been the international leader in the sustainability space. Metro has developed the following baseline documents to ensure that sustainability principles are implemented uniformly in all of our construction programs:

1. Update in 2010 (and revised in 2012) of the Metro Rail Design Criteria specifically in Section 2 to include the consideration of multi-mobility hubs with various first and last mile strategies, climate change adaptation principles and green infrastructure;
2. Update in 2012 of Metro's baseline specifications to require the development and implementation of a project-specific Sustainability Plan regardless of the size of projects. Each one of these plans outlines the environmental and sustainability commitments for each project. These commitments are consistent with statutory and regulatory requirements. The Sustainability Plan specifically adheres to the requirements of the California Green Building Code and the California Building Code. However, Metro's requirements (if more stringent) are followed, as feasible, when in conflict with those of the statute or regulations.
3. Requirement for annual reports in environmental and sustainability metrics that is reported as the following: Energy and Resource Report (formerly called Sustainability Report, since 2010), annual Energy and Renewable Energy program update (since 2012), Annual Green Construction Policy Implementation (since 2012). Attachments B, C, D provide specific details on the projects and the metrics that Metro is measuring itself against in sustainability, energy, and green construction, respectively.

The basis for these documents include a number of agency-wide policies such as:

- Green Construction Policy;
- Renewable Energy Policy;
- Energy and Sustainability Policy (to include the requirement for the use of Leadership in Energy and Environmental Design [LEED] as the standard rating system to document the implementation of green infrastructure for projects 10,000 square feet or larger);
- Environmental Policy;
- Environmental Liabilities Reduction Policy;
- Construction Demolition Debris Recycling and Reuse Policy;
- Water Use and Conservation Policy; and
- Complete Streets Policy.

A complete inventory of all policies, plans, description of projects, metrics, and other relevant information could be found at www.metro.net/sustainability <<http://www.metro.net/sustainability>>.

DISCUSSION

In the context of the items in the preceding section, Motion #57 provides a framework and opportunity for Metro to strengthen and expand its sustainability policies, plans, and implementation efforts for the benefit of our metropolitan region and to foster a greater level of coordination with peer agencies trying to address overlapping sustainability mandates. Based on our staff-initiated consultation process, staff concurs with our stakeholders that Metro will need to adapt its sustainability implementation strategy to reflect rapidly evolving technology, increasing impacts of extreme weather events, more stringent federal, state, and local requirements, advancements in best management practices for active transportation infrastructure, as well as the need for closer coordination among agencies. We want to stay on the forefront of sustainability, and also recognize that we are not alone in this space. Continuing our leadership in sustainability implementation is necessary to carry out the co-related and cooperative green infrastructure goals to efficiently converge transportation, open space, air and water resource, and biodiversity protection into a shared vision of all our 88 cities and unincorporated areas of LA County and surrounding jurisdictions.

MSIP To Be Updated By March 2017

To holistically do so and to increase logistical efficiency, staff determined that updating the MSIP would be the most logical first step. While, on a project per project basis, a requirement is in place to develop a Sustainability Plan for all projects, regardless of size, the intent of the MSIP update is to make sure that we capture all of the gains we achieved in the last few years, summarize our lessons learned as well as draw from our experience and the input of diverse stakeholders to implement the most-effective strategies to mitigate the impacts from those challenges, and optimize our resources to optimally achieve environmental and sustainability goals. Developing an updated plan to be completed within the next six months is key to ensuring the continued implementation of existing sustainability efforts as well as opportunities for increased sustainability while maintaining a state of good repair and to be able to operate our expanding system in the most cost-effective and resilient

manner.

To better address the request of the Motion and to set the stage for developing an updated MSIP, our response to each element of the Motion for this report is characterized by its current stage of development:

- Bench - Research & Development stage;
- Pilot - Advanced from Bench stage and Metro is in the process of scaling up;
- Fully Implemented - Policy is applied to all eligible assets and projects; and
- Process Improvement - Continual improvement and innovation to meet targets.

The responses below for each of the elements of the Motion are developed in close coordination with Metro Operations, the Metro Highways Group and the Metro Countywide Planning Department. The Countywide Planning Department coordination specifically focused on the development and implementation of responses related to First and Last Mile Connections to Metro's transit system, Parking Management as well as Goods Movement initiatives.

Water Conservation & Green Infrastructure

Goal: *All Metro future construction projects (that are currently not out to bid) implement methods to capture and treat storm water and apply reclaimed water best practices.*

Current Status: Process Improvement status for Storm Water; Pilot status for Reclaimed Water practices.

Summary: Since 2003, Metro has implemented a best practice to capture and treat storm water. The requirement is reflected in the agency Design Criteria for all major capital projects. Section 2 of the Design Criteria describes Metro's commitment to develop a Construction Storm Water Control Plan for all above ground fixed facilities. These would include the implementation of applicable Standard Urban Stormwater Mitigation Plan (SUSMP) guidelines for permanent management of storm water. Where treatment is within Metro jurisdiction and if feasible to achieve the highest and best transportation use of the property, treatment would include the establishment of minimum buffers from riparian corridors and wetlands, where water quality is of particular importance. Engineering strategies are required to be constructed for the permanent control of water runoff during the operation phase of the project.

Throughout the County, Metro follows the City or County of Los Angeles' Low Impact Development (LID) protocols in addition to regulations from state and other local regulatory agencies that govern the treatment and re-use of storm water. Major capital transit projects where these strategies were

implemented include the Orange Line, Central Maintenance Facility, Division 13, Santa Monica Yard, and Monrovia Yard. For future projects, Metro will coordinate with Countywide stormwater managers and land use planners to determine the overlap of potential LID treatment sites with Metro properties and locate optimal sites of implementation within Metro parcels based on drainage corridors and critical water sources. Metro will work with other jurisdictions to integrate their LID strategies with those of Metro at the time of Metro implementation.

Our Board has mandated the reduction of potable water use agency-wide by as much as 20% by 2017 using 2015 baseline levels. Current efforts continue for process improvements to meet the target. Since mid-2000, our bus washes have supplemented potable water use with reused treated washwater in all of our bus and rail car washing activities. We have implemented the use of recycled water in some segments of the Orange Line for landscaping, specifically where we are able to connect to recycled water main pipelines installed by the Los Angeles Department of Water and Power. The use of dewatering water can pose some challenges, especially if the water quality is impacted by chemical contamination (natural [e.g., in the case of stations adjacent to the La Brea Tar Pits area] or anthropogenic [e.g., due to industrial activities adjacent to the dewatering site]).

Full scale reclaimed water implementation at Metro (specifically for landscaping) faces significant impediments for consistent implementation on construction projects. In most cases, the local jurisdiction or utility companies are currently in the planning stages or have constrained resources to align with the schedule and proximity of their projects to Metro's projects. Based upon Motion #57 and feedback from stakeholders, Metro will continue its close coordination specifically with the City of LA's Bureau of Sanitation, Department of Water and Power, Los Angeles County Department of Public Works, County Sanitations District of Los Angeles County, and One Water LA Working group in aligning placement of reclaimed water throughout Metro projects, in addition to Orange Line.

Besides these potable water conservation efforts, as part of our efforts to determine feasible numerical sustainability goals, Metro staff will work to develop minimum targets for LID strategies. To this end, Metro will establish best practice strategies (including consideration of voluntary goals such as those provided in the California Green Building Code, where feasible) to achieve those targets and track progress including monitoring, reporting, and maintenance towards the greening of our new and existing infrastructure.

Metro is working with the County of LA in bringing these strategies to the rest of the cities in the County. We have identified a potential new funding source to assist local jurisdictions regarding expansion of storm water capture and reuse and other low impact development strategies. If passed by the voters, Measure M will allow local jurisdictions to use up to one-third of their annual Local Return funds (or \$7.5 billion over 40 years) for "Green Streets" initiatives. Per the Ordinance, "Green Streets" are defined as "urban transportation rights-of-way integrated with storm water treatment techniques that use natural processes and landscaping and that quantitatively demonstrate that they

capture and treat storm water runoff from their tributary watershed through infiltration or other means that are included within the respective Enhanced Watershed Management Plan.”

Goal: *All future design and construction projects (\$5 million and over) use Storm Water & Discharge Runoff Capture and Cleaning Devices.*

Current Status: Pilot Status

Summary: This goal relates to the treatment of storm water that is in excess of what could be infiltrated or captured and reused on site. Since 2003, Metro has incorporated and implemented additional low impact development and engineering controls for this purpose, where feasible. The Orange Line is an example where we have installed an extensive network of detention basins and treatment devices at or preceding storm water inlets.

Challenges exist in reaching full implementation based upon three key issues:

- Feasibility in terms of physical area of capture;
- Development of performance metrics and targets to push progress; and
- Agreement on inter-jurisdictional Operations & Maintenance.

Metro will work with all stakeholders in developing strategies to overcome these challenges.

Not all project sites have sufficient right-of-way or drainage area to allow for efficient capture & installation of mitigation strategies or installation of treatment devices. Further, it can be a challenge for jurisdictions to fully implement long-term operations and maintenance after Metro’s typical initial five year establishment period, specifically in areas where there may be confusion on limits of maintenance responsibilities. While we had limited opportunities to implement these strategies in recently-built stations and projects, we continually look for opportunities in newer projects like the Emergency Service and Operation Center, Rosa Parks Willowbrook Station, and Union Station projects. We have also recently worked with the Gold Line Foothill Authority to use the recently laid out ballast as a part of the system’s storm water treatment strategy. Staff is working with the Crenshaw LRT, Regional Connector, and Purple Line Extension projects for opportunities as part of the implementation of the project-specific Sustainability Plans.

As stated above, based upon Motion 57 and feedback from stakeholders, if approved by voters, Measure M provides a potential new funding source for local jurisdictions by making “Green Streets” an eligible expense under Local Return. We are also working with other jurisdictions on defining how maintenance can be implemented using community partnerships.

Goal: *All future design and construction projects (\$5 million and over) use Permeable Pavement &*

Surfaces.

Current Status: Bench (Research & Development) status.

Summary: Metro received a grant in 2014 and has a permeable pavement pilot planned for installation at the Central Maintenance Facility (CMF) in 2017. This two-year pilot will allow for evaluation of the technology until 2019. Retrofit projects are being planned in other Divisions. The goal is to complete the pilot effort at CMF, determine the benefits and costs for full implementation, and begin full-scale implementation across all applicable assets in 2018. This study makes use of the results of existing research that have identified parking lots, alleys, service roads, and low-traffic suburban neighborhood roads as best-suited for permeable pavement. Where applicable, these results provide insight on possible ways to accelerate more widespread deployment. It is also worth taking into consideration that at present permeable pavement is quite costly, and so other best management practices may be more appropriate when budget constraints are a major limiting factor. Metro's current study incorporates bioswales and trees/vegetation. Other strategies such as rain grading, infiltration trenches, and curb inlets can be considered for other applications.

In addition to these, the Exposition Light Rail Authority had recently completed a porous pavement project on Metro property around the Expo/Bundy station. This acts like a natural on-site stormwater retention system, reducing the storm water runoff onto city streets. LA Metro staff is currently working to understand the long-term operations and maintenance constraints of this new permeable pavement system.

Goal: *All future design and construction projects (\$5 million and over) use Low Carbon-Intensity Materials.*

Current Status: Bench (Research & Development) Status.

Summary: Due to Motion #57, staff has begun to explore how to add this requirement in all projects for implementation. After the last few months of research, staff has determined that the availability of these materials in the supply chain that can fulfill Metro usage requirements is the critical path for full implementation. There are limited materials and volume to fulfill Metro needs. Therefore, Metro commits to implement this goal towards full implementation through a phased approach as follows:

- a. Identify the availability of all such type of materials for use in all projects;
- b. Educate suppliers on Metro's commitment to the use of these materials in all of its projects;
- c. Encourage the use of low carbon-intensity materials through the revision of our procurement documents.

In addition, staff has determined that most contractors are not familiar with the use of these materials

(and their impact on warranties and durability) nor have the awareness of how to procure for these products. Concurrent with the update of procurement documents to include low carbon-intensity materials as a possible alternative, Metro will work with contractors to implement the strategy in all Metro projects and encourage their use in Metro funded projects.

Goal: *All future design and construction projects (\$5 million and over) use Recycled and Local Materials.*

Current Status: Fully Implemented for Recycled Materials; Bench (Research & Development) Status for Local Materials

Summary: In 2007, Metro approved a policy to give preference to recyclable and recycled products in the selection of construction materials to the maximum extent feasible. The recycled material requirement is fully implemented on both construction and for the most part in operations. Examples of the extensive use of recycled materials, particularly recycled concrete sub-base, are the Metro Orange Line and the I-405 HOV lanes.

Similar to the implementation of low carbon-intensity materials, local materials implementation remains to be in the bench stage. Supply chain challenges remain an obstacle for scaling up. Further, the practical issue that not all materials are available locally (specifically at the scale we are projecting for these materials to be used in major capital projects) can eventually limit the full implementation. Metro commits to implement this goal towards full implementation through the same phased approach as low carbon-intensity materials.

Goal: *All future design and construction projects (\$5 million and over) use Light Colored Pavement and Native Shade Trees*

Current Status: Light Colored Pavement is in the Bench stage; California Native Plants is Fully Implemented, Native Shade Trees is in Bench stage

Summary: Light colored pavement has been implemented in limited situations in Metro parking lots and maintenance yards, most recently at the Monrovia Rail Maintenance Facility. Due to Motion 57, Metro will continue to determine the feasibility of widespread use in all projects. There are life cycle cost concerns as it relates to the durability of light colored pavements as well the availability and full-scale implementation as compared to conventional pavement. High reflectance top coats are also an option that Metro will look into as a possible alternative method for combating the urban heat island effect.

Metro's best management requirements are to plant California native and drought tolerant vegetation at all existing Metro facilities. However, the requirement for Native Shade Trees is in Bench stage.

The implementation of this strategy is limited to areas where the trees would not interfere with the safe operation of the transit system (e.g., away from overhead catenary systems) or at locations where the presence of the tree would not impede safety of patrons and/or at intersections. Metro will incorporate urban heat island studies to determine opportunities on where shade trees may be critical especially when placement opportunity arises from new construction or retrofit of existing Metro assets.

While every project is unique; consideration of the inclusion of Native Shade Trees will be given priority, as opposed to the alternative of not including Native Shade Trees, given the direction of this motion. The correlation between a high urban heat island effect and lower-resource, disadvantaged communities makes apparent that offering technical assistance in this area where needed would be highly beneficial. Establishing targets and tracking relevant metrics towards achieving reductions in the urban heat island effect is a crucial initial step towards guiding progress in this area.

Goal: All future highway and transit projects include a project-specific Sustainability Coordinator to oversee all resiliency and long-term sustainability-related requirements for the project realizing that proper maintenance is essential to realizing the full life-cycle benefit of sustainable infrastructure and to assist the agency's Sustainability Officer in achieving Metro's sustainability metrics.

Current Status: Pilot status

Summary: A project specific Sustainability Coordinator is a requirement for all Metro construction projects per the Sustainability Plan. Currently, the project level Sustainability Coordinator role is met through Metro consultants. The Executive Officer, Environmental Compliance and Sustainability currently provides oversight in the overall implementation of all Sustainability Plans for all projects; acts as the EMS Administrator; and provides review and approval in all projects of any scale for the inclusion of sustainability strategies in any stage of a project or maintenance of an asset.

In terms of all of our existing facilities, as a result of Motion 57, staff has met with Metro Operations to improve coordination, specifically, with the Environmental Compliance and Sustainability Department. This coordination is focused on ensuring that operations and maintenance of sustainability elements of a project are properly vetted out, implemented, and environmental benefits optimized with Operations and Facilities Maintenance staff at the concept development stage rather than waiting until the project/installation is complete.

If passed by the voters, Measure M will provide a new funding source which could provide a resource for additional full time staffing to operate and maintain current and future sustainability-related projects. A formal Program Management Plan for Measure M will be presented to the Metro Board in October 2016 to include these potential additional resources, including the consideration of a Sustainability Officer.

Specifically on Metro's role in implementing green infrastructure projects in Metro's Highway programs, the State highway system in California is owned and operated by the California Department of Transportation (Caltrans). As a result, collaboration with Caltrans is the most effective way to assist with their sustainability efforts to the fullest extent possible. Caltrans' Sustainability Program follows established State and federal programs, policies, and guidelines throughout the project development, implementation, and maintenance and operation phases of highway projects. Regardless, Metro, as a major partner in implementing sustainable highway projects in Los Angeles County, continues to work with Caltrans in identifying and incorporating practical and feasible sustainability measures in projects.

Goal: *Significantly increase the number, size, and scope of projects in Metro's Urban Greening Implementation Action Plan.*

Current Status: Bench (Research and Development) stage.

Summary: Metro's Urban Greening Toolkit provides resources to cities and communities to implement transit-supportive green infrastructure at Metro-owned property. This is a critical first step because most jurisdictions do not have the technical knowledge of implementing an urban greening program. In January 2016, the Metro Board approved an Implementation Action Plan for the Urban Greening Plan and Toolkit. The action plan included, among other items, a small set of demonstration projects intended to showcase the benefits of green infrastructure and place-making. Subsequently, at the June 2016 meeting, the Board approved proposed criteria for the demonstration program. At this time, there is \$200,000 budgeted in FY 17 for the small scale demonstration programs.

As a way to expand the program, staff recommends proceeding with an application process as described in the recently approved criteria, then reporting back to the board to request additional resources based on demonstrated demand for qualifying projects. The smaller scale demonstration projects will then inform the development of a larger scale program to be developed by staff for FY18. The application process referenced above is highly suitable for Metro technical assistance to lower-resource local jurisdictions - an initiative described in greater length later on in this document.

Improve Connectivity & Enhance First-and-Last Mile Connections to the Transit System

Subsequent to Motion #57, the Metro Board approved Motion #14 in May 2016 which directed a comprehensive set of activities to implement first/last mile improvements, with a required report-back to the Board by the Countywide Planning Department in October 2016. The report back will address all of the specific first/last mile items of Motion #57, including expanding the car-share program to more than the 15 current locations; and incorporating active transportation accessibility into transit

stations' design.

The report back will also propose development of guidelines that will delineate how to include first/last mile components in future capital projects. This will cover the shared responsibility of Metro and municipalities as well as how funding needs will be addressed. It will also describe a comprehensive planning effort that will include a set of metrics that can be used to evaluate successes and shortcomings of these design elements and associated strategies going forward. Such metrics could include utilization rates of bike facilities (as well as unmet demand like bike locker wait lists) provided at transit stations, changes in vehicular traffic or car parking utilization, transportation mode used to get to/from transit stations, as well as qualitative data on barriers to and enablers of mode shift. Metrics will also cover broader sustainability goals around VMT and emission reduction. Additionally, Metro will consider the value of integrating stations, particularly those services by Greenways, with automated bike/pedestrian counters as part of station design in order to measure changes in use of active transportation infrastructure over time.

Furthermore, in addition to First-and-Last Mile strategies, Motion #57 calls on Metro to play a leadership role in coordinating the establishment of a Regional Active Transportation Network, a coherent one which utilizes existing right of ways (utility corridors, flood channels, etc.) and connects existing fragmented segments. It is noted that the Active Transportation Strategic Plan and subsequent implementation actions lay out a broad set of activities to this end. To facilitate this aim, the Motion directs Metro staff to make recommendations on establishing a matching funding program (also covered in Motion #14) to support the delivery of multi-jurisdictional projects. Some other possible roles that Metro could play are to:

- Set County-wide benchmarks for active transportation use and regional network implementation, and report back to the public on an annual basis;
- Host an annual LA County Active Transportation summit to build regional capacity, provide technical assistance, and foster collaboration across the region; and
- Provide active transportation proposal development assistance for city-level projects with regional significance (e.g. regional Greenway expansion), especially for disadvantaged communities (DACs).

Deploy Technology and Promote Green Jobs

Goal: *Complete an assessment of any necessary positions focused on technological efficiencies and improvements that would be critical to supporting Metro's sustainability efforts.*

Current Status: Pilot Stage

Summary: There are three components to the assessment. The first component is the life-cycle

analysis to establish the benchmark for performance metrics. This process is complete. The next component, which is also complete, is to identify revenues to fund the life cycle strategies. The final component is to work with the Operations Department to determine the resource needs, including full-time staff, training, tools, software, etc. This third and final component is underway and anticipated to be completed by Spring 2017.

Goal: *Alternative renewable energy generation technology that could be used for future bus, vehicle, rail and maintenance structures.*

Current Status: Pilot stage.

Summary: Metro is in the forefront of piloting new forms of low-impact transport (e.g., EV buses, car share, taxis). For example the agency has received five of the 20 electric buses it has put on order and has piloted their use in selected routes. Results of the pilot are being evaluated. Metro is also in the process of procuring for biomethane (renewable natural gas) to replace fossil natural gas use in its CNG fleet. Once fully implemented, it is expected that it will reduce our bus fleet carbon emissions by more than 78% and agency emissions by more than 45%. The current timeline for the implementation of the biomethane pilot is Spring 2017 with full implementation anticipated in Spring 2018. The agency is also looking at other near zero or zero emissions technologies in combination with low NOx/biomethane fuel combination as viable alternatives.

In partnership with the California Energy Commission, our agency has installed electric vehicle chargers at five park and ride locations, and is in the process of increasing electric vehicle charger offerings for the rest of the system (including workplace charging). To date, Metro has installed approximately 4 megawatts of solar panels. In July 2016, the White House recognized Metro's commitment to the deployment of a Community Solar Program for our line-up of capital projects. This trailblazing new program will bring solar energy to communities throughout the LA region and will represent a significant investment in communities and renewable energy over the near and long term. Metro is the first public transportation agency to pursue a community solar program, which builds on our success of deploying approximately 7 megawatts of renewable energy by the end of fiscal year 2017, with a goal of 66 percent renewable energy use by 2022. Metro is currently working with the County of Los Angeles in developing a strategy for Community Choice Aggregation to further enhance the delivery of renewable energy specifically in underserved communities.

Goal: *Partnership and funding opportunities, including an incentive program, to maximize the use of zero or near zero emission technologies in future transit and goods movement corridors.*

Current Status: Pilot stage.

Summary: Metro is partnering with the Ports to identify strategies to reduce emissions along the I-

710 and SR-710 corridors. Metro is also in the process of identifying goods movement strategies in the high desert corridor to increase energy resiliency as well as a potential by-pass in lieu of the LA Basin for diesel emitting trucks.

Metro has been actively engaged in regional discussions to pursue opportunities to test and demonstrate connected vehicle technologies to reduce emissions and improve commercial vehicle operational efficiency. These technologies include eco-driving, freight signal priority, truck platooning, and freight drayage optimization applications. In addition, Metro is actively engaged with SCAQMD, Caltrans, Ports of Long Beach and Los Angeles, and SCAG, to advance the development of zero and near-zero emission truck technology (as mentioned above). Our agency has hired a full-time staff to coordinate these efforts and is currently reviewing the California Sustainable Freight Action Plan.

Metro is part of the Zero-Emission Truck Collaborative, which includes representatives from Caltrans, Port of Los Angeles, Port of Long Beach, SCAQMD, and SCAG. The collaborative was formed to promote demonstration projects. SCAQMD, with support from the Metro and the Zero-Emission Truck Collaborative, has recently been selected to receive funding from CARB to demonstrate zero and near-zero emission drayage truck technologies in and around the Ports, as well as connected vehicle technologies.

Metro realizes that the changeover to zero emission technologies in freight entails significant upfront costs and that both incentives and fines have a role to play in driving this transition. Many truck drivers are employed by small “mom-and-pop” establishments that lease their fleets. An economic system that impacts the lessors of the trucks, not the lessees, is an important environmental justice strategy to improve compliance. Metro will work with our stakeholders, for example the Los Angeles Alliance for a New Economy and the Coalition for Environmental Health and Justice to explore the development of sound, equitable compliance instruments going forward.

Metro is in the forefront of piloting new forms of low-impact transport (e.g., EV buses, car share, taxis). As mentioned, Metro has received five of the 20 electric buses it has put on order and has piloted their use in selected routes. Results of the pilot are being evaluated. Metro is also in the process of procuring for biomethane (renewable natural gas) to replace fossil natural gas use in its CNG fleet. The agency is also looking at other near zero or zero emissions technologies in combination with biomethane use with Low NOx engines.

Metro has participated in Federal Notices of Funding Availability opportunities as well as working with our partners in all levels of government to secure mobility funds. LA Metro has developed a strategy to secure annual Cap and Trade funding. Metro has also voluntarily participated in the Low Carbon Fuel Standards market to generate revenue to construct/install, operate, and maintain sustainability-related infrastructures throughout Los Angeles County. Staff has been in discussions with the Department of Energy on community solar opportunities and the USEPA for alternative financing

mechanisms to convert brownfields to transportation supplementing facilities. Metro has a P3 program that is designed to attract private equity entities to assist Metro in fulfilling its agency sustainability objectives.

Goal: An overview of the Environmental Compliance and Sustainability Department's agency-wide effort to ensure coordination in planning and implementing sustainability initiatives, including recommended metrics to measure challenges and successes. This includes partnering and soliciting input from non-profits and other stakeholders to ensure public participation.

Current Status: Process Improvement.

Summary: The Environmental Compliance and Sustainability Department (ECSD) provides general support services to LA Metro's Planning, Construction, and Operations Business units. There are currently three distinct business functions provided by ECSD to include:

- Environmental Services;
- Sustainability Services (including Policy Implementation, Environmental Management System, and Carbon Credits Administration); and
- Project Management of Sustainability Related Projects/Infrastructure.

ECSD has implemented an award-winning, internationally certified EMS that provides environmental and sustainability support throughout the agency. With ECSD's very close partnership with Metro Planning, Construction, Operations, Procurement, Management and Budget, and Risk Management/Corporate Safety, ECSD has brought to light and implemented innovative environmental and sustainability strategies that are now standard in all of our construction methods and facilities operations. In addition, many of these projects have also generated cost avoidance, cost-savings, and to some extent revenue generating opportunities of which goes back to the Metro General Fund for reinvestment into sustainability projects. Many examples are provided in Attachment B and in www.metro.net/ecsd <<http://www.metro.net/ecsd>>.

Technological, regulatory, and increasing extreme weather event impacts provide an opportunity to do more than what we are currently doing. The FAST Act has also required that resiliency to extreme weather events as well as stormwater issues be incorporated into Federally funded projects. To this effect, in order to guide us in our MSIP update, staff proposes the use of the following Seven Pillars of Sustainability Planning that will form the principles for the development of our new Comprehensive Sustainability Implementation Plan (Plan). The Plan will involve collaboration among various Metro departments as well as our local and regional partners. The Plan will capitalize on Metro's efforts already underway to jumpstart a more robust regional effort that goes beyond pilot programs and aims for widespread implementation. These pillars will be used to come up with an updated plan in the next eight months. These include:

- 1. Collaboration** - Metro will continue to work with the Chief Sustainability Officers of the various jurisdictions within the County to expand on the current collaboration efforts with these

jurisdictions as well as with other entities within the City and County of LA, AQMD, ARB, High Speed Rail Authority, and SCAG among others. Staff will convene in the next six months a collaboration summit to better understand the role that each of our agencies play in the overall sustainability of Los Angeles. We will initially focus our efforts in reducing the current gaps in our collaboration with local government representatives dealing with storm water, street services, parks and planning departments to facilitate implementation of projects. We will also explore with other agencies the benefits and costs on the use of various green rating systems other than LEED. The initial work products of this collaborative effort would focus on the regional issue of storm water management plans including the LA County Basin Plan, various Enhanced Watershed Management Plans, and the LADWP Stormwater Capture Master Plan and how those could interface with Metro's programs. Other areas of focus might include strategies for combating the urban heat island effect and encouraging mode shift towards more sustainable modes of transport. Lessons learned on the use of rating systems other than LEED would inform life-cycle costing analysis as described below.

- 2. Leadership** -Similar to Metro's Technical Advisory Committee, Metro will promote and supports the formation of a "Sustainability Council" to advise Metro on its activities and projects. Metro staff envisions this Council to consist of members by nomination only and will leverage ideas from Metro's internal and external stakeholders. At a minimum, staff will look into a membership that may include the consideration of representatives from each of the following sectors: local government representatives in the Planning, Construction, and Operations and Maintenance space; environmental NGOs with a focus on water resources, water quality, and air quality (including the urban heat island effect); NGOs with a focus on social justice, environmental justice, and equity; the design profession (architect, engineer, etc.) who can provide expertise on implementation of sustainable solutions; landscape and infrastructure design; local labor unions; and public health. One of the initial tasks of the Council is to review the new Comprehensive Sustainability Implementation Plan prior to its endorsement by staff for Board approval. Future responsibilities could include providing input on the development of sustainability goals. Staff will include the results of action plans and proposals as to what their anticipated impact will be towards advancing the achievement of sustainability goals in the annual Energy and Resource Report (Attachment B). Staff will report back more frequently on progress on these items, if requested by the Metro Board. Metro staff will work to establish the formation of this Sustainability Council within 60 days of the Board receiving and filing this report.
- 3. Strengthening Relationships** - Metro will leverage existing best practices and programs throughout the County to incorporate into its programs and explore opportunities of collaboration specifically to address the inter-jurisdictional challenges to fully implement Green Infrastructure strategies. These best practices will be used to facilitate a review of Metro's internal green infrastructure requirements and guidelines and determine correlation and inconsistencies with other jurisdiction's planning and general plan documents. We foresee using the results of such a review to facilitate continual improvement in Metro's requirements and how it addresses and coordinates those requirements with other jurisdictions. Maintenance of green infrastructure and the associated workforce skill development that is needed to do so are key issues to work through. While Metro's strategies are already best in class compared to other agencies throughout the nation, there remain opportunities for

improvement. Staff will explore the development, contractual implications, and implementation protocols for an incentive system that allows for the incorporation of best practice sustainability principles that are currently voluntary requirements (such as those in the CA Green Building Code) into major capital project proposals.

- 4. Technical Assistance** - Staff will enhance LA Metro's training programs and include partnerships with non-profits in developing and implementing the program. For example, since our Board has required achievement of a LEED-Silver Certification for new construction that is 10,000 square feet or larger in area, it makes sense to partner up with the US Green Building Council (i.e., governing body that oversees LEED implementation) for Metro to conduct three types of training: Internal Metro Trades; Contractors; General Public. These series of trainings will result in three outcomes: 1) level the playing field and make all entities who would want to participate in the future on Metro projects to know and understand Metro's green infrastructure requirements; 2) ensure that green infrastructure is properly maintained to optimize benefits; and 3) ensure that a greater number of firms as well as individuals are equally competitive to implement or construct Metro green infrastructure projects/contracts. Metro will also look into developing additional aspects of a technical assistance program that aims to increase capacity in lower-resource, disadvantaged communities for them to advocate for in green infrastructure in their local streetscapes.
- 5. Resiliency Policy** - Consistent with the requirements of the FAST Act to incorporate resiliency in all USDOT funded projects, Metro will develop and implement a comprehensive resiliency policy to make sure that our projects comply with the requirements of the statute. This proactive approach to formalizing resiliency in our agency is consistent with our current efforts to coordinate with the City of LA's efforts through their Chief Resiliency Officer to make sure that our current and future infrastructure and related services can immediately recover after a significant disruptor.
- 6. Life Cycle Cost Analysis** - Within one year, staff will report back on its efforts to fully implement in all projects the 2014 authority on life cycle cost considerations in all sustainability-related infrastructure. Through this pillar, we also need to understand how the results of multiple pilot efforts can now be optimized into full scale operations. We will also consider the effects of incentives in accelerating the implementation of successful pilot strategies in capital projects, with a focus on making technical assistance available so as to create equitable opportunities for more widespread implementation of such sustainability-related infrastructure projects. The effect of standardizing sustainability implementation through rating systems other than LEED will also be explored.
- 7. End User Collaboration** - The most challenging hurdle in the fulfillment of sustainability goals is the operations and maintenance of sustainability-related projects. Often, there is a dichotomy between construction and operations and maintenance. The Plan will address these challenges to ensure attainment of the sustainability benefits that drove the conceptualization, design, construction and operations and maintenance of the final work product. The Plan will also address the realization of an accelerated implementation of Green

Jobs and Technology in projects and any additional resource needs that Metro Operations needs to ensure that environmental and sustainability benefits are consistently realized throughout the life of the asset. In addition, the Plan will also identify strategies on how to manage the relationships and break down the barriers of operations and maintenance challenges between Metro and other end users including but not limited to cities, special jurisdictions, and joint developers.

Concurrent with Plan development, Metro will be reporting back to the Board (with specific reporting schedule) on the following items:

1. Financial quantification and determination of a blended Return on Investment for all of the sustainability investments already made; and to the fullest extent feasible (through a life cycle costing method) determine the benefits of implementing the new projects to achieve identified existing goals as presented: Winter 2017.
2. Determination of the cost impacts associated with new regulatory requirements as well as additional mandates dictated by the 2016 California Green Building Code; the planning, execution, and maintenance of capital projects related to the consideration and use of green rating systems other than LEED; any new updated or mandated inter-jurisdictional ordinances; and the associated operations and maintenance costs and requirements for Metro to operate its existing systems as well as the need for additional resources (manpower) needed; Spring 2017.
3. Determination of feasible numerical sustainability goals that Metro can adhere to and the identification of the parties responsible for ongoing operations and maintenance associated with maintaining that goal through a full life-cycle analysis. These goals will include those already approved by the Board, indicated in this report, and those that staff could recommend in the future. Goals will represent best practice with consideration of current voluntary requirements like those in the California Green Building Code and those that emanate from the implementation of LEED and other to be considered green rating systems. Staff will also provide a standardized process into where such goals will be commenced (i.e., either in the planning process, design, construction, or maintenance), metrics for measuring progress towards their achievement, and regular progress reports to the Metro Board on successes and challenges towards meeting these goals: Fall 2017.

Combining the information generated from the Seven Pillars of Sustainability Planning along with the information developed during the cost benefit analysis in the above three steps will provide the Board with a very objective result on when goals and new tools to achieve sustainability in our new current infrastructures can and should be achieved.

The above processes will be incorporated into the Agency's Measure M Program Management Plan (PMP). The PMP is currently being developed and will be presented to the Board for adoption during

the October 2016 Board meeting. The PMP will describe the organization, management controls systems, and processes that guide the full range of activities required to implement LA Metro's transformative expansion program. After PMP approval, staff will develop the specific timeline for development and implementation of the new Comprehensive Sustainability Program Implementation Plan.

NEXT STEPS

Staff will be working with stakeholders and executive management in developing the Comprehensive Sustainability Program Implementation Plan. Staff will report back within six months on its progress towards the implementation of the seven pillars of sustainability as well as the progress in the development of the Plan.

ATTACHMENTS

Attachment A: January 2016, Motion Item #57, Environmental & Sustainability Efforts to Further Metro's Goals to Reduce Emissions, Clean the Air & Improve Urban Areas

Attachment B: Metro's 2016 Energy and Resource Report (download from www.metro.net/ecsd <<http://www.metro.net/ecsd>>)

Attachment C: Energy and Renewable Energy Update

Attachment D: Green Construction Policy Update

Prepared by:

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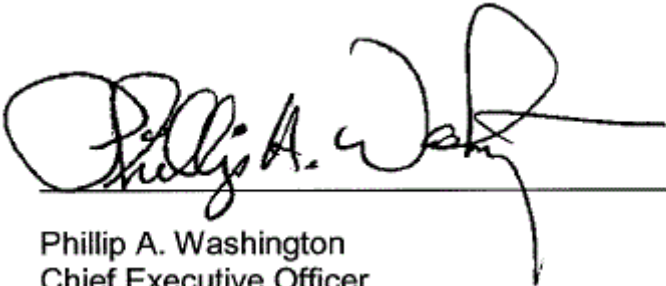
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Phillip A. Washington
Chief Executive Officer

File #:	2016-0157	Name:	
Type:	Motion / Motion Response	Status:	Agenda Ready
File created:	2/12/2016	In control:	Board of Directors
On agenda:	2/18/2016	Final action:	
Title:	APPROVE Motion by Directors Garcetti, Kuehl, Ridley-Thomas, Fasana, Solis and Bonin that the Board of Directors direct the Chief Executive Officer to: A. INCLUDE the following elements in Metro's Annual Energy and Resource Report, related to Air Quality, Emission Reductions and Resiliency efforts: 1. Efforts to reduce nitrogen oxide (NOx) emissions since the approval of Measure R, with a goal of 80% NOx emissions reduction by 2025, using 2008 as a base year. 2. An update on the progress of the Metro June 2012 Climate Action and Adaptation Plan and recommendations on how to achieve carbon emission reductions by 2025, 2035 and 2050. 3. Efforts to reduce vehicle miles traveled ("VMT") per capita in Los Angeles County, including proposed reduction targets. 4. Methods and recommendations to increase agency infrastructure resiliency and reduce environmental liabilities, especially those related to hazardous waste, as well as increase fuel efficiency, and use of energy efficien...		
Sponsors:	Board of Directors		

**EXECUTIVE MANAGEMENT COMMITTEE
FEBRUARY 18, 2016**

Preamble

Motion by:

DIRECTORS GARCETTI, KUEHL, RIDLEY-THOMAS, FASANA, SOLIS AND BONIN

February 18, 2016

Environmental & Sustainability Efforts to Further Metro's Goals to Reduce Emissions, Clean the Air & Improve Urban Areas

Metro has been at the forefront of international sustainability efforts and can continue to be a model, sustainably-oriented transportation system.

Every day, Metro provides transit service to over 1.4 million riders - literally taking millions of vehicles and the associated greenhouse emissions off the road. In addition, the Board has adopted a series of policies that demonstrate our commitment to operating in an environmentally sensitive manner. For example, the Board has instituted a Green Construction Policy, a Renewable Energy Policy and multiple Sustainability Policies which have guided both our operations and construction protocols.

However, given Metro's extensive operations and ambitious capital program designed to further expand public transit service, there is an opportunity to strengthen and expand our policies to further benefit the environment.

Specifically, Metro should look for opportunities to further reduce environmental impacts associated with the development and operations of both our current and future system. Metro's investments in future construction projects should reflect the best sustainability practices to meet federal, state, and local objectives in order to develop vibrant neighborhoods, foster economic growth, and enhance social equity. These investments should also be designed in a manner that promotes resiliency by assessing potential extreme weather events and drought-related issues resulting from the continual effects of climate change.

To maximize these goals, greening strategies should also be considered, implemented, and maintained in future Metro investments and capital projects to reduce regional air quality impacts, properly manage/reuse/recycle water resources, increase community connectivity, and advance clean technology, while simultaneously creating jobs to ensure economic vitality.

Metro's Environmental Compliance & Sustainability Department currently oversees the agency's multiple initiatives to reduce environmental impacts and is responsible for assessing Metro's ongoing commitment to sustainability, as reflected in their annual Energy and Resource Report. While this report demonstrates that much progress has been made, there are notable opportunities to expand and better integrate sustainability

efforts into Metro's overall operations and capital program.

Title

APPROVE Motion by Directors Garcetti, Kuehl, Ridley-Thomas, Fasana, Solis and Bonin that the Board of Directors direct the Chief Executive Officer to:

- A. INCLUDE the following elements in Metro's Annual Energy and Resource Report, related to **Air Quality, Emission Reductions and Resiliency efforts**:
1. Efforts to reduce nitrogen oxide (NOx) emissions since the approval of Measure R, with a goal of 80% NOx emissions reduction by 2025, using 2008 as a base year.
 2. An update on the progress of the Metro June 2012 Climate Action and Adaptation Plan and recommendations on how to achieve carbon emission reductions by 2025, 2035 and 2050.
 3. Efforts to reduce vehicle miles traveled ("VMT") per capita in Los Angeles County, including proposed reduction targets.
 4. Methods and recommendations to increase agency infrastructure resiliency and reduce environmental liabilities, especially those related to hazardous waste, as well as increase fuel efficiency, and use of energy efficient lighting, propulsion and auxiliary systems.
 5. Efforts and recommendations to reduce emissions on Metro's vanpool program fleet.

FURTHER MOVE that the Board of Directors direct the Chief Executive Officer to report back to the Metro Board with an interim report on the above in May 2016 and a full report in August 2016 on the following:

- B. An expansion of Metro's Green Construction Policy to make the following improvements related to **Water Conservation & Green Infrastructure**:
1. A requirement that all Metro future construction projects (that are currently not out to bid) implement methods to capture and treat storm water and apply reclaimed water best practices.
 2. A requirement that all future design and construction projects (\$5 million and over) use sustainable building materials which includes, but not limited to, the following, where feasible:
 - a. Storm water & discharge runoff capture and cleaning devices
 - b. Permeable pavement and surfaces
 - c. Low carbon-intensity materials

- d. Recycled & local materials
 - e. Light colored pavement & native shade trees
3. A requirement that all future highway and transit projects include a project-specific Sustainability Coordinator to oversee all resiliency and long-term sustainability-related requirements for the project realizing that proper maintenance is essential to realizing the full life-cycle benefit of sustainable infrastructure and to assist the agency's Sustainability Officer in achieving Metro's sustainability metrics.
4. A plan to significantly increase the number, size, and scope of projects in Metro's Urban Greening Implementation Action Plan.
- C. Strategies to improve connectivity & enhance **"First-and-Last Mile" connections to our transit system**, including:
- 1. A schedule for expanding the existing car-share pilot program to at least ten additional park and ride Metro-owned lots and/or major transit hubs in the system.
 - 2. An inventory of potential Metro-owned parcels that could be used to expand opportunities for active transportation links and/or "First-and-Last Mile" applications (e.g. Mobility Hubs).
 - 3. A requirement, when feasible, that all future Metro-owned transit stations consider, for connectivity and ridership purposes, incorporate the following elements into their designs:
 - a. Walking paths
 - b. Bike routes
 - c. Accessibility to local neighborhoods (i.e. half-mile radius).
 - d. River & bicycle waterways (where applicable)
 - 4. As part of Metro's Active Transportation Strategic Plan, strive to create a Regional Active Transportation Network, in coordination with local municipalities. As an initial step, Metro should coordinate with local agencies to assess opportunities to include right of ways (utility corridors, flood channels and other corridors) in this Regional Active Transportation Network to allow for preservation and best use and outline next steps towards implementing this network. Metro should also make recommendations on establishing a matching funding program to support the delivery of local first-last mile capital projects that support countywide transit ridership, and regional Active Transportation network connections.
- D. Report back on the following strategies to better **deploy technology and promote green jobs**:

1. An assessment of any necessary positions focused on technological efficiencies and improvements that would be critical to supporting Metro's sustainability efforts.
 2. Alternative renewable energy generation technology that could be used for future bus, vehicle, rail and maintenance structures.
 3. Partnership and funding opportunities, including an incentive program, to maximize the use of zero or near zero emission technologies in future transit and goods movement corridors.
- E. An overview of the Environmental Compliance and Sustainability Department's agency-wide effort to ensure coordination in planning and implementing sustainability initiatives, including recommended metrics to measure challenges and successes. This includes partnering and soliciting input from non-profits and other stakeholders to ensure public participation.

[Board Report](#)

Los Angeles County
Metropolitan Transportation Authority

Metro's 2016 Energy and Resource Report



Metro®

APPENDIX C: ENERGY AND RENEWABLE ENERGY UPDATE

Metro staff provides annual update on its implementation of Metro's energy program. For the purposes of the report back regarding Item #57 of the February 2016 Board Meeting, staff is including the information as Attachment D, herein. The following summarizes FY16 Energy Program activities and accomplishments.

Energy Efficiency Project Update

- Implemented energy saving projects and identified new opportunities, including:
 - Completed lighting retrofits at fuel islands and steam bays at Divisions 5 and 9, which are expected to save the organization over \$11,720/year in utility costs;
 - Completed the installation and commissioning of an advanced wireless lighting controls system and lighting retrofits at Division 22, resulting in measured annual energy savings of nearly 1,000,000 kWh and avoided utility costs of \$113,000 annually;
 - An ASHRAE Level II energy audit was completed at the Gateway Building. The purpose of the audit was to identify and quantify energy savings from proposed lighting and mechanical measures. Implementation of the proposed energy efficiency measures will contribute to the overall goal of achieving an Energy Star Rating to allow the LEED re-certification process to commence;
 - Metro's Energy Management Program (EMP) staff completed the 30% design packages for Buildings 1-6 at Metro's Central Maintenance Facility (CMF) based on the \$2.5M energy improvements that were identified during FY15. The energy improvements identified are expected to save nearly \$120,000 annually;
 - As part of the agency's annual Capital Program, the following are approved energy efficiency capital projects:
 - Division 30, Building 5 Air Scrubber Project: Metro's ECSD staff was asked to support the design of a ventilation system for the body shop within Building 5 at Metro's CMF to improve the current conditions within the space. In addition to supporting a permanent system, Metro's EMP staff was asked to investigate and recommend low cost short term solutions to improve the ventilation system and indoor air quality. Compressed air portable dust collector units were specified as an effective short term solution and will be purchased for the facility's use. Metro's EMP staff completed a Basis of Design (BOD), which outlines the requirements of the new central vacuum system that will replace the existing Rotoclones. Replacement of the Rotoclones with a central vacuum system will result in increased operating efficiencies and reduced equipment energy operating costs. Based on the outlined requirements, the proposed central vacuum system is projected to

save over 5,000,000 gallons of water annually. The procurement is expected to be initiated by the end of the calendar year.

- As part of the FY14 capital program, Metro staff applied for and was awarded nearly \$4.2M to implement comprehensive energy efficiency and renewable energy projects at multiple bus divisions. In addition, \$1.5M was awarded to implement energy efficiency projects at two rail divisions. Metro's EMP staff completed the 30% design packages and is ready for procurement. The procurement is expected to be initiated by the end of the calendar year and will require board approval.
- Gateway Lighting Retrofit Project: Using the investment grade lighting audit that was previously performed in 2010 as a basis, Metro's EMP staff conducted an updated lighting audit to focus on spaces that have since undergone changes and any interior or exterior lighting that was not previously included. Proposed recommendations include the retrofit of existing fixtures with new LED fixtures or retrofit kits and the installation of advanced lighting controls such as daylighting controls, fixture tuning, and occupancy sensors. Based on preliminary energy savings calculations, this project is projected to save approximately 2,800,000 kWh and avoided utility costs of over \$300,000 annually.
- Gateway DHW Heat Recovery Project: In response to analyzing the most efficient system to heat the domestic hot water (DHW) at the Gateway building, a proposal emerged to utilize waste heat from the elevator motors that is currently ejected using air conditioners to heat hot water used in the high rise. This opportunity is expected to cost \$50,000 and result in annual savings of \$10,000. Southern California Gas Company has committed \$15,390 to Metro in incentives for this project. The project will nearly eliminate the use of existing cooling equipment by taking all waste heat and pumping it into the domestic hot water system. This creates a positive feedback loop wherein the more the elevators are used; the more natural gas is offset because it is no longer used to provide hot water for the building.
- Select CNG Fuel Stations implemented recommended lockouts and if implemented successfully at all divisions, the lockout can potentially save Metro nearly \$260,000 in annual energy costs with no capital expenditure necessary.

LEED Program Update

- Continued the pursuit of Metro's goal to achieve LEED-Existing Building (EBOM) certification at all existing maintenance facilities. LEED-EBOM progress in FY16 included:
 - Division 7 campus achieved LEED-EBOM Silver Certification. This site represents Metro's second LEED-EBOM certified maintenance facility and one of only a few in the country.
- LEED requires verification of compliance with ASHRAE Standard 62.1, which details the specific ventilation requirements different space types, including auto repair and offices. Extensive analysis and outside air (OSA) testing completed at Divisions 9 and 15 identified units that were not in compliance with ASHRAE 62.1. In order to proceed with the LEED Certification process, a corrective action plan will be developed to implement the minor repairs and adjustments to these units.

Renewable Energy Update

- Metro continues its progress in meeting and exceeding the Renewable Energy Policy goal of 33% use of renewable power by 2020. Current estimates for calendar year 2015 total at least 24.03% use of renewable power.

Metro's existing photovoltaic (PV) systems at Division 8, 15, and 18 have been experiencing technical difficulties as detailed below and as a result have underperformed. A contract has been awarded to Skybridge Renewables to repair all known problems at the sites to bring these units not only operational, but also to upgrade the systems to current technology and specifications. A contract modification is currently in progress to include additional recommendations as detailed below and it is expected that the repair work will be completed by the end of this calendar year.

- Division 8
 - Current Status: While Skybridge Renewables was on-site to assess the current state of the system they found that the system was not operational. They were able to get at least three inverters operating and the system is now producing.
 - Repair Plan: The old inverters will be replaced with string inverters, which will make this system operational for years and improve the performance.
- Division 15

- Current Status: During Skybridge Renewal's inspection of the existing system, they discovered a few bad modules that were then isolated in order to bring the system operational.
 - Repair Plan: The old inverters will be replaced with string inverters, which will make this system operational for years and improve the performance. Additionally, 40 modules will be installed to return the system to its nameplate capacity of 500 kW.
 - Division 18
 - Current Status: During Skybridge Renewal's inspection of the existing system, they identified two bad strings. As a result of cleaning and rebooting, the system is operational and appears to be producing. However, they also found the monitoring gateway has been removed. Therefore, the system performance of this system is not known.
 - Repair Plan: Rooftop and Inverter repairs and tune-ups are recommended for Division 18 to improve the performance.
- In reaction to the issues uncovered at Metro's existing PV stations, a comprehensive preventative maintenance process was developed and implemented. ECSD and facility maintenance staff are working together to implement protocols that will ensure all systems receive regular maintenance, produce as expected and system failures are communicated and addressed in a timely fashion. Detailed training sessions on the preventative maintenance procedures have been held with facility maintenance staff and will continue to be offered as refresher course and to new staff over time. During a training session at El Monte station (Terminal 19), it was observed that the 89 kW system was underperforming. Further investigation led to the discovery that several micro-inverters were inoperable. Corrective actions were deployed by the system installer to bring the inverters operational and the system performance has since improved.
- As part of the preventative maintenance program, a series of video clips were developed related to the most critical PV system maintenance procedures and safety to provide on demand training support. In an effort to provide technical assistance with addressing concerns/issues with the PV systems, a hotline was established to field calls from facilities maintenance staff. If warranted, the hotline will also be used to schedule an onsite visit to address the system concerns.
- Metro continues their efforts in fulfilling commitments in the Renewable Energy Policy to incorporate renewable energy into Metro facilities. During FY16 solar panels were installed at two Metro facilities (Divisions 13 and 24), which are

expected to avoid over 800,000 kilowatt hours per year from being purchased, reducing electric utility costs by approximately \$100,000 annually.

- Procurement process has been initiated on a set of new photovoltaic (PV) systems that will leverage the recently authorized Alternative Financing Mechanism authority and expand Metro's system portfolio by more than 50%. Summary of the approach and systems are as follows:
 - Shaded and PV wired parking structures are specified for Division 9 and rooftop installations are proposed at Division 11, 22 and Expo Maintenance facility.
 - The entire project is expected to install 1.73MW in capacity and projected to avoid nearly 3,000,000 kWh from being purchased from SCE.
 - The proposed financing structure, known as a Power Purchase Agreement (PPA), will be funded through a Public-Private Partnership at no up-front capital cost to Metro.
 - Metro will agree to a price per unit of energy and purchase all the energy produced by the system for the life of the system.
 - This approach will constitute the 2nd renewable energy-related public private partnership at Metro following the system installed at Division 30 by Chevron Energy Services.
 - Roofing replacements will be included at Divisions 11 & 22 as part of the project; specifics of the cost and financing structure are currently being analyzed.
- Metro's maintenance divisions provide a large expanse of parking lots that provide an ideal opportunity for ground mounted PV systems, which represents the largest opportunity for large scale solar installation. The buses operate through these lots, requiring a modified carport to be constructed to raise the panels up and above the buses. Initial screenings were performed to assess viability from a physical, operational, and potential energy generation standpoint. Based on this assessment, three potential sites have been identified as the most favorable bus divisions for deployment of solar canopies.
- An area near the Metro Gold Line Highland Park Station was identified as a safety concern for Metro passengers and neighborhood residents. Metro ECSD staff, at the request of multiple parties, developed a sustainable, low cost solution for providing area lighting to address this safety concern. Solar powered lighting systems were installed to meet the need for outdoor lighting in this area.

NEXT STEPS

Metro staff will continue to implement the on-going programs as follows:

Energy Efficiency Projects

- Release large scale procurement across 6 divisions to implement all identified energy efficiency projects, which will save over \$350,000 annually. Project details are provided in Table 1 below.

Table 1. List of Energy Efficiency Improvement Projects at Selected Divisions

	Net Capital Cost, Includes Incentives	Total Annual Cost Savings	Annual kWh Savings	Annual Therm Savings
Division 3	\$580,880	\$54,091	470,215	5,431
Division 11	\$867,015	\$95,111	614,874	29,435
Division 22	\$208,712	\$52,550	451,235	290
Division 7	\$246,026	\$48,226	329,701	8,141
Division 15	\$368,480	\$73,101	623,765	9,888
Division 9	\$288,377	\$55,115	563,226	15,721
TOTAL	\$2,559,490	\$378,194	3,053,016	68,906

- Release procurement for large scale lighting retrofit and advanced controls at the Gateway Building that is projected to save over \$275,000 in utility costs annually.
- Establish a new capital project for the replacement of HVAC systems at the Central Maintenance Facility campus, which is expected to save nearly \$120,000 annually. Replacement of these HVAC systems, which are beyond useful life, is necessary to improve indoor air quality and to achieve an Indoor Air Quality prerequisite for LEED Certification. Project details are provided in Table 2 below.

Table 2. List of Energy Efficiency Improvement Projects at CMF Buildings 1-6

	Net Capital Cost, Includes Incentives	Total Annual Cost Savings	Annual kWh Savings	Annual Therm Savings
Unit Shops #1 and #2	\$841,582	\$31,006	309,043	5,805
Unit Shops #3 and #4	\$699,930	\$18,988	182,611	5,825
Building 5	\$687,087	\$52,509	261,568	19,365
Building 6	\$96,351	\$16,745	129,218	1,101
TOTAL	\$2,324,950	\$119,248	882,440	32,096

- Completion of the following projects:
 - Install heat recovery project at the Gateway building;
 - Complete installation of LED lighting at Division 7;
 - Establish a new capital project for retrofitting the existing lighting fixtures in the Gateway Parking Garage.
- Complete expansion of the Energy Data Platform as the remaining sub-metering systems are installed and commissioned.
- Continue using the Energy Program Site Implementation Process as outlined in the Energy Management Action Plan to implement and measure results from energy efficiency measures at 4-6 more maintenance divisions;
- Continue managing utility incentives for any and all Metro projects. Outstanding incentives pre-approved total nearly \$50,000.
- Implement remaining cost saving strategies related to the operation of CNG Fuel Stations. Successful implementation at all divisions is estimated to save nearly \$260,000 annually.
- Continue utilizing the Master Energy Project Dashboard as the central reporting tool while expanding to include all Sustainability related projects/assets.
- Complete quantification of benefits from transferring Metro rail propulsion billing to a structure known as conjunctive billing and develop a strategy to support obtaining conjunctive billing treatment from all electricity providers.

LEED® Program

- In order to proceed with the LEED Certification process, a corrective action plan will be implemented at Division 9 and 15, which will include air testing, adjusting, and

balancing for all units that were identified as not meeting the minimum OSA requirements as per ASHRAE 62.1. At the completion of repairs and adjustments, these units will be retested for compliance.

- Initiate LEED Certification applications at Division 9 and 15.
- Implement four remaining sub-metering systems to meet LEED Certification requirements.
- Continue supporting the Gateway Building staff as it prepares to recertify to Platinum level LEED® Certification in 2018.
- Continue expanding the use of Disadvantaged Business Enterprises in the LEED Certification Process
- Continue managing installed sub-metering systems and continually manage energy data.

Renewable Energy Program

- Continue measuring the generation performance of installed systems and implementing the preventative maintenance program.
- The concept of Community Solar presents an opportunity for Metro to realize operational savings, enhance relationships with Business Interruption Funds recipients, and support renewable energy goals. To pursue this opportunity, a proposed pilot program is under development. Disadvantaged Business Enterprises will be utilized for outreach in communities targeted for the pilot. The pilot programs will be designed based on communication with LADWP and SCE representatives to ensure that the pilot will best fit within LADWP and SCE's programs.
- Conceptual design studies will be developed for three bus division sites that were identified for deployment of solar canopies. Each site selected will undergo a financial analysis to evaluate various project financing options and alternative project delivery methods, including self-ownership, Power Purchase Agreements, and equipment leasing.

Energy Resiliency

- Explore applicable concepts of resiliency, business continuity, and emergency response as they relate to energy systems on or near Metro facilities, transit hubs, and right-of-ways. A white paper on this topic is being developed in conjunctive with Risk Management, Asset Management, and other departments.

Staff will report back to the Board periodically on accomplishments and challenges related to this Energy Program.

ATTACHMENT D: GREEN CONSTRUCTION POLICY UPDATE

Metro staff provides annual update on its implementation of the Green Construction Policy. For the purposes of the report back regarding Item #57 of the February 2016 Meeting, staff is including the same information as Attachment D, herein.

I. GREEN CONSTRUCTION POLICY OVERVIEW

The Metro Board approved the Green Construction Policy (GCP) in 2011 to reduce the air quality impacts of Metro's construction projects in surrounding communities. Staff is required to report back to the Board periodically regarding the implementation status of the policy. Staff is also reporting on the implementation status of Sustainability Plan Policy which was approved in 2012 to ensure compliance with Metro Facility Design Criteria for Sustainability and the California Green Building Standards Code.

II. BACKGROUND

By adopting this policy, Metro is committed to using greener, less polluting construction equipment and vehicles, and will implement best practices to reduce harmful emissions in all construction projects performed on Metro properties and rights-of-way. Metro's GCP applies only to Metro contractors and Metro construction projects. The information in this report reflects the measurement of emissions and data from the larger Metro capital projects, specifically the Purple Line Extension Section 1, Crenshaw/LAX, and Regional Connector.

The GCP provides requirements for (a) identifying and mitigating diesel exhaust emission impacts from on-road and off-road equipment used during Metro construction and development activities, on human health and the environment; and (b) implementing appropriate best management practices to complement equipment mitigations. The goal of the policy is to reduce harmful air emissions of Particulate Matter (PM₁₀, PM_{2.5}), Nitrogen Oxides (NOx), and Reactive Organic Gases (ROGs) during Metro construction projects while minimizing any significant impact to cost schedule.

III. DISCUSSION

OUTREACH ACTIVITIES

Metro continues to schedule and facilitate GCP outreach activities, across Los Angeles County, with the assistance from a California Air Resources Board (ARB) instructor who has led all of these workshops with the support of Metro staff and consultants. The purpose of the workshops is to educate and raise awareness of the potential health impacts from diesel emissions, the state of the Los Angeles basin air quality, ARB current strategies to reduce diesel emissions, ARB enforcement programs, engine standards and diesel emission control strategies, off-road and on-road vehicle regulation requirements, public agency fleet regulations ARB's portable equipment registration program fugitive dust regulations and

the requirements in Metro's GCP. The workshop participants have included interested stakeholders and contractors.

Metro has conducted two (2) training workshops over the past several months in an ongoing effort to ensure that the regulated community is aware of the ARB and South Coast Air Quality Management District (SCAQMD) requirements governing construction equipment: off-road, on-road, and portable equipment; and to assist Metro contractors with understanding and conforming with the GCP requirements. Workshops were conducted at the following locations:

- Metro Purple Line Extension Project Field Office, Los Angeles, March 9, 2016 **(Number of Attendees: 34)**
- Division 16 / Crenshaw & LAX, Los Angeles, March 8, 2016 **(Number of Attendees: 25)**

During the workshops with the contractors, Metro provided an overview of the following: purpose/goal of the GCP, GCP project specification requirements, best management practices, conformance reviews, available exceptions, submittal requirements and a link to Metro's Green Construction Equipment Initiative website.

Metro also provided a Construction Equipment Funding Resource Guide to workshop attendees. The guide includes a program description (SCAQMD, ARB, and EPA), key deadlines to apply for grant funds to repower, replace, or retrofit aged construction equipment, and program websites. Metro also provided specific information about funding workshops focused on the Carl Moyer Program and off-road and on-road funding sources provided directly by the SCAQMD and attended each workshop on **04/20/16** and **05/04/16** to acquire and assist in transmitting information to the contractors and sub-contractors.

PROJECT INSPECTION REVIEWS

Metro has continued to conduct project inspection reviews in Fiscal Year 2016 during the execution of the Purple Line Extension Section 1, Crenshaw/LAX, Regional Connector and Universal Pedestrian Bridge Projects. As a result of the reviews, Metro has documented the following GCP implementation challenges:

- Incomplete (but improved from Fiscal Year 2015) GCP specification submittals - includes equipment lists (on-road, off-road, portable generators), compliance certification, fuel use logs, and copies of ARB/SCAQMD permits and registrations;
- Fuel use logs are not submitted monthly as required in the specifications;
- Off-road equipment observed on site without ARB registration labels;
- Sub-contractors not documenting or providing a list of equipment or fuel use data;
- Off-road equipment with less than Tier 4 rated engines observed on-site, and through review of equipment lists;
- Methodology changes in emissions calculations and continually changing quantification tools;

- ARB EIN number required to verify the equipment was missing in 35% of equipment listed and reported on in fuel logs (Figure 1);

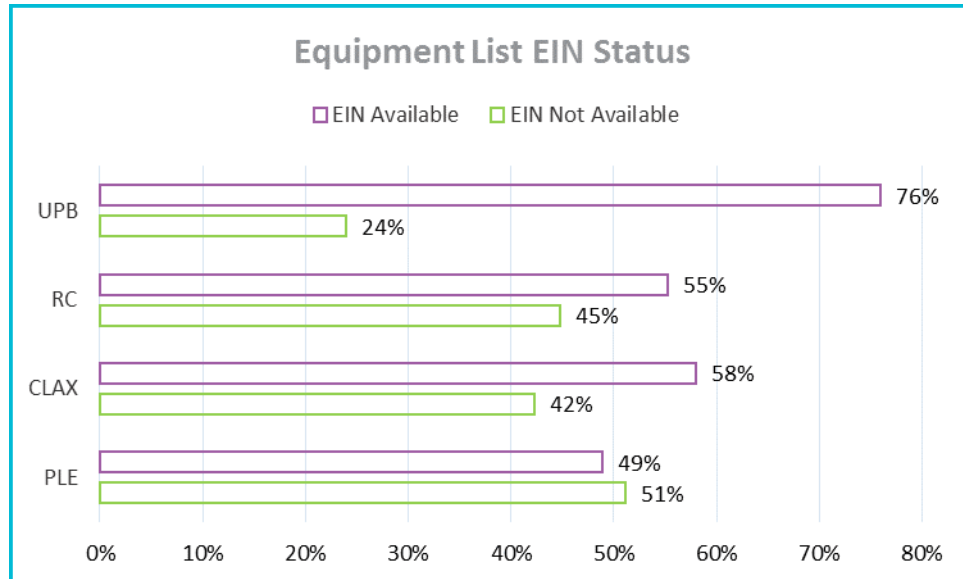


Figure 1 – Equipment EIN availability provided by contractor in equipment list

According to the Air Resources Board, “the In-Use Off-Road Diesel Vehicle Regulation (Off-Road Regulation) requires that all vehicles subject to the Off-Road Regulation be labeled with a unique EIN.¹” In each non-conformance case, the contractor or subcontractors were issued corrective action requests to respond by either providing documentation of exceptions or to remove the equipment or vehicles from the site in order to be in conformance with the GCP. The contractors for each of the projects made a notable improvement in providing fuel logs in comparison to Fiscal Year 2015; data was reported for each month during the 2015 calendar year.

Off-Road Equipment Summary

The majority of the off-road equipment used in the submitted equipment lists are comprised of excavators, backhoes, loaders, tractors and cranes. The Air Resources Board (ARB) applies engine “Tiers” to off-road equipment according to engine model year and horsepower. This higher Tier equipment has lower emissions rates, which are considered cleaner equipment. As of January 1, 2016 the ARB requires Tier 2 or higher for the fleet of equipment. Metro’s GCP contains more stringent requirements than the ARB, requiring all equipment (not just the fleet) adhere to Tier 4 standards. An overview of ARB Engine Tiers is provided in the table below.

Equipment Engine Tiers	ARB	Metro GCP	Notes

¹ Air Resources Board, “Label Vendors for Off-Road Vehicles” <http://www.arb.ca.gov/msprog/ordiesel/labelvendors.htm>

Tier 0	Not Compliant	Not Compliant	ARB banned in fleets as of January 1, 2014
Tier 1	Not Compliant	Not Compliant	ARB banned in fleets as of January 1, 2016
Tier 2	Compliant	Not Compliant*	ARB minimum compliance through January 2018
Tier 3	Compliant	Not Compliant*	
Tier 4 – Interim (Tier 4i)	Compliant	Compliant	Tier 4i emissions standard that became effective on Jan. 1, 2011
Tier 4 – Final (Tier 4F)	Compliant	Compliant	Tier 4F represents the highest level of clean air regulations proposed to date

Table 1 - Tier requirements overview;

**Exceptions are defined with the GCP specification*

Through the fuel log submittals and equipment lists, we determined Tier 4 interim equipment or better comprised 70% of the equipment used on site across all projects. A project level breakdown is listed below. The “undetermined” category is assigned due to insufficient information in the equipment list (i.e. horsepower, model year, EIN number), which is information required to determine a tier for the piece of equipment. Subsequently, the emissions associated with these were not included in the reduction calculations. The off-road equipment for each of the four capital projects is listed in Figure 2.

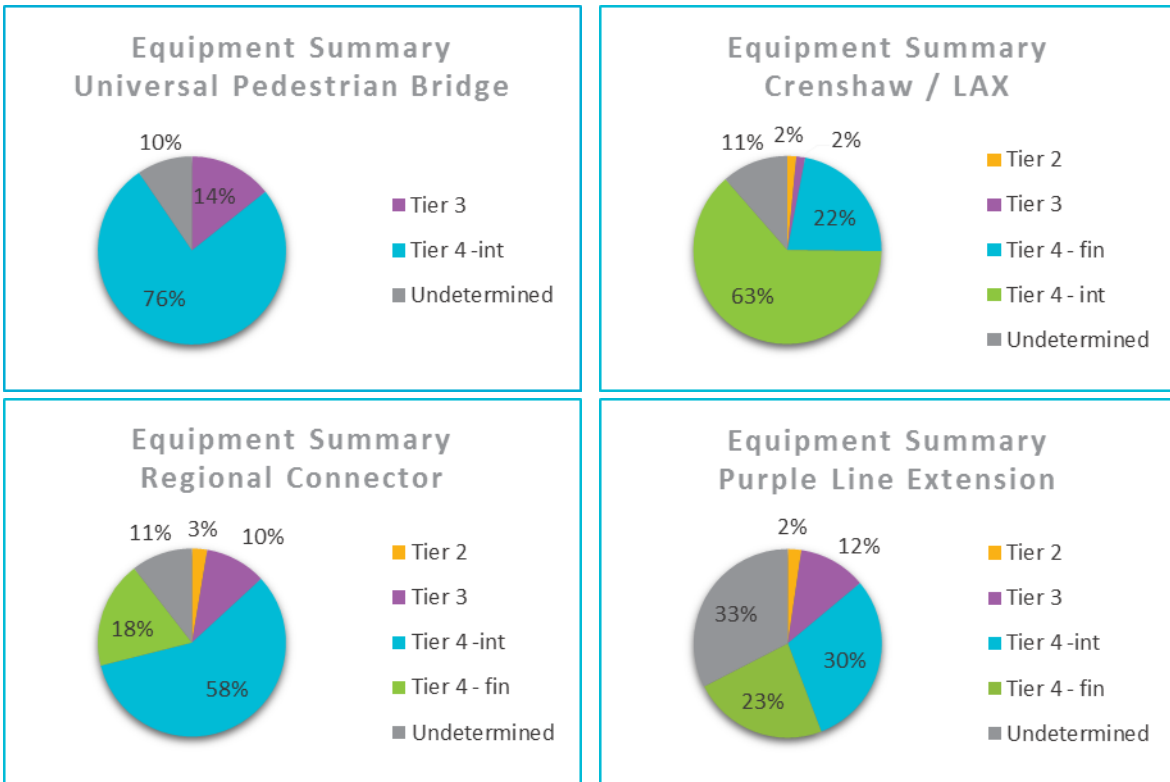


Figure 2 – Equipment Tier by project

IV. EMISSIONS REDUCTIONS

The emission reduction analysis analyzed the following criteria pollutants emitted by the construction equipment. EPA identifies these pollutants based on the human health-based and/or environmentally-based effects. These criteria pollutants included in the analysis are detailed in Table 2. The analysis primarily relies on the carbon dioxide equivalent converted into metric tons, using the Nitrogen Oxide emissions.

	Pollutant	Definition
NOx	Nitrogen Oxides	Nitrogen Oxides are a family of poisonous, highly reactive gases. NOx pollution is emitted by automobiles, trucks and various non-road vehicles (e.g., construction equipment) ²
CO2e	Carbon Dioxide Equivalent	A metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential (GWP). ³
PM ₁₀	Particulate Matter	10 micrometers or less in diameter, also known as inhalable coarse material by the EPA ⁴
ROG	Reactive Organic Gases	Any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate.

Table 2 – Criteria pollutants used in Green Construction Policy analysis

In Fiscal Year 2015, Metro calculated the emissions reductions (NO_x, PM₁₀, PM_{2.5}, and ROGs) for the Purple Line Extension Section 1, Crenshaw / LAX, Regional Connector and the Universal Pedestrian Bridge Projects for a worst case scenario. Each of these projects utilized off-road equipment, on-road vehicles or portable generators subject to the GCP. Project specifications required fuel log submittals for the off-road equipment and on-road vehicles for each project be reviewed and tabulated to determine the emissions reductions. The following summarize the CO₂e reductions by pollutant across projects.

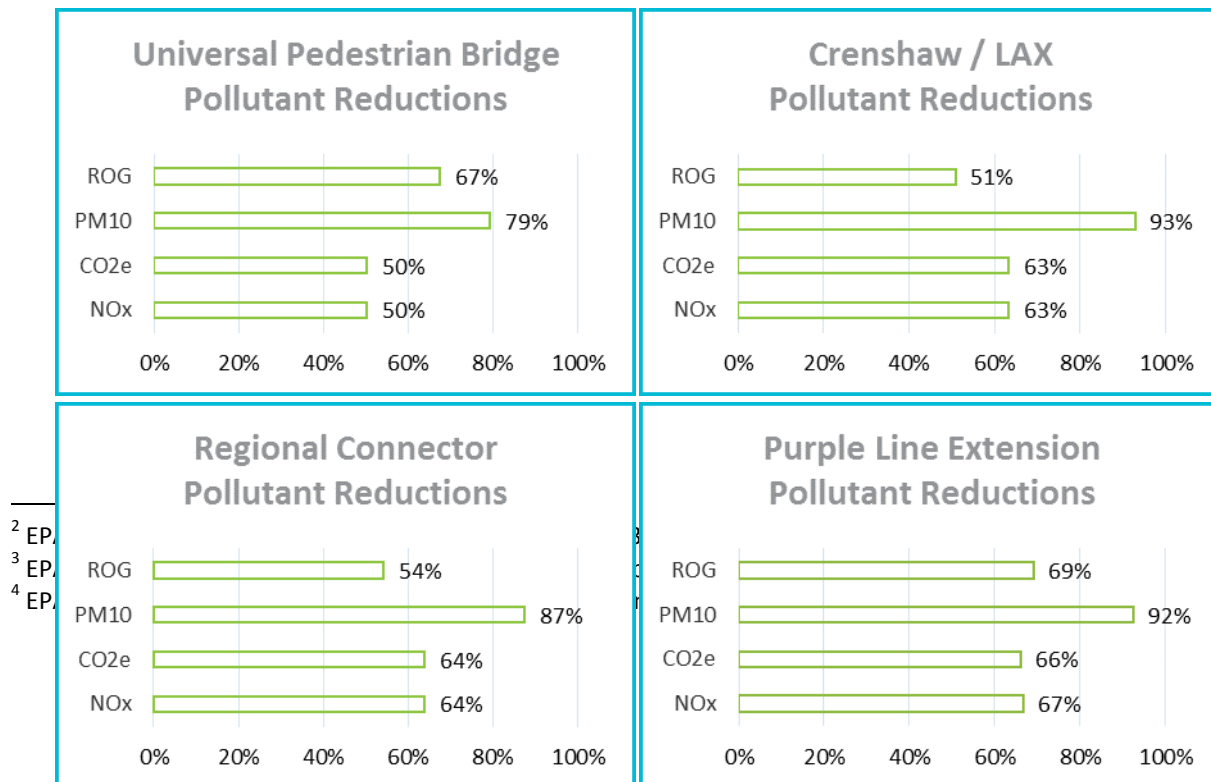


Figure 3 - Percent reduction in criteria pollutants and CO₂e

As indicated in Figure 3, the most significant reductions from using Tier 4 Interim equipment, when compared to Tier 2 equipment, occur in PM₁₀ with an average reduction of 87.5%. However, in terms of volume, Carbon-dioxide equivalents were reduced by 4,000.05 metric tons. According to the Environmental Protection Agency (EPA, 1999)⁵ nitrogen oxides (NO_x) represent seven (7) compounds, including nitrous oxide (N₂O), which forms from tail pipe emissions (EPA, 2016)⁶ and results in harmful ozone production, when combined with sunlight.

Currently, the emission factors for NO_x are available for multiple tiered off-road pieces of equipment. While nitrogen oxides are generally short-lived, nitrous oxides have long atmospheric lifetimes and the carbon dioxide equivalents were based on the global warming potentials of nitrous oxides to account for a worst possible case scenario. It should be noted that as EPA tools and methodologies continually develop for tail pipe emissions of multiple tiered off-road and on-road equipment and vehicles, emissions calculations will be further adjusted in Fiscal Year 2017. The percentage reduction in pollutants from off-road equipment emissions from the use of Tier 4 Interim equipment, when

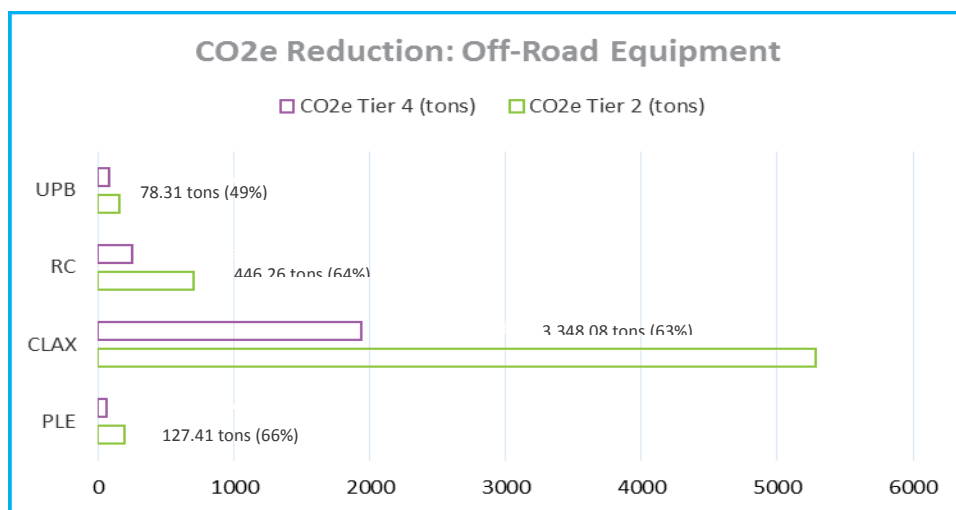


Figure 4 - Percent reduction CO2e and metric tonnage reductions.

compared to Tier 2 equipment reductions, are provided for each project in Figure 4.

Off-Road Emission Reductions

The off-road equipment CO2e emissions reductions from the use of Tier 4 Interim equipment, when compared to Tier 2 equipment, are as follows:

⁵ “Technical Bulletin, Nitrogen Oxides (NO_x) Why and How They Are Controlled”, 1999
<https://www3.epa.gov/ttn/catc1/dir1/fnoxdoc.pdf>

⁶ “Overview of Greenhouse Gases – Nitrous Oxide Emissions”, 2016
<https://www3.epa.gov/climatechange/ghgemissions/gases/n2o.html#Reducing>

As indicated in Figure 4, the most significant reductions from using Tier 4 Interim equipment, when compared to Tier 2 equipment, occur in PM₁₀ with an average reduction of 87.5%. However, in terms of volume, Carbon-dioxide equivalents were reduced by 4,000.05 metric tons. The percentage reduction in pollutants from off-road equipment emissions from the use of Tier 4 Interim equipment, when compared to Tier 2 equipment reductions, are provided for each project in Figure 4.

Off-Road Emission Reduction Comparisons

The reductions from using Tier 4 (Interim and Final), as required by the Metro GCP, result in greater emissions reductions than would otherwise occur under ARB regulations. The results of this more

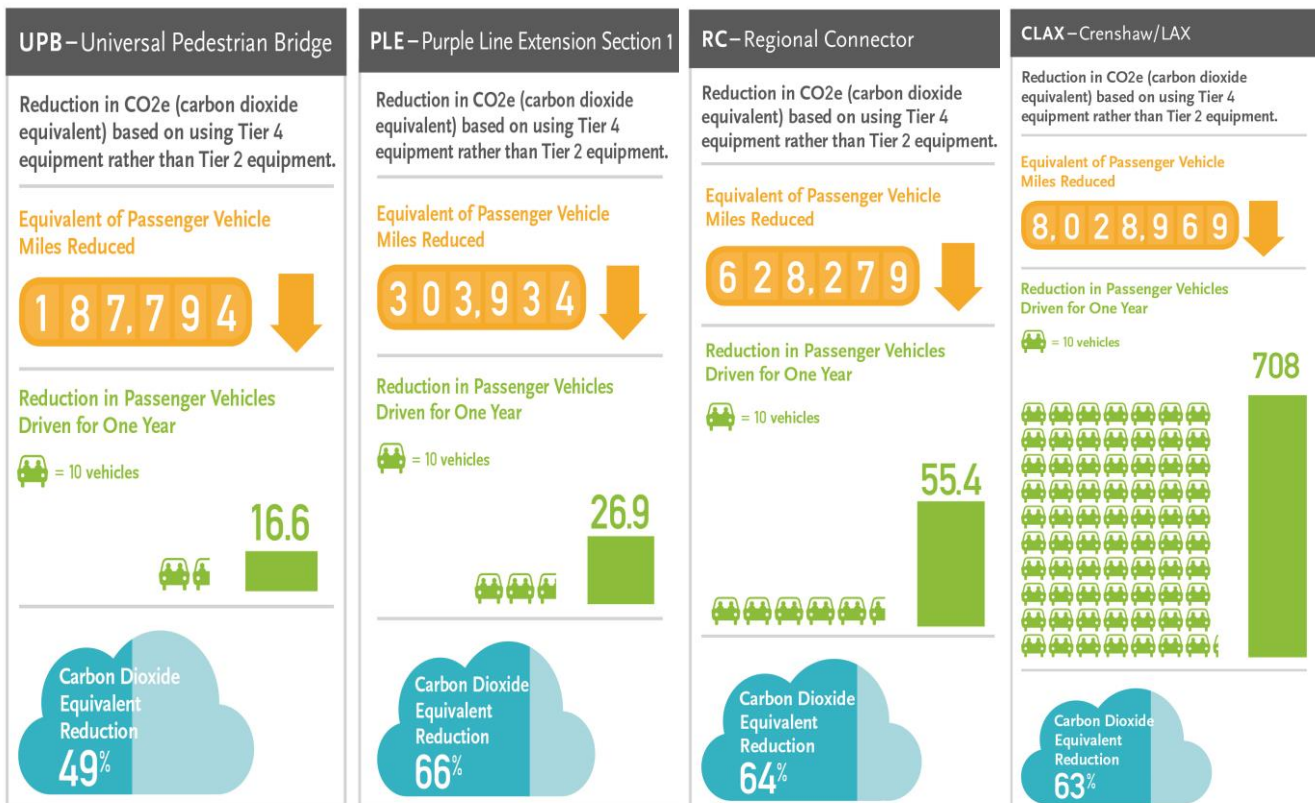


Figure 5 - Project summaries for emissions reductions (CO₂e) based on Tier 4 equipment rather than Tier 2 equipment.

stringent Metro policy can be translated to greenhouse gas and carbon dioxide equivalent reductions. These emissions reductions per project based on using the cleaner Tier 4 equipment mandated by the GCP, rather than Tier 2 equipment required by the ARB, are as follows in Figure 5.⁷

On-Road Equipment Emissions

The Green Construction Policy requires on-road vehicles' engine model year (MY) to be 2007 or newer. Figure 6 shows the relationship between gallons of fuel dedicated by a range of model years and the associated CO₂e emissions. 1998-2009 accounts for 6% of fuel usage, yet contributes to 44% of the

⁷ "EPA Greenhouse Gas Equivalencies Calculator", 2014
<https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>

CO2e emissions. Conversely, 2010 and later model years consume 94% of fuel, and only contribute 56% of emission pollutants. The efficiency of newer model years indicate a nonlinear relationship between fuel usage and consequent pollutants, a relationship that highly favors using newer lower emitting construction equipment.

The on-road vehicle emissions reductions from the use of vehicles with engine model years of 2010 and newer, when compared to engine models of 1998 – 2009 are as follows:



Figure 6 –Projects summary for emissions reductions (CO2e) based on Tier 4 equipment rather than Tier 2 equipment.

III. NEXT STEPS

Metro Staff will continue to implement the GCP through the following tasks in Fiscal Year 2017:

- 1) Coordinate and schedule additional workshops jointly with the Air Resources Board (ARB).
- 2) Expand GCP implementation to other capital projects including Division 16, Purple Line Extension Section 2 and Building 61s.
- 3) Conduct construction project conformance reviews on a quarterly basis, and on a monthly basis where Metro deems necessary, based on the quality of contractor submittals.
- 4) Assist the contractors with meeting the GCP requirements through trainings and providing funding information.
- 5) Continue expanding quantification methodology and emissions reporting reductions using newly available tools in 2016.
- 6) Continue to provide Metro with infographics and visual tools for display on the Metro website.
- 7) Revise GCP specifications to include updated goals / timeframes through the year 2020 based on commercially available off-road, on-road, portable generators equipment and alternative fuel / electric equipment.

Staff will report back to the Board at the end of Fiscal Year 2017 to document additional progress of Green Construction Policy implementation.

IV. SUSTAINABILITY PLAN OVERVIEW

Starting in 2012, Metro began including the requirement for Sustainability Plans as part of specifications (Section 01 35 63) to be submitted for Metro's construction projects. The goal of the Sustainability Plan is for project contractors to address sustainable practices in the following categories:

- Planning and Design
- Energy Efficiency
- Water Efficiency and Conservation
- Material Conservation and Resource Efficiency
- Environmental Quality

The Sustainability Plan must include the project's mandatory and voluntary commitments to ensure compliance with Metro's sustainability policy and requirements and California Green Building Standards Code for Mandatory and Voluntary measures (CALGreen), Title 24. Additionally, the specification establishes that the contractor will provide a qualified Sustainability Coordinator that oversees the contractor's monthly submittals and annual Sustainability Plan updates. These reports provide the basis for the content that follows.

V. DISCUSSION

Sustainability Plans ("Plan") requirements are currently being implemented on the Crenshaw/LAX, Purple Line Extension, Regional Connector, Building 61s, and Universal Pedestrian Bridge Projects. The

Emergency Security Operations Center (ESOC) project will be kicking off its Plan in the near future and the new Division 16 rail yard project has yet to submit a Plan. The Universal Pedestrian Bridge project has been completed and we are awaiting their final annual report that will describe the project’s sustainability performance in detail.

In December of 2015, Metro’s sustainability team in ECSD kicked off tasks to elevate the level of compliance with the Sustainability Plan implementation. During the past 6 months, considerable effort has been spent to evaluate project compliance status, improve reporting on sustainability plan progress in monthly and annual reports, and identify gaps in sustainability plans where they do not adequately address mandatory requirements such as compliance with CALGreen Mandatory measures and applicable MRDC Energy Policy. The materials were also developed in 2016, including a Monthly Submittal, Monthly Review, Gap Analysis, CALGreen Report Card, and Annual Report templates. Furthermore, a *Sustainability Plan* template and implementation process document is under development for use by the contractor teams on current and future projects.

Compliance Summary

Key information provided in the contractor submitted 2015 Sustainability Plan Project Annual Reports is summarized below. The following information highlights Sustainability Plan commitments of the Crenshaw/LAX, Purple Line Extension, Regional Connector projects. It should be noted that at this early-stage of Sustainability Plan implementation much of the project performance information is presented as “projections”. This information will be refined annually as the program is implemented and more detailed performance information becomes available.

The following infographic includes the current reported status of the abovementioned projects along the path to required CALGreen State Mandatory Measure Compliance. All projects have committed to compliance with mandatory CALGreen measures in general as a primary objective of their sustainability plan as this is also the primary objective of the Sustainability Plan Specification. The projects, currently in design and early construction phases, have reported they are “on track” for all CALGreen State mandatory measures. Annually, and upon completion of construction, ESCD will assess and verify final compliance percentages.

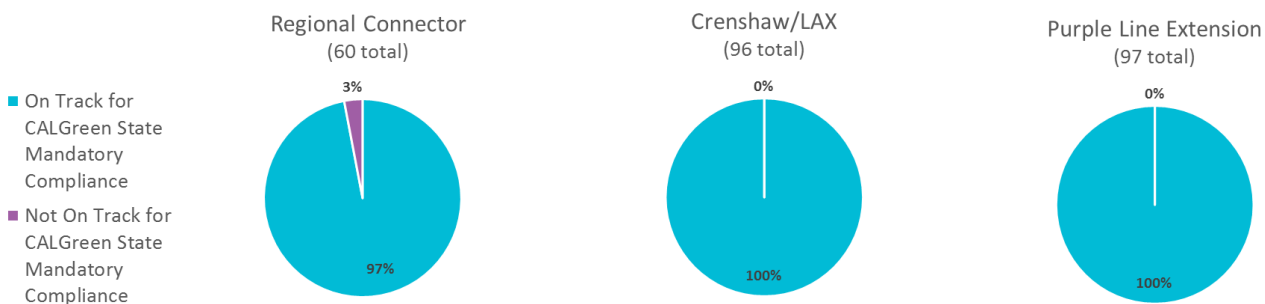


Figure 7 – CALGreen State Mandatory Compliance %

Sustainability Plan Practices

The following information highlights the sustainability practices reported by the Crenshaw/LAX (C/LAX), Purple Line Extension (PLE), Regional Connector (RC) projects for each of the Sustainability Plan specification required areas:

Planning and Design

Planning and Design

PLE – Purple Line Extension

Developing areas for a future bike sharing program that include bike storage units and multiple locations for bike racks. In order to promote the Metro Bike Sharing program, project designs do not include vehicle parking at stations.




Complying with Metro's new Vision Zero policy being implemented in Los Angeles.

We are focusing on improving our streets, during construction and for future use, for vulnerable roadway users to encourage walking and biking.



Energy Efficiency

Planning and Design	
RC – Regional Connector and PLE – Purple Line Extension Section 1	
	<p>Exceeds Metro Standards for LED Lighting, thus reducing cable sizes, losses in the cables and increasing available power on the feeders.</p> 
	<p>Improved overhead contact cable that minimizes wear and tear, reducing maintenance and materials costs.</p> 
	<p>Utilizes a single fan type for both emergency ventilation and normal operations instead of more traditional separate fan plant approach. This is a more economical design and lessens the station footprint and reduces the overall environmental impact.</p> 

Water Efficiency and Conservation

Water Efficiency and Conservation

RC – Regional Connector and PLE – Purple Line Extension Section 1



Smart irrigation controller, drip irrigation system, and native plants with low water use.



Low flow toilets, sensor operated low flow faucets, and hand dryers instead of paper towel products.



Material Conservation and Resource Efficiency

Material Conservation and Resource Efficiency

CLAX – Crenshaw/LAX

Reused crushed concrete/asphalt as temporary base, rather than purchasing new crushed miscellaneous base material, resulting in cost savings.



Approximately 100% viable soil is being used as backfill for mechanically stabilizing earth (MSE) walls.

Refurbished viable wood 1,000 tons of wood ties.



Many tons of railroad ballasts recycled or re-used to stabilize soil during construction to reduce mud and dust.



Unviable, contaminated soil sent to landfill for proper disposal.



5 million pounds of unviable wood disposed as Treated Wood Waste.

Contaminated ballasts hauled to hazardous waste site.



Reuse Reduces...



Truck Loads, Traffic Disturbances, Dust Generation



Costs on New Materials and Wear and Tear on Equipment



Energy Use and Greenhouse Gas Emissions

Environmental Quality

Environmental Quality

RC – Regional Connector and CLAX



By partnering with LADWP in the Green Power Program, Metro supports the development of new green power resources and receives 20% of the project power from renewables owned and operated by LADWP.

Reuse of felled trees to make drums, resulting in environmental, economic, and social benefits by avoiding long hauling, providing materials to a local business, and the creation of a positive association between the community members, this project and METRO.



VI. Next Steps

Metro's Sustainability Team will continue to provide the Board the Sustainability Program Annual Review. Environmental and cost performance metrics will be refined annually as the project is implemented and more detailed performance information will be reported for the following:

- Updated Percent of CALGreen project compliance to State Mandatory Measures
- CO₂ Reduction Resulting from Bike Spaces
- Annual GHG benefits from Water, Energy, Bike/EV
- Savings from Water and Energy Reductions
- Reduction of Energy Demand in Kwh
- Renewable or Alternative Energy generation (kWh)
- Water Savings in G/Y for Indoor Potable, Wastewater, And Recycled Water
- Tons of Waste Diverted from Landfills
- Emissions Reduction from reduced Truck Trips per day and miles traveled per day

In addition, ECSD will conduct Sustainability Plan Workshops with project teams to ensure a clear understanding of reporting requirements, baseline data, and methodologies for the collection and reporting of annual report data.

VII. APPENDICES

I. Appendix A – Off-Road Annual Summaries

a) Universal Pedestrian Bridge

	Tier	NO _x	CO ₂ e	PM ₁₀	ROG
UPB	Tier 2 (lbs)	1,137.59	352,653.95	42.00	53.48
UPB	Tier 4 (lbs)	566.53	175,623.76	8.69	17.47

b) Regional Connector

	Tier	NO _x	CO ₂ e	PM ₁₀	ROG
RC	Tier 2 (lbs)	4,973.56	1,542,224.68	128.07	177.91
RC	Tier 4 (lbs)	1,800.04	558,228.67	16.26	81.59

c) Purple Line Extension

	Tier	NO _x	CO ₂ e	PM ₁₀	ROG
PLE	Tier 2 (lbs)	1,358.34	424,832.97	42.52	58.07
PLE	Tier 4 (lbs)	452.32	143,899.83	3.21	17.86

II. Appendix B – On-Road Annual Summaries

a) Universal Pedestrian Bridge

	Model Year	Gallons	NOx	CO2e	PM ₁₀
UPB	1998 - 2009 (lbs)	202.70	26.47	8,204.99	0.61
UPB	2010 - later (lbs)	90.00	0.73	227.58	0.04

b) Regional Connector

	Model Year	Gallons	NOx	CO2e	PM ₁₀
RC	1998 - 2009 (lbs)	1,868.37	179.94	55,782.83	3.61
RC	2010 - later (lbs)	7,734.03	63.09	18,690.24	3.15

c) Purple Line Extension

	Model Year	Gallons	NOx	CO2e	PM ₁₀
PLE	1998 – 2009 (lbs)	387	55.94	5908.55	37.16
PLE	2010 – later (lbs)	262	20.64	681.01	18.61

d) CLAX

	Model Year	Gallons	NOx	CO2e	PM ₁₀
CLAX	1998 – 2009 (lbs)	875	134.18	41596.45	3.26
CLAX	2010 – later (lbs)	47596.5	388.24	120355.3	8.96

III. Appendix C - < 50 HP

a) Universal Pedestrian Bridge

		NOx	CO2e	PM ₁₀	ROG
UPB	Tier 4 (lbs)	82.14	25,464.23	4.97	5.15

b) Regional Connector – N/A

c) Purple Line Extension –

		NOx	CO2e	PM ₁₀	ROG
PLE	Tier 2 (lbs)	26.25	11,883.31	2.32	2.40
PLE	Tier 4 (lbs)	24.69	11,336.61	0.99	0.99

d) CLAX

		NOx	CO2e	PM ₁₀	ROG
CLAX	Tier 2 (lbs)	1.89	585.38	0.11	0.12

IV. Appendix D – Project Descriptions

Crenshaw/LAX	
Project Description	The Metro Crenshaw/LAX Line will extend from the existing Metro Exposition Line at Crenshaw and Exposition Boulevards. The Line will travel 8.5 miles to the Metro Green Line and will serve the cities of Los Angeles, Inglewood and El Segundo; and portions of unincorporated Los Angeles County.
Start Date	January 21, 2014
Proposed Completion Date	2019
Completion of Design Phase	90%
Completion of Construction Phase	30% of Tracks
Innovative Sustainable Element	The project collaborated with a local drum maker to rescue tree trunks of felled trees within the community to create drums which avoided long hauling, providing materials to a local business (by-product synergy), and the creation of a positive association between the community members, this project, and Metro.
Notable Challenge/Lesson Learned	For a design-build project such as Crenshaw/LAX, there is no contingency budget to incorporate sustainable practices that have premium costs.

Purple Line Extension #1	
Project Description	The Metro Rail extension, which will be built in three phases, will continue from the current station at Wilshire/Western extending westward for about nine miles along Wilshire Boulevard into Westwood. Section #1 is 3.92 miles and extends the line to the Wilshire/La Cienega Station
Start Date	November 11, 2014
Proposed Completion Date	2023
Completion of Design Phase	90% and 60% for Wilshire/La Cienega
Completion of Construction Phase	5%
Innovative Sustainable Element	
Notable Challenge/Lesson Learned	



Board Report

File #: 2016-0778, **File Type:** Informational Report

Agenda Number: 42.

**SYSTEM SAFETY, SECURITY AND OPERATIONS COMMITTEE
EXECUTIVE MANAGEMENT COMMITTEE
OCTOBER 20, 2016**

SUBJECT: ZERO EMISSION BUS PLANS

ACTION: RECEIVE AND FILE

RECOMMENDATION

RECEIVE AND FILE status report on Metro's Zero Emission Bus Plans.

ISSUE

At the April 2016 Metro Board of Directors Meeting, Metro's CEO was asked to provide a status report on Metro's initial plans for Zero Emission Buses and to provide a comprehensive plan to further reduce greenhouse gas emissions by gradually transitioning to a zero emission bus fleet.

DISCUSSION

Metro's current plan for Zero Emission Buses (ZEB's) and reducing Greenhouse Gas Emissions (GHG) include new engine and fuel deployment and ZEB (electric bus) operational testing. Our approach consists of the following projects and activities:

1. Purchase five (5) New Flyer all-electric articulated buses with depot and en-route chargers for deployment on Metro's Orange Line with expected delivery in late 2017.
2. Purchase five (5) BYD all-electric articulated buses with depot chargers, also for use on Metro's Orange Line, with expected delivery in late 2017.
3. Purchase additional zero emission buses under RFP OP28167 for delivery between FY18 and FY22.
4. Expand use of Low NOx "Near Zero" CNG engines and Renewable Natural Gas (RCNG) for all new bus purchases and for mid-life engine repowers starting in FY18.

Given the rapid growth in ZEB technology and the strong possibility that today's technology may be dated in a couple of years, the first two ZEB projects will be used to gain first-hand experience with two prominent ZEB approaches, i.e. en-route charging and depot charging; and with operational

testing of the newest ZEB long range battery technology.

For additional ZEB's that may be purchased between FY18 and FY22, Metro will need to consider that costs and operational capabilities of ZEB technologies are maturing rapidly. ZEB's that are available today (in 2016) are more expensive to buy and to operate. ZEB's currently impose operational compromises such as limited operating range and battery charging requirements that need to be tested in a larger scale than previously. While Metro does plan to gradually build up Metro's ZEB fleet over the next 3-5 years, this assumes successful operational testing and experience; and that ZEB technologies continue to evolve. Assuming that occurs, Metro would expect to accelerate the rate that ZEB's are brought into Metro's bus fleet in the future.

The more immediate term strategy for air quality improvement is to consider purchasing "Near Zero" Cummins-Westport Low NOx ISL-G engines and renewable natural gas (RCNG) fuel for both new and repowered CNG buses. According to the fleet emission modeling done by Metro's technical consultant, this approach will have significant regional air quality benefits, including reducing NOx emissions for Metro's bus fleet by an additional 90%, and greenhouse gas emissions by an additional 80% below current fleet emission levels. This is the most cost effective approach that provides immediate emission and regional air quality benefits.

Low NOx engines were certified by CARB and EPA in 2015. The Low NOx engines may be run using existing operations infrastructure, and are commercially available today. It is anticipated that the majority of Metro's CNG powered bus fleet will be retrofit with Low NOx engines by 2026.

The attached report from Ramboll/Environ outlines different technology options for Metro to comply with pending CARB ZEB rules. The report provides a high-level cost assessments and emission impacts for several technology options, including battery electric buses, fuel cell buses, and Low NOx "Near Zero" CNG engines. Since the draft report was first released in February 2016, it has been updated and revised based on input from CARB staff and ZEB industry suppliers. As shown in Table 1, the expanded use of Low NOx CNG engines and renewable natural gas appear to be the most impactful strategies. This approach will have the greatest potential for emission reductions for our region at the lowest cost.

As compared to Electric Buses with Depot & En-route charging, Low NOx & RCNG offers:

- Approximately the same reduction in NOx (2.72 vs. 2.83 million tons)
- Approximately 39% greater reductions in GHG (11.4 vs. 8.2 million tons)
- At approximately half the increased costs from the baseline (\$173M vs. \$376.1M)

TABLE 1
ESTIMATED COSTS FOR EMISSION REDUCTION OPTIONS 2015 - 2055

Comparison to Baseline CNG	LNOx & RCNG	Electric Buses		Fuel Cell Buses	
		Depot Charging	Depot & En-Route Charging	H2 from Methane	H2 from Electrolysis
Increased Cost (NPV \$ Million)	\$173.0	\$767.8	\$376.1	\$1,379.3	\$1,680.2
GHG Reductions (million tons)	11.4	8.2	8.2	3.3	6.7
In-Basin NOx Reduction (million tons)	2.72	2.83	2.84	0.07	2.50
Cost Effectiveness					
\$/Ton Reduction of GHG	\$15.19	\$93.71	\$45.69	\$419.43	\$249.84
\$/Ton Reduction of NOx	\$63,530	\$271,638	\$132,667	\$20,247,155	\$670,849

Source: Ramboll/Environ, October 2016

FINANCIAL IMPACT

Staff and consultants will continue to refine our comprehensive cost analysis that encompasses the total life-cycle cost for ZEB implementation. Details of the cost elements include, but are not limited to the necessary infrastructure changes, operation and maintenance costs (including staff training), engine repower mileage impacts, and short term capital cost impacts. Metro expects to pursue a number of competitive federal, state and local grant funding opportunities. Specific funding sources may include FTA “Lo-No” grants, Measure R and a “Buy Back” credit from BYD for the trade-in of Metro’s original BYD 40’ buses.

The recommended bus procurement program, including zero emission buses is expected to be made under RFP OP28167, Forty and Sixty Foot Low Floor CNG or Zero Emission Buses. Funding for these projects will be identified when this contract is awarded. Currently the RFP is an active procurement and in a blackout period. Specific quantities and types of ZE buses to be purchased under RFP OP28167 are to be determined based on Metro’s operational needs, and these ZE buses may be a combination of 40’ and 60’ buses. Each of these ZEB projects will be subject to Metro Board approval and funding availability.

NEXT STEPS

Staff will return to the Board with award recommendations for purchasing new CNG and zero emission buses in early 2017. This will include recommendations for quantities and types of zero

emission buses that are best suited for Metro's operational needs, reflect best performance in field tests, and that fit within Metro's available funding.

ATTACHMENTS

Attachment A - Board Motion April 28, 2016

Attachment B - Staff Responses to Board Requests for ZEB Plans

Attachment C - Updated Ramboll/Environ Report September 29, 2016

Attachment D - List of Transit Properties Running ZEB's

Attachment E - Identified ZEB Suppliers

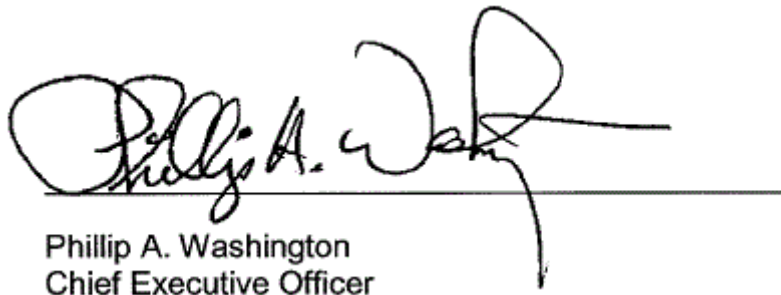
Attachment F - Noise Level Comparison of Conventional Buses and ZEB's

Attachment G - Metro Routes Most Suitable for ZEB Operation

Attachment H - Summary of ZEB Funding Opportunities

Prepared by: John Drayton, Director, Equipment/Vehicle Acquisition (213) 617-6285

Reviewed by: James T. Gallagher, Chief Operations Officer, (213) 922-4424



Phillip A. Washington
Chief Executive Officer

Metro



Board Report

 File #:2016-0388, File Type:Informational Report

Agenda Number:

 REGULAR BOARD MEETING
APRIL 28, 2016

Motion by:

DIRECTORS GARCETTI, SOLIS, FASANA AND DUPONT-WALKER

Related to Item 29

ZERO-EMISSION BUS TECHNOLOGY

As one of the largest transit agencies in the U.S., Metro needs to continue leading the nation in the application of best environmental and sustainable practices. After purchasing its first natural gas bus in 1995, Metro became the largest clean compressed natural gas (CNG) bus fleet in the nation with its last diesel bus retiring in 2011.

With the fast-paced evolution of new and clean technology, the transit industry is adopting and deploying new bus technologies that offer significant economic and environmental benefits. According to the American Public Transportation Association ("APTA"), 46.9 percent of U.S. public transportation buses are using alternative fuels or hybrid technology. Various transit agencies have embraced these advancements such as, but not limited to, the following: Philadelphia ("SEPTA"), Indianapolis ("IndyGo"), Seattle's King County Metro Transit, and Foothill Transit, which has the largest electric bus fleet in the country.

Although mile-range and mass production remains a challenge, continually improving technology and the steady decrease in cost is a clear indication that zero-emission bus vehicles are in high demand.

A strong commitment toward transitioning to a zero-emission bus fleet will position Metro to capitalize on Federal grant programs along with the State of California's cap-and trade programs.

WE THEREFORE MOVE that the Board direct the CEO to:

- A. Develop an initial outline for a comprehensive plan to further reduce greenhouse gas emissions by gradually transitioning to a zero-emission bus fleet;
- B. Report which public transit agencies have deployed zero emission vehicle buses in the U.S.
- C. Identify manufacturers that provide zero emission bus technology for large U.S. transit agencies.

D. Report that provides the following information for zero emission buses:

1. Greenhouse gases and air pollutant levels;
2. Noise levels (i.e. decibels) comparison between conventional Clean Natural Gas ("CNG") and zero emission buses;
3. Production challenges and opportunities to partner with other agencies in large procurements to achieve economies scale discounts; comparison of long-term maintenance costs.
4. Chronological timeline of the advancements and forecasts in zero emission bus technologies;

E. Provide a report on all mile-range and run times for all current MTA bus routes.

F. Identify possible Federal, State and local funding sources that are eligible for the purchase of zero-emission bus vehicles.

G. For this new bus procurement of advanced transit buses, include the following:

1. Zero emission bus technology cost options for the base order and all other bus purchase options.
2. Increasing and maximizing seating capacity.

H. Report back on the above at the October 2016 MTA Board meeting and provide a semi-annual report thereafter on zero emission bus technology.

RESPONSES TO BOARD REQUEST FOR ZEB PLANS 4/28/16

During the April 28, 2016 Board meeting, staff was directed to report back and provide detailed updates on several items at the October 2016 Board of Directors meeting. Attached are technical responses to these questions, and supporting data is also attached to this report.

- A. **Greenhouse Gas Emission Reduction Options:** Metro's technical consultant, Ramboll/Environ, has provided a detailed assessment of options for reducing greenhouse gas emissions and for transitioning to ZEB's. Key recommendations from this analysis include focusing on using longer range ZE buses and immediately adopting the use of Low NOx "Near Zero" CNG engines and using RCNG for fueling. For certain corridors, such as Metro's Orange Line, there will be opportunities to use specialty ZEB's with en-route opportunity charging. Based on this technology assessment and state of ZE technologies in 2016, Ramboll/Environ does not recommend pursuing fuel cell buses at this time.
- B. **USA ZEB Transit Deployments:** As of April 2016, staff identified 57 transit agencies that are operating a total of 280 zero emission buses in the US.
- C. **Current ZEB Manufacturers:** Staff has identified five (5) major domestic US manufacturers that have produced heavy duty 40' or 60' zero emission buses for large transit agencies in the US: BYD; Proterra; Gillig; New Flyer; and Nova Bus (a subsidiary of Volvo). Of these manufacturers, BYD and Proterra solely produce electric buses; Gillig, New Flyer and Nova offer both electric buses as well as conventionally powered transit buses. In addition to these five manufacturers, there are several other smaller manufacturers that produce light and medium duty transit vehicles in a variety of configurations.
- D. **Additional Updates on Zero Emission Buses:**
1. Greenhouse gases and air pollutant levels. All the programs identified for Zero and Near Zero Emission propulsion systems have impacts on criteria pollutants and GHG emissions. The most cost effective option for emission reductions today is Near Zero CNG engines. Refer to Ramboll/Environ report.
 2. Noise levels (i.e. decibels): Attached is a comparison between conventional CNG and zero emission buses. Based on Altoona noise testing data, the average interior and exterior noise levels for Zero Emission buses are 4-8 dB lower than CNG buses.
 3. Partnering and Scalability: Production challenges and opportunities to partner with other agencies in large procurements to achieve economies of scale discounts; comparison of long-term maintenance costs.

Metro has identified over 50 transit operators who have initiated ZEB programs. No single US transit operator, even the largest operators like LA Metro, have the resources and means to single-handedly support ZEB commercialization. We have also surveyed the five

major US bus manufacturers who have produced heavy duty 40' and 60' buses and will pursue any opportunities to leverage Metro's ZEB investments. We will also continue to reach out to regional municipal transit operators and provide opportunities to partner with Metro on our upcoming bus procurements.

4. Chronological timeline of the advancements and forecasts in zero emission bus technologies; refer to Ramboll/Environ report.

- E. **Metro Routes Suitable for ZEB's** – Metro reviewed all lines and run assignments by operating division, and also looked at potential layover facilities to rank the best corridors for ZEB operation. Out of Metro's 1,900 weekly run assignments, 71% are under 150 miles, and 99% are under 250 miles; many of these lines may be suitable to battery electric buses. However, many of these runs also have extended run times; almost every operating division has run assignments where buses don't return to the home division for 20 hours or more.

The top rated corridor for ZEB's is the Metro Orange Line (MOL) BRT which currently operates 43 articulated buses. The MOL corridor has several advantages for operating ZEB's, including a dedicated right-of-way with no traffic and Metro-owned terminals at each end that can be used for en-route opportunity charging. Metro is also looking at other BRT services like the Silver Line that have similar operational characteristics and advantages for deploying ZEB's.

Attached is a line-by-line assessment of all Metro bus routes and operating divisions to help determine suitability for ZEB operation.

- F. **ZEB Funding Sources** – Attached is a listing of potential Federal, State and local funding sources that are eligible for the purchase of zero-emission bus vehicles.
- G. **ZEB Bus Procurements** – Recommendations from Metro's Board for costing ZE options and considering seating capacity have been included in the new bus solicitation that is currently underway. The full RFP can be found on-line on Metro's Vendor Portal ([here](#)). Staff will report back periodically on the status of these items when they return to the Board with recommendations for contract award(s) based on this solicitation.

UPDATED DRAFT

Intended for

**Advanced Transit Vehicle Consortium
Los Angeles, California**

Prepared by

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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**

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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_x BUSES:** In addition to phasing in the use of renewable natural gas, in 2019 begin to purchase new CNG buses with "Low NO_x" engines (LNO_x), certified to have NO_x, CH₄, 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_x engines during their mid-life overhaul. Under this scenario the entire fleet will turn over to Low NO_x 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_x 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 ₂ by SMR	H ₂ 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>
TOTAL		\$16,277.7	\$16,277.7	\$16,450.8	\$16,450.8	\$17,045.6	\$16,653.9	\$17,657.1	\$17,957.9
INCREASE		NA	\$0.00	\$173.03	\$173.03	\$767.85	\$376.14	\$1,379.33	\$1,680.15
AVG \$/mile		\$4.18	\$4.18	\$4.22	\$4.22	\$4.27	\$4.28	\$4.53	\$4.61
AVG \$/revenue seat-mile	Value	\$0.138	\$0.138	\$0.139	\$0.139	\$0.144	\$0.141	\$0.150	\$0.152
	% diff to baseline	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 Basin¹ 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

¹ 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 CH₄ emissions by 2%, reduce CO₂ emissions by 81% and reduce total CO₂-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 ₂ by SMR	H ₂ by Electrolysis
	Conv NG	Renew NG	Conv NG	Renew NG				
NOx (in-basin)	6,296	6,385	3,483	3,573	3,444	3,431	6,228	3,792
PM (in-basin)	81.1	-22.8	79.0	-25.4	40.0	39.7	723.5	49.1
CH₄	89,590	87,421	76,590	74,414	41,124	40,965	59,292	45,651
CO₂	13,637,506	2,618,086	13,681,149	2,624,750	6,537,416	6,486,030	11,106,350	8,011,017
GHG (CO₂-e)	15,877,260	4,803,609	15,595,906	4,485,096	7,565,519	7,510,164	12,588,639	9,152,286
NOx (Out-of-basin)	10,157	1,785	10,190	1,789	4,954	4,910	6,410	6,228
PM (out-of-basin)	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 CH₄ emissions by 17%, will reduce CO₂ emissions by 81% and will reduce total CO₂-equivalent GHG emissions by 72%.

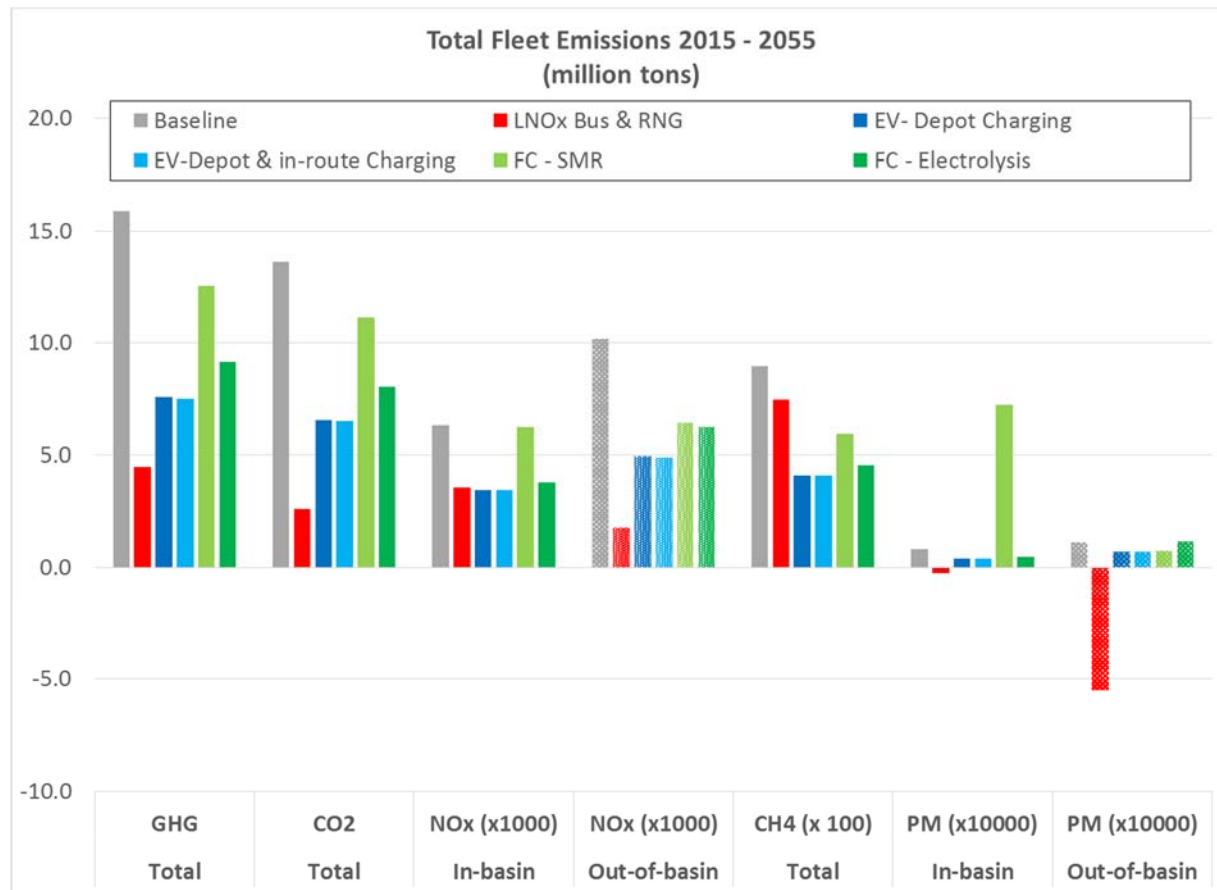
Compared to the baseline the transition to electric buses is projected to reduce NOx emitted within the South Coast Air Basin over the next 40 years by 45% -46%, and to reduce NOx emitted outside of the South Coast Air Basin over the next 40 years by 51% - 52%. It will also reduce PM emitted within the 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 CH₄ emissions by 54%, reduce CO₂ emissions by 52%, and reduce total CO₂-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 CH₄ emissions by 34% - 39%, reduce CO₂ emissions by 19% - 41%, and reduce total CO₂-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 CO₂, 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
Compared to Baseline	Increased Cost (NPV \$ million)	\$173.0	\$767.8	\$376.1	\$1,379.3	\$1,680.2
	GHG Reduction (million ton)	11.4	8.2	8.2	3.3	6.7
	In-basin NOx Reduction (ton x000)	2.72	2.83	2.84	0.07	2.50
Cost effectiveness of Emission Reductions	\$/ton GHG	\$15.19	\$93.71	\$45.69	\$419.43	\$249.84
	\$/ton IB NOx	\$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 fleet². 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.

² 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 therm³) 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 (CO₂), nitrogen oxides (NO_x), particulate matter (PM), and methane (CH₄). Using the global warming potential of methane over a 100-year period (GWP₁₀₀) the model also uses estimated CO₂ and CH₄ emissions to estimate total annual greenhouse gas (GHG) emissions in terms of CO₂-equivalent emissions (CO₂-e). For both NO_x and PM emissions the model

³ 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_x 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 commercially⁴, 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/ft³).

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.

⁴ 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 today⁵. 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

⁵ 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

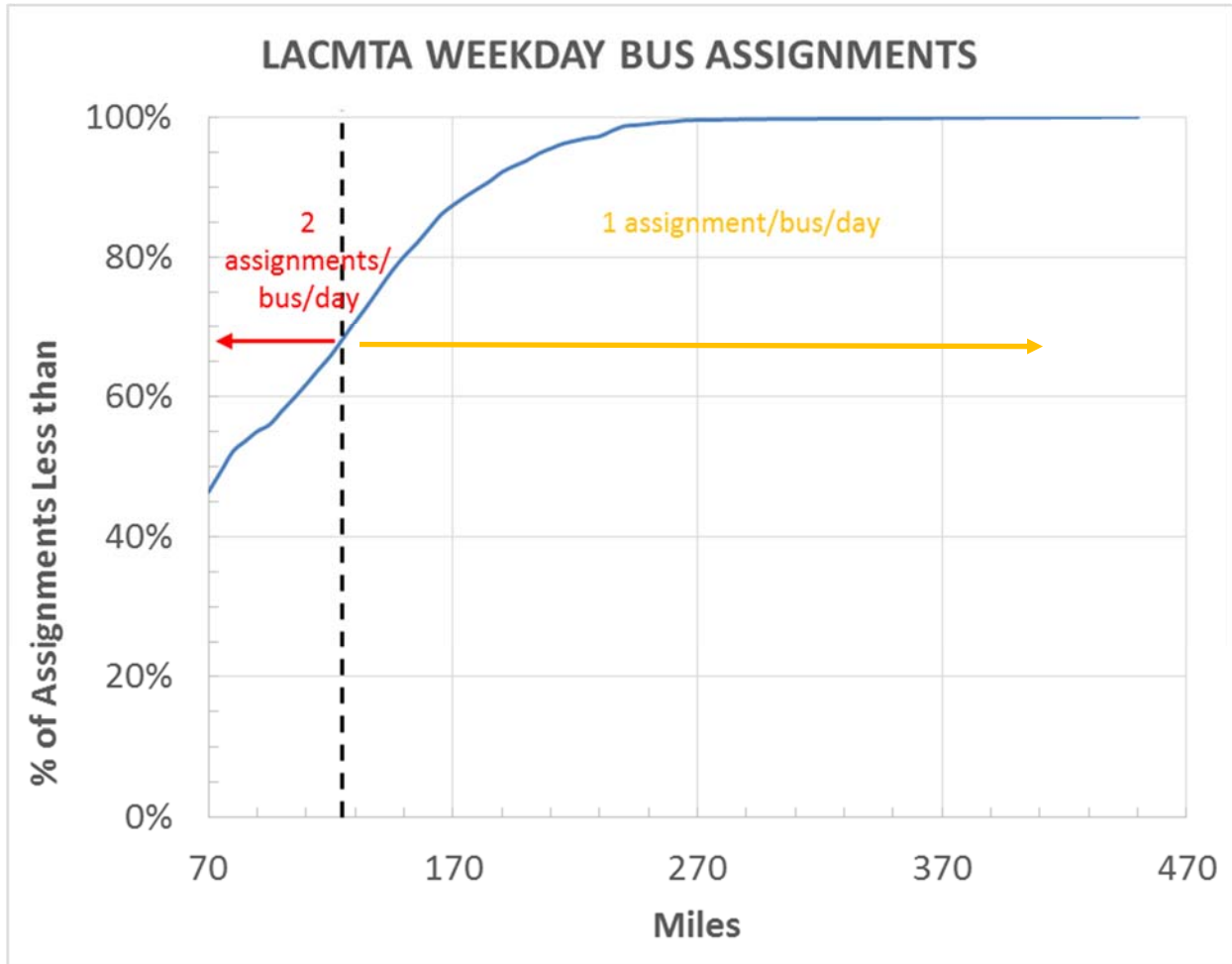
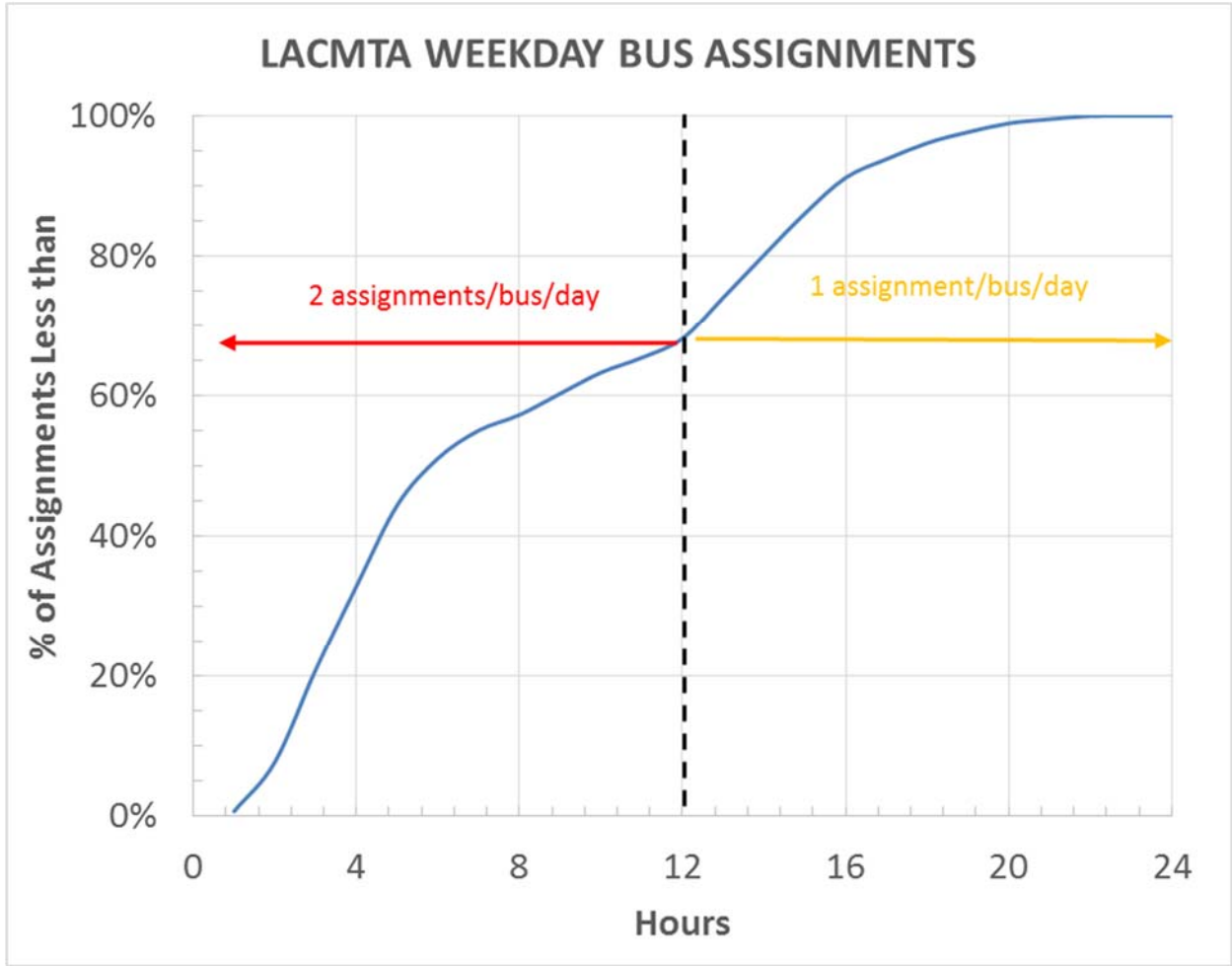


Figure 3. LACMTA Weekday Bus Assignments, Percent versus Accumulated Time in Service



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 service⁶. 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
FLEET AVERAGE REPLACEMENT RATIO	1.41	1.17	1.12	1.08

⁶ 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

5A: LACMTA SYSTEM CHARACTERISTICS		
<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 CO₂ 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&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 CO₂ 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>
Annual Fuel Cost Inflation	<p>Energy Information Administration, Annual Energy Outlook 2016 early release, <i>Table 3.9, Energy Prices by Sector & 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 _x , PM, CH ₄ (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 _x CNG bus tailpipe NO _x , PM, CH ₄ (g/mi)	California Air Resources Board Executive Orders A-021-0631 and A-021-0629	NO _x , PM, and CH ₄ 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 _x and standard CNG engines. NO _x emissions assumed to be 92% lower (0.01 g/bhp-hr vs 0.13 g/bhp-hr), CH ₄ 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 _x CNG bus tailpipe CO ₂ (g/mi)	U.S. Department of Energy, <i>Alternative Fuels & Advanced Vehicles Data Center</i> (www.afdc.energy.gov/afdc/fuels/properties.html)	5,593 g CO ₂ /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 ₂ /therm.
Natural Gas Upstream CO ₂ , NO _x , PM, CH ₄ (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 _x compared to current assumptions.
Renewable Natural Gas Upstream CO ₂ , NO _x , PM, CH ₄ (g/therm)		
Hydrogen Production CO ₂ , NO _x , PM, CH ₄ (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 CO₂, NO_x, PM, CH₄ (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_x, PM, CO₂, and CH₄ 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

5D: CNG BUSES		
<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

5E: LOW NOx CNG BUSES		
<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 ₂ 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		
<i>Metric</i>	<i>Data Sources</i>	<i>Values/Notes</i>
		<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 ₂ 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 ₂ 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

5H: FUELING INFRASTRUCTURE – ELECTRIC BUSES		
<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 http://blog.rmi.org/blog_2014_04_29_pulling_back_the_veil_on_ev_charging_station_costs	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

5I: FUELING INFRASTRUCTURE – FUEL CELL BUSES		
<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

5J: DEPOT EXPANSION AND MODIFICATIONS		
<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 ₂ 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

5K: GLOBAL ECONOMIC ASSUMPTIONS		
<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 ₁₀₀)	Intergovernmental Panel on Climate Change, <i>Fifth Assessment Report, 2013</i>	Global warming potential of methane over 100 years relative to CO ₂ . 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)

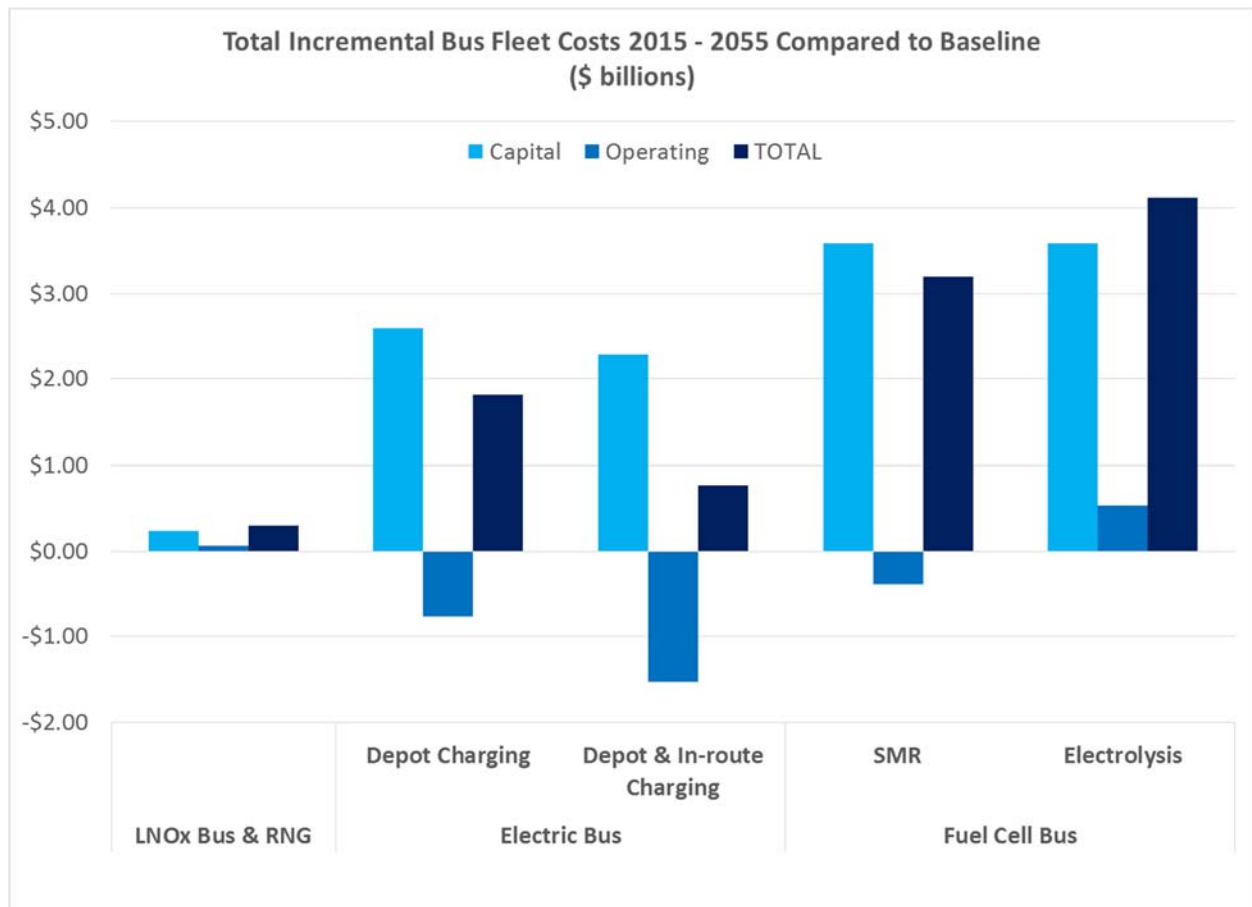
Cost Element		BASELINE	RENEW NG	LOW NOx CNG BUS & REPOWER		ELECTRIC BUS		FUEL CELL BUS	
		Std CNG Bus Conv NG	Std CNG Bus RNG	LNOx Bus Conv NG	LNOx Bus RNG	Depot Charging	Depot & In- Route Charging	H ₂ by SMR	H ₂ by Electrolysis
Capital	Bus Purchase	\$5,177.9	\$5,177.9	\$5,250.0	\$5,250.0	\$7,094.2	\$6,889.2	\$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>
Operating	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>
TOTAL		\$36,815.6	\$36,815.6	\$37,112.2	\$37,112.2	\$38,635.0	\$37,579.3	\$40,011.7	\$40,933.0
INCREASE		NA	\$0.00	\$296.59	\$296.59	\$1,819.44	\$763.73	\$3,196.17	\$4,117.40

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.

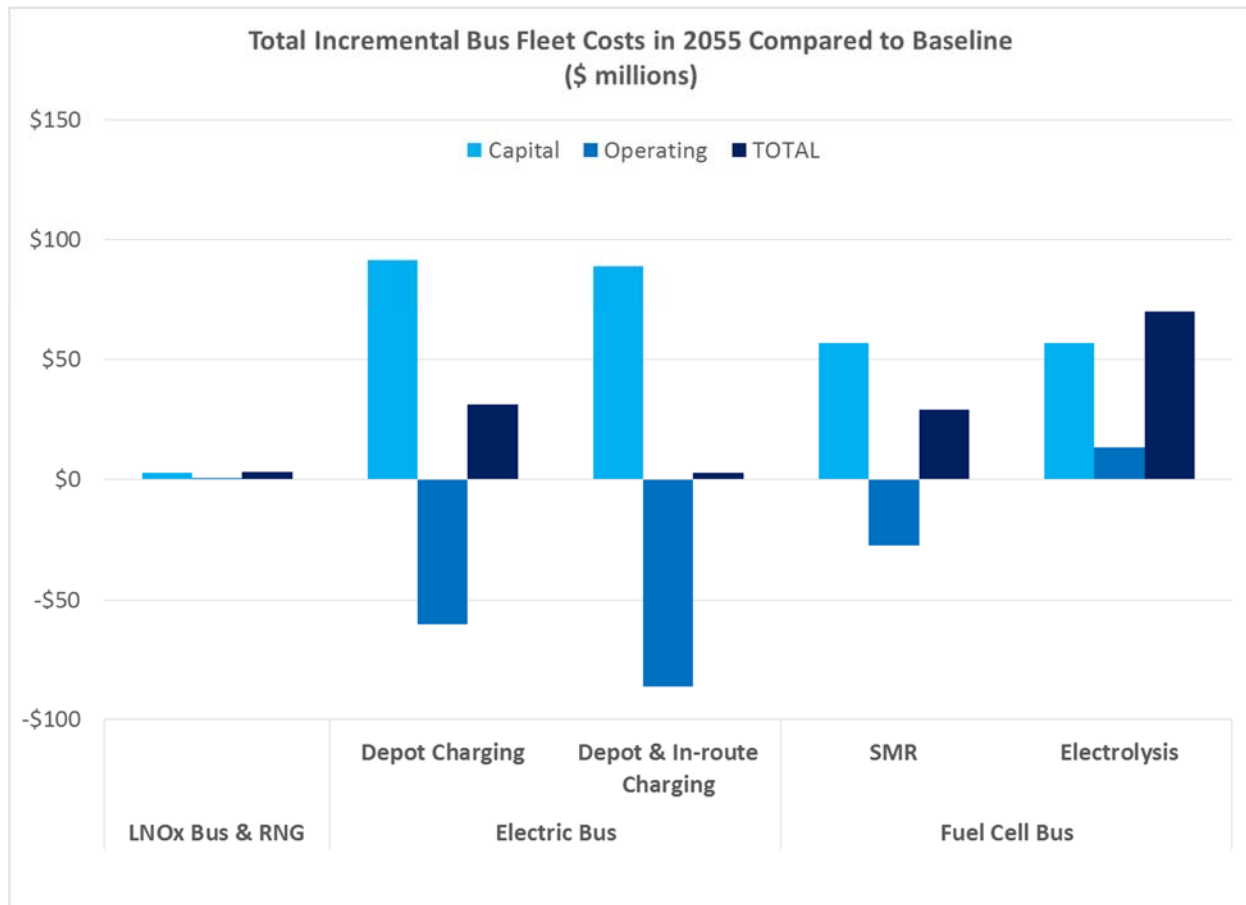
The electric bus scenarios have increased on-going annual costs relative to the baseline projection primarily due to continuing higher annual capital costs for bus purchase and overhaul. These scenarios

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 ₂ by SMR	H ₂ by Electrolysis
Capital	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>	\$187.8	\$187.8	\$190.6	\$190.6	\$279.3	\$276.9	\$244.3	\$244.3
Operating	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>	\$1,072.9	\$1,072.9	\$1,073.3	\$1,073.3	\$1,012.4	\$986.5	\$1,045.5	\$1,086.2
TOTAL		\$1,260.7	\$1,260.7	\$1,264.0	\$1,264.0	\$1,291.7	\$1,263.3	\$1,289.8	\$1,330.5
INCREASE		NA	\$0.00	\$3.32	\$3.32	\$31.08	\$2.67	\$29.13	\$69.88

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 CH₄ 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

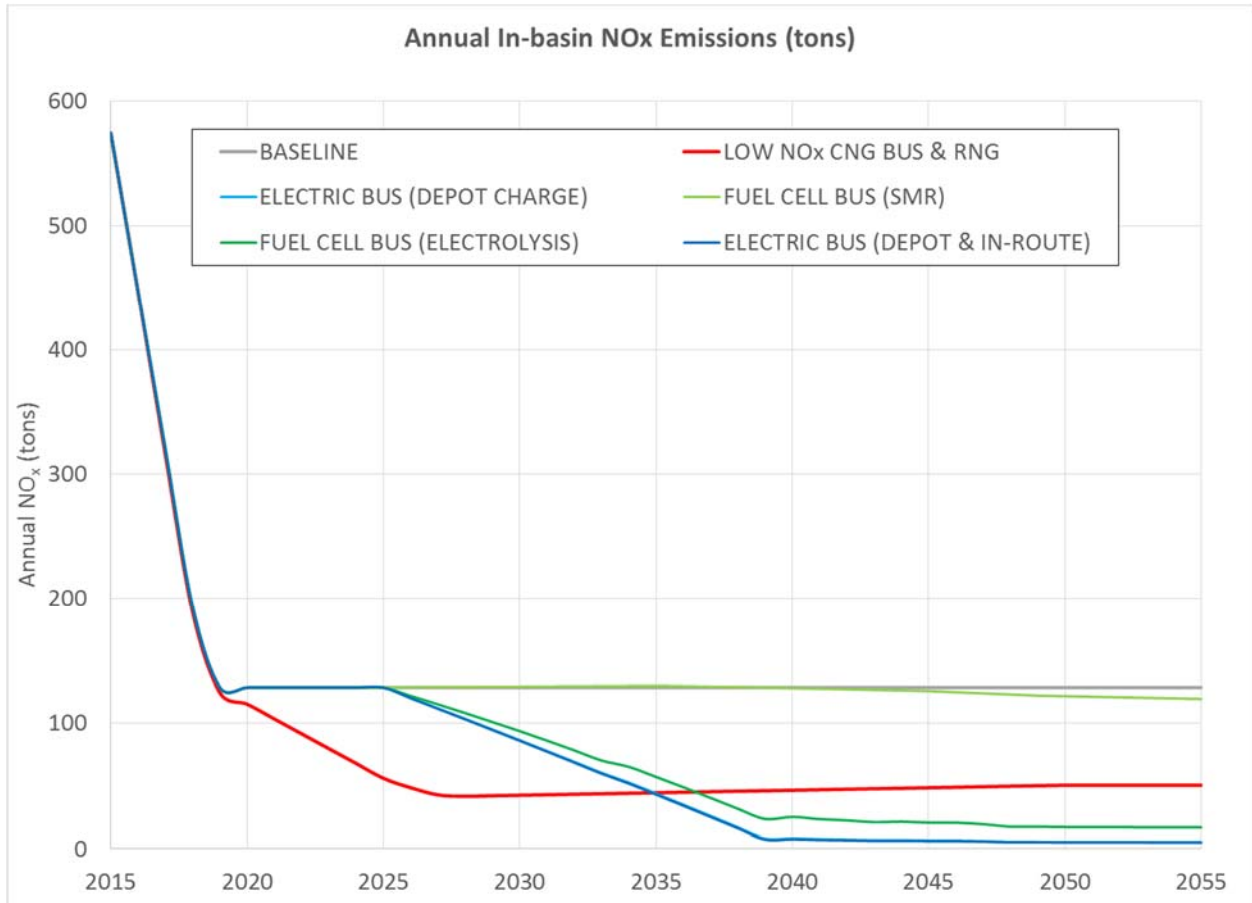


Figure 7. Estimated Annual Fleet Emissions of out-of-basin NOx (tons), 2015 – 2055

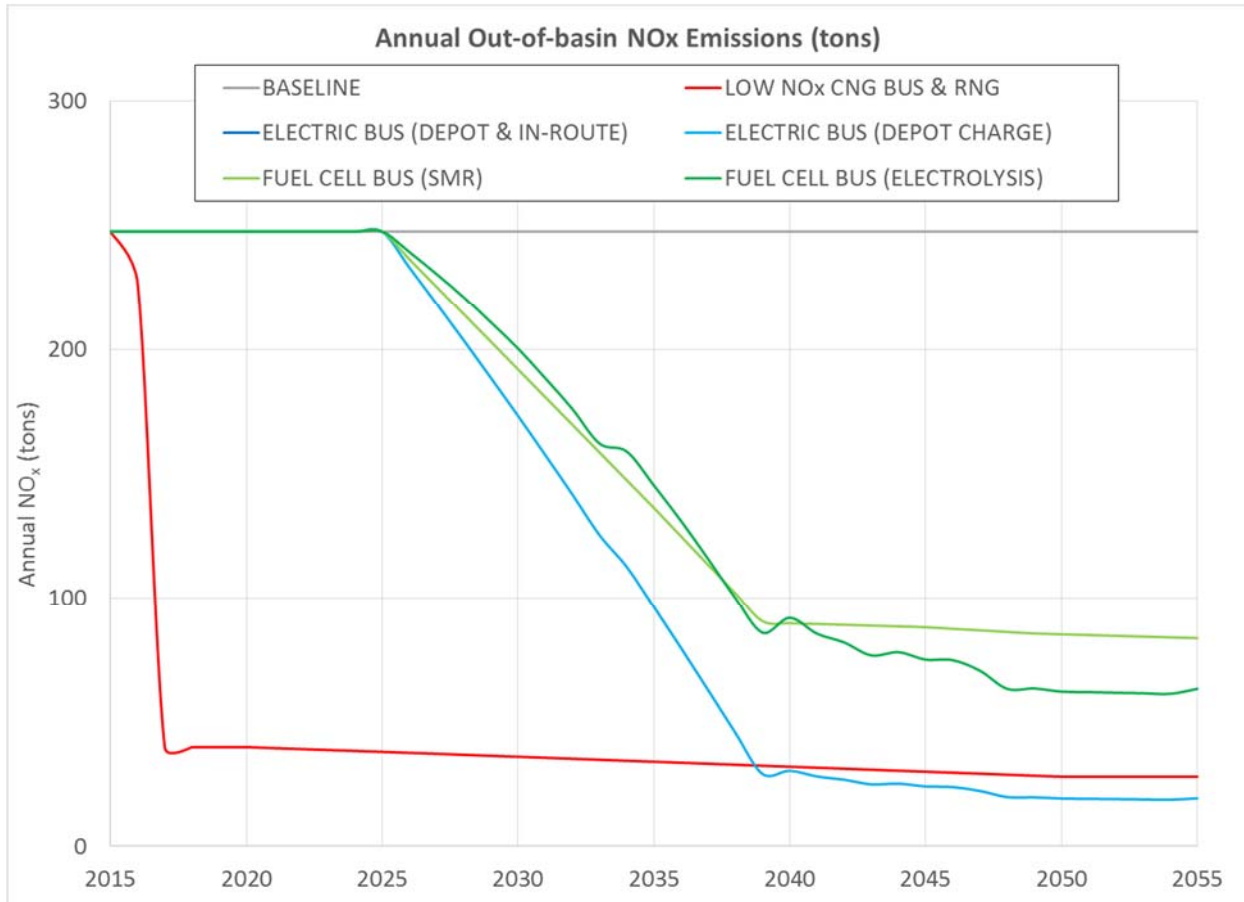


Figure 8. Estimated Annual Fleet Emissions of in-basin PM (tons), 2015 - 2055

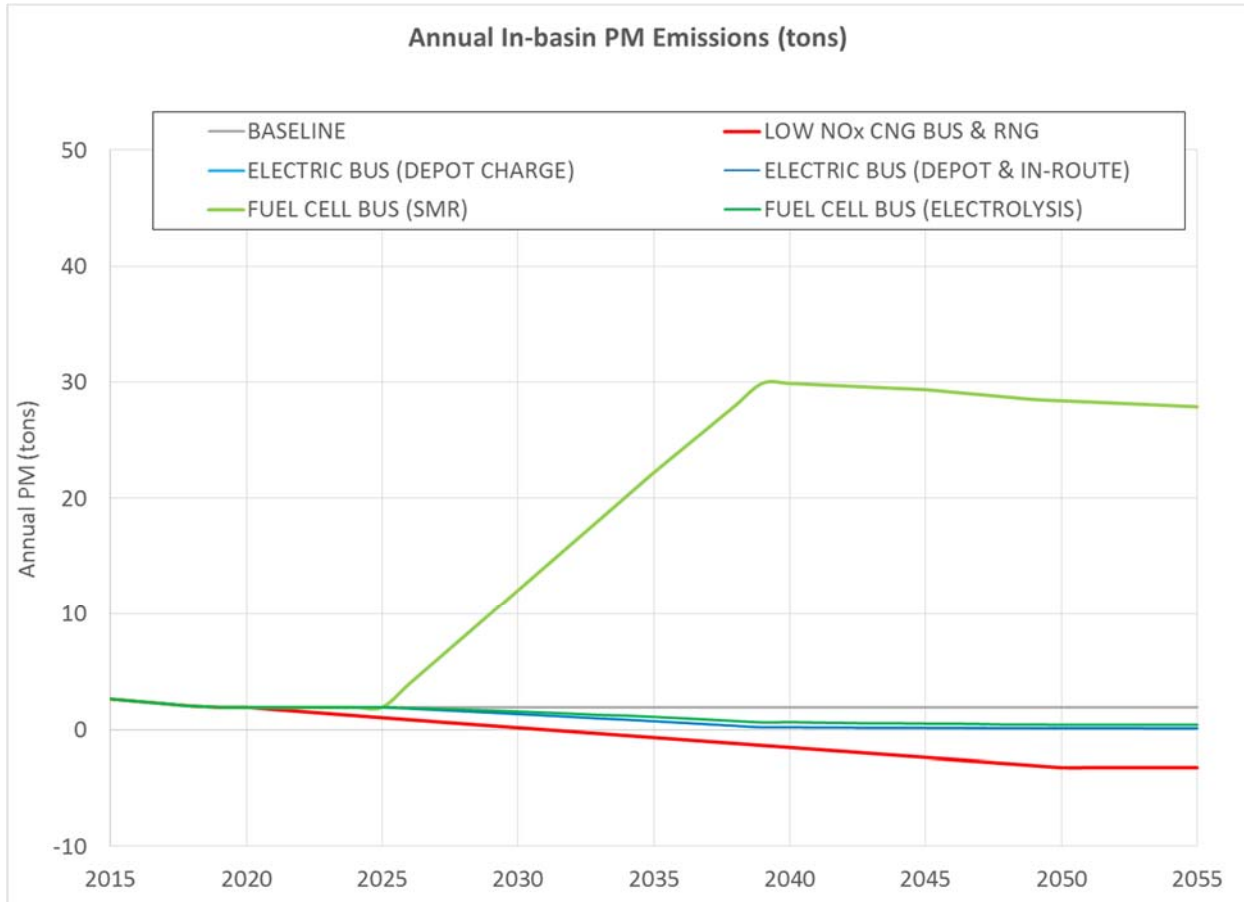


Figure 9. Estimated Annual Fleet Emissions of out-of-basin PM (tons), 2015 - 2055

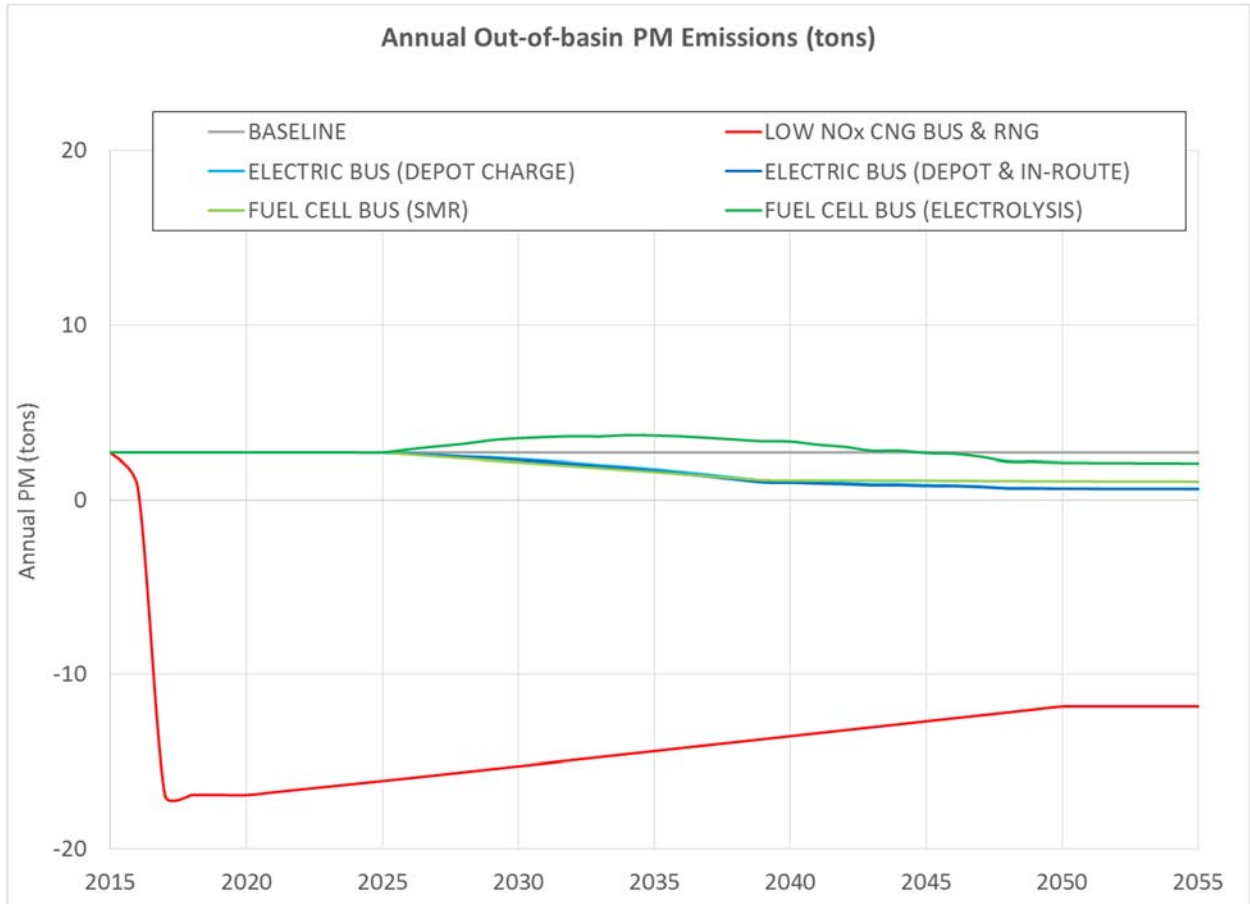


Figure 10. Estimated Annual Fleet Emissions of CH₄ (tons), 2015 - 2055

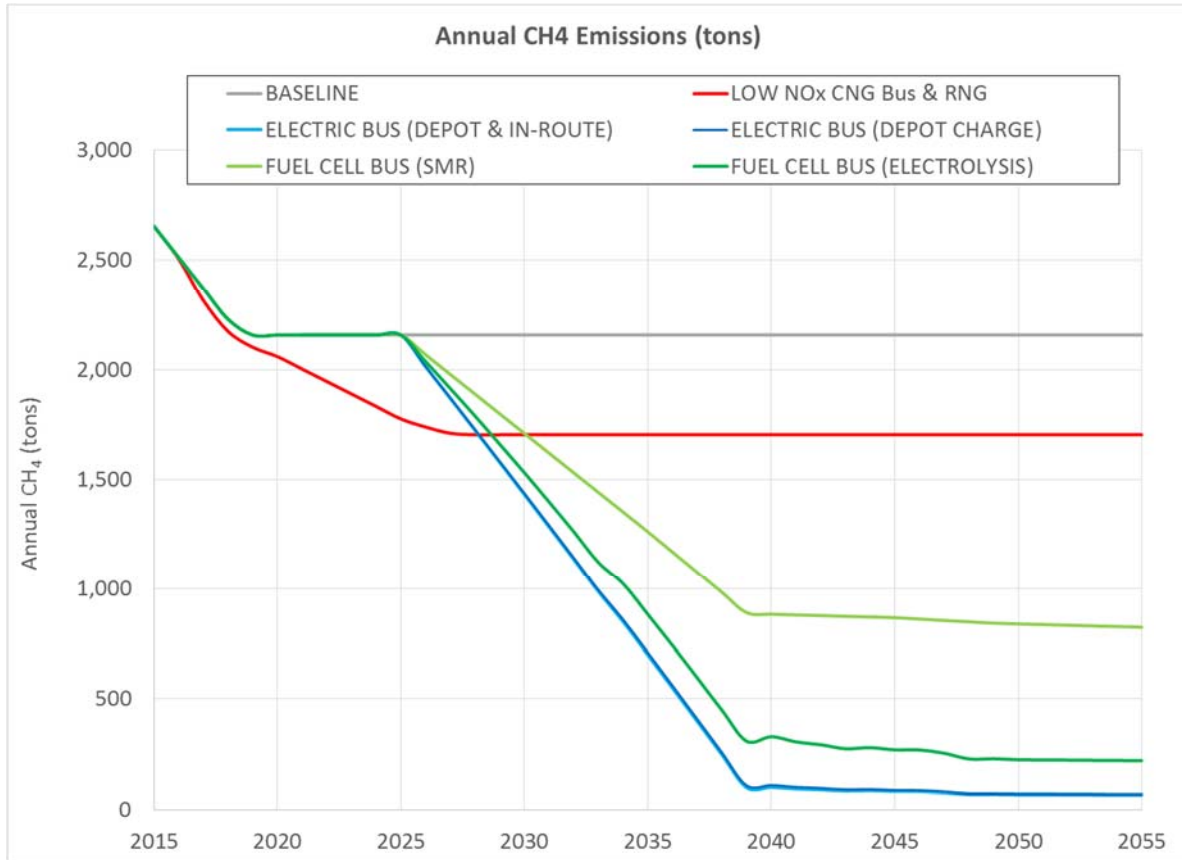


Figure 11. Estimated Annual Fleet Emissions of CO₂ (tons), 2015 - 2055

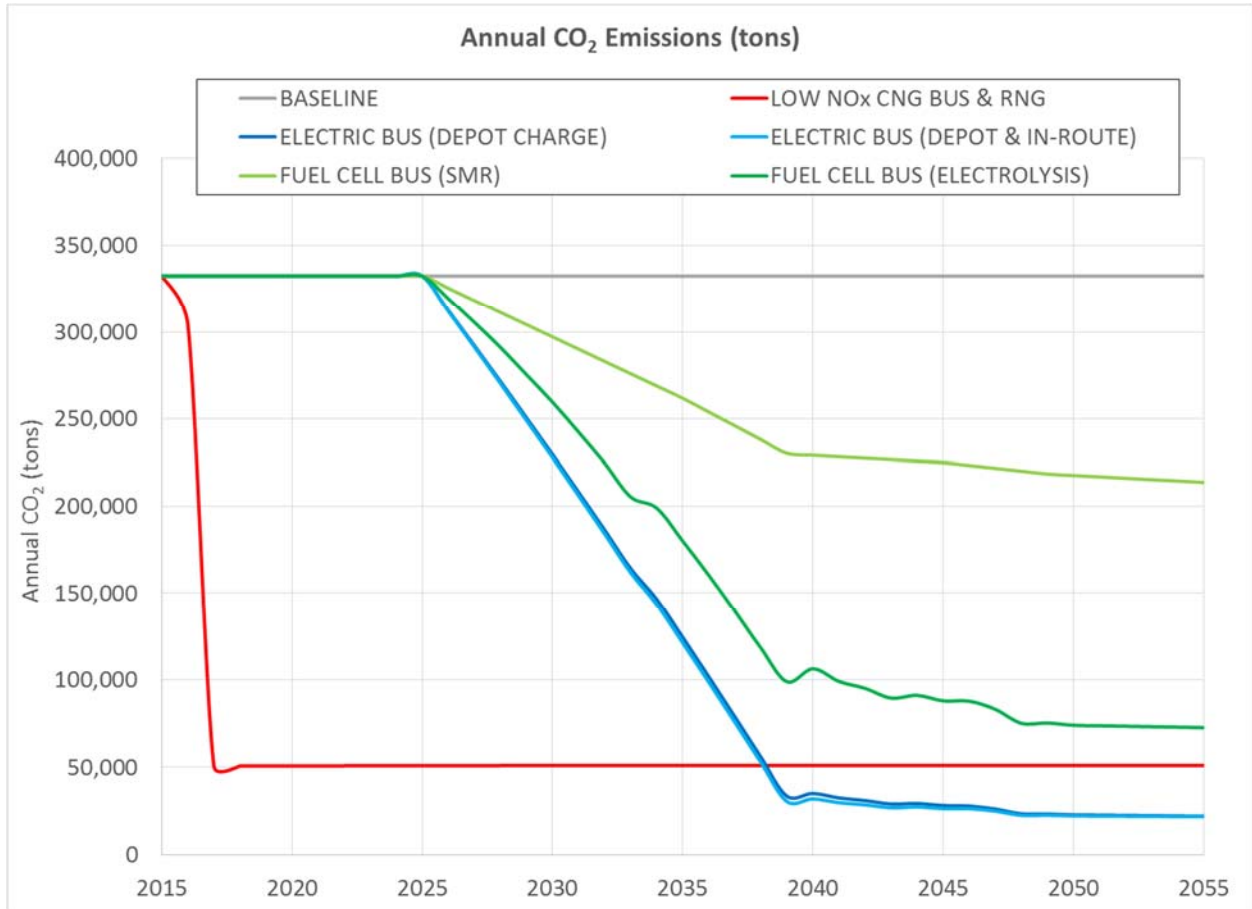
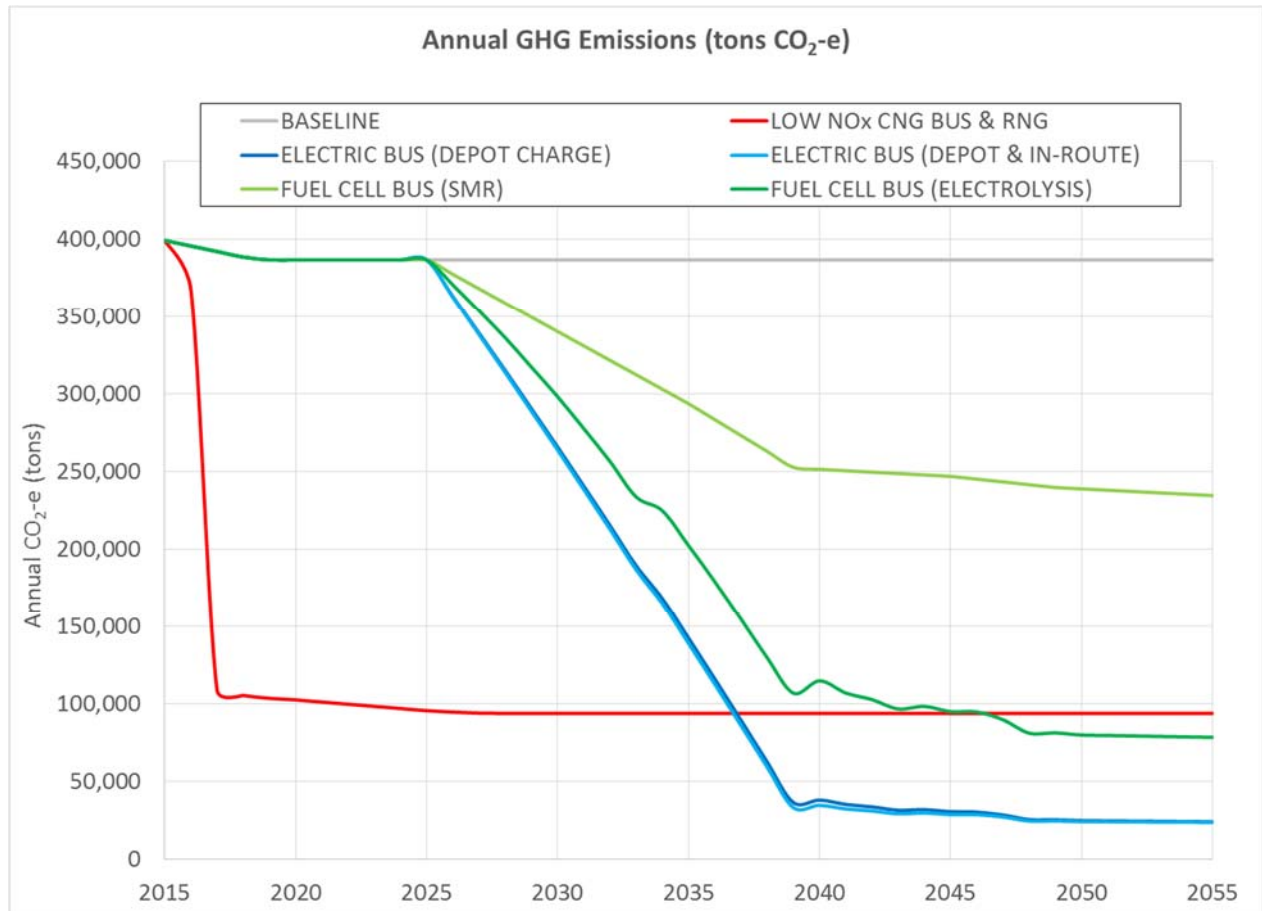


Figure 12. Estimated Annual Fleet Emissions of GHG (tons CO₂-e), 2015 - 2055



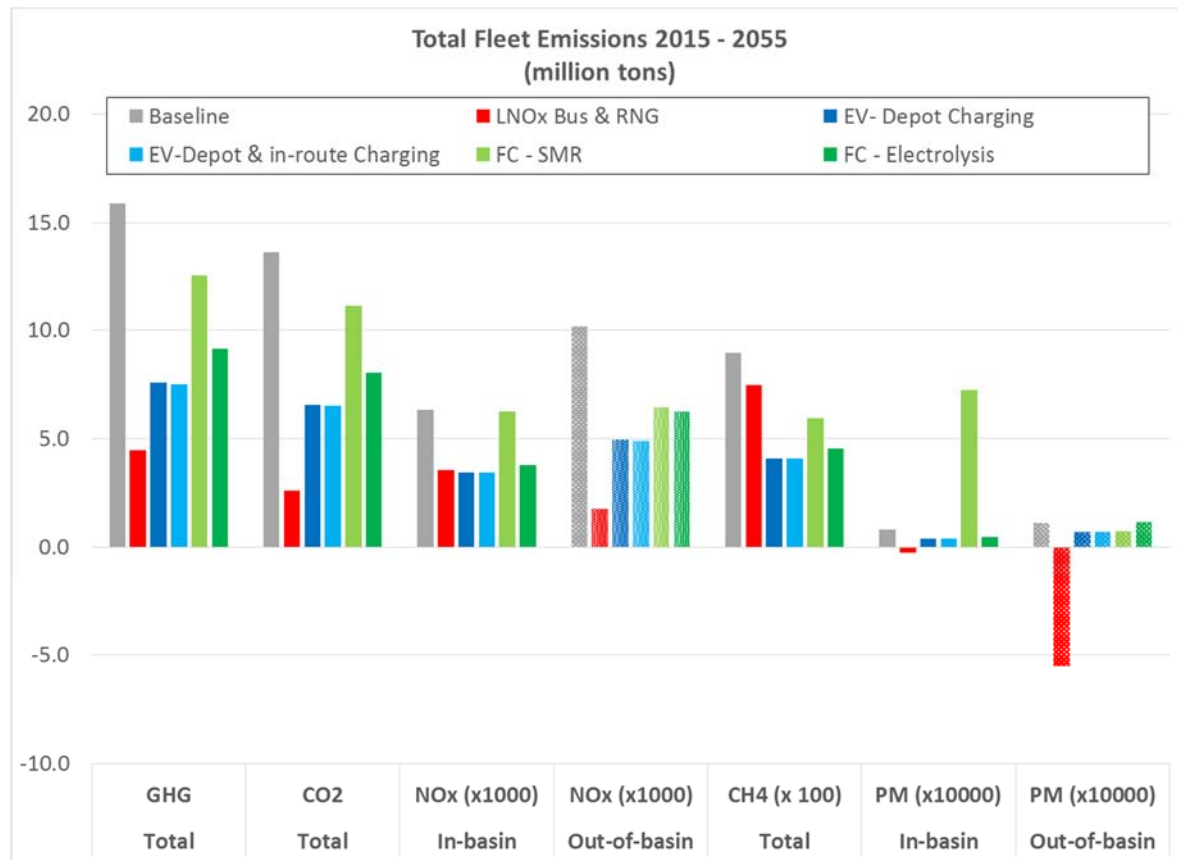
Under the LNOx Bus + RNG scenario annual estimated out-of-basin NOx and PM, CH₄, CO₂ and GHG emissions fall dramatically between 2016 and 2018 compared to the baseline, as the entire existing bus fleet is transitioned to RNG. These reductions are the result of lower upstream emissions from RNG production 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 NOx, in-basin PM, and CH₄ emissions continue to fall as the bus fleet transitions from standard natural gas engines to Low NOx natural gas engines with lower tailpipe emissions of NOx, PM, and CH₄. Between 2028 and 2055 in-basin PM and NOx under this scenario increase slightly year-to-year, while out-of-basin PM and NOx 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 NOx, CH₄, CO₂, 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 NOx. When hydrogen is produced via SMR, out-of-basin NOx 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, CO₂, 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 CH₄ 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 Board⁷ RNG produced from wastewater treatment plants or food waste would have lower NOx and lower GHG

⁷ 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)

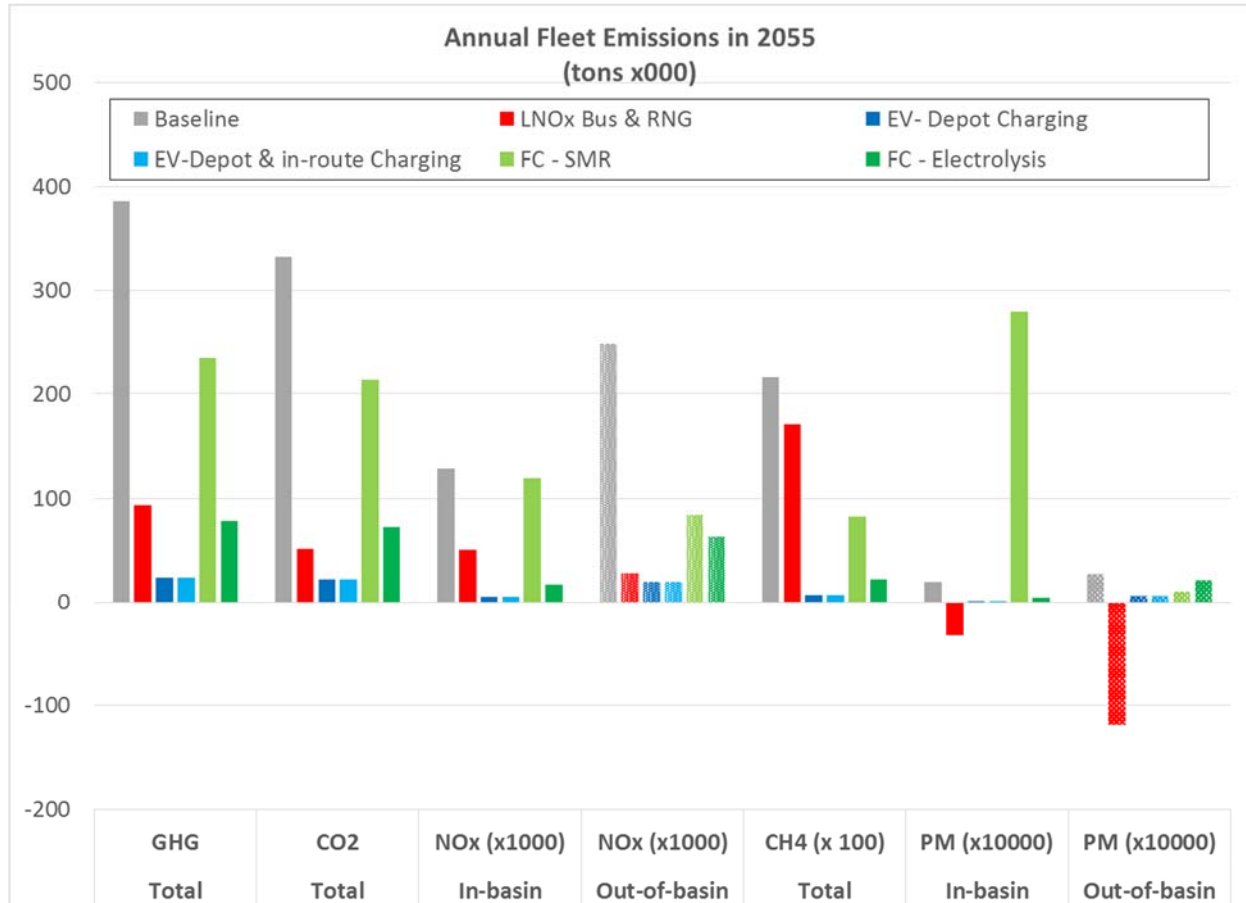
Pollutant	BASELINE		RENEW NG		LOW NOx CNG BUS & REPOWER		ELECTRIC BUS		FUEL CELL BUS	
	Std CNG Bus Conv NG	Std CNG Bus Renew NG	LNOx Bus Conv NG	LNOx Bus Renew NG	Depot Charging	Depot & In- Route Charging	H ₂ by SMR	H ₂ by Electrolysis		
NOx (in-basin)	128.6	136.6	42.5	50.5	5.1	5.1	119.6	16.9		
PM (in-basin)	1.94	-3.13	1.87	-3.22	0.13	0.13	27.87	0.42		
CH₄	2,157.3	2,101.8	1,759.4	1,703.7	67.1	66.3	824.2	220.2		
CO₂	332,622	50,795	333,958	50,999	22,151	21,896	213,790	72,708		
GHG (CO₂-e)	386,554	103,340	377,942	93,591	23,829	23,554	234,395	78,213		
NOx (Out-of-basin)	247.7	27.9	248.7	28.0	19.3	19.1	83.8	63.4		
PM (out-of-basin)	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.

ATTACHMENT E

Identified ZEB Suppliers

Company	Buy America	Location	Models	Battery
BYD	Y	46147 BYD Blvd, Lancaster, CA	20,30, 40, 45, 60 ft battery electric	up to 520 kWh
CCW	Y	1863 Service Ct, Riverside, CA	30, 35, 40 ft rebuilt	311 kWh
ebus	Y	9250 Washburn Rd, Downey, CA	22, 40 ft battery electric	
El Dorado	Y	9670 Galena St, Riverside, CA	40' battery bus	
GreenPower	N	37-2 Haijing East Road, China. ST 240-209 Carrall St, Vancouver , BC	30, 40, 45, 60 ft battery electric	210-400 kWh
Linkker	N	Koritie 2, 15540 Villahde, Finland	12 m, low floor battery electric	48 kWh
NFA	Y	6200 Glenn Carlsen Dr., St. Cloud, MN	40' 60' battery buses	
Proterra	Y	1815 Rollins Rd., Burlingame, CA	35', 40' battery bus	Up to 300kWh
Van Hool	N	Bernard Van Hoolstraat 58, Loningshooikt, Belgium	40' fuel cell bus	H2
Nova/Volvo	Y	260 Banker Rd, Plattsburgh, NY	40' battery bus	40 kWh

NOISE LEVEL COMPARISON OF CONVENTIONAL AND ZEB's

Altoon test data												
Measured in dBA Scale	CNG						Electric				Difference for Electric Buses	
	New Flyer XN40 - 2014	Nova Bus LFS 40 - 2013	NABI 40- LFW - 2013	Orion EPA 10 - 2011	New Flyer XN60 - 2011	Average	Proterra BE40 - 2014	New Flyer XE40 - 2014	BYD K9 - 2013	Average		
Interior												
Driver	71.7	71.4	74.8	75.5	71.5	73.0	74.8	69.3	68.3	70.8	-2.2	
Passengers	75.8	79.5	74.8	77.9	74.0	76.4	75.6	70.2	71.1	72.3	-4.1	
Exterior												
Curb Side	73.6	72.4	67.9	71.3	71.5	71.3	66.1	66.1	63.0	65.1	-6.3	
Street Side	73.9	72.2	68.9	71.5	77.7	72.8	66.6	66.1	61.3	64.7	-8.2	

Weekday Metro Bus Mileage Summary by Division
June 26, 2016

ATTACHMENT G

Div.	Line	Weekday Bus Mileage Totals						Shortest Run Time	Longest Run Time	Weekday Ridership	Off-Street Terminals	Comments
		One-Way Trip Mi.	Total Blocks	<150	> 150 <200	> 200 <250	<250 and UP					
Div 1	16	12.6	20	17	3	0	0	0:57	21:53	16,821	1	Maple Lot
Div 1	18	13.0	31	30	1	0	0	0:45	17:46	14,042	2	6th and Oxford & Montebello Metro Link Sta
Div 1	20	17.5	15	15	0	0	0	1:23	17:19	8,223	1	Maple Lot
Div 1	45	20.2	12	9	3	0	0	2:04	18:03	13,034	0	
Div 1	53	16.6	25	20	4	1	0	1:47	19:19	8,617	1	Beaudry & Temple
Div 1	62	26.3	13	6	5	2	0	2:15	19:40	3,681	1	Beaudry & Temple
Div 1	66	13.0	25	24	1	0	0	1:03	19:20	35,663	2	6th and Oxford & Montebello Metro Link Sta
Div 1	460	40.3	12	9	3	0	0	3:23	16:11	2,290	2	Maple Lot & Disneyland
Div 1	760	11.5	12	6	6	0	0	1:40	16:30	2,290	0	
Division 1 Vehicle Totals			165	136	26	3	0			104,661		
Division 1 Percentages				82%	16%	2%	0%					
Div 2	4	20.7	7	7	0	0	0	3:25	15:25	15,869	1	Terminal 28
Div 2	10	19.9	13	9	4	0	0	1:51	19:31	13,036	1	On-Street Adjacent to Division 7
Div 2	55	13.2	14	10	4	0	0	1:36	17:36	8,566	1	Rosa Parks/Willowbrook Station
Div 2	51	17.6	45	39	6	0	0	1:28	15:34	26,191	3	Harbor Gateway TC, MLK TC Compton, 6th & Shatto Pl
Div 2	60	25.6	31	30	1	0	0	1:42	16:10	15,678	1	Artesia Blue Station
Div 2	105	16.0	16	12	4	0	0	2:44	19:08	11,280	2	Division 7 Yard & Vernon Yard
Div 2	200	6.3	17	16	1	0	0	1:44	20:44	13,291	0	
Div 2	611	14.6	4	2	2	0	0	3:41	17:12	1,647	0	
Div 2	612	16.3	4	2	0	2	0	8:30	20:24	1,374	2	Clockwise Shuttle with Terminal at Willowbrook Station.
Div 2	705	14.8	9	8	1	0	0	2:08	15:51	6,363	2	Division 7 Yard & Vernon Yard
Division 2 Vehicle Totals			160	135	23	2	-			113,295		
Division 2 Percentages				84%	14%	1%	0%					
Div 3	28	21.1	13	11	2	0	0	0:41	16:04	10,996	0	
Div 3	45	20.2	15	15	0	0	0	1:59	15:05	16,149	0	
Div 3	81	19.9	27	17	7	3	0	1:53	19:55	16,090	0	
Div 3	83	15.1	7	7	0	0	0	1:32	17:18	2,888	1	Terminal 28
Div 3	175	5.2	2	2	0	0	0	1:08	4:06	864	0	
Div 3	180	18.6	16	11	4	1	0	2:44	20:40	8,710	2	Hollywood Vine Sta. (Sierra Madre Villa Sta - Rte 181 only)
Div 3	201	11.6	3	2	1	0	0	15:02	15:20	1,166	1	Wilshire / Vermont Red Line Station
Div 3	206	14.0	5	4	1	0	0	2:09	15:52	13,145	0	
Div 3	251	14.6	15	13	2	0	0	0:51	17:11	8,739	1	On-Street adjacent to Division 3
Div 3	252	8.9	5	2	3	0	0	0:52	16:12	2,453	0	
Div 3	258	28.4	7	0	1	6	0	14:19	17:30	1,771	0	
Div 3	751	10.2	9	9	0	0	0	3:27	14:52	5,533	2	Palm / Seville & On Street adjacent to Division 3
Div 3	780	22.1	21	9	12	0	0	2:40	15:31	9,095	1	Washington / Fairfax Terminal
Division 3 Vehicle Totals			145	102	33	10	0			97,599		
Division 3 Percentages				70%	23%	7%	0%					
Div 5	102	18.5	7	4	2	1	0	3:54	19:46	2,614	2	Lax City Bus Terminal & Palm and Seville Terminal
Div 5	108	24.1	34	21	10	3	0	1:59	18:39	16,770	0	
Div 5	110	21.2	22	18	4	0	0	2:02	18:36	9,598	0	
Div 5	204	12.6	12	12	0	0	0	2:07	15:55	22,173	0	
Div 5	206	14.0	12	7	4	1	0	3:16	20:13	13,145	0	
Div 5	207	14.2	12	10	1	1	0	2:12	21:37	18,048	0	
Div 5	209	14.7	3	0	3	0	0	13:52	16:10	1,059	1	Oxford & 6th Terminal
Div 5	212	14.7	26	23	3	0	0	1:52	20:00	13,476	1	On-Street adjacent to Hollywood / Vine Station.
Div 5	740	12.7	9	4	5	0	0	1:45	17:41	2,781	1	South Bay Transit Center
Div 5	754	12.5	20	17	3	0	0	2:31	16:30	20,575	0	
Div 5	757	14.3	20	16	4	0	0	2:00	15:09	13,104	0	
Division 5 Vehicle Totals			177	132	39	6	0			133,343		
Division 5 Percentages				75%	22%	3%	0%					

Weekday Metro Bus Mileage Summary by Division

June 26, 2016

Weekday Bus Mileage Totals											Off-Street Terminals	Comments
Div.	Line	One-Way Trip Mi.	Total Blocks	<150	> 150 <200	> 200 <250	<250 and UP	Shortest Run Time	Longest Run Time	Weekday Ridership		
Div 7	2	28.9	25	22	3	0	0	1:25	19:25	15,909	1	Terminal 28.
Div 7	4	20.7	11	9	2	0	0	2:09	19:03	15,869	1	Terminal 28.
Div 7	10	19.9	16	14	2	0	0	1:30	15:39	13,036	1	On-street adjacent to Division 7
Div 7	14	19.8	41	38	3	0	0	1:31	18:24	19,054	1	Washington / Fairfax Terminal
Div 7	16	12.6	23	21	1	1	0	2:23	21:53	22,938	1	Maple Lot
Div 7	20	17.5	11	11	0	0	0	3:44	15:18	15,455	1	Maple Lot
Div 7	28	21.1	13	12	1	0	0	1:17	17:50	10,996	0	
Div 7	30	15.3	7	7	0	0	0	2:15	16:48	13,807	1	On-street adjacent to Division 7
Div 7	33	19.6	8	8	0	0	0	2:48	13:20	11,062	2	Maple Lot & Jackson st. Terminal
Div 7	35	15.0	17	13	4	0	0	2:07	18:58	9,715	2	Washington / Fairfax Terminal
Div 7	217	14.5	15	15	0	0	0	0:58	17:14	7,002	1	On-street adjacent to Hollywood & Vine Terminal
Div 7	534	26.5	16	12	4	0	0	2:03	8:30	2,689	1	Washington / Fairfax Terminal
Div 7	704	19.7	9	8	1	0	0	2:44	15:54	12,389	1	Jackson Street Terminal
Div 7	705	14.8	8	6	0	1	1	2:06	19:44	6,363	2	On-street adjacent to Division 7 Yard & Vernon Yard.
Div 7	733	19.7	5	5	0	0	0	4:27	4:46	11,451	1	Jackson Street Terminal
Division 7 Vehicle Totals			225	201	21	2	1			187,735		
Division 7 Percentages				89%	9%	1%	0%					
Div 8	150	18.1	20	10	8	1	1	2:12	21:59	9,189	2 / 4	Universal / Studio City Sta./ On-Street Warner Cntr (2 of 4 Terms)
Div 8	152	24.4	17	12	4	1	0	0:45	17:48	11,780	1	North Hollywood Station
Div 8	155	13.4	2	2	0	0	0	7:33	8:40	1,659	1	Burbank Station
Div 8	158	18.9	5	2	2	1	0	2:04	16:13	2,321	1	Chatsworth Wtation
Div 8	161	22.4	8	5	2	1	0	1:42	13:28	1,344	2	Thousand Oaks Transit Center & On-Street Warner Center
Div 8	163	17.2	6	6	0	0	0	4:21	13:08	9,605	1/3	North Hollywood Station (1 of 3 Terminals)
Div 8	164	23.5	12	8	1	3	0	2:15	18:06	6,696	1	Burbank Station
Div 8	165	22.9	18	13	1	3	1	1:21	18:58	8,252	1	Burbank Station
Div 8	166	16.7	9	6	1	2	0	1:47	18:12	2,865	2	Diviion 15 & Chatsworth Metrolink Station
Div 8	169	33.1	7	2	2	3	0	0:59	17:02	2,497	2	On Street Warner Center & Burbank RITC
Div 8	236	16.6	9	4	3	2	0	1:56	18:24	2,499	1	Sylmar Station
Div 8	237	22.2	3	0	2	1	0	13:38	16:36	N/A	0	
Div 8	239	16.1	2	2	0	0	0	2:15	6:08	976	0	
Div 8	243	19.0	7	4	2	1	0	1:29	15:06	1,857	0	
Div 8	245	16.5	12	10	2	0	0	1:04	15:14	3,170	2	Chatsworth Station on both ends of the line.
Div 8	750	16.1	12	7	2	3	0	1:52	16:58	3,170	2	On Street Warner Center & Universal City Red Line Sta.
Div 8	901	19.8	33	10	9	14	0	2:12	15:21	25,979	3/3	On Street Warner Center, North Hollywood Sta & Chatsworth Sta.
Division 8 Vehicle Totals			182	103	41	36	2			93,859		
Division 8 Percentages				57%	23%	20%	1%					
Div 9	70	16.5	17	9	8	0	0	1:58	18:10	11,064	2	El Monte Station & Terminal 28
Div 9	71	8.3	7	6	1	0	0	3:17	15:39	1,737	1	Terminal 28
Div 9	76	16.3	17	14	3	0	0	2:04	18:12	9,393	2	El Monte Station & Terminal 28
Div 9	78	18.2	27	18	7	1	1	1:44	20:55	70,026	1	Terminal 28
Div 9	176	20.7	5	0	5	0	0	14:16	16:20	1,797	2	Terminal 28 to El Monte Station
Div 9	260	28.5	21	9	5	7	0	1:55	20:08	11,149	1	Artesia Blue Line Station
Div 9	265	16.3	4	1	0	3	0	6:14	17:25	1,705	1	Jackson Street
Div 9	267	17.6	8	0	5	3	0	14:16	16:30	3,217	1	El Monte Station
Div 9	268	23.0	15	11	2	2	0	1:15	17:32	1,906	1	El Monte Station
Div 9	487	31.6	18	11	4	3	0	1:45	15:43	3,709	1/3	El Monte Station (1 of 3 terminals)
Div 9	665	6.7	2	1	1	0	0	6:18	15:53	758	1	Cal State L.A On-Street Transit Station.
Div 9	687	5.9	4	1	3	0	0	15:05	17:40	1,426	0	
Div 9	762	25.0	11	4	2	5	0	2:25	16:32	4,120	1	Artesia Blue Line Station
Div 9	770	16.6	16	6	9	1	0	2:33	16:12	7,651	2	Terminal 28 to El Monte Station
Div 9	910	38.9	33	21	0	4	8	2:19	21:04	16,355	2/3	El Monte Sta, Harbor Gateway Sta (2 of 3 terminals)
Division 9 Vehicle Totals			205	112	55	29	9			53,793		
Division 9 Percentages				55%	27%	14%	4%					

Weekday Metro Bus Mileage Summary by Division
June 26, 2016

<u>Weekday Bus Mileage Totals</u>											<u>Off-Street</u>	<u>Comments</u>
<u>Div.</u>	<u>Line</u>	<u>One-Way</u> <u>Trip Mi.</u>	<u>Total</u> <u>Blocks</u>	<u><150</u>	<u>> 150</u> <u><200</u>	<u>> 200</u> <u><250</u>	<u><250</u> <u>and UP</u>	<u>Shortest</u> <u>Run Time</u>	<u>Longest</u> <u>Run Time</u>	<u>Weekday</u> <u>Ridership</u>		
Div 10	2	28.9	5	5	0	0	0	2:25	11:05	15,909	1	Terminal 28
Div 10	30	15.3	3	3	0	0	0	1:26	5:26	13,807	2/3	Division 7 Yard & Pico Rimpau Terminal (2 of 3 terminals)
Div 10	33	19.6	4	4	0	0	0	2:16	7:39	11,062	2/3	Maple Lot & Jackson Street Terminal (2 of 3 terminals)
Div 10	68	11.3	4	4	0	0	0	1:08	14:02	5,737	3/4	Dozier/Rowan, Maple Lot, ELAC Transit CTR (3 of 4 terminals)
Div 10	106	7.5	2	2	0	0	0	15:05	15:27	N/A	2	ELAC Transit Ctr. & On Street USC Medical Center.
Div 10	704	19.7	11	10	1	0	0	2:18	15:32	12,389	1	Jackson Street
Div 10	728	13.3	16	14	2	0	0	2:04	17:35	5,979	1	Jackson Street
Div 10	733	19.7	20	14	6	0	0	2:26	15:46	11,451	1	Jackson Street
Div 10	745	11.3	8	6	2	0	0	2:00	15:59	6,278	2	Jackson Street & Figueroa and 117th (Green Line Station)
Division 10 Vehicle Totals			73	62	11	0	0			82,612		
Division 10 Percentages				85%	15%	0%	0%					
Div 13	2	28.9	25	20	5	0	0	1:31	19:22	12,689	1	Terminal 28.
Div 13	4	20.7	9	7	2	0	0	2:56	20:17	15,869	1	Terminal 28.
Div 13	30	15.3	13	12	1	0	0	3:13	20:14	13,807	2/3	Division 7 Yard & Pico Rimpau Terminal (2 of 3 terminals)
Div 13	33	19.6	12	12	0	0	0	2:27	14:17	11,062	2/3	Maple Lot & Jackson Street Terminal (2 of 3 terminals)
Div 13	55	13.2	4	3	1	0	0	4:31	15:49	8,566	1	Rosa Parks / Wilmington Blue Line Station.
Div 13	68	11.3	7	5	2	0	0	3:16	21:11	5,767	3/4	Dozier/Rowan, Maple Lot, ELAC Transit CTR (3 of 4 terminals)
Div 13	704	19.7	7	3	4	0	0	7:35	18:52	12,389	1	Jackson Street
Div 13	720	24.6	64	47	11	6	0	2:15	21:13	35,512	0	
Div 13	733	19.7	5	3	2	0	0	9:51	19:20	11,451	1	Jackson Street Terminal
Div 13	745	11.3	9	7	2	0	0	2:14	14:38	6,278	2	Jackson Street & Figueroa and 117th (Green Line Station)
Division 13 Vehicle Totals			155	119	30	6	0			133,390		
Division 13 Percentages				77%	19%	4%	0%					
Div 15	90	32.4	18	7	8	2	1	0:51	19:45	7,856	1	Terminal 28.
Div 15	92	14.3	12	5	7	0	0	3:45	18:05	5,191	1	Burbank Station
Div 15	94	26.0	13	4	2	4	3	2:50	21:34	5,084	1	Terminal 28.
Div 15	152	24.4	10	5	5	0	0	2:00	12:53	11,780	1	North Hollywood Station
Div 15	154	18.0	3	0	3	0	0	14:09	15:20	1,021	1	Burbank Station
Div 15	155	13.4	4	1	3	0	0	13:41	14:38	1,659	1	Burbank Station
Div 15	163	17.2	14	11	3	0	0	2:11	16:36	9,605	1/3	North Hollywood Station (1 of 3 Terminals)
Div 15	164	23.5	5	1	0	4	0	1:30	18:00	6,696	1	Burbank Station
Div 15	165	22.9	7	5	1	1	0	1:46	17:07	8,252	1	Burbank Station
Div 15	166	16.7	11	9	2	0	0	1:29	13:33	5,865	2	Division 15 & Chatsworth Metrolink Station
Div 15	183	22.4	6	2	3	1	0	3:05	17:39	2,175	1	Glendale Transportation Center
Div 15	222	17.4	10	7	1	1	1	1:00	20:58	1,801	0	
Div 15	224	16.9	12	10	1	0	1	2:40	21:12	7,681	1	Universal City Red Line Station
Div 15	230	15.4	11	7	3	1	0	0:56	18:27	4,626	0	
Div 15	233	13.7	16	13	3	0	0	2:29	19:13	12,105	0	
Div 15	234	28.6	10	4	2	2	2	2:09	21:17	5,576	0	
Div 15	237	22.2	6	4	2	0	0	1:28	15:53	N/A	0	
Div 15	292	13.1	3	0	1	2	0	13:12	17:22	2,374	2	Burbank Station & Sylmar Station
Div 15	734	24.3	14	3	4	7	0	5:23	17:46	6,456	1	Sylmar Station
Div 15	744	23.4	13	2	7	4	0	8:06	18:15	9,587	0	
Div 15	788	20.2	11	11	0	0	0	3:10	6:04	1,807	0	
Div 15	794	26.0	12	4	2	5	1	2:50	17:16	4,569	2	Sylmar Station & Terminal 28.
Division 15 Vehicle Totals			221	115	63	34	9			121,766		
Division 15 Percentages				52%	29%	15%	4%					

Weekday Metro Bus Mileage Summary by Division
June 26, 2016

Div.	Line	Weekday Bus Mileage Totals						Shortest Run Time	Longest Run Time	Weekday Ridership	Off-Street Terminals	Comments	
		One-Way Trip Mi.	Total Blocks	<150	> 150 <200	> 200 <250	<250 and UP						
Div 18	40	20.9	25	17	7	1	0	2:17	20:14	17,671	1	Jackson Street Terminal	
Div 18	111	21.1	23	9	9	5	0	2:25	21:40	16,818	2	LAX City Bus Terminal & Norwalk Green Line Station	
Div 18	115	22.2	29	20	6	3	0	1:58	19:33	15,628	1	Norwalk Green Line Station	
Div 18	117	18.4	13	7	5	1	0	8:42	19:10	8,533	1	LAX City Bus Terminal	
Div 18	120	29.7	9	4	2	3	0	6:35	20:51	4,181	1	LAX Aviation / LAX Station	
Div 18	126	12.2	2	2	0	0	0	3:48	5:05	204	0		
Div 18	127	10.3	3	1	2	0	0	1:12	14:30	938	2	MLK Compton Transit Ctr & Downey Transit Center	
Div 18	202	18.3	3	3	0	0	0	3:16	4:50	245	1	Rosa Parks-Wilmington Station	
Div 18	204	12.6	10	9	1	0	0	2:57	18:15	22,173	0		
Div 18	207	14.2	8	8	0	0	0	2:22	15:12	18,048	0		
Div 18	210	19.5	17	7	7	3	0	2:46	22:07	13,104	1	South Bay Transit Center	
Div 18	211	14.5	5	5	0	0	0	0:52	5:25	770	2	Marine Green Line Station, South Bay Transit Center	
Div 18	246	15.1	9	5	1	1	2	1:42	21:47	2,601	1	Harbor Gateway Transit Center	
Div 18	344	19.4	5	4	1	0	0	1:42	13:18	1,709	1	Harbor Gateway Transit Center	
Div 18	442	17.1	3	3	0	0	0	2:02	5:44	233	1	Jackson Street Terminal	
Div 18	550	23.5	5	3	0	1	1	4:32	18:21	1,546	0		
Div 18	710	15.9	16	10	6	0	0	1:47	15:54	7,285	2	South Bay Transit Center / 6th & Oxford	
Div 18	754	12.5	8	8	0	0	0	2:32	13:10	20,575	0		
Div 18	910	38.9	7	4	0	0	3	2:23	15:16	16,355	2/3	El Monte Sta, Harbor Gateway Sta (2 of 3 terminals)	
Division 18 Vehicle Totals			200	129	47	18	6				168,617		
Division 18 Percentages				65%	24%	9%	3%						
System Vehicle Totals			1908	1350	390	146	27				1,336,780		
System Percentages				71%	20%	8%	1%						

**ELIGIBLE FEDERAL FUNDING SOURCES FOR THE PROCUREMENT OF
ZERO-EMISSION BUSES**

PROGRAM	ELIGIBILITY REQUIREMENTS	AGENCY/TYPE
Section 5307 Urbanized Area Formula Grants ¹	Buses to be procured must have a nexus with the large urbanized areas (UZA, as defined by the US Census) within Los Angeles County to which the funds are apportioned or allocated, as applicable.	FTA/Formula
Section 5309 Capital Investment Grants ¹	Buses to be procured must be included as part of the initial acquisition of rolling stock for a New Starts/Small Starts bus rapid transit (BRT) system or associated with Core Capacity BRT corridor improvements that increase capacity by not less than 10%. The procurement of buses only, and of buses to be assigned to routes operating on high occupancy vehicle lanes or on high occupancy toll lanes, is an ineligible expense.	FTA/Competitive
Section 5310 Enhanced Mobility of Seniors & Individuals with Disabilities Formula Grants	Buses to be procured must be used to assist with meeting the transportation needs of the elderly and persons with disabilities who travel to/from or within the UZA within Los Angeles County to which the funds are apportioned or allocated, as applicable.	FTA/Formula
Section 5311 Rural Areas Formula Grants	Buses to be procured must be used to support public transportation in rural areas in Los Angeles County with populations less than 50,000.	FTA/Formula
Section 5337 State of Good Repair Grants ¹	Buses to be procured must be for replacements that either operate on existing BRT systems or are used for providing transit service on high occupancy vehicle lanes. Buses to be procured solely for expansion are not eligible.	FTA/Formula
Section 5339 Buses and Bus Facilities Formula Grants	Buses to be procured must have a nexus with the large urbanized areas (UZA, as defined by the US Census) within Los Angeles County to which the funds are apportioned or allocated. Acquisition of buses for fleet replacement and expansion are eligible.	FTA/Formula

**ELIGIBLE FEDERAL FUNDING SOURCES FOR THE PROCUREMENT OF
ZERO-EMISSION BUSES**

PROGRAM	ELIGIBILITY REQUIREMENTS	AGENCY/TYPE
Section 5339 Buses and Bus Facilities Competitive Grants	Acquisition of buses for fleet replacement and expansion are eligible.	FTA/Competitive
Section 5339 Low or No Emission Grants	Acquisition of buses for fleet replacement and expansion are eligible.	FTA/Competitive
Section 149 Congestion Mitigation and Air Quality Improvement ¹	CMAQ funds “transferred” from the Federal Highway Administration (FHWA) to FTA may be used for the procurement of zero-emission buses due to their air quality benefit.	FHWA/Formula
Section 133 Surface Transportation Block Grant ¹	STP funds “transferred” from FHWA to FTA may be used for the procurement of zero-emission buses for improving the conditions and performance of surface transportation.	FHWA/Formula
Transportation Investment Generating Economic Recovery Grant	TIGER funds may be used for the procurement of zero-emission buses if included as part of the scope of work of a BRT project that promises significant economic and environmental benefits to an entire metropolitan area or region.	USDOT/Competitive
Vehicle Technologies Multi-Topic	Requires community-based partnerships among state and local governments and the private sector to accelerate the use of commercially available electric drive and alternative fuel vehicles, including zero-emission buses.	US Department of Energy/Competitive

1. Funding source is currently programmed by Metro for other competing uses.

**ELIGIBLE STATE AND LOCAL FUNDING SOURCES FOR THE
PROCUREMENT OF ZERO-EMISSION BUSES**

PROGRAM	ELIGIBILITY REQUIREMENTS	AGENCY/TYPE
Zero-Emission Truck and Bus Pilot Commercial Deployment	Buses to be procured must provide benefits to disadvantaged communities by operating on routes located within, or directly benefitting, these communities. Buses must meet applicable certification requirements of the California Air Resources Board (CARB).	CARB/Competitive
Hybrid and Zero-Emission Truck and Bus Voucher Incentive	Buses to be procured must be located in a disadvantaged community. The voucher amount depends on the gross vehicle weight rating of the buses. The amount per voucher for a zero-emission bus is currently \$110,000 for maximum of 100 buses and \$45,000 for each additional bus (up to a maximum of 200 vouchers per fleet). Buses must demonstrate a thirty-five mile all-electric range. If the bus is fast charge compatible, then it must demonstrate a twenty mile all-electric range. Buses must be CARB-certified.	CARB/First-come, First-served
Transit and Intercity Rail Capital	Buses to be procured must provide a direct, meaningful, and assured benefit within and/or to disadvantaged communities.	California State Transportation Agency/Competitive
Low Carbon Transit Operations	Buses to be procured must be used to support new or expanded service. At least 50% of the total funds an agency receives must be expended on projects that will benefit disadvantaged communities.	California Department of Transportation/Formula
Affordable Housing and Sustainable Communities	Buses to be procured must benefit disadvantaged communities in transit oriented development or integrated community project areas. Requires 50% of available funds to be invested in projects that benefit disadvantaged communities.	Strategic Growth Council/Competitive
Carl Moyer Memorial Air Quality Standards Attainment	The procurement of buses must not be to comply with any regulation, memorandum of understanding, or other legal mandate. The maximum grant amounts for the procurement of each bus for fleet expansion or for replacement are currently limited to 25% of the cost and \$60,000, respectively.	South Coast Air Quality Management District/Competitive

**ELIGIBLE STATE AND LOCAL FUNDING SOURCES FOR THE
PROCUREMENT OF ZERO-EMISSION BUSES**

SOURCE	ELIGIBILITY REQUIREMENTS	AGENCY/TYPE
Local Transportation Fund/Transportation Development Act ¹	Acquisition of buses for fleet replacement and expansion are eligible expenses only under TDA Article 4 and must comply with regional transportation plans.	State Board of Equalization/Formula
State Transit Assistance Fund/Transportation Development Act ¹	Acquisition of buses for fleet replacement and expansion are eligible expenses and must comply with regional transportation plans.	State Controller's Office/Formula
Public Transportation Account ¹	Acquisition of buses for fleet replacement and expansion are eligible expenses funded through the State Transportation Improvement Program.	Caltrans/Formula
General Revenues ¹	Metro revenue from fares, advertisement, lease and other general revenue sources may be used for fleet replacement and expansion.	Metro/Discretionary
Proposition A	Acquisition of buses for fleet replacement and expansion are eligible expenses from the 40% funding allocation category.	Metro/Formula
Proposition C	Acquisition of buses for fleet replacement and expansion are eligible expenses from the 40% funding allocation category.	Metro/Discretionary
Measure R ²	Acquisition of buses for fleet replacement and expansion are eligible expenses from the 35% funding allocation category.	Metro/Discretionary

1. Funding source is currently programmed by Metro for other competing uses.
2. In June 2013 the Metro Board of Directors approved establishing a life-of-project budget of \$30 M for zero-emission buses.

**Board Report**

File #: 2016-0706, **File Type:** Informational Report

Agenda Number: 14.

REVISED
CONSTRUCTION COMMITTEE
EXECUTIVE MANAGEMENT COMMITTEE
OCTOBER 20, 2016

SUBJECT: PROGRAM MANAGEMENT PLAN

ACTION: RECEIVE AND FILE

RECOMMENDATION

RECEIVE AND FILE report on **Metro's Program Management Plan.**

ISSUE

Metro's Program Management Plan (PMP) provides a capital project delivery roadmap on how Metro will manage and implement the Los Angeles County ~~Transportation~~ Traffic Improvement Plan (LACTIP). Metro's PMP outlines Metro's program structure, management control systems, and processes that guide the full range of activities required. Metro is prepared and is ready to execute the PMP to deliver the transportation infrastructure program in the LACTIP.

DISCUSSION

In June 2016, the Metro Board of Directors approved placing a sales tax ballot measure titled Los Angeles County ~~Transportation~~ Traffic Improvement Plan, officially designated as Measure M, on the November 2016 general election ballot. The LACTIP was crafted through a collaborative process with regional stakeholders and with input from the public. As Metro prepares an implementation plan, staff presents a capital project delivery roadmap in Metro's Program Management Plan. This document is a dynamic tool, which will be updated as required to best deliver the LACTIP.

The development of the PMP was a collaborative agency-wide effort led by the Program Management Department. The major objectives of the PMP are as follows:

- Summarize the LACTIP Program, including the scope, schedule and capital budget.
- Establish goals and objectives that form the basis of the LACTIP Program.
- Provide information about the organization, control systems, processes, roles and responsibilities, and lines of authority within the LACTIP Program.
- Cite definitive and authoritative references, including specific policies and procedures.
- Describe inter-relationships between the LACTIP practices and agency-wide policies and

procedures.

- Establish consistent management practices.
- Establish mechanisms for managing technical and financial risks.
- Demonstrate to stakeholders that the plan is structured in accordance with the regional planning process and federal requirements.

A summary of the Program Management Plan is outlined in Attachment A and the Executive Summary is included in Attachment B.

FINANCIAL IMPACT

Metro's Program Management Plan does not have any specific budgetary impact or financial impacts. Staff will return to the Board with any adjustments to approved budgets through the FY2017 mid-year budget adjustments and/or separate Board action items.

NEXT STEPS

Staff will execute and implement the Program Management Plan, if the voters approve Measure M in November. In addition to this capital project delivery roadmap, staff will prepare and present to the Board a Program Support Plan outlining the support plan necessary to administer and manage the Program.

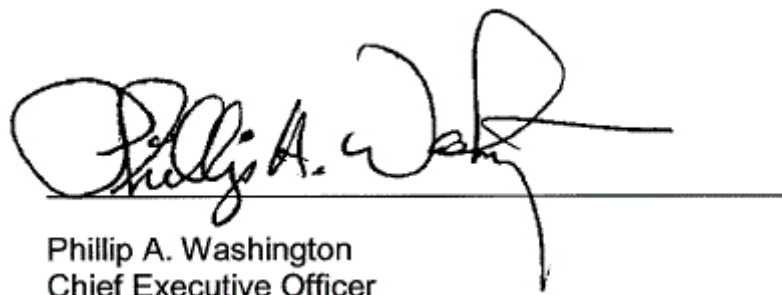
ATTACHMENTS

Attachment A - Program Management Plan Presentation

Attachment B - Program Management Plan Executive Summary

Prepared by: Brian Boudreau, Sr. Executive Officer, Program Control (213) 922-2474
Julie Owen, Deputy Executive Officer, Program Control (213) 922-7313

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



Phillip A. Washington
Chief Executive Officer

Program Management Plan

Program Management
Last updated: October 6, 2016

Construction Committee
October 20, 2016



PRESENTATION OVERVIEW

- PMP Objectives
- PMP Document Framework
- Contributing Departments
- Master Schedule
- Expenditure Plan
- Resources
- Strategic Initiatives
- Next Steps

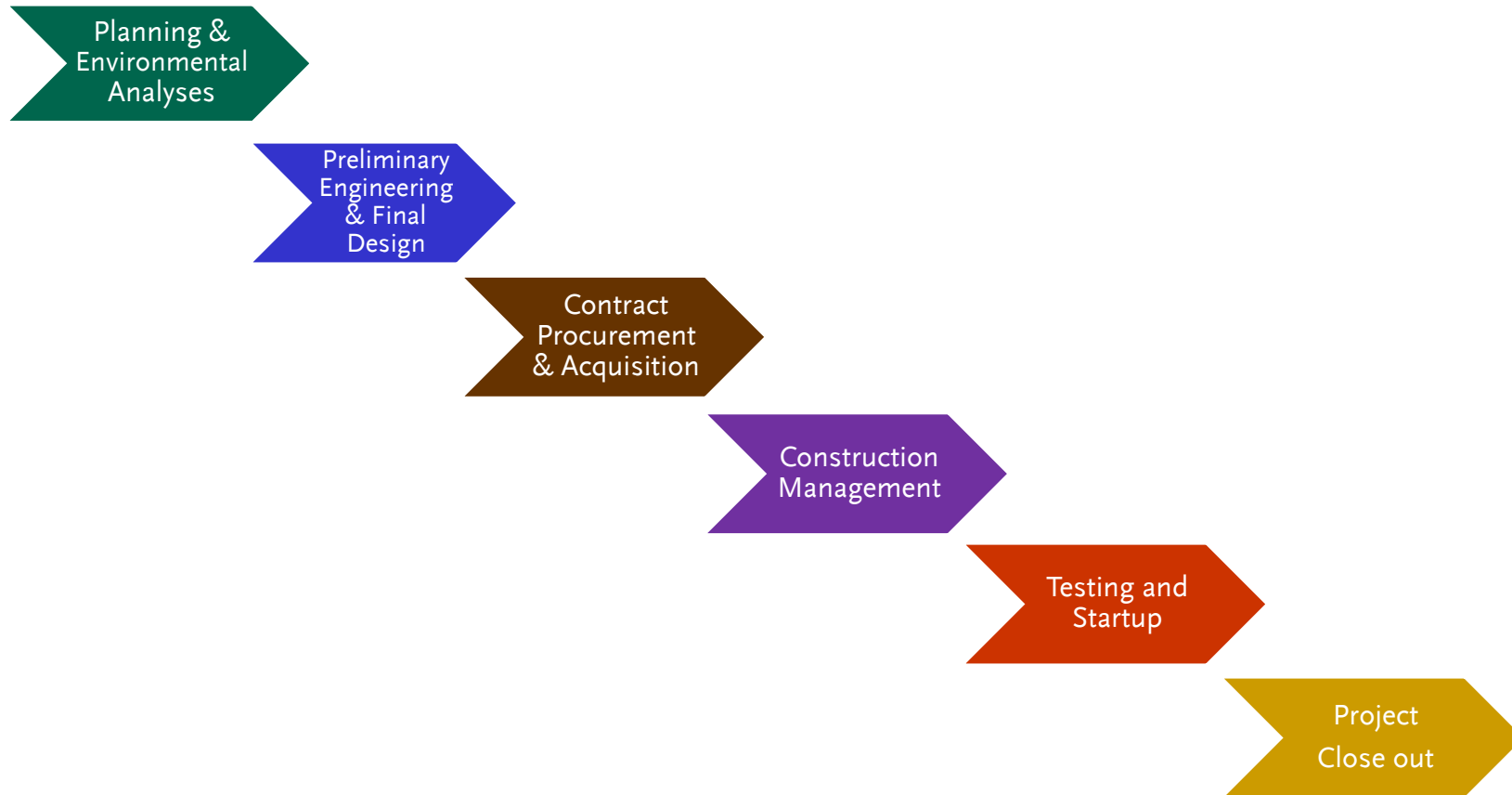
PMP OBJECTIVES

- Outlines Measure M Capital Project Delivery for Major Transit and Highway Projects
- Summarizes program, scope, schedule and budget
- Provides organization information for control systems, processes, responsibilities and authority
- Describes agency policies, procedures, and inter-relationships
- Establishes mechanisms for managing technical and financial risks
- Demonstrates stakeholder accountability and transparency

PMP DOCUMENT FRAMEWORK

- Measure M
 - Program Description
 - Program Budget
 - Program Schedule
 - Strategic Initiatives
- Roadmap to Implement Measure M
 - Agency Organization
 - Department-by-Department
 - Processes
 - Roles
 - Responsibilities

CAPITAL PROJECT LIFECYCLE PHASES



CONTRIBUTING DEPARTMENTS

Chief Executive Office	Communications
Office of Management and Budget	Employee/Labor Relations
Countywide Planning and Programming	Congestion Reduction
Program Management	Office of Extraordinary Innovation
Vendor/Contract Management	Civil Rights
County Counsel	Management Audit Services
Risk, Safety, Emergency, and Asset Management	Information Technology
System Security and Law Enforcement	Operations and Maintenance

MEASURE M TRANSIT & HIGHWAY PROJECTS



MEASURE M - MAJOR PROJECT LEGEND

Highway/Street Projects

- 3** High Desert Multi-Purpose Corridor Project (Right-of-Way)
- 4** I-5 N Capacity Enhancements (SR-14 to Lake Hughes Rd)
- 12** SR-71 Gap: I-10 to Rio Rancho Rd
- 18** SR-57/SR-60 Interchange Improvements
- 21** I-105 ExpressLane: I-405 to I-605
- 15 16** Sepulveda Pass Corridor (Busway)
- 20** I-710 South Corridor Project Phase 1
- 33** I-605/I-10 Interchange
- 29** I-5 Corridor Improvements: I-605 to I-710
- 37** I-405 South Bay Curve Improvements
- 28** I-710 South Corridor Project Phase 2
- 36** I-110 ExpressLanes Extension to I-405/I-110 Interchange
- 34** SR-60/I-605 Interchange HOV Direct Connectors
- 32** I-405/I-110 Interchange HOV Connect Ramps & Interchange Improvements
- 45** High Desert Multi-Purpose Corridor Project (Construction)
- 61** I-605 Corridor "Hot Spot" Interchange Improvements

Not shown on map: Las Virgenes/Malibu Transportation Improvements, and North County Transportation Improvements

Transit Projects

- 1** Airport Metro Connector/Green Line Extension
- 9** East San Fernando Valley Transit Corridor
- 7 8** BRT Connector Orange/Red Line to Gold Line
- 5** Gold Line Foothill Extension Phase 2B
- 2** Purple Line Extension Transit Project Section 3
- 10** West Santa Ana Transit Corridor Segment 1
- 6** Orange Line BRT Improvements (Locations TBD)
- 24 25** Gold Line Eastside Extension Phase 2 (one alignment)
- 19** Green Line Extension to Crenshaw Bl in Torrance
- 17** Vermont Transit Corridor
- 22 23** Sepulveda Pass Corridor (Rail)
- 26** West Santa Ana Transit Corridor Segment 2
- 30 31** Crenshaw Line Northern Extension
- 41** Orange Line Conversion to Light Rail
- 35** Lincoln Bl BRT
- 38** Green Line to Norwalk Metrolink Station
- 40** Sepulveda Pass Corridor Westwood to Airport Metro Connector
- 44** Gold Line Eastside Extension Phase 2 (second alignment)

Not shown on map: Crenshaw/LAX Track Enhancement Project, Complete LA River Bike Path and LA River Waterway, System Bike Path, City of San Fernando Bike Master Plan, Historic Downtown Streetcar, North San Fernando Valley BRT Improvements, Arroyo Verdugo Transportation Improvements, Regional Rail and Metrolink Improvements, and South Bay Transportation Improvements



MEASURE M EXPENDITURE PLAN

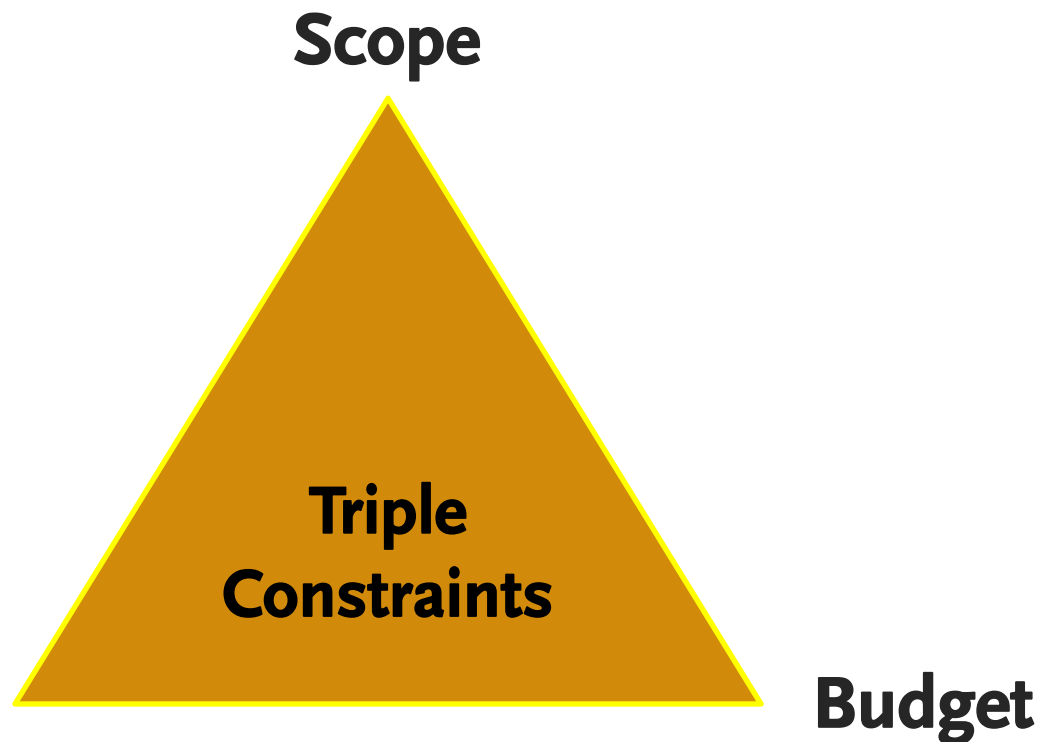
Subfund	Program	% of Sales Tax (net of Admin)	First Year Amount (FY 2018)	FY 2018 - FY 2032 (15 Years)	FY 2033 - FY 2047 (15 Years)	FY 2048 - FY 2057 (10 Years)	FY 2018 - FY 2057 (40 Years)	
Transit Operating & Maintenance	Metro Rail Operations	5%	\$ 42	\$ 850	\$ 2,320	\$ 2,810	\$ 5,980	
	Transit Operations (Metro & Municipal Providers)	20%	\$ 169	\$ 3,400	\$ 9,280	\$ 11,240	\$ 23,920	
	ADA Paratransit for the Disabled; Metro Discounts for Seniors and Students	2%	\$ 17	\$ 340	\$ 930	\$ 1,120	\$ 2,390	
Transit, First/Last Mile (Capital)	Transit Construction (Includes System Connectivity Projects - Airports, Union Station, and Countywide BRT)	35%	\$ 296	\$ 5,960	\$ 16,230	\$ 19,670	\$ 41,860	
	Metro State of Good Repair	2%	\$ 17	\$ 340	\$ 930	\$ 1,120	\$ 2,390	
Highway, Active Transportation, Complete Streets (Capital)	Highway Construction (includes System Connectivity Projects - Ports, Highway Congestion Programs, Goods Movement)	17%	\$ 144	\$ 2,890	\$ 7,880	\$ 9,560	\$ 20,330	
	Metro Active Transportation Program (Bicycle, Pedestrian, Complete Streets)	2%	\$ 17	\$ 340	\$ 930	\$ 1,120	\$ 2,390	
Local Return / Regional Rail	Local Return - Base (Local Projects and Transit Services)	16%	\$ 136	\$ 2,720	\$ 7,420	\$ 8,990	\$ 19,130	
	Local Return / Regional Rail (Beginning FY 2040)				3% / 1% →	\$ 690	\$ 2,240	\$ 2,930
	Regional Rail	1%	\$ 8	\$ 170	\$ 460	\$ 560	\$ 1,200	
TOTAL PROGRAMS			\$ 847	\$ 17,010	\$ 46,380	\$ 56,190	\$ 119,590	
Administration /Local Return	0.5% for Administration	0.5%	\$ 4	\$ 85	\$ 230	\$ 280	\$ 600	
	1.0% Local Return	1.0%	\$ 8	\$ 170	\$ 460	\$ 560	\$ 1,200	
GRAND TOTAL			\$ 860	\$ 17,265	\$ 47,070	\$ 57,030	\$ 121,390	



PROJECT MANAGEMENT



One side of the triangle cannot be changed without affecting the other sides:

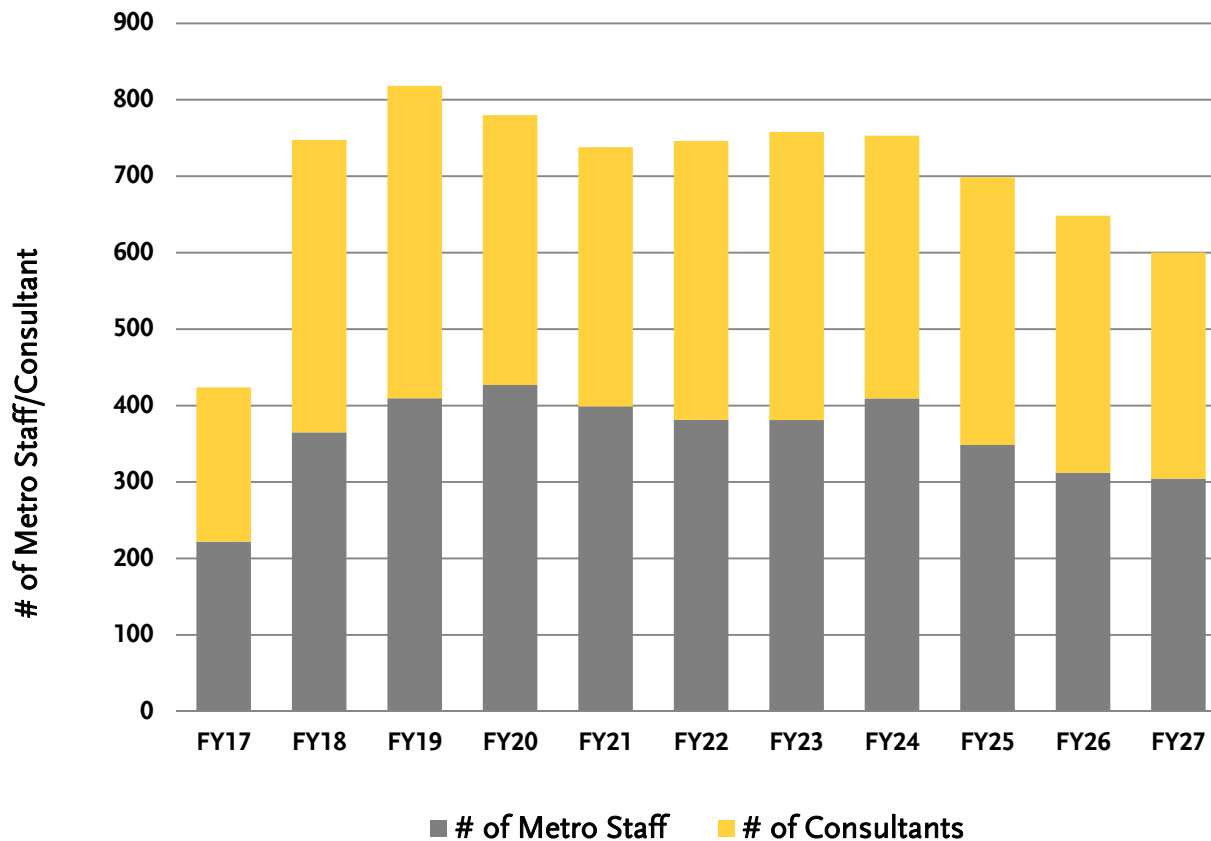


PROJECT DELIVERY STAFFING

- **Focus on Project Delivery Staffing**
 - Utilize recent project historical staffing levels for project staff modelling
 - Apply 50/50 blend of Metro staff/consultants
 - Re-assign staff to new projects upon completion
 - Actual staffing will depend on exact timing of projects, delivery methods, and streamlining initiatives
- **Preliminary Projections for 1st Decade**
 - Metro staff averages approximately 374
 - Consultant staff averages approximately 390

PRELIMINARY STAFFING

- Preliminary Project Delivery Staffing First Decade



STRATEGIC INITIATIVES - INTERNAL

- **Staff Capacity/Capability**
 - Right-size the Metro Organization
 - Strategic Consultant Use
 - Attract, Train, Retain Core Staff
 - Grow Through Succession Planning
 - Partner with Community Colleges to Develop Transportation Discipline Curriculums
 - Streamline/Automate Processes for Efficiency

STRATEGIC INITIATIVES - INTERNAL

- **Strengthen Project Budgeting Process**
 - Engage and Expand Cost Estimating in Development of Project Estimates/Budgets
 - Estimates to Reflect Current Project Scope, Schedule, and Costs
 - Commence Risk Assessments Early and Factor Effects into Project Estimates
 - Establish LOP Budget After Adequate Engineering and Design or Bids are Received for Construction
 - Conduct Annual Program Evaluation (APE) Review
 - Manage Project Scope to Deliver Projects On-time and Within Budget

STRATEGIC INITIATIVES - INTERNAL

- **Quality Management**
 - Quality Strategic Planning
 - Incorporate Best Practices
 - Establish Quality Audits

- **Update Technical Documents**
 - Incorporate Lessons Learned
 - Review Parameters Prescriptive vs. Performance
 - Reduce Submittals and Approvals
 - Promote Emerging Technologies
 - Analyze Commercial/Claims Perspective

STRATEGIC INITIATIVES - INTERNAL

- **Innovate Procurement Process**
 - Review Potential Alternative Delivery Methods/PPP
 - Facilitate Private Sector Innovation
 - Streamline Process and Documentation
 - Procurement Strategic Planning
 - Project Pre-Planning
 - Increase Competition
 - Increase Small Business Opportunities

STRATEGIC INITIATIVES - INTERNAL

- **Third Party Utilities**
 - Incorporate Lessons Learned
 - Perform Utility Strategic Planning
 - Establish Municipal/Utility Task Force
 - Analyze Organizational Structure/Co-Location
 - Establish Bench Contractors
 - Expand Pool of Contractors
 - Expedite Lead-In Activities

STRATEGIC INITIATIVES - EXTERNAL

- **Teaming With External Jurisdictions**
 - Establish Executive Level Single Point of Contact
 - Perform Joint Strategic Pre-Planning
 - Streamline Master Cooperative Agreement
 - Establish Joint Oversight Committee
 - Establish Mutually Acceptable Design Criteria
 - Co-locate Key Staff
 - Define Maintenance Responsibilities
 - Streamline Approval and Permit Processes

STRATEGIC INITIATIVES - EXTERNAL

- **Teaming With Caltrans**
 - Initiate Partnering Program
 - Implement Lessons Learned Program
 - Establish Management/Communications Plan
 - Establish Strategic Implementation Plan
 - Establish Project Management Plans
 - Develop Interagency Agreement
 - Promote Staff Co-Location
 - Provide Joint Coordination with COG's

NEXT STEPS

- Ballot Measure Success
- Implement PMP
- Continue Extensive Community Outreach
- Update Plan as Required
- Develop Program Support Plan
- Deliver Projects On Time and Within Budget





PROGRAM MANAGEMENT PLAN

EXECUTIVE SUMMARY

MEASURE M
October 2016

Draft

EXECUTIVE SUMMARY

The Los Angeles County Metropolitan Transportation Authority (Metro) has developed the Los Angeles County Traffic Improvement Plan (LACTIP) or “Measure M” as a way to address new transit and highway projects, enhanced bus and rail operations, and several other transportation improvements in Los Angeles County. Metro’s Program Management Plan serves as a strategic framework for Measure M Capital Project Delivery and provides a roadmap on how Metro will manage and implement this ambitious transportation infrastructure program if voters approve the Measure in November. The Program Management Plan summarizes program scope, schedule and budget; provides organizational information for control systems, processes, responsibilities and authority; describes agency policies, procedures and interrelationships; establishes mechanisms for managing technical and financial risks and demonstrates stakeholder accountability and transparency.

Measure M is expected to generate an estimated \$860 million a year in 2017 dollars. Based on the latest economic forecast by the Los Angeles Economic Development Corporation, the LACTIP would add 465,690 new jobs across the region, stimulate \$79.3 billion in economic output in Southern California, and fund 40 major highway and transit projects in the first 40 years. The goals of Measure M include easing traffic congestion, improving freeway traffic flow; expanding rail and rapid transit systems and improving system connectivity; repaving local streets, repairing potholes, and synchronizing signals; making public transportation more accessible, convenient and affordable for seniors, students, and the disabled; earthquake retrofitting bridges and keeping the transit and highway system safe and in good working condition; embracing technology and innovation; creating jobs, reducing pollution and generating local economic benefits; providing accountability and transparency by protecting and monitoring the public’s investment.

The overall program budget for the first 40 years focuses on Capital Project Delivery which includes \$41.8 billion Transit Construction, \$2.39 billion Metro State of Good Repair, and \$20.33 billion Highway Construction. The Measure M Program Master Schedule outlines project delivery across the lifecycle including planning and environmental analysis, preliminary engineering and final design, contract procurement and real estate acquisition, construction management, testing and start-up as well as outlines opportunities for acceleration of projects. A Program Support Plan will be issued at a future date to address other elements of Measure M.

Strategic Initiatives

A series of strategic initiatives have been identified to address planned enhancements for Measure M Capital Project Delivery and how this transportation infrastructure program will be managed and implemented:

- **Staff Capacity Planning** - Capital project delivery of the infrastructure program in the Plan is highly dependent on providing sufficient staffing resources. Staffing needs for the Measure M projects were forecasted based on utilizing the right size for Metro, strategic consultant use, the ability to attract, train and retain core staff, growing through succession planning, streamlining /automating processes for efficiency, and partnering with community colleges to develop transportation in discipline curriculums.

- **Acquisition Process Innovation** - The construction industry differs from most other industries as contracts developed for individual projects, while containing a core set of standard requirements, are developed and adapted to suit the specific requirements of each project. This can be further complicated by the different types of contract delivery methods that have evolved over the years. Any efficiency that can be developed in either the procurement process or the procurement document can, when repeated over the life of a program of projects, save significant time and cost and improve the flow of procurements and implementation. Procurement process initiatives include reviewing potential Alternative Delivery Methods / PPP, facilitating private sector innovation, streamlining process and documentation, procurement strategic planning, project pre-planning, increasing competition, and increasing small business opportunities.
- **Strengthen the Project Budget Process** – With the large increase in both the number and value of projects being delivered under Measure M, it is essential that accurate Life of Project (LOP) budgets be developed for each project. Strengthening the project budget process includes expanding the use of Cost Estimating staff in the development of independent cost estimates and project budgets, working closely with the respective Departments during the early stages of project development, commencing risk assessments at the earliest practicable time in the project life, ensuring continuity of approach across the program, continuing Annual Program Evaluation process, establishing the LOP budget once projects have completed adequate engineering and design or bids are received for construction, and actively manage project scope to deliver projects on-time and within budget.
- **Technical Documents** – The Technical Documents initiative will entail the review of Metro's Design Criteria, Specifications, Standard and Directive Drawings, in conjunction with the innovation of Metro's procurement process and related documentation. This includes incorporating lessons learned, reviewing contract specification parameters (prescriptive vs performance), reducing submittals and approvals, promoting emerging technologies, and analyzing contract documents from a commercial/claims perspective.
- **Quality Management** – The Quality Management initiative will involve a thorough review and revision of Metro's Quality Management Program (QMP) and of the Quality Management Program Manual (QMPM) to incorporate Lessons Learned from Metro's projects and taking into account national Best Practices and experience from other transit agencies. The establishment of Quality Audit strategies, schedules and requirements, the capturing of quality records and audit data and tailored quality reporting will be automated, using State of the Art technology.
- **Third Party Utilities** – One area that has the most impact on the success of project delivery, and thus the cost and schedule of a project, is the third party interface, particularly utility relocations. Utilities are widely recognized as one of the top two causes of delay in project development and delivery. Third Party Utility initiatives being implemented include incorporating lessons learned, performing utility strategic planning, establishing Municipal/Utility Task Force, analyzing organizational structure/co-location, establishing bench contractors, expanding the pool of contractors and expediting lead-in activities or undertaking them earlier in the Project Life.

- **Teaming with External Jurisdictions** – The success of Stakeholder and Third Party Coordination is a major contributor to project delivery. While this section references good cooperation and coordination between the City of Los Angeles and Metro, close coordination with all interfacing governmental entities is important and this section applies equally to all such entities and cities. This strategic initiative involves establishing Executive Level single point of contact, performing joint strategic pre-planning, streamlining Master Cooperative Agreements, establishing a Joint Oversight Committee, establishing mutually acceptable design criteria, co-locating key staff, defining maintenance responsibilities, and streamlining the approval and permit process.
- **Teaming with Caltrans** – The Metro Highway Program is responsible for the programming and delivery of transportation improvements on the State Highway System and local arterials in Los Angeles County consistent with the Metro Long Range Transportation Plan (LRTP) and the projects/programs approved by the Metro Board under various sales tax measures. In this capacity, Metro works closely with the California Department of Transportation (Caltrans), the subregional Councils of Governments (COGs) and the cities in Los Angeles County to deliver regional, subregional, and local highway/roadway improvement projects. As local funding for project implementation increases, so does the need for greater coordination and communication between the parties. This strategic initiative involves initiating a Partnering Program, implementing a Lessons Learned Program, establishing a Management / Communications Plan, establishing a Strategic Implementation Plan, establishing Project Management Plans, developing an Interagency Agreement, promoting staff co-location and providing joint coordination with the Council of Governments.

Metro Department Functions

The Management Organization in the Program Management Plan describes Metro organizational structure and the responsibilities of staff that will be involved in the Capital Program. There are three management levels overseeing delivery of Metro Capital Program: the Board of Directors, who provide policy direction; the Chief Executive Officer and his direct reports, who provide executive direction; and the Projects Teams, who are responsible for implementation of the projects.

The Office of the CEO (OCEO) – The OCEO supports the CEO in carrying out his vision for the agency. The OCEO is the central point of contact for the Board of Directors, Board staff, and employees. Supporting the CEO requires understanding the vision, mission, and goals, maintaining frequent communication with the Board offices, working with staff to elevate issues, ensuring crossing departmental coordination and collaboration.

Finance & Budget - Metro's Finance & Budget participates extensively in Metro's fiscal and project delivery cycles. Metro's Finance Business Unit is charged with maintaining long term fiscal stability in an aggressive construction environment. In support of Metro's project delivery efforts, the Finance & Budget Business Unit is comprised of five sub-units as follows: Treasury, Office of Management and Budget (OMB), Accounting, Local Programming and Transit Access Pass (TAP).

Countywide Planning and Development – The Countywide Planning and Development Department is responsible for long range planning, regional transit planning and systems analysis and research within Los Angeles County. This department develops and implements complex countywide plans and programs such as Long Range and Short Range Transportation Plans and manages the Biennial Call for Projects competitive grant process. Major efforts include the implementation of the Congestion Management Program (CMP) which enables cities to receive annual gas tax apportionments for meeting statutory CMP requirements and coordination with South Coast Air Quality Management District to ensure that the \$297.6 billion of LRTP projects are in compliance with the federal Clean Air Act. This unit also provides technical planning analysis including travel demand modeling, geographic information system analysis, and census data analysis. These tools are essential to the development of corridor and countywide studies, and are required for the approval of federal transportation funds.

The Strategic Financial Planning group is responsible for integrating diverse federal, state, local, and private financial resources to accomplish the Long Range Transportation Plan, as periodically updated by the Metro Board of Directors. In doing so, this unit seeks to preserve local financial resources and funding flexibility to enable the delivery of planned services and capital projects, including existing operating commitments, state of good repair needs and improvements to the regional transportation system in Los Angeles County. Grants management and administration activities include grant development, project and program monitoring, reporting and financial oversight. Working with federal, state and regional/local funding policy makers and partners, this group seeks to optimize policies and maximize funding for Los Angeles County transportation programs and projects by obtaining and overseeing formula and discretionary federal, state and regional/local grant funds and federal loans for the agency and its sub-grantees.

The Transit, Highway and Regional Rail Planning group provides integrated support through all phases of a project's life, from early project planning through construction. While Planning's role evolves through the life of the project, their involvement is essential to each project's success. As the lead through the Planning and Environmental phases, the Planning group acquires a trove of project knowledge and builds stakeholder relationships that help mitigate areas of development risk during the design/construction phases. Looking forward, more effective coordination between Planning and Program Management and early community engagement will be critical to the departments' collective ability to deliver on the Metro capital program. Property acquisition and management of real property is the responsibility of the Real Estate section in Transit Planning.

Program Management – The Program Management Department is focused on the successful delivery of capital projects, including transit, highway, and regional rail projects. Safety, quality, and on-time/on-budget delivery while mitigating stakeholders issues are major goals. The department comprises of the following functions: Program Control; Engineering; Transit, Highway and Regional Rail and Facility Capital Project Delivery; Environmental Compliance & Sustainability.

Program Control assists in managing scope, project status, budgets, schedules, estimates, document control, change control, risk management and reporting. Program Control serves as

the central point of coordination across departments to ensure projects are delivered within cost, schedule, and risk expectations. Program controls support is also provided for activities including program reporting, enterprise standards and tool development, project management training and process improvements. Staff support is provided for the environmental planning and preliminary engineering, final design engineering and construction, and maintenance and operations phases.

Engineering is composed of engineering staff across all Engineering and Architectural fields needed for the design and construction of Metro rail systems including tunnel engineering, structural engineering, geotechnical engineering, civil and track work engineering, architectural, mechanical, electrical and plumbing (MEP) engineering and systems engineering. In addition, the Engineering group supports Metro's projects for their coordination with all Third Parties including the City of Los Angeles departments, mainly Bureau of Engineering (BOE) and Department of Transportation (DOT), but also Bureau of Sanitation (BOS), Bureau of Street Services (BSS), Bureau of Street Lighting (BSL) and Contract Administration (CONAD). Engineering also houses the Quality Assurance/Quality Control (QA/ QC) Department, which provides Quality Management to all Metro projects.

The Transit unit of the Program Management Department manages Transit projects from the Project Development Phase, through Construction and Project Handover. Metro's Transit projects include a broad range of infrastructure and technology, from vertical structures required to support operations and security activities to horizontal infrastructure such as Light Rail Transit and Subways.

The Metro Highway Program is responsible for the cost effective and timely delivery of safe and sustainable transportation improvements on streets and freeways across Los Angeles County. In line with the Metro Long Range Transportation Plan, the Highway Program advances the planning, environmental clearance, design and construction of major capital projects such as carpool lanes, mainline widening, freeway connectors, auxiliary lanes, freeway ramp improvements, grade crossings, and sound walls. In addition, the Highway Program works with regional and local stakeholders to implement lower-cost operational improvements such as ramp metering, traffic signal synchronization, and corridor management solutions to alleviate congestion and improve travel time reliability on freeways and local arterials.

The Regional Rail unit of the Program Management Department oversees the coordination with key stakeholders including Southern California Regional Rail Authority (SCRRA), Los Angeles – San Diego – San Luis Obispo Rail Corridor (LOSSAN), California High Speed Rail Authority (CHSRA), local municipalities, as well as the communication with Metro Board of Directors and their staff. Working in coordination with SCRRA, the Regional Rail unit also manages select capital projects for major Regional Rail and other Metro capital projects and provides overall leadership of Regional Rail staff to ensure that all Regional Rail capital projects and planning efforts are completed on time and within budget.

The Facilities Capital Projects Unit is responsible for all vertical construction and capital improvements for Metro's operational bus and rail facilities. The Unit supports other capital projects with construction and design support for projects not directly managed by the Facilities Capital Projects. The Unit is also responsible for management and coordination of all joint



development projects at Metro stations, for engineering support and design work for Facilities Maintenance and General Services at facilities and headquarters, and technical support for sustainability projects. The Unit assists in other major rail programs and planning with management of their rail facility projects, such as the yards, new stations, etc.

The Environmental Compliance and Sustainability Unit provides general support services and project management to Metro's Planning, Construction, and Operations Business units. The Unit is comprised of three functions: Environmental Services (including compliance, remediation, and liabilities reduction); Sustainability Services (including Policy Implementation, Environmental Management System, and Carbon Credits Administration); and Project Management of Sustainability Related Projects/Infrastructure.

Vendor / Contract Management – The Vendor/Contract Management Department (V/CM) has the responsibility to procure goods and services for Metro at a fair and reasonable price while exercising good business practices and the post award administration for contract compliance. All construction contracts (Design-Bid-Build (DBB), Design-Build (DB), Design-Build-Operate-Maintain (DBOM), Public-Private Partnership (P3), etc.) that exceed \$2,500,000 shall be subject to Metro's Project Labor Agreement and Construction Career Policy and Local Hire Initiative. Metro's Vendor Portal (Metro/Business.net) links contractors, vendors, small businesses (DBE/SBE/DVBE), medium size businesses, and suppliers to all necessary information for contracting opportunities, how to do business with Metro, and requirements for all solicitations.

Risk, Safety, Emergency Management, & Asset Management – The Risk, Safety, Emergency Management & Asset Management Department protects the assets of the public by identifying, evaluating and responding to the risk exposures of Metro. The Risk section assess individual project risk and potential for damages across a wide variety of risk sources. Insurance provides an acceptable method of risk transference that ensures the adequate capital is required in the event of claims. Insurance also helps ensure that all of the various risk exposures are addressed by contractors. The Corporate Safety section provides leadership and dedicates its resources to promote the philosophy of continuous safety improvement (Safety's First!) for the benefit of Metro's employees, customers, community, and business partners.

System Security & Law Enforcement – The Systems Security and Law Enforcement Department is responsible to develop, distribute, implement, and administer comprehensive security and law enforcement procedures for all Metro operations.

Communications –The Metro Communications Department will develop a Strategic Communications Plan to establish and maintain a high level of communication and outreach to various stakeholders throughout the implementation of the Measure M program. The public outreach, engagement and communication functions are essential parts of keeping communities informed and engaged throughout the Measure M implementation process.

Employee / Labor Relations – Metro has organized services that recruit, develop and support the workforce within the Department of Employee and Labor Relations. The Department is organized with three Units; General Services, Labor Relations and Talent Management. These services are designed to support the core business of Metro. The General Services division manages all printing services, travel coordination and the maintenance of the Gateway Headquarters facilities. The Labor Relations division conducts all of Metro's negotiations leading to Collective Bargaining Agreements with the Union partners. The Talent Management

division is responsible for talent acquisition and talent development. Team members manage recruitment and selection, including testing and background checking for over 2500 hires each year.

Congestion Reduction Department – The Congestion Reduction Department directs and manages the development of congestion reduction operating plans and implementation schedules, including revenue projections, environmental effects, mobility impacts on legislative requirements and technical feasibility. The Congestion Reduction department manages the maintenance of the tolling infrastructure on the I-10 and I-110 ExpressLanes. This includes the toll gantries, signage, in pavement sensors, cameras, enforcement beacons, and dynamic message signs. Roadway related items such as pavement maintenance and striping, median barriers, and graffiti removal are managed by Caltrans in coordination with ExpressLanes staff.

Office of Extraordinary Innovation – The Office of Extraordinary Innovation (OEI) provides support to the Program Management Department in all matters relating to innovation, unsolicited proposals, and public-private partnerships, such as procurement support, project delivery support, research to support program delivery, evaluation of unsolicited proposals, and analysis supporting the incorporation of new technologies on projects. Support to the Program Management Department may include such things as assistance in contract negotiations, the establishment of contract performance measures, consultant advisory services, and other assistance throughout the project delivery process, as requested by the Program Management Department or Metro's Senior Leadership Team.

Civil Rights – The Civil Rights Department ensures that Metro meets or exceeds Federal, State, and Local Civil Rights requirements by promoting universal equity for customers and employees. Civil Rights Program Compliance will evaluate services, programs, and facilities; educate employees and customers; monitor and advise on Civil Rights compliance; conduct investigations and make recommendations on corrective actions; and eliminate barriers in employment opportunities and ensure equal access and participation in the Metro transportation system.

Management Audit Services - Metro's Management Audit Services (MAS) Department is responsible for ensuring the integrity and efficiency of Metro policies and practices, the protection of assets and revenues, compliance with law, and adequacy of internal controls. MAS performs and/or manages the following types of engagements: performance audits (efficiency and effectiveness of operations, projects, or programs, suitability of the design and effectiveness of internal controls, reliability of operational and financial information), financial and compliance audits (grant agreements, Memorandum of Understanding, audits required by Proposition A, and Proposition C, Measure R, etc.), and contract audits (pre-award, incurred cost, close out, and contract change orders).

Information Technology (IT) Services – ITS enables the achievement of Metro's business goals and objectives through the use of innovation and technology. Key functions include Information Security, IT Operation and Service Delivery, System Architecture & Technology, Business Applications, IT Project Management Office, Corporate IT, delivering services & facilities on transportation projects, Digital Strategy & Innovation, and Research & Records Information.



Operations and Maintenance – Metro’s Operations and Maintenance department ensures the safe and reliable operation of regional bus and rail transportation infrastructure and equipment. Their focus is to continually improve the performance of Metro’s assets and to conduct Metro’s efforts in an efficient and professional manner. This mission is met by keeping all facilities, equipment, structures and utilities in good working order and at maximum efficiency. The Operations and Maintenance department works to advance preventative, predictive and responsive management of resources and to provide safe and comfortable environments for passengers and employees. Metro Operations works with Planning and Program Management to establish criteria, planning, design and construction of projects.

Metro is prepared and is ready to implement the Program Management Plan, continue extensive community outreach, develop a Program Support Plan, and continue planning and delivering one of the largest capital improvement programs in the nation.



Board Report

File #: 2016-0737, **File Type:** Oral Report / Presentation

Agenda Number: 37.

**EXECUTIVE MANAGEMENT COMMITTEE
OCTOBER 20, 2016**

RECEIVE oral report on **the potential role of public-private partnerships in delivering Metro projects.**

DISCUSSION

This presentation provides a general overview of public private partnerships and the role that they may play in financing and/or accelerating the delivery of Metro projects.

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Reviewed by: Joshua L. Schank, Chief Innovation Officer, (213) 922-5533

The background of the entire image is a long-exposure photograph of a train at night. The train's lights create horizontal streaks of white, blue, and red, moving from left to right across the frame. In the background, there are dark silhouettes of trees and a building with some lit windows. A street lamp with two glowing lights is visible in the upper center.

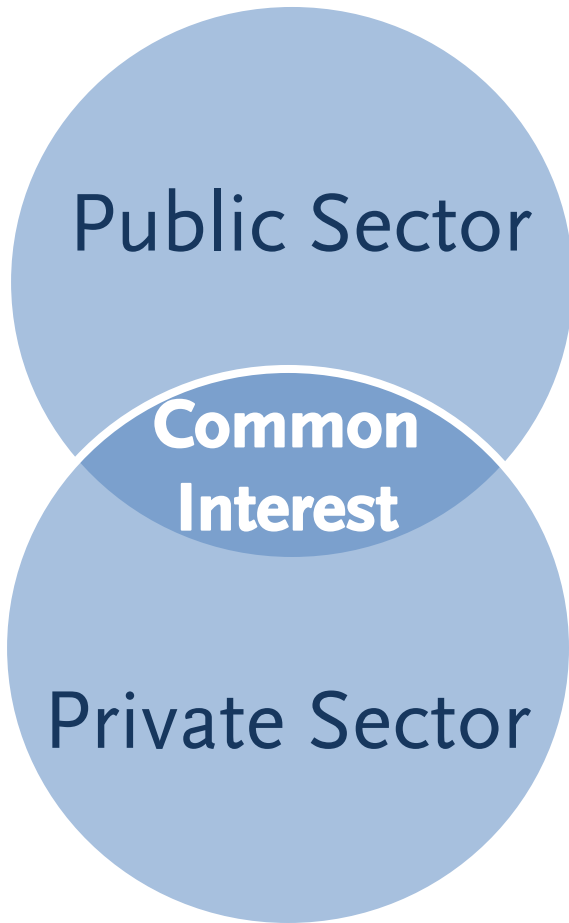
OEI

OFFICE OF EXTRAORDINARY
INNOVATION

The Potential Role of
Public-Private Partnerships
in Delivering Metro Projects



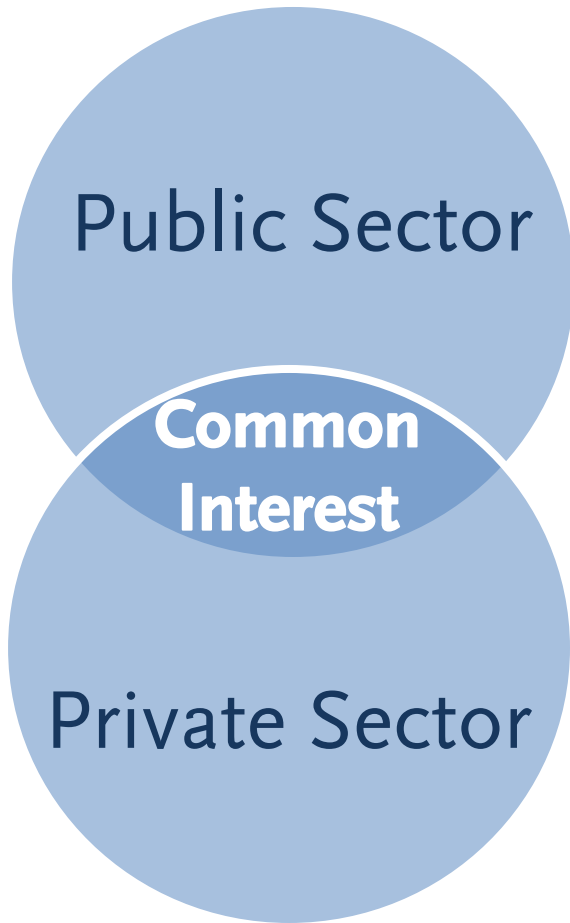
PUBLIC-PRIVATE PARTNERSHIPS (P3)



What is a Public-Private Partnership?

- > Collaboration between a public agency and a private company to deliver a public service or facility
- > Each party shares its key skills and takes on the risks it is best able to manage, leading to cost savings and project acceleration

PUBLIC-PRIVATE PARTNERSHIPS (P3)



Why use a Public-Private Partnership?

- > Brings private-sector expertise, ingenuity, and rigor to building and managing public infrastructure
- > The skills and assets of each sector are shared, as are risks and potential rewards

POTENTIAL P3 PUBLIC BENEFITS

> Faster Project Delivery Timeframes

Accelerate construction of high priority projects by compressing and overlapping project sequences

> Allows Greater Creativity & Technology Access

Use of advanced technologies or proprietary methods that are not generally available through standard procurement

> Creates New & More Flexible Funding Access

New sources of private debt and equity can be structured to be more flexible and minimize costly project risks

KEY P3 COST SAVINGS

> Construction & Life-Cycle Cost Savings

Minimizes schedule and cost overruns and creates incentives for cost savings over the life of the project

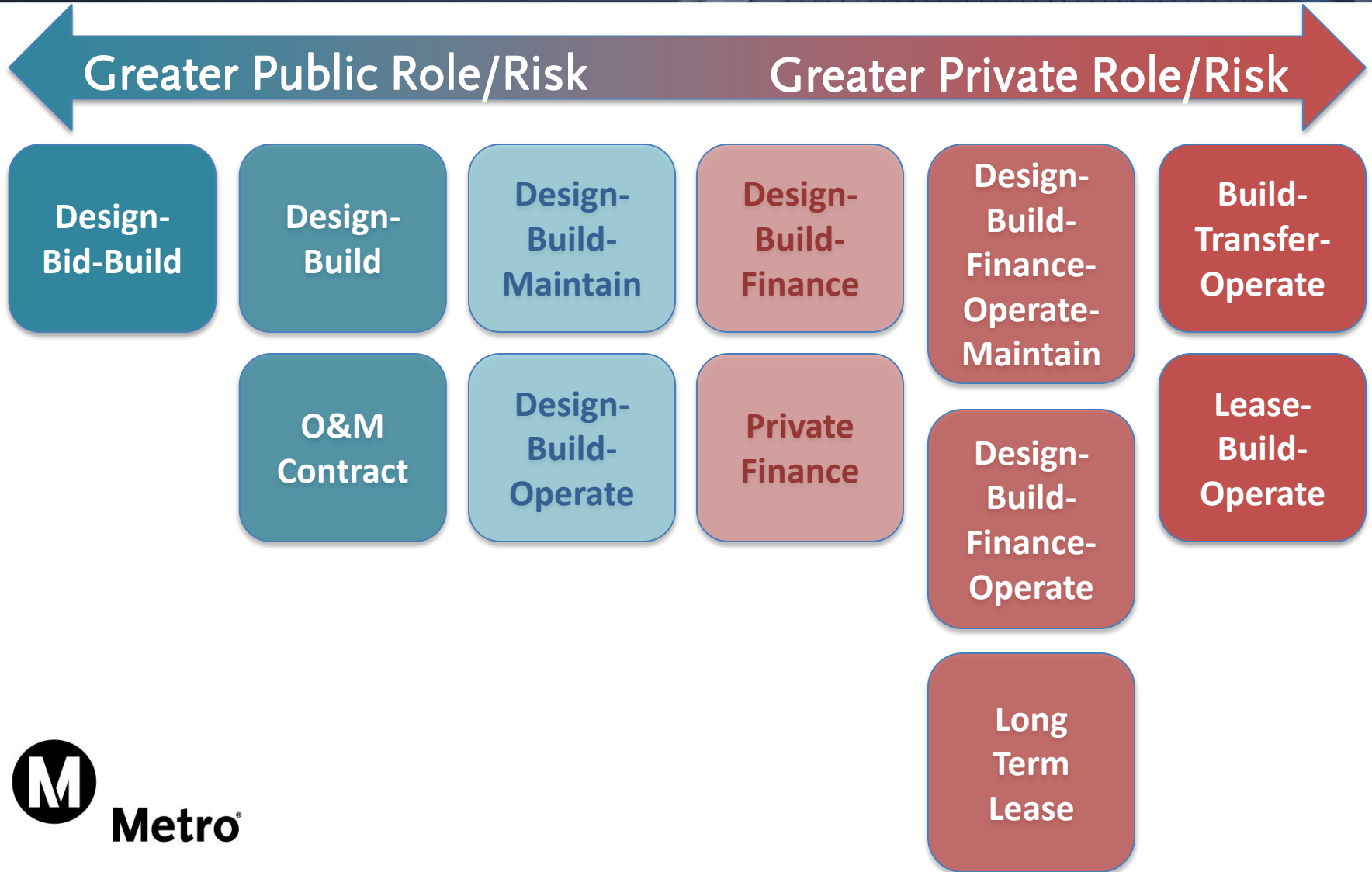
> Shifts Risks & Costs to Private Partner

Private assumption of project risks leads to more effective management and shields the public from potential costs

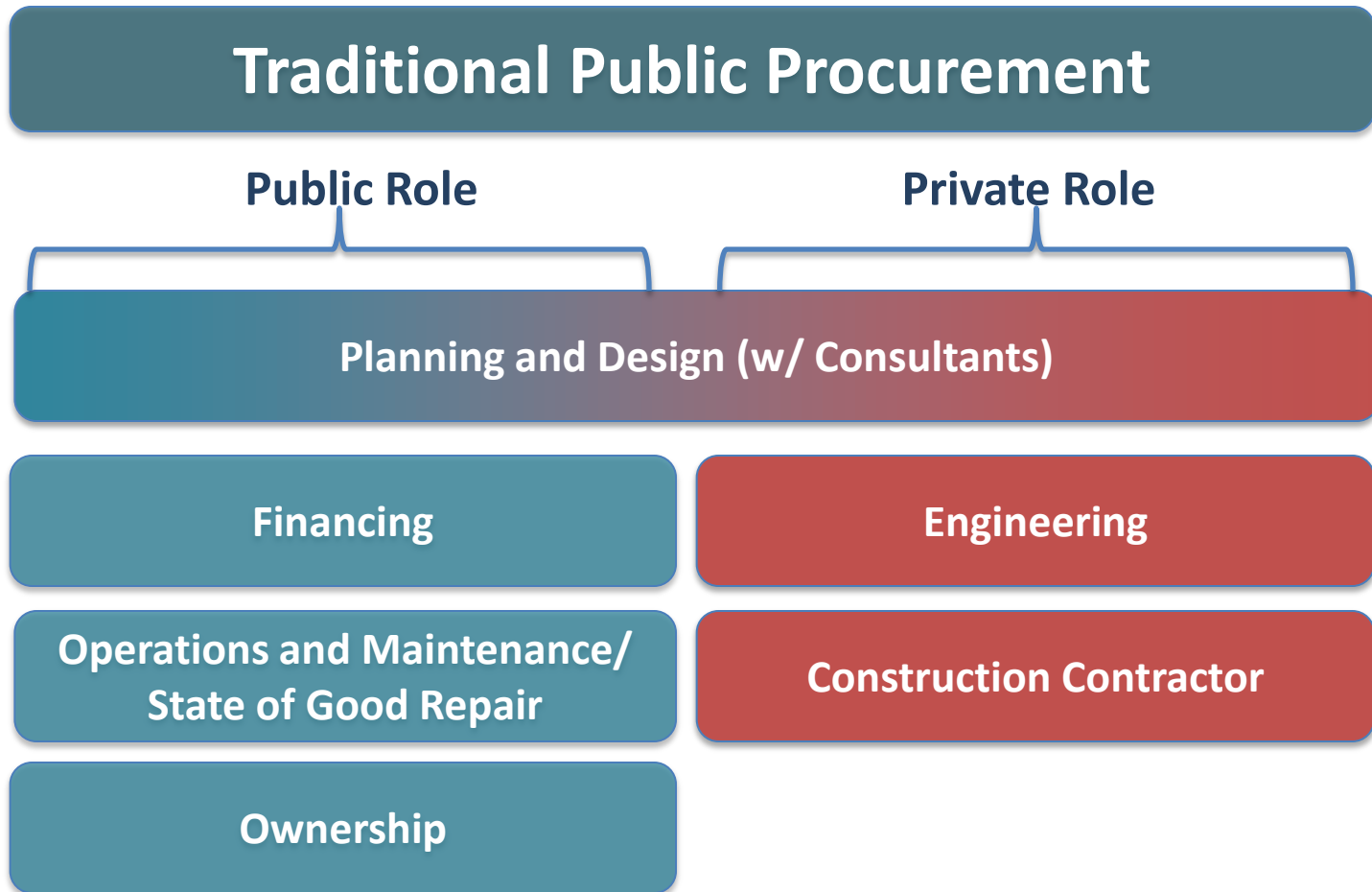
> Improves Project Performance

Performance and accountability for complex project tasks with built in financial incentives and penalties

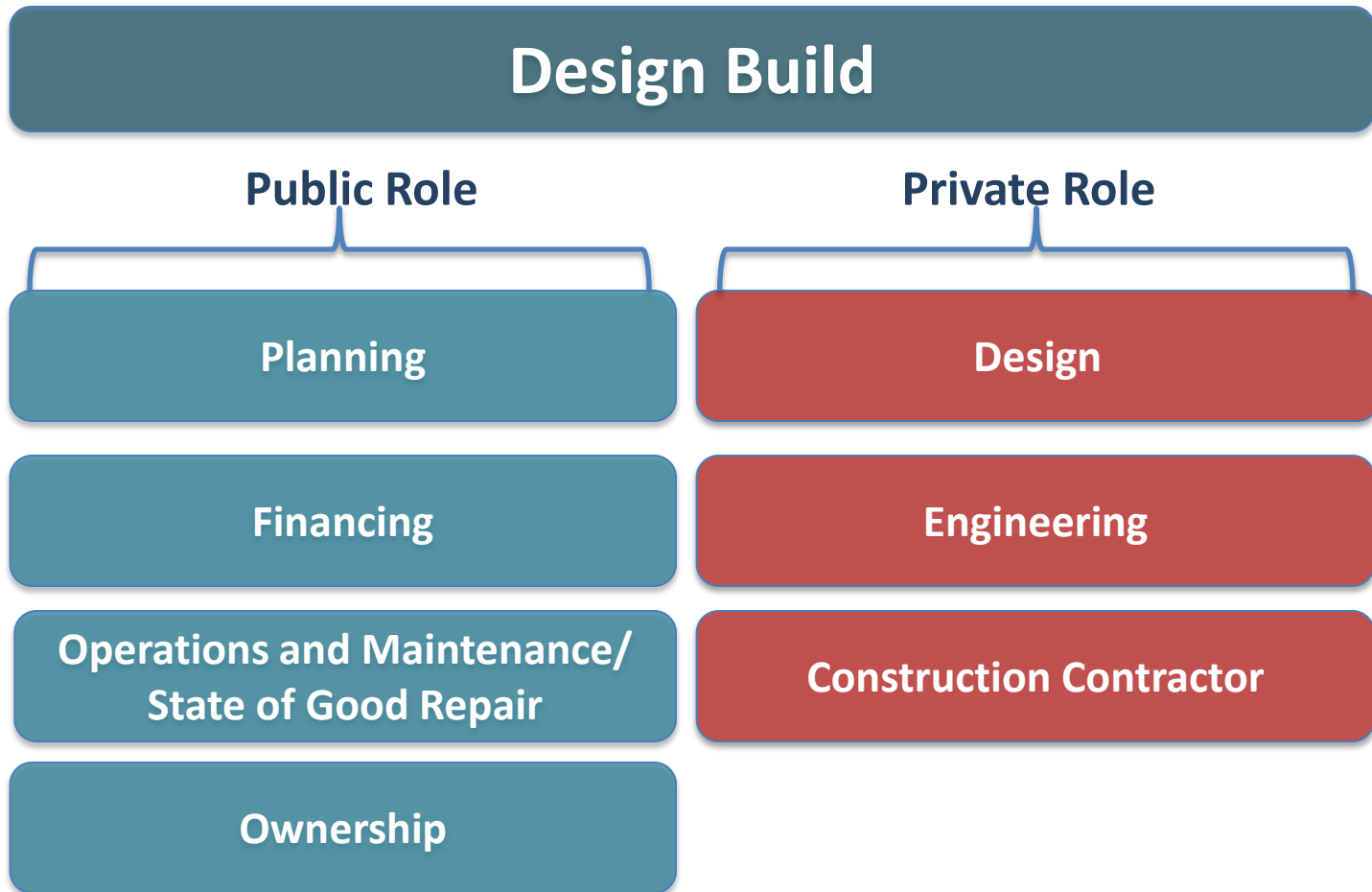
MANY DIFFERENT P3 MODELS



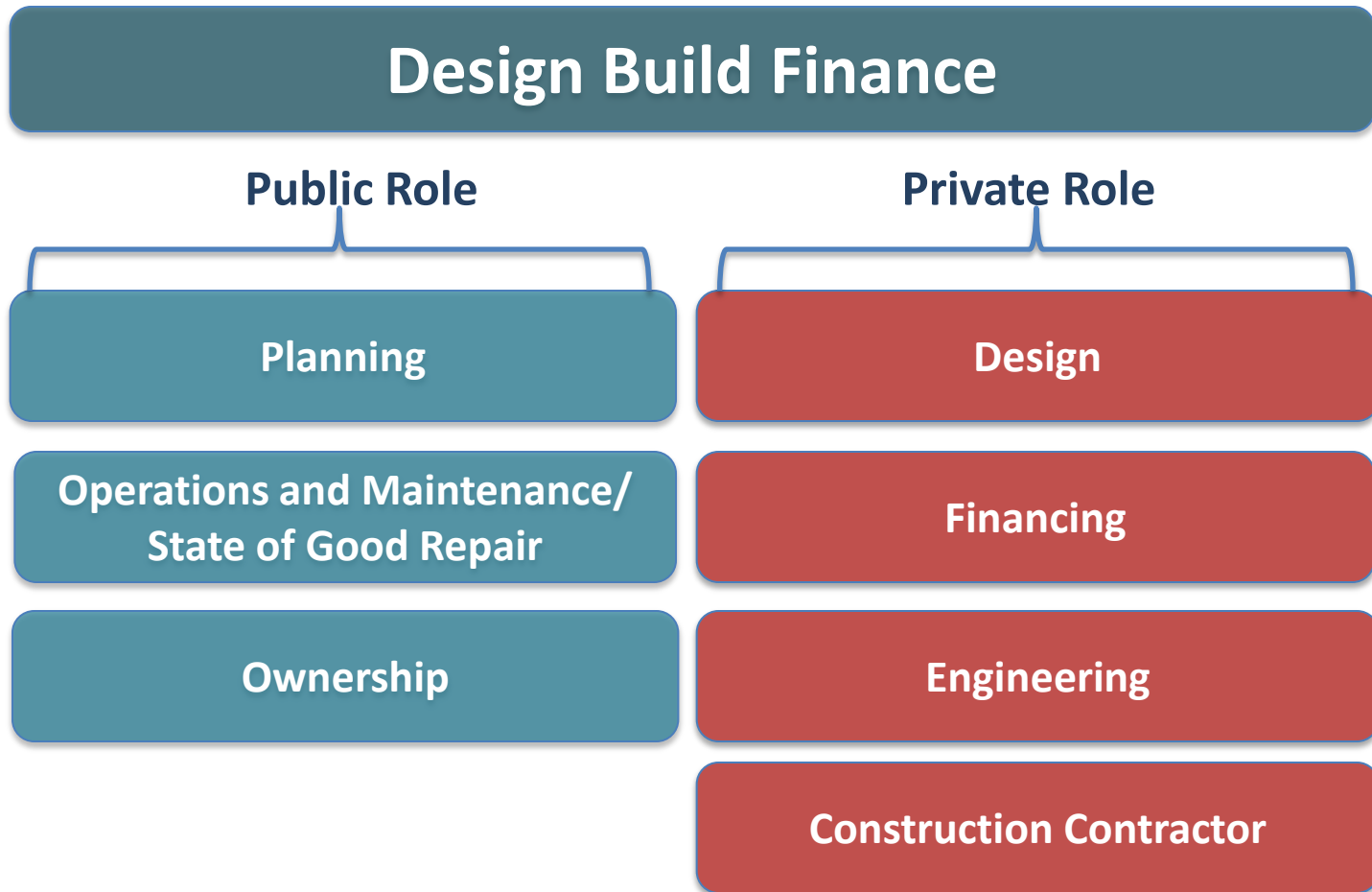
MANY DIFFERENT P3 MODELS



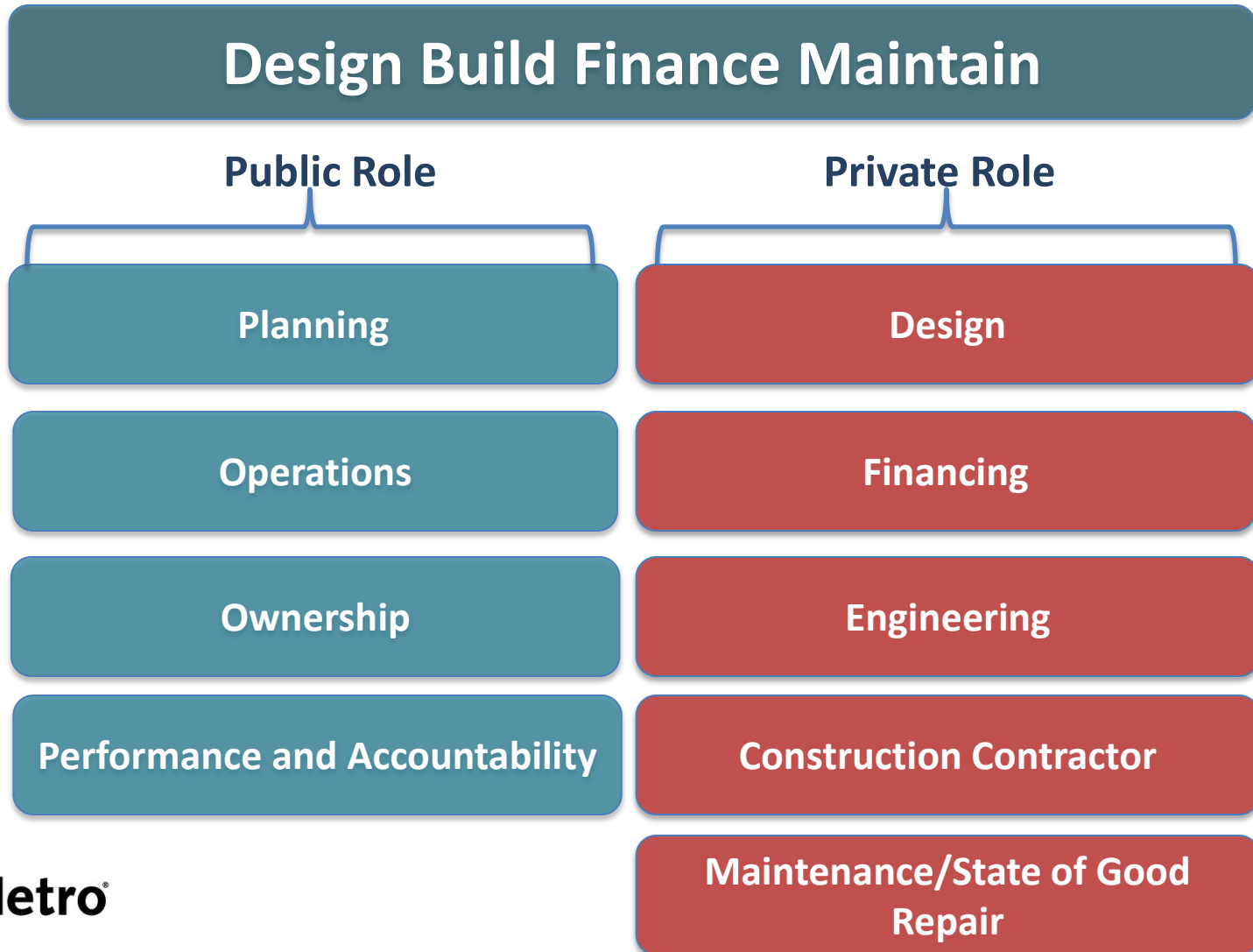
MANY DIFFERENT P3 MODELS



MANY DIFFERENT P3 MODELS



MANY DIFFERENT P3 MODELS



MANY DIFFERENT P3 MODELS

Design Build Finance Operate Maintain

Public Role

Planning

Ownership

Performance and Accountability

Private Role

Design

Financing

Engineering

Construction Contractor

Operations

Maintenance/State of Good
Repair

P3 MISCONCEPTIONS

- > P3s DO NOT privatize public resources. The public retains ownership and oversight of their investments.
- > P3s DO NOT lead to public sector job losses. Any Metro P3 must meet state and county workforce standards, and be governed by Labor agreements.
- > Public services DO NOT take a backseat to private sector profits. Projects and performance agreements are designed to maximize public benefit.
- > Smart P3s DO NOT exclude small and local contractors. P3s can and do include SBE and DBE requirements.

TYPICAL PUBLIC AND PRIVATE ROLES

Public Sector Roles

- > Corridor and project definition
- > Political/stakeholder
- > Environmental clearance
- > Financial feasibility and programming
- > Ownership, oversight and accountability

Private Sector Roles

- > Financial/cash flow
- > Project design/engineering
- > Construction and project management
- > Deadlines/milestones
- > Facility management
- > System performance



METRO P3 PRINCIPLES

- > Public interest is paramount – The top priority is securing greater value than a fully public approach
- > Value for money must be clear – The *actual financial value* of the P3 must clear, compared to a public model
- > Process must be fair and transparent – Appropriate documentation, public notice and comment, full competition
- > Public ownership and control – Private role is limited by public ownership and oversight with clear accountability mechanisms



Metro



THANK YOU



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**Board Report**

File #: 2016-0789, **File Type:** Policy**Agenda Number:** 38.

**EXECUTIVE MANAGEMENT COMMITTEE
NOVEMBER 17, 2016****SUBJECT: PROPERTY NAMING POLICY****ACTION: APPROVE REVISED PROPERTY NAMING AND CORPORATE
SPONSORSHIP/NAMING RIGHTS POLICY****RECOMMENDATION**

APPROVE revised **Property Naming Policy** with the addition of guidelines to implement and manage a Corporate Sponsorship/Naming Rights Program for the purpose of generating revenue or valued assets. (Attachment B)

ISSUE

Metro is continually looking for new ways to generate Corporate Sponsorships for the agency. In January 2016, the Metro Board of Directors approved the Risk Allocation Matrix (RAM) and creation of an Internal Savings Account intended as tools to ensure long-term financial stability and mitigate projected budget shortfalls. As part of this initial comprehensive agency-wide effort, staff identified cost saving and revenue generating initiatives that can yield deposits to the Internal Savings Account, thereby securing the sustainability of Metro's future operations and expansions.

Among the most financially significant of these initiatives is the implementation of a Corporate Sponsorship/Naming Rights program to generate revenue from Metro's property and assets. As proven by other transit agencies throughout the country, there is a substantial revenue opportunity in selling corporate sponsorships and naming rights to Metro properties, facilities, services and events.

DISCUSSION

The 2014 Board-approved Property Naming Policy (Attachment A) provides criteria for naming stations and other Metro properties through a customer-focused approach. The policy guides the naming of Metro property with four principles in mind:

- **Transit System Context** - Information as to where a property is located within the context of the entire transit system with names that are clearly distinguishable
- **Property Area Context** - Information of the location of the property within the context of the surrounding street system

- **Neighborhood Identity** - Where appropriate, acknowledging a landmark or that the property serves as an entry point to a community or neighborhood
- **Simplicity** - Names will be brief enough for quick recognition and retention and fit within signage and mapping parameters

The policy states the difference between an “Official” name approved by the Metro Board, which are used for Board documents, contracts and legal documents and notices, and an “Operational” name, which is a shorter name used for station/stop announcements and printed and electronic materials for readability and size constraints.

These clear policy points, along with the defined naming process, provide strong guidance in order for Metro to aptly name new properties and re-name existing properties when applicable.

The existing policy also provides an opportunity for Board members to bestow a special honor in the form of a dedication on rare instances to a deceased individual and reserved to honor those of substantial historical, cultural or civic significance. In a similar dedication, the Board may also honor an individual who has demonstrated a unique and extraordinary degree of service yielding a distinguishable contribution to the public transportation in Los Angeles County. Such dedications are viewed as secondary information to the property signage, but not renamed for individuals. Following Board approval, individuals will be honored with plaques where space is available.

Addition of Corporate Sponsorship/Naming Rights Program

Updating the policy to include a revenue-generating, payment-in-kind, or value-in-kind Corporate Sponsorship and Naming Rights Program is a prudent means of maximizing the value of the agency’s capital investments and assets. Including this new program in the policy will establish a cohesive and transparent process for the consideration and determination of Corporate Sponsorship opportunities for the re-naming of existing and future property, facilities, services, programs and events.

The Communications Department will administer the program as part of its overall responsibility of generating revenue through advertising and other valued assets. In preparation for developing a Corporate Sponsorship/Naming Rights program, staff researched how other transit agencies have implemented such programs (Attachment C).

Corporate Sponsorship can take on various forms in which companies contract with Metro to associate their name, identify and branding with Metro’s property, facilities, services, programs or events. Partnerships will fall into two categories:

- **Short-term Sponsorships** - Agreements extending a maximum of 12 months or less for assets such as programs, events, seasonal events, or temporary station re-namings.
- **Long-term Sponsorships** - Agreements lasting a minimum of five years for assets such as transit services, rail lines, stations, buildings, etc.

Any short-term or temporary naming sponsorships will be communicated to the Metro Board in advance of implementation. Any re-naming proposals must uphold the location and historic reference name of the property to ensure that it remains easily identifiable and recognizable by the general

public.

Metro will utilize the services of a qualified and independent firm with extensive experience in valuations of naming rights opportunities to ensure that Metro receives fair market value for the naming of its property and assets. The valuation methodology will be based on real-world values, quantitative values of impressions based on market-tested media rates, qualitative values of the opportunity in terms of prestige, reach and target audience, as well as comparisons against similar properties in the marketplace.

Responsibilities for Metro and the corporate sponsor, as well as provisions for terminating the contract, will be included in each agreement.

The businesses and organizations that will not be considered for this program are outlined in the policy, in alignment with Metro's Advertising Policy. Companies that are eligible for sponsorships will have to meet established criteria.

Contracts over \$500,000 will be presented to the Board for approval. Those under \$500,000, likely short-term sponsorships, will be awarded at the direction of the CEO.

DETERMINATION OF SAFETY IMPACT

Revision of this policy currently does not impact safety.

FINANCIAL IMPACT

In compliance with Metro's System Advertising Policy, Metro will only accept revenues, payment-in-kind, or value-in-kind from corporations meeting the Ad Policy criteria and criteria stated in this policy (Attachment B).

All costs related to establishing a new name or re-naming an existing facility, service, or program shall be borne by the corporate sponsor, including Metro materials and labor costs associated with implementing re-naming efforts.

If this action leads to an increase in revenue, the revenues will be subject to Board adopted guidelines.

Impact to Budget

No impact to the FY17 Budget is anticipated as a result of approval of the policy.

This is a new business model for Metro. Upon expansion of the program, it may warrant evaluation of staffing to manage the execution of contracts and business needs associated with corporate partnerships.

ALTERNATIVES CONSIDERED

1. Decline to adopt the revised Property Naming Policy and Corporate Sponsorship/Naming Rights Policy. This is not recommended as the primary change to the policy clarifies and supports the new Corporate Sponsorship/Naming Rights Program as directed by the Board through approval of the 2016 RAM/Internal Savings Account Process.

NEXT STEPS

Upon Board approval, staff will:

1. Procure the services of a specialist to assist in the implementation of attaining corporate sponsorships and naming rights for Metro's property, programs, assets and services.
2. Exercise the business model process for all inquiries and propositions.

ATTACHMENTS

Attachment A - Property Naming Policy

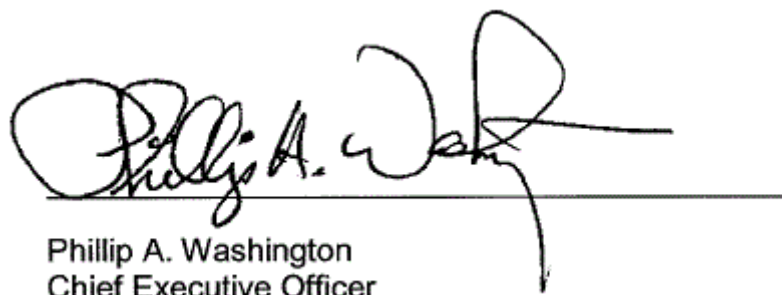
Attachment B - Property Naming and Corporate Sponsorship/Naming Rights Policy

Attachment C - Active Corporate Sponsorship Programs at Peer Transit Properties

Attachment D - Presentation on Property Naming and Corporate sponsorship/Naming Rights Policy

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



Phillip A. Washington
Chief Executive Officer

PROPERTY NAMING POLICY

PURPOSE

Through implementation of this policy, Metro seeks to establish guidelines regarding the naming of Metro properties frequented by the public that will provide clear transit information to our customers – both frequent patrons as well as visitors and infrequent users. In addition, the policy is intended to ensure timely, cost-effective and rider-friendly property naming efforts.

Properties will be named with the maximum benefit and convenience of the transit system user in mind. Naming will provide customers with travel information in a simple, straightforward and unified way in order to assist patrons in successfully navigating the transit system and correspondingly the region. Property names will reflect the following principles:

- ***Transit system context*** – Names will provide information as to where a property is located within the context of the entire transit system; property names will be clearly distinguishable with no duplication.
- ***Property area context*** – Names will provide specific information as to the location of the property within the context of the surrounding street system, so that users can find their way around after their arrival and to support system access via automobile drop-off and parking.
- ***Neighborhood identity*** – Where appropriate, property naming will acknowledge that system stations and stops serve as entry points to the region's communities and neighborhoods.
- ***Simplicity*** – Names will be brief enough for quick recognition and retention by a passenger in a moving vehicle, and to fit within signage and mapping technical parameters.

POLICY POINTS

1. Property naming will identify transit facilities so as to provide immediate recognition and identification for daily riders as well as periodic users and visitors. Transit facilities include rail stations, bus rapidway stations, transit centers, bus stops and other properties frequented by the public. Property names will be identified based on the following:
 - Adjacent or nearby street or freeway
 - Well-known destination or landmark
 - Community or district name

- City name – if only one Metro property is located within a city

If space permits, property names can be a combination of street system location and well-known destination, particularly when the street system name may not be recognizable to transit riders and visitors. No business, product or personal names shall be used unless that name is part of a street name or well-known destination; or as part of a corporate sponsorship or cooperative advertising revenue contract.

2. The following criteria will ensure simple, succinct property names that are easily understood and retained by transit riders:

- Minimize the use of multiple names for a property. A single name identifiable by the general public is preferred, with a maximum of two distinct names separated by one slash. For example, Westlake/ MacArthur Park Station.
- Minimize the length of property names to ensure comprehension and retention by system riders. The property name shall have a preferred maximum of 24 characters in order to ensure general public and ADA readability, and fit within Metro's signage system.
- Minimize the inclusion of unneeded words in property names such as ones that are inherently understood, or added when verbally stating the property's name. Avoid inclusion of unnecessary words that may describe the property's location, but are not part of that location's commonly known name.

3. In consideration of the various applications where the property name will be used and displayed, properties may have a Board-adopted official name as well as a shorter operational name. The official property name would be used for Board documents, contracts and legal documents and notices. The operational name would be used for station/stop announcements by vehicle operators, and on printed materials due to readability and size constraints. In addition, the property name may be further abbreviated for other operational uses such as vehicle headsigns and fare media.

4. The property naming process will include the following steps:

- A. Initial property names will be identified during the project planning process primarily based on geographic location.
- B. When a project is approved by the Board to proceed into the preliminary engineering phase, a formal naming process will be initiated.

- C. Staff will solicit input from cities, communities and other stakeholders on preferred property names based on the Board-adopted naming criteria.
 - D. The resulting property names will be reviewed by a focus group comprised of both transit system users and non-users for general public recognizability.
 - E. Staff will return to the appropriate Board committee and then to the full Board for adoption of the final set of official property names.
 - F. The adopted official property names will then be included in any final engineering bid documents and other agency materials.
 - G. Requests to rename properties after Board action and the release of project construction documents may be considered by the Board. Property name changes must be approved by a vote of two-thirds of the Board members. All costs associated with changing a property name, including any signage revisions and market research to determine if the proposed name is recognizable by the general public, will be paid for by the requestor unless otherwise determined by the Board.
5. If the Board wishes to bestow a special honor to a deceased individual, it may choose to dedicate a site to him/her. The act of dedicating a Metro property to an individual should be rare and reserved as a means to honor those of substantial historical, cultural, or civic significance. The Board may wish to bestow a similar honor upon an individual who demonstrated a unique and extraordinary degree of service yielding a distinguishable contribution to public transportation in Los Angeles County. Such dedications shall be viewed as secondary information with regard to signage and other identification issues. Properties/facilities frequented by the public may not be renamed for individuals.

Such dedications are made in the form of a motion presented by a Board Member to the appropriate committee of the Board for review and approval, and then forwarded to the full Board for final approval. With Board action, individuals will be honored with plaques where space is available.

PROPERTY NAMING AND CORPORATE SPONSORSHIP/NAMING RIGHTS POLICY

PURPOSE

Through implementation of this policy, Metro seeks to establish guidelines regarding the naming of Metro properties frequented by the public that will provide clear transit information to our customers – both frequent patrons as well as visitors and infrequent users. In addition, the policy is intended to ensure timely, cost-effective and rider-friendly property naming efforts.

Properties will be named with the maximum benefit and convenience of the transit system user in mind. Naming will provide customers with travel information in a simple, straightforward and unified way in order to assist patrons in successfully navigating the transit system and correspondingly the region. Property names will reflect the following principles:

- ***Transit system context*** – Names will provide information as to where a property is located within the context of the entire transit system; property names will be clearly distinguishable with no duplication.
- ***Property area context*** – Names will provide specific information as to the location of the property within the context of the surrounding street system, so that users can find their way around after their arrival and to support system access via automobile drop-off and parking.
- ***Neighborhood identity*** – Where appropriate, property naming will acknowledge that system stations and stops serve as entry points to the region's communities and neighborhoods.
- ***Simplicity*** – Names will be brief enough for quick recognition and retention by a passenger in a moving vehicle, and to fit within signage and mapping technical parameters.

NAMING POLICY POINTS

1. Property naming will identify transit facilities so as to provide immediate recognition and identification for daily riders as well as periodic users and visitors. Transit facilities include rail stations, bus stations, transit centers, bus stops and other properties frequented by the public. Property names will be identified based on the following:
 - Adjacent or nearby street or freeway
 - Well-known destination or landmark
 - Community or district name

- City name – if only one Metro property is located within a city

If space permits, property names can be a combination of street system location and well-known destination, particularly when the street system name may not be recognizable to transit riders and visitors. No business, product or personal names shall be used unless that name is part of a street name or well-known destination; or as part of a corporate sponsorship or cooperative advertising revenue contract.

2. The following criteria will ensure simple, succinct property names that are easily understood and retained by transit riders:
 - Minimize the use of multiple names for a property. A single name identifiable by the general public is preferred, with a maximum of two distinct names separated by one slash. For example, Westlake/MacArthur Park Station.
 - Minimize the length of property names to ensure comprehension and retention by system riders. The property name shall have a preferred maximum of 24 characters in order to ensure general public and ADA readability, and fit within Metro’s signage system.
 - Minimize the inclusion of unneeded words in property names such as ones that are inherently understood, or added when verbally stating the property’s name. Avoid inclusion of unnecessary words that may describe the property’s location, but are not part of that location’s commonly known name.
3. In consideration of the various applications where the property name will be used and displayed, properties may have a Board-adopted official name as well as a shorter operational name. The official property name would be used for Board documents, contracts and legal documents and notices. The operational name would be used for station/stop announcements by vehicle operators, and on printed materials due to readability and size constraints. In addition, the property name may be further abbreviated for other operational uses such as vehicle headsigns and fare media.

NAMING PROCESS AND PROCEDURE

The property naming process will include the following steps:

1. Initial property names will be identified during the project planning process primarily based on geographic location.

2. When a project is approved by the Board to proceed into the preliminary engineering phase, a formal naming process will be initiated.
3. Staff will solicit input from cities, communities and other stakeholders on preferred property names based on the Board-adopted naming criteria.
4. The resulting property names will be reviewed by a focus group comprised of both transit system users and non-users for general public recognizability.
5. Staff will return to the appropriate Board committee and then to the full Board for adoption of the final set of official property names.
6. The adopted official property names will then be included in any final engineering bid documents and other agency materials.
7. Requests to rename properties after Board action and the release of project construction documents may be considered by the Board. Property name changes must be approved by a vote of two-thirds of the Board members. All costs associated with changing a property name, including any signage revisions and market research to determine if the proposed name is recognizable by the general public, will be paid for by the requestor unless otherwise determined by the Board.
8. If the Board wishes to bestow a special honor to a deceased individual, it may choose to dedicate a site to him/her. The act of dedicating a Metro property to an individual should be rare and reserved as a means to honor those of substantial historical, cultural, or civic significance. The Board may wish to bestow a similar honor upon an individual who demonstrated a unique and extraordinary degree of service yielding a distinguishable contribution to public transportation in Los Angeles County. Such dedications shall be viewed as secondary information with regard to signage and other identification issues. Properties/facilities frequented by the public may not be renamed for individuals.

Such dedications are made in the form of a motion presented by a Board Member to the appropriate committee of the Board for review and approval, and then forwarded to the full Board for final approval. With Board action, individuals will be honored with plaques where space is available.

CORPORATE SPONSORSHIP AND NAMING RIGHTS

Metro has determined that allowing a revenue-generating, payment-in-kind, or value-in-kind Corporate Sponsorship and Naming Rights Program is a prudent means of maximizing the value of the agency's capital investments and assets. Metro may enter into sponsorship and naming rights contracts for short-term and long-term partnerships with qualified companies in order to provide value and benefits for both parties.

Through implementation of this policy, Metro seeks to establish a cohesive and transparent process for the consideration and determination of Corporate Sponsorship opportunities for the naming or re-naming of existing and future property, facilities, services, programs and events.

The implementation of a Corporate Sponsorship and Naming Rights Program carries with it a responsibility to protect the agency from potential litigation and to recognize the potential association of outside corporations with Metro services, property and events, while respecting and adhering to existing Metro policies, including Metro's System Advertising, and Commercial Filming Policies. The agency addresses these issues through the responsible and consistent application stated in this policy.

CORPORATE SPONSORSHIP POINTS

1. Corporate Sponsorship is a form of advertising in which companies will pay Metro to be associated with certain facilities, services, programs or events. This could also include providing resources and finance, payment-in-kind, or value-in-kind to develop new facilities, services, programs or events or funding to operate existing ones. Naming rights is a form of advertising whereby a corporation purchases the right to name or re-name a Metro facility, service, program, or event, typically for a defined period of time.
2. Metro's Communications Department administers the Corporate Sponsorship and Naming Rights Program as part of its overall responsibility of revenue-generating advertising and Metro's overarching goal of partnering with businesses on activities that can increase mobility for customers in the LA region.
3. In order to ensure Metro receives fair market value for Corporate Sponsorship and Re-naming Rights, Metro will routinely procure the services of a qualified and independent firm that regularly provides valuations of naming rights opportunities.

Agency Assets Eligible for Sponsorship

Metro is transportation planner and coordinator, designer, builder and operator of a large and expanding transit system. The infrastructure capital investment and other assets are significant within Metro's county-wide system of bus, rail, and other services; property portfolio; numerous facilities; programs; and events. The various facilities, programs, and services that may be applied to corporate sponsorships to are:

- **Facilities** – Any rail or bus stations, parking lots and parking structures, regional facilities, maintenance buildings and maintenance structures, Metro headquarters building, and any other property solely owned and operated by Metro.

- **Transit Services** – Any light & heavy rail lines, bus service lines & routes, transitway service lines & routes, and any mode of transit service solely owned and operated by Metro.
- **Programs** – Any established Metro-operated effort/initiative for the benefit of customers and communities that Metro serves; generally in the form of customer service actions and functions, internally and externally.
- **Events** – Any seasonal, annual or one-time event led and initiated by Metro.

Corporate Sponsorship Models

Corporate Sponsorship can take on various forms of advertising in which companies contract with Metro to associate their name, identity and branding with facilities, services, programs or events. Metro will engage in short-term and long-term corporate sponsorships that provide value and benefits for both parties. Naming Rights is a type of advertising whereby a corporation secures the right to name or re-name a Metro facility, service, program, or event for a defined period of time.

- **Short-term Sponsorship** – Agreements extending a maximum of twelve months for assets such as programs, events, seasonal events, or temporary station re-namings. Short-term sponsorships and those under \$500,000 in contract value do not require Board review and approval, and can be implemented at the direction of the CEO.
- **Long-term Sponsorship** – Agreements lasting a minimum of five years and greater. All long-term sponsorships must be reviewed and approved by the Metro Board. Agency assets such as transit services, rail lines, stations, buildings, and facilities would be considered for long-term sponsorships.

Any short-term or temporary naming sponsorships will be communicated to the Metro Board in advance of implementation. Any re-naming proposals must uphold the location and historic reference name of the property to ensure that it remains easily identifiable and recognizable by the general public.

Corporate Eligibility and Criteria

Business entities in the following categories will not be considered for participation: Alcohol; Tobacco and Electronic Cigarettes; Adult Entertainment and Content; Arms/Guns and Weapons; Political Parties, Political Groups, Political Organizations, and Political Candidates or Campaigns; Religious Groups and Religious Associations.

Metro shall consider partnerships with qualified companies who meet these criteria: Businesses already established in the U.S. or have fulfilled all legal requirements/compliance to establish a business within the U.S.; financially stable businesses; businesses with no history of fraudulent, unethical or prejudicial behavior; and businesses with satisfactory record of contractual performance.

Corporate Responsibilities

1. All costs related to establishing a new name or re-naming an existing facility, service, or program – including, but not limited to, the costs of replacing affected signage and customer information collateral, Metro materials, and Metro staff labor – shall be borne by the corporate sponsor.
2. All granted Corporate Sponsorship agreements must respect and adhere to Metro’s System Advertising Policy.
3. Corporate Sponsorship proposals and agreements are subject to the provisions of the California Public Records Act (California Code Government Code §6250 et seq.).

BUSINESS PROCESS

Evaluation Criteria

If all criteria listed under “Corporate Eligibility and Criteria” are met, Metro will take into consideration the financial offers and implementation proposals, which are listed below in order of weighted criteria and relative importance:

- Financial offer
- Alignment with Metro’s existing brand and agency mission, including visibility of activating the partnership
- Reach of cross promotion between Metro and corporate sponsor, including corporate social/community activities attached to the program
- Innovative partnership business plans

Proposal Submittal Process

1. **Submittal** – All Corporate Sponsorship Proposals shall be submitted to the Chief Communications Officer and the Deputy Executive Officer of Marketing within the Communications Department.
2. **Acknowledgement** – Communications will acknowledge and confirm receipt of Proposal via email communications, and letter.
3. **Agency Follow-up** – Communications staff may request more information, clarity of proposal, and in-person meeting or presentation of proposal.
4. **Notice of Proposal** – If the original proposal is deemed to have financial merit and meets all criteria, Metro will publicize the receipt of proposal to provide an opportunity for other companies with a vested interest in or proximity interest in the Metro asset/facility, an opportunity to compete for the Corporate

Sponsorship. Metro will allow interested parties to submit proposals within 30 days of notice.

5. **Evaluation Process** – Communications will proceed to review and evaluate final corporate sponsorship proposals with appropriate Metro departments. Metro may utilize the services of a consultant in order to the complete evaluation process. Metro will also ~~solicit public comment~~ engage the community in the neighborhood near a Metro property proposed for a long-term sponsorship via digital communication and/or a community meeting.
6. **Decision Process** – Communications will issue a determination of selection in writing to each proposer either recommending that the proposal be granted, or denying the proposal.
 - a. Recommend award – In the event a long-term Corporate Sponsorship proposal is recommended for award, Communications will prepare a contract recommendation to the Metro Board for its review and approval. Short-term sponsorships and those under \$500,000 contract value will move forward with a formal agreement and contract approved by the CEO.
 - b. Recommend no award – In the event a Corporate Sponsorship proposal is not recommended for award, Communications will have the ability to counter with additional requests.

Each sponsorship agreement will be unique and negotiated accordingly within the guidelines of this policy.

7. **Presentation to Board** – In the event a Corporate Sponsorship proposal is recommended, Communications will present the final proposal to the Metro Board of Directors for review and approval. The corporate sponsor will be invited to participate in the presentation of their recommended proposal.
8. **Board Approval** - Upon Metro Board approval, a formal agreement for Corporate Sponsorship will be completed and a contract with the Corporate Sponsor will be finalized.

Termination of Contract

In all contracts, Metro will include provisions for termination of the contract for default due to circumstances that are inconsistent with or violate Metro's System Advertising Policy, actions contrary to Metro's standards, or if the firm violates the established Corporate Eligibility Criteria.

Active Corporate Sponsorship Programs at Peer Transit Agencies

AGENCY	AGENCY ASSET/NAME	CORPORATE SPONSOR	START	VALUE
Chicago Transit Authority (CTA)	Station Refurbishment North/Clybourn Red Line Stop	Apple	2010	\$3.9M
Chicago Transit Authority (CTA)	Program Penny Rides Program (free rides on New Year's Eve)	Miller Coors	2012	\$1.3M for 3 years
Cleveland Regional Transit Authority (RTA)	BRT Healthline	Cleveland Clinic and University Hospitals	2008	\$12.5M for 10 years
Cleveland Regional Transit Authority (RTA)	BRT Cleveland State Line	Cleveland State University	2010	\$3M for 10 years
Cleveland Regional Transit Authority (RTA)	Bus Station 200 Public Square Station	Huntington Bank	2013	\$3M for 10 years
Denver RTD	Rail Line University of Colorado A Line	University of Colorado	2015	\$5M for 5 years
San Diego MTS	Rail Line UC San Diego Blue Line	University of San Diego	2015	\$30M for 30 years

- **Important Note: while many peer transit agencies have adopted a Corporate Sponsorship Policy, some do not yet have corporate sponsorship contracts, including NY MTA, MBTA, and San Francisco Transbay Center.**

Property Naming and Corporate Sponsorship/ Naming Rights Policy

Executive Management Committee
October 20, 2016



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History

- Corporate Sponsorship/Naming Rights was recommended by staff as a meaningful revenue-generating initiative as part of the **Risk Allocation Matrix (RAM)/Internal Savings Account** process, approved by the Board in January 2016.
- Currently Metro has a 2014 Board-approved **Property Naming Policy** which provides criteria for naming stations and other Metro properties through a customer-focused approach.

Property Naming Policy Principles

Four Guiding Principles

- **Transit System Context** – Context of the entire transit system
- **Property Area Context** – Context of the surrounding street system
- **Neighborhood Identity** – Acknowledging a landmark, community, or neighborhood
- **Simplicity** – Recognition and retention and fit within signage and mapping parameters

Property Naming Policy – Key Points

Recognizes Official Name vs. Operational Name

- Official – Longer name used for Board documents, contracts and legal documents and notices
- Operational – Shorter name used for station/stop announcements and customer information

The Board may **dedicate stations** to a deceased individual, or individual who has demonstrated a unique and extraordinary degree of service to public transportation.

Corporate Sponsorship/Naming Rights

- **Corporate Sponsorship/Naming Rights** is a form of advertising to **generate revenue, payment-in-kind, or value-in-kind** to maximize the agency's capital investments and assets.
- Communications will administer the program as part of its overall responsibility of generating revenue through advertising, and will contract with an independent firm to ensure fair market value for the naming of its property and assets.

Types of Corporate Sponsorships

- **Short-term Sponsorships** – Agreements extending a maximum of 12 months or less for assets such as programs, events, seasonal events, or temporary station re-namings.
- **Long-term Sponsorships** – Agreements lasting a minimum of five years for assets such as transit services, rail lines, stations, buildings, etc.
- **Contracts over \$500,000 will be presented to the Board for approval.** Those under \$500,000, likely short-term sponsorships, will be awarded at the direction of CEO. However, any short-term or temporary naming sponsorships will be communicated to the Metro Board in advance.

Corporate Sponsorship – Key Points

- **The businesses and organizations considered for this program are outlined in the policy, in alignment with Metro's Advertising Policy.**
- **Metro will publicize the receipt of proposal to provide an opportunity for other companies to compete.**
- **Each sponsorship agreement will be unique and negotiated accordingly within the guidelines of the policy.**
- **Metro will engage the community in the neighborhoods near a Metro property proposed for a long-term sponsorship prior to being presented to the Board.**

Corporate Sponsorship – Key Points

- Any re-naming proposals must uphold the location and historic reference name of the property to ensure that it remains easily identifiable and recognizable by the general public.
- Responsibilities for Metro and the corporate sponsor, as well as provisions for terminating the contract, will be included in each agreement.



Thank you



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**Board Report**

File #: 2016-0743, **File Type:** Project**Agenda Number:** 39.

**EXECUTIVE MANAGEMENT & AUDIT COMMITTEE
OCTOBER 20, 2016****SUBJECT: LEASE OF PROPERTY FOR CHILDCARE CENTER****ACTION: CONSIDER APPROVING TWO LEASE AGREEMENTS TO OPERATE CHILDCARE CENTERS****RECOMMENDATION**

AUTHORIZE the Chief Executive Officer (CEO) to execute two five-year lease agreements ("Lease Agreements"), including an additional five (5) year option, with Peggy Nairn, dba Penny and Peggy Nairn 24-Hour Child Care, Inc., ("Nairn") to **develop, finance, and operate two childcare facilities in Metro-owned buildings located in Chatsworth and Sylmar**, at a first year annual lease amount of sixty thousand dollars (\$60,000) and forty-eight thousand dollars (\$48,000), respectively, which are subject to an annual increase the second year to seventy-two thousand dollars (\$72,000) and sixty thousand dollars (\$60,000) respectively and annual adjustments based on Consumer Price Index (CPI) thereafter.

ISSUE

Metro staff released a Request for Proposals (RFP) for licensed/bonded operators to develop, finance, and operate childcare facilities in two (2) Metro-owned buildings. Nairn, the recommended vendor, was the firm judged to provide the best value for Metro as well as the most relevant experience.

DISCUSSION

The Chatsworth childcare facility is located at the Chatsworth Metrolink station. The facility consists of 5,450 square feet of indoor space equipped with four (4) classrooms, shared child restrooms, staff lounge area, lobby for guests, office space, and two (2) adult restrooms. There is also a large outdoor area consisting of 7,795 square feet, utilized for a playground and other outdoor activities.

The Sylmar childcare facility is located at the Sylmar/San Fernando Metrolink station. The facility consists of 5,830 square feet of indoor space and 4,000 square feet of play yard area. The facility's indoor area is equipped with four (4) classrooms, child restrooms, staff lounge area, lobby for guests, office space, and two (2) adult restrooms. Metro recently completed \$780,000 in renovations to the building, including a new roof, mechanical and electrical upgrades, and landscaping. A portion of the Sylmar childcare facility is located on land owned by the City of Los Angeles (City) under lease to Metro. Metro has obtained approval from the City Council for a new rent-free lease to allow for the

continued use of this property for a childcare center.

Metro staff released an RFP in March 2016 for a licensed/bonded operator(s) to develop, finance, and operate two Metro-owned childcare facilities. Ten (10) responses were received for the RFP; however, one of the proposers was considered non-responsive because their proposal did not include the proposed rent which was required pursuant to the RFP. The remaining nine responses all met the Metro requirements to provide a licensed and bonded childcare service, to pay the minimum rent, and to be responsible for all operating and maintenance expenses. A list of the proposers is attached as Attachment "A".

Evaluation Criteria

A selection committee was formed consisting of Metro staff from Real Estate, Major Capital Projects, Engineering, and Facilities Maintenance. The selection committee conducted a technical evaluation of the proposals and rated them based on the following criteria:

1. Firm's Qualifications	30%
2. Experience with the Start-up of Childcare Facilities and Community Benefits Offered	20%
3. Financial Strength	50%
Total	100%

Nairn, Eben-Ezer Children's Daycare Center and Devonshire Preschool and Infant Center were rated as the top three proposers.

After the selection committee had completed its evaluation of each proposal, interviews were conducted with the top three firms. All three had received recognition for outstanding service, demonstrated extensive experience and had the financial capacity to develop, finance, and operate the childcare facilities over the long term. Their key personnel had significant start-up experience having developed other childcare facilities in the local area within the last 10 years.

The RFP indicated that the proposer could propose on either (1) both of the facilities or (2) only one of the facilities. Nairn's proposal included both Metro locations. Eben-Ezer Children's Daycare Center proposal included only the Sylmar location, and Devonshire Preschool and Infant Center included only the Chatsworth location.

Based on the staff analysis, Nairn was the firm considered to provide the best value for Metro. This firm has established waiting lists of over 50 potential customers for each of the two Metro locations. During their interview, they pointed out that clients come from as far away as Lancaster and Ventura County to take advantage of their 24-hour services. They were the only proposer of the three finalists that offered the community 24-hour childcare. The firm has a record of working with families to connect them to community resources, services and agencies. Nairn demonstrated that they organized community job outreach programs for unemployed families enrolled in their program.

Nairn was the firm judged to provide the best value for Metro because the candidate was offering greater community benefits by providing 24-hour childcare services, seven (7) days per week and employment referral services. Having 24-hour day care and employment referral services would benefit both communities by expanding job options available to families and supporting those families by offering extended childcare services. The extended hours also greatly increase the utilization of these facilities by the community.

DETERMINATION OF SAFETY IMPACT

This project will not have any impact on safety.

FINANCIAL IMPACT

The Lease Agreements are expected to generate a minimum of \$299,000 and \$361,000, respectively, in new general fund revenue to Metro over the five-year term of the Lease Agreements, based on fixed rental adjustments the second year and assuming three percent (3%) CPI adjustments thereafter. A summary of the proposed terms of each Lease Agreement is included in Attachment "B" and Attachment "C."

Impact to Budget

Adoption of the recommended action will have no impact to the FY17 budget for bus or rail operations.

ALTERNATIVES CONSIDERED

1. Not approve the Lease Agreements. This alternative is not recommended because this project is expected to produce a minimum of \$660,000 in additional revenues over the five-year term of the Lease Agreements and the selected firm meets the requirements of the RFP.
2. Approve one Lease Agreement with one party and another lease with another party. This alternative is not recommended given the advantages afforded the community by the Nairn proposal.

NEXT STEPS

The final terms of the lease will be negotiated and executed with Nairn, subject to County Counsel approval as to form. Nairn would then begin the refurbishment of the facilities, obtain its licenses for the facilities, and begin operation of the childcare centers. The remaining process is expected to take approximately four (4) to six (6) months, depending on licensing.

ATTACHMENTS

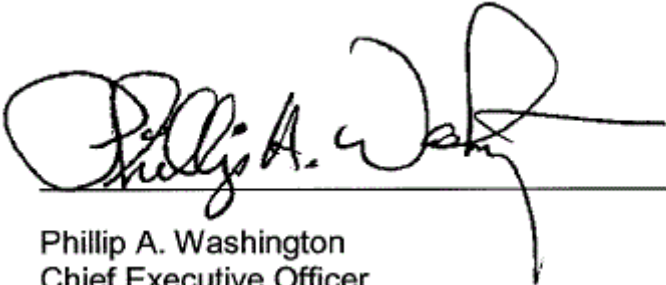
Attachment A - List of Proposers for Childcare Facility Operator

Attachment B - Summary of Lease Agreement Key Terms Chatsworth Metrolink Station

Attachment C - Summary of Lease Agreement Key Terms for Sylmar Metrolink Station

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Phillip A. Washington
Chief Executive Officer

LIST OF PROPOSERS FOR CHILD CARE FACILITY OPERATOR

No.	PROPOSERS
1	Penny & Peggy Nairn 24-Hr Childcare
2.	Eben-Ezer Children's Daycare Center, Inc.
3.	Devonshire Preschool and Infant Center
4.	De Kat, LLC dba Dream High Education
5.	Little Wonders Montessori
6.	Los Angeles Signatures LLC
7.	Guardian Angel Academy
8.	Small Worlds Learning Academy
9.	Notre Dame
10.	Around the Kornor

ATTACHMENT B

**SUMMARY OF LEASE AGREEMENT KEY TERMS
CHATSWORTH METROLINK STATION CHILD CARE CENTER**

Premises	The Premises consist of 5,450 square feet of indoor space and 7,795 square feet of outdoor area located at the Chatsworth Metrolink Station.
Term	The term of the Lease Agreement is five (5) years commencing on the date that license to operate the facility has been obtained and the business is ready for operation.
Option to Extend Lease Term	Tenant has an option to extend the term for one (1) additional five-year (5-year) period.
Rent	Tenant will pay Metro Sixty Thousand Dollars (\$60,000) during the first year. The rent increases to Seventy-Two Thousand dollars (\$72,000) in the second year. Commencing on the third year the rent will be adjusted based on Consumer Price Index.
Rent Credits	Metro will credit Tenant the costs to refurbish the space over the first five years of the terms of the lease.
Maintenance	Tenant will be responsible for all operating and maintenance expenses.
Indemnification	Tenant will indemnify and hold the LACMTA harmless from all claims, liabilities and damages resulting from its use of the Premises.

**SUMMARY OF LEASE AGREEMENT KEY TERMS
SYLMAR METROLINK STATION CHILD CARE CENTER**

Premises	The Premises consist of 5,830 square feet of indoor space and 4,000 square feet of outdoor area located at the Sylmar Metrolink Station.
Term	The term of the Lease Agreement is five (5) years commencing on the date that license to operate the facility has been obtained and the business is ready for operation.
Option to Extend Lease Term	Tenant has an option to extend the term for one (1) additional five-year (5-year) period.
Rent	Tenant will pay Metro Forty Eight Thousand Dollars (\$48,000) during the first year. The rent increases to Sixty Thousand dollars (\$60,000) in the second year. Commencing on the third year the rent will be adjusted based on Consumer Price Index.
Rent Credits	Metro will credit Tenant the costs to refurbish the space over the first five years of the terms of the lease.
Maintenance	Tenant will be responsible for all operating and maintenance expenses.
Indemnification	Tenant will indemnify and hold the LACMTA harmless from all claims, liabilities and damages resulting from its use of the Premises.



Board Report

File #: 2016-0584, **File Type:** Program

Agenda Number: 40.

REVISED
EXECUTIVE MANAGEMENT COMMITTEE
OCTOBER 20, 2016

SUBJECT: TITLE VI PROGRAM UPDATE

ACTION: APPROVE ADOPTION OF TITLE VI PROGRAM UPDATE

RECOMMENDATION

ADOPT the **Title VI Program Update** presented in Attachments A and B.

ISSUE

Title VI of the Civil Rights Act of 1964 (Title VI) prohibits discrimination on the basis of race, color, and national origin in programs that receive federal funding. The Federal Transportation Administration (FTA) requires transportation agencies to demonstrate their compliance with Title VI by submitting a triennial Title VI Program Update in compliance with Title 49 CFR Section 21.9(b) and with FTA Circular 4702.1B "Title VI Requirements and Guidelines for Federal Transit Administration Recipients," issued October 1, 2012. The Metro Board of Directors must review and approve the Title VI Program Update prior to its submittal.

DISCUSSION

Background

Section 601 of Title VI of the Civil Rights Act of 1964 (Title VI) states the following:

No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

The Title VI Program Update consists of a report and supporting documentation that provides evidence of the equitable distribution of services; promotion of full and fair participation in public transportation decision-making without regard to race, color, or national origin, and meaningful access to transit-related programs and activities by persons with limited English proficiency. FTA reviews and concurs with the Title VI Program Update or requests additional information.

Metro's Title VI Obligations

Metro last submitted a Title VI Program Update to the FTA on September 30, 2013. On November 6, 2013, the FTA's sent Metro a Letter of Concurrence informing Metro that our Title VI Program Update, submitted on September 30, 2013, met the requirements set out in the FTA Title VI Circular, 4702.1B. Our next Title VI Program Update is due on November 15, 2016. This date conforms to the traditional three-year cycle.

Metro has completed a draft Title VI Program Update that incorporates all of the requirements set forth in the FTA Circular 4702.1B. There are ~~twelve~~ thirteen requirements under Title VI that Metro must report on:

1. The provision of notice to beneficiaries of their civil rights;
2. The existence of complaint procedures and a complaint form;
3. A list of all transit-related complaints, investigations, or lawsuits;
4. A Public Participation Plan;
5. A Language Assistance Plan;
6. Minority representation on planning and advisory committees;
7. The provision of assistance to and monitoring of subrecipients;
8. Equity evaluations relating to the site and location of facilities;
9. Service standards and system-wide service policies;
10. The collection and reporting on demographic data;
11. The requirement to monitor transit service; and
12. The requirement to evaluate service and fare changes;
13. Provide documentation of Metro's board approval on 2016 Title VI Program, once program is approved by Metro's Board of Directors

A more detailed description of these requirements can be found in the FTA Circular 4702.1B (Attachment C).

Although no substantial changes were made to the Title VI Program since the 2013 submission, Metro made the following minor updates to the Title VI Program:

1. Updated the Civil Rights Notice to Beneficiaries to include additional state protected categories;
2. Updated the list of Metro's Title VI transit-related complaints, investigations and lawsuits;
3. Updated the Public Participation Plan to include current demographic data on Metro's stakeholders, identified minimum baseline thresholds for public outreach and listed Metro's public outreach activities since October 2013;
4. Updated the Language Assistance Plan to include an updated Four Factor Analysis and initiation of a monitoring program for the Language Assistance Plan;
5. Updated the demographic data for the participants of Metro's planning and advisory committees;
6. Updated the Title VI Program due dates for Metro's subrecipients;
7. Provided information on Metro's Title VI equity evaluation for the siting of new constructed

facilities;

8. Provided Metro's current service standards and policies;
9. Provided updated demographical data on Metro's stakeholders and distribution of service;
10. Provided documentation on Metro's Board approval of Metro's service monitoring program;
11. Provided documentation of Title VI equity analyses for Metro's fare and major services changes and documentation of Metro's Board approval of the Title VI equity analyses for fare and major service changes ;
12. Will provide documentation of Metro's Board approval of the 2016 Title VI Program, once program is approved by Metro's Board of Directors

Before submitting the completed Title VI Program Update, the Metro Board of Directors must review and approve the draft program. A copy of today's meeting minutes will be submitted to the FTA as evidence of this approval.

DETERMINATION OF SAFETY IMPACT

The requested action in this report will have no direct impact on the safety of Metro's employees or customers.

FINANCIAL IMPACT

Adoption of the Title VI Program Update has no direct impact upon Metro's expenditures or revenues. Approval is consistent with the implementation of service included in the adopted FY2017 Budget. Failure to submit a Title VI Program Update or to have a Title VI Program Update approved by the FTA could result in the delay, suspension or loss of federal funding.

Impact to Budget

Adoption is consistent with the implementation of service included in the adopted FY2017 Budget.

ALTERNATIVES CONSIDERED

The alternative to filing a Title VI Program Update by November 15, 2016 could have significant negative impacts to the agency. Failure to timely file a Title VI Program Update may result in the delay or suspension of federal funds, the initiation of a review or investigation by the FTA, and ultimately the loss of eligibility for federal funds.

NEXT STEPS

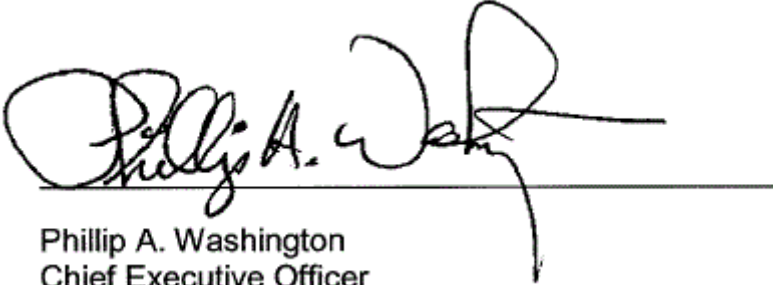
The Title VI Program Update will be submitted to the FTA no later than November 15, 2016

ATTACHMENTS

Attachment A - 2016 Draft Title VI Program Update
Attachment B - Appendices to 2016 Draft Title VI Program Update
Attachment C - FTA Circular 4702.1B

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Reviewed by: Dan Levy, Chief, Office of Civil Rights (213) 922-8891



Phillip A. Washington
Chief Executive Officer

Metro's Profile

Los Angeles County Metropolitan Transportation Authority (Metro) is unique among the nation's transportation agencies. It serves as transportation planner and coordinator, designer, builder and operator for one of the country's largest, most populous counties. More than 9.6 million people – nearly one-third of California's residents – live, work, and play within its 1,433-square-mile service area.

Metro's Vision Statement

Metro provides excellence in service and support.

Metro's Mission Statement

Metro is responsible for the continuous improvement of an efficient and effective transportation system for Los Angeles County.

Metro Title VI Report Purpose

The purpose of the Title VI Program Update is to document the steps Metro has taken and will take to ensure that Metro provides services without excluding or discriminating against individuals on the basis of race, color and national origin. In addition to the Title VI protected categories, Metro will take steps to ensure that our programs and activities do not exclude or discriminate against low-income individuals or other classes protected by Federal or State law.

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APPENDICES

- A. November 3, 2013 FTA letter Regarding Metro Title VI Program Update Due Date
- B. Civil Rights Notice and List of Locations
- C. Civil Rights Policy
- D. Civil Rights Complaint Form
- E. List of Transit-Related Title VI Investigation and Complaints
- F. Public Participation Plan
- G. Summary of Public Outreach Efforts
- H. Limited English Proficiency /Four Factor Analysis and Language Assistance Plan
- I. Subrecipient Schedule of Title VI Program Update Due Dates
- J. Board Report and Minutes Approving the Title VI Equity Analysis for the Rosa Parks/
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- K. System-wide Service Standards and Policies
- L. Demographic and Service Profile Maps and Charts
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- N. Board Report Reporting Results of Service Monitoring
- O. Title VI Service Equity Analyses
- P. Title VI Fare Equity Analyses
- Q. Title VI Major Service Change Policy, Disparate Impact and Disproportionate Burden Policies
Presentation to Service Councils
- R. Board Approval of Metro's 2016 Title VI Program Update

INTRODUCTION

The Los Angeles County Metropolitan Transportation Authority (Metro) has prepared this Title VI Program Update in compliance with Title 49 CFR Section 21.9(b) and with the Federal Transit Administration (FTA) Circular 4702.1B "Title VI Requirements and Guidelines for Federal Transit Administration Recipients," issued October 1, 2012.

This Title VI Program Update is being submitted to the FTA in accordance with the FTA's Concurrence letter sent to Metro on November 6, 2013. In November 2013, the FTA informed Metro that our Title VI Program Update, submitted on September 30, 2013, met the requirements set out in the FTA Title VI Circular, 4702.1B and that that our Title VI Program Update would be due October 1, 2016. A copy of this letter is included in **Appendix A**. This Program Update will cover the time period from October 1, 2016 to October 1, 2019.

This plan was prepared to ensure that the level and quality of Metro's transit services are provided in a non-discriminatory, safe, reliable and equitable manner. Metro ensures that full and fair participation is offered to all those that reside, work, and travel throughout Los Angeles County.

Any questions regarding this Title VI Program Update can be directed to Dan Levy, Chief of Civil Rights Programs Compliance, at levyd@metro.net or Jonaura Wisdom, Director of Civil Rights and Equal Employment Opportunity, at wisdomj@metro.net.

GENERAL REQUIREMENTS

This section addresses the General Requirements of FTA Circular 4702.1B. The following information addresses the reporting requirements as described under Chapter III of the Circular. Supporting documentation can be found in the Appendix to this report.

1. Notification to Beneficiaries of Title VI Protections

Metro is committed to ensuring that the public is aware of the rights and protections afforded to them under Title VI. In accordance with Title 49 CFR Section 21.9(d) and guidance provided in FTA Circular 4702.1B, Metro's Civil Rights Policy includes:

- I. A statement that the agency operates programs without regard to race, color, or nation origin;
- II. A description of the procedures that the public should follow in order to request additional information regarding Metro's Title VI obligations;
- III. A description of the procedures that the public needs to follow in order to file a Title VI discrimination complaint.

Metro's Civil Rights Policy can be found on the Metro website at: <http://www.metro.net/about/civil-rights-policy/>.

Notice regarding Metro's Civil Rights Policy has been disseminated throughout Metro's rail and bus system. Metro's Notice of Civil Rights also contains a statement that Metro operates its programs

without regard to race, color, or national origin and provides a phone number for customers to call to get information regarding Metro's Title VI obligations and the procedure for filing a Title VI discrimination complaint.

Metro's Notice of Civil Rights has been placed in backlit cases in almost all rail stations. It has also been posted on all 25 floors of Gateway Plaza, Metro's headquarters, as well as in all of Metro's Divisions. A "take-one" brochure of the notice was also placed on buses. The notice is also available at Metro's Customer Centers.

The Civil Rights Notice in the backlit cases and the brochures have been translated into the nine languages identified in Metro's Language Assistance Plan: Spanish, Korean, Chinese, Japanese, Armenian, Russian, Vietnamese, Khmer, and Thai. The Civil Rights Policy found on Metro's website has also been translated into the nine languages and with the assistance of Google Translate, may be translated into seven additional languages.

Metro's Civil Rights Notice, including photos of the backlit cases and take-ones, along with a list of all of the locations the Civil Rights Notice has been placed, are included in **Appendix B**.

2. Title VI Complaint Procedure and Complaint Form

As part of Metro's commitment to ensuring that no person is discriminated against on the basis of race, color, national origin, or any other federal and/or state protected category, and to ensure compliance with 49 CFR Section 21.9 (b), Metro has developed The Civil Rights Policy which includes procedures for investigation and tracking Title VI complaints. Metro policy is to investigate complaints that are filed in writing within 180 days from the date of the alleged discrimination in which the complainant alleges discrimination on the basis of race, color, or national origin. Each complaint alleging discrimination based on race, color, or national origin is categorized as a Title VI complaint and investigated according to Metro's Title VI Complaint Procedure.

The policy can be found on Metro's website at: <http://www.metro.net/about/civil-rights-policy/>

Translated versions of the procedure and complaint form can be accessed by clicking the tab titled "Additional Languages" or by utilizing the Google Translate application on Metro's website.

A copy of the Civil Rights Policy is included in **Appendix C**.

The Complaint Form in English is included in **Appendix D**.

3. Record of Title VI Investigations, Complaints, or Lawsuits

In order to comply with 49 CFR Section 21.9(b), Metro's Office of Civil Rights maintains a list of all active complaints, investigations, and lawsuits naming Metro, on the basis of race, color, and/or national origin. This list includes the date of the complaint, investigation or lawsuit; a summary of the allegations; and the status of the complaint, investigation, or lawsuit; and the actions taken in response to the complaints, investigations, and lawsuits. To date, Metro has a total of 46 Title VI complaints.

Metro personnel that customers most commonly interact with are Bus Operators. It is, therefore, not surprising that the majority of Title VI complaints involve customers alleging discrimination by a bus operator. In all cases, the complaint is sent to the operator's division manager and to the Office of Civil Rights (OCR) group by Customer Relations. The complaint is reviewed by the division manager, or the designee of the division manager, who takes a statement from the operator and sends a transcript of the statement to OCR.

Metro buses are equipped with a digital recording device. Additionally, approximately 950 out of 2200 buses are equipped with audio recording devices. When a Title VI complaint is received alleging discrimination by a bus operator, it is Metro's procedure to pull the portion of the digital recording that would likely cover the time frame implicated by the complaint. The recording is reviewed by the division manager who then prepares a report and sends the report to OCR. This report contains information regarding the bus operator's version of events, the division manager's observations of the ¹recording, a history of all complaints against the operator for the prior 36 months, and disciplinary actions taken in response to any complaints.

All division reports are reviewed by investigators in the OCR group. The investigators have discretion to ask the division manager for more information about the incident, including asking follow-up questions to the operator. The investigator may also review the digital recording themselves, reach out to any witnesses to the incident for follow-up, and ultimately make recommendations regarding disciplinary actions if it is determined that there is merit to the complaint. In some instances, depending on the circumstances presented in the complaint, investigators will request a Mystery Ride² to gain insight generally into how the operator approaches customer service and specifically to observe for any other instances of discriminatory animus.

After the investigator reviews all of the available information, a report is written that analyzes the information presented in the underlying complaint, the evidence received in the investigation undertaken, and concludes with a finding of substantiated or unsubstantiated depending on what the evidence reveals. When a determination is made that a Title VI complaint has merit, operators or other Metro personnel are disciplined appropriately and in accordance with Metro policy, the Metro Bus Operator Rulebook & Standard Operating Procedure, applicable Collective Bargaining Agreements, or other employment contracts. In instances where no merit is found, or disciplinary action is not warranted, operators may be provided with consultation and updated training.

The process for formally closing complaint investigations requires three levels of review. All complaint investigations are reviewed by the Director of EEO Programs and Office Civil Rights -, the Chief of OCR and County Counsel. Once all three parties have reviewed the complaint and findings, the complaint is formally closed and a letter is sent to the complainant and respondent stating that an investigation was conducted and that the matter is closed.

A list of Metro Title VI related complaints, investigations and lawsuits from August 1, 2013 to July 31, 2016² is included in **Appendix E**.

4. Public Participation Plan

Pursuant to FTA Title VI regulations and FTA guidance 4702.1B, Metro has updated its Public Participation Plan. This Public Participation Plan has been updated and assembled to capture the methods, innovations and measurements of the agency's commitment to not just meet, but exceed the prescribed requirements of the FTA Circular 4702.1B, citing Metro's responsibilities to limited English Proficient Persons, minority communities, low-income communities, and communities with disabilities. Additionally, the Public Participation Plan integrates principles of FTA Circular 4703.1, guiding Metro on integrating principles of Environmental Justice into the transportation decision-making process.

From February 2016 to March 2016, Metro presented a draft of the Public Participation Plan to our various stakeholders and solicited our stakeholders' feedback; this group included all individuals who reside, work and travel within Los Angeles County. The public outreach resulted in valuable feedback that Metro incorporated into the Public Participation Plan to ensure that our public engagement practices are inclusive of all our stakeholders. The Public Participation Plan can be found in **Appendix F**.

A summary of Metro's public participation and outreach efforts since October 2013 is included in **Appendix G**.

5. Meaningful Access to Limited English Persons

Metro supports the goals of Title VI of the Civil Rights Act of 1964, Federal Executive Order 13166 and the Department of Transportation's (USDOT) Limited English Proficiency (LEP) Guidelines by making reasonable accommodations for those individuals with limited English proficiency (LEP) and by providing meaningful access to our services and programs to LEP individuals.

According to the US Department of Transportation's (USDOT) guidance concerning persons with limited English proficiency (LEP), the extent of the Federally-funded recipient's obligation to accommodate LEP populations is determined by balancing the following four factors:

- Factor 1: The number or proportion of LEP persons eligible to be served or likely to be encountered by a program, activity, or service of the recipient or grantee of Federal funding,
- Factor 2: The frequency with which LEP individuals come in contact with the program
- Factor 3: The nature and importance of the program, activity, or service provided by the recipient to people's lives
- Factor 4: The resources available to the recipient

Metro updated the 2013 Four Factor Analysis in order to determine the language assistance needs of our stakeholders. Metro then utilized the results of the updated Four Factor Analysis to create a

² Metro's Board report cycle necessitates that the cutoff date for the complaint reporting end before the October 1, 2016 due date. Metro is willing to provide information relating to the balance of this period at the FTA's request.

language assistance plan detailing the level of appropriate language outreach. The Language Assistance Plan highlights the ways in which Metro is committed to providing language assistance to our customers.

Metro’s Four Factor Analysis and Language Assistance Plan can be found in **Appendix H**.

6. Minority Representation on Planning and Advisory Bodies

Pursuant 49 CFR Section 21.5 (b)(1)(vii) and the requirements set forth in FTA C 4702.1B, Metro maintains a list depicting the racial breakdown of the membership of its transit-related non-elected planning boards, advisory councils and committees. The boards, councils, and committees are as follows:

- i. Service Councils
- ii. Transportation Business Advisory Council (TBAC)
- iii. Citizen’s Advisory Council (CAC)
- iv. Accessibility Advisory Committee (AAC)
- v. Independent Citizens Advisory Committee
- vi. Boyle Heights Design Review Advisory Committee
- vii. Regional Connector Transit Project Community Leadership Council
- viii. Crenshaw/LAX Transit Project Community Leadership Council

Table Depicting the Racial Breakdown of Committees

Body	Caucasian	Latino	African American	Asian American	Native American	Other	Total No. Members
Service Councils	46%	34%	9%	9%	2%	0%	44
Transportation Business Advisory Council	0%	25%	6%	13%	6%	50%	16
Citizens Advisory Council	65%	25%	5%	5%	0%	0%	17
Accessibility Advisory Committee	55%	25%	5%	10%	5%	0%	20
Independent Citizens Oversight Committee	100%	0%	0%	0%	0%	0%	4
Boyle Heights Design Review Advisory Committee	11%	89%	0%	0%	0%	0%	19
Regional Connector Transit Project Community Leadership Council	62.5%	0%	0%	37.5%	0%	0%	8
Crenshaw/LAX Transit Project Community Leadership Council	9.5%	4.7%	66%	4.7%	0%	14%	21

Description of Efforts Made to Encourage Minority Participation

i. Service Councils

Metro’s Service Councils advise on Metro services in five geographic regions; Gateway Cities (Southeast LA County), San Fernando Valley, San Gabriel Valley, South Bay Cities and Westside/Central. This [map](#) illustrates the five service council areas:



Metro Service Council Appointments Overview

The purpose of Metro Service Councils is to improve bus service and promote service coordination with municipal and local transit providers. The Service Council's primary responsibilities are to receive presentations on proposed Metro bus service changes from Metro staff, community input on proposed service modifications, conduct public hearings for major service changes, and to render decisions on proposed bus route changes considering staff recommendations and public comments. Metro has five Service Councils, each representing a distinct region of Metro’s service area. Those regions are: Gateway Cities, San Fernando Valley, San Gabriel Valley, South Bay, and Westside/Central.

The Service Councils are composed of transit users, local leaders, and/or elected officials that live, work or represent the region from which they are appointed; at least fifty percent of each Council members shall be regular users of public transit services. Each Service Council is comprised of nine Members that

serve a term of three years; terms are staggered so that the terms of three of each Council's nine members expire annually on June 30. Incumbent Members can serve additional terms if re-nominated by the nominating authority and confirmed by the Metro Board; there are no term limits.

Potential Service Council Members are nominated for appointment by the respective Service Council nominating authorities. Nominations are gathered by Metro Service Council staff and submitted to the Board of Directors for approval. A few months prior to the expiration of a Representative's term, Metro Service Council staff notifies the nominating authorities and asks them to submit a nomination for their incumbent representatives to serve another term or to submit the name and resume of a new nominee. Generally, due to the specific nature of knowledge and the institutional history that is preserved by maintaining some incumbents on each of the Councils, the nominating authority approaches incumbent representatives to verify whether they would like to continue to serve on their respective council; usually the incumbents choose to remain on the Council.

Service Council Members occasionally resign at the end of their terms or prior, for various personal or professional reasons. In those instances, the nominating authorities are contacted to submit the nomination of a replacement candidate to serve the remainder of the term. The replacement nomination is then submitted by Service Council staff to the Metro Board for approval as soon as the process can be completed.

Each Service Council has its own schedule of nominating authorities. Those authorities are as follows:

Gateway Cities Service Council Nominating Authorities

All Gateway Cities Services Council Members are nominated by the Gateway Cities Council of Governments (COG). The Gateway Cities COG represents 27 cities in the Harbor Gateway region as well as portions of unincorporated Los Angeles County. The Gateway Cities COG has determined that its appointments to the Council shall include a majority of public transit users and not exceed four (4) elected officials. In order to solicit applications for nominees to fill vacant Council seats of elected officials, the COG solicits applications by direct notification sent to all mayors and city council members in the Gateway Cities region. In order to solicit applications for nominees to fill vacant Council seats for non-elected officials, the COG places advertisements in regional publications that serve the Gateway Cities region.

Currently, five of the Gateway Cities Service Council Members are in their first term, one member is in his second term, one member is in his third term, and two members have served on the Council since its inception in 2003.

San Fernando Service Council Nominating Authorities

Four of the nine seats on the San Fernando Service Council are nominated by the Office of the Mayor of Los Angeles. To fill any vacancies, the Mayor's Office generally solicits potential appointee names and resumes from its network of transit advocates. Then any potential appointees are reviewed in relation

to the make-up of the current council. Appointees representative of the diversity (both geographic and ethnic) that may be lacking on the Council are interviewed and the Office of the Mayor then makes its selection.

Two seats are allocated to an East Valley cluster of cities, which includes Burbank, Glendale, and San Fernando. When either of those seats is vacant or terms are expiring, Metro Service Council staff notifies the mayors and city managers of each city within the cluster to request that they submit nominations to fill the expiring Council Member terms or vacancies. If more than one nomination per city cluster is received, Metro Service Council staff then asks all of the cluster cities to decide amongst themselves which of the nominees they wish to have appointed. Generally, the city clusters nominate a city employee who works in a transit-related position or a city council member who is involved in local transit issues.

One seat each is allocated to the Offices of the Los Angeles County 3rd District Supervisor and the 5th District Supervisor. In order to fill their Service Council vacancies, both the Office of the 3rd District Supervisor office solicit potential appointee names and resumes from their networks of transit advocates. Potential appointees are reviewed on a number of factors including current composition of the council, experience in transit advocacy and knowledge of the transit issues impacting their geographic area. The goal in making the final selection(s) is to have a council representative of the ethnic and cultural diversity of the district.

One seat is allocated to the Las Virgenes-Malibu Council of Governments (COG). As there is limited Metro bus service to the Las Virgenes-Malibu COG's region, the COG generally looks to people that have some familiarity with the needs of those cities.

Currently, five of the San Fernando Valley Service Council Members are in their first terms, two members are in their second terms, one member is in his third term, and one member has served on the Council since its inception in 2003. There is currently one vacancy on the San Fernando Valley Service Council.

San Gabriel Valley Service Council Nominating Authorities

Three of the seats on the San Gabriel Valley Service Council are nominated by the San Gabriel Valley Council of Governments (SGVCOG). When the SGVCOG has vacancies, the COG sends notifications through its Governing Board, which is made up of area elected officials, and its Transportation Committee which is composed of city delegates, their alternates, and/or city-appointed staff. The SGVCOG has an informal practice of having at least one of its seats occupied by an elected official at all times. The SGVCOG also strives to have at least one transit user or individual with extensive knowledge of the transit system occupy at least one of its seats at all times. Any vacancies of a transit user seat are filled by soliciting nominations from the SGVCOG's Governing Board and its Transportation Committee. Applications for any vacancies are then reviewed by the Transportation Committee, and selection is

made based on applicant knowledge of the region's transportation issues and existing regional representation on the Council.

One seat each is allocated to the Offices of the Los Angeles County 1st District Supervisor and the 5th District Supervisor. In order to fill their Service Council vacancies, the Offices of the 1st and 5th District Supervisors solicit potential appointee names and resumes from their networks of transit advocates. Potential appointees are reviewed on a number of factors including current composition of the council, experience in transit advocacy and knowledge of the transit issues impacting their geographic area(s). The goal in making the final selection is to have council representative(s) of the ethnic and cultural diversity of the district.

The remaining four seats are nominated by clusters of cities. The city clusters are:

- Alhambra, San Gabriel, South Pasadena, and San Marino
- Arcadia, El Monte, and Temple City
- Montebello, Monterey park, and Rosemead
- Pasadena, Sierra Madre, and La Cañada Flintridge

For those seats nominated by clusters of cities, Metro Service Council staff notifies the mayors and city managers of each city within the cluster, requesting that they submit nominations to fill any expiring Service Council Member terms or vacancies. If more than one nomination per city cluster is submitted, then the cluster cities are asked to decide amongst themselves which of the nominees they wish to have appointed. Generally, the city clusters nominate a city employee who works in a transit-related position or a city council member who is involved in area transit issues.

Currently, one of the San Gabriel Valley Service Council Members is in her first term, two members are in their second terms, three members are in their third terms, one member is in his fourth term, and two members have served on the Council since its inception in 2003.

South Bay Service Council Nominating Authorities

All South Bay Service Council Members are nominated by the South Bay Cities Council of Governments (SBCCOG). The SBCCOG is a joint powers authority of 16 cities and the County of Los Angeles. The SBCCOG Board of Directors has previously stated a strong preference that transit users or those familiar with the South Bay transit services be selected to serve as council members and in no case shall elected officials represent a majority of the Service Council. The SBCCOG also works to ensure that one position be filled by a representative from one of the South Bay's municipal transit providers.

To recruit nominees to serve on the South Bay Service Council, the SBCCOG circulates a Call for Nominations among their regions' elected officials, city managers, city clerks and working groups of the South Bay Cities COG. The SBCCOG's Steering Committee then reviews nominations and forwards their

recommendations to the SBCCOG Board, which approves the nominations and forward to Metro for approval by the Metro Board.

Currently, four of the South Bay Service Council Members are in their first terms, one member is in her second term, one member is in his third term, two members are in their fourth terms, and one member is in his fifth term.

Westside/Central Service Council Nominating Authorities

Four of seats on the Westside/Central Service Council are nominated by the Office of the Mayor of Los Angeles. To fill any vacancies, the Mayor's Office generally solicits potential appointee names and resumes from its network of transit advocates. Then any potential appointees are reviewed in relation to the make-up of the current council. Appointees representative of the diversity (both geographic and ethnic) that may be lacking on the Council are then interviewed and the Office of the Mayor makes its selection.

Three of the seats are nominated by the Westside COG. The Executive Director of the Westside COG has recently resigned; the COG is currently reexamining its mission, purpose and goals and has not yet determined whether it will continue to be a nominating authority for the Westside/Central Service Council. All of the current appointees are transit agency employees.

One seat each is allocated to the Office of the Los Angeles County 2nd District Supervisor and the 3rd District Supervisor. To fill any Service Council seat vacancies, the Offices of the 2nd and 3rd District Supervisors solicit potential nominee names and resumes from their networks of transit advocates. Potential appointees are reviewed on a number of factors including current composition of the council, experience in transit advocacy and knowledge of the transit issues impacting their geographic area(s). The goal in making the final selection(s) is to have a council representative of the ethnic and cultural diversity of the district(s). Once a nominee has been selected, the name is forwarded to Metro Service Council Staff to facilitate the Board approval process.

Currently, five of the Westside/Central Service Council Members are in their first terms, two members are in their second terms, and two members are in their third terms.

ii. Transportation Business Advisory Council (TBAC)

Small Business owners and interested parties are welcomed and encouraged to attend the monthly Transportation Business Advisory Council (TBAC) meeting. TBAC meetings provide small businesses a forum to discuss topics and issues impacting business owners throughout the contracting community. Particularly, TBAC advocates for small business owners to have increased access to Metro's procurement process.

TBAC meetings are beneficial for all business interests. The meetings feature a monthly speaker series, Metro current and future contract opportunities, legislation updates, and current trends in transportation.

TBAC is comprised of professional business associations representing an array of industries and trades. TBAC has been instrumental in working with the Diversity & Economic Opportunity Department (DEOD) to develop a successful path forward bridging relationships between small businesses and Metro.

Efforts are made to encourage representatives from minority, female and small business organizations to participate in TBAC at both internal and external business outreach events. Internal outreach events include, but are not limited to, monthly “How to do Business with Metro” workshops, “Meet the Prime” contractor events, “Meet the Buyers” events, “Meet and Greet” small and large businesses events for large projects, and other events at Metro. External events include, but are not limited to, “Orange County Transportation Authority (OCTA) Small Business Conference, Southern California Minority Business Development Council (SCMBDC) Business Enterprise Fair, Minority Enterprise Development (MED) Week – Mayor’s Office,” and a host of small and minority business organization events.

A typical list includes the following:

- Asian American Architects/Engineers Annual Awards Dinner
- National Association of Minority Contractors Awards Dinner
- Latin Business Association Sol Business Awards Gala
- Black Business Association Procurement Summit / Expo
- Asian Business Association Annual Awards Banquet
- Women’s Transportation Seminar Expo
- Greater Los Angeles African American Chamber of Commerce Economic Awards Dinner
- National Association of Women’s Business Owners – Los Angeles Awards Luncheon
- Regional Hispanic Chamber of Commerce Conference
- American Indian Chamber of Commerce Luncheon
- Women’s Transportation Coalition Expo

TBAC Member organizations are appointed by the Metro Board of Directors.

iii. Citizens Advisory Council

On May 19, 1992, the governor signed AB 152 (Katz) into law. This act merged the Los Angeles County Transportation Commission and the Southern California Rapid Transit District and created Metro. As part of AB 152, Metro was to establish a Citizens’ Advisory Council whose “membership shall reflect a broad spectrum of interest and all geographic areas of the County.”

The CAC consults, obtains and collects public input on matters of interest and concern to the community and communicates the CAC’s recommendations with respect to such issues to Metro. Issues may also be assigned to the CAC by Metro for its review, comment and recommendation. The CAC meets twice

monthly, once at the beginning of the month for their Executive Committee Meeting, and once towards the end of the month for the General Assembly Committee Meeting. Every Board member may appoint up to four members to the CAC. The CAC consults, obtains and collects public input on those matters of interest and concern to the community and communicates key feedback and CAC recommendations with respect to such issues to the Metro Board and staff.

Each member of the Metro Board of Directors nominates four public members to the CAC to serve at the pleasure of the appointing Board member.

To fill seat vacancies, the Offices of District Supervisors solicit potential nominee names and resumes from their networks of transit advocates. Potential appointees are reviewed on a number of factors including current composition of the council, experience in transit advocacy and knowledge of the transit issues impacting their geographic area(s). The goal in making the final selection(s) is to have a council representative of the ethnic and cultural diversity of the district(s). Once a nominee has been selected, the name is forwarded to chair of the CAC to facilitate the Board approval process. In order to promote diversity and public access to information, the CAC web page has been updated to accommodate multiple language translations, and any member of the public wishing to have meeting materials in a different language are at the meeting are able to notify Metro staff with such translation requests or other needed special accommodations. Additionally, CAC Meeting Agendas and materials are regularly translated into Braille, typically per monthly requests made by a CAC Member who is blind.

iv. Accessibility Advisory Council

Metro strives to ensure that its services are fully accessible to all of our customers, including those with disabilities. The AAC provides advice to Metro on policy and allocation issues affecting transportation of older adults and persons with disabilities. The AAC recruits members based on several criteria; the most important being strong familiarity with, and close connection to, communities with disabilities. Individuals are also required to demonstrate some knowledge of transit. Selections to the committee are made keeping in mind the demographics, both geographic and racial/ethnic, of the county. This is accomplished through extensive outreach to elected officials and organizations within the community. In addition, Metro promotes diversity on the Council by providing language interpretation services for Limited English Proficient members on the council.

v. Independent Citizens Advisory and Oversight Committee

The Metropolitan Transportation Authority Reform and Accountability Act of 1998 (the Act) created the Independent Citizen's Advisory and Oversight Committee (ICAOC) to review transportation sales tax expenditures, hold public hearings and issue reports thereon. The Act mandates that the ICAOC be presented with the results of the initial local sales tax audit, as required by the Act, and thereafter, the annual local sales tax audit as required by the Act. The ICAOC will cause a summary of each audit to be published in local newspapers and make each audit report in its entirety available to the public in every library locate within Los Angeles County. The ICAOC holds public hearings on each audit and provides the MTA Board of Directors a report on the public comments to the audit.

The ICAOC consists of five (5) members. The membership of the ICAOC is not made on the basis of race, color, or national origin and each ICAOC member must live in the County of Los Angeles. No elected city, county, special district, state, or federal public officeholder will be eligible to serve as an ICAOC member. The ICAOC consists of the following members:

- One member appointed by the Chair of the Los Angeles County Board of Supervisors;
- One member appointed by the Chair of the governing board of the MTA;
- One member appointed by the Mayor of the City of Los Angeles;
- One member appointed by the Mayor of the City of Long Beach;
- One member appointed by the Mayor of the City of Pasadena.

vi. Boyle Heights Design Review Committee (DRAC)

Metro strives to carry out its mission and commitment to excellence in service and support and we do so by ensuring that we are accountable, first and foremost, to the public. Metro is dedicated to providing robust and inclusive public engagement opportunities that strengthen and deepen our relationships with our stakeholders. The Boyle Heights DRAC is one such example and was established to advise Metro on the design of Metro Joint Development (JD) projects within Boyle Heights. The DRAC also serves as the formal means through which the community members are involved in the evaluation of the JD projects and their design; and to act as representatives of residents, businesses, and institutions in the project area.

The DRAC is designed to maintain a fair representation of the Boyle Heights community and upholds their duties through the JD process until the final design for the project is complete. DRAC membership will be drawn from people who reside and/or work within the Boyle Heights neighborhood, with up to seventeen (17) members representing the following categories:

- Residential property owners
- Residential tenants
- Commercial property owners
- Design professionals from the community (architect, landscape architect, engineer, urban planner)
- Community organizations
- Business tenants/owners
- Students/Youth

Members shall not include persons or representatives of businesses who will likely be bidders/proposers/contractors/consultants for a Metro contract to be awarded concerning the Project sites. In addition, Metro promotes diversity on the DRAC by not selecting members on the basis of race, color or national origin, rather the DRAC is reflective of the demographics of the Boyle Heights community.

vii. Regional Connector Community Leadership Council

The Regional Connector Community Leadership Council (RCCLC) is an advisory group formed by the Los Angeles County Metropolitan Transit Authority (Metro) to provide sustained public involvement from all parts of the 1.9 mile light-rail alignment. The mission of the CLC is to foster, advance, and promote community-based dialogue and information-sharing regarding the needs and preferences of varied stakeholders on such matters as design, construction and public safety. In addition, members of the Leadership Council review and provide input on mitigations designed to address construction impacts per the Mitigation Monitoring and Reporting Program, specified as part of the project's Environmental Impact Report. The involved representatives serve both in an advisory capacity to Metro, and as liaisons to the wider group of station area project stakeholders including, but not limited to, local small businesses and residents, corporations, cultural, entertainment, tourism, and educational institutions. Updates on construction activities, mitigations, parking or access changes, marketing and advertising efforts available to sustain and/or enhance businesses are commonly raised. The CLC's charge also includes assessing how best to leverage this billion dollar transit investment to promote economic prosperity of communities.

Varied efforts are completed to maintain diverse leadership on the board ensuring the Regional Connector's Community Leadership station area co-chairs represent downtown's varied interests. The Leadership Council's Asian American leaders represent Little Tokyo, one of three remaining Japantowns in the United States, and one member represents the adjacent station area, 2nd Av/Broadway. The co-chairs of the council that are of Asian descent also are vested by virtue of land ownership, business interests, non-profit, and civic leadership. Of the four neighborhoods subject to Community Leadership Council monthly meetings, three are future station areas and one is engaged as the Los Angeles Financial District. Of the three station area councils, two are represented by leaders who identify as Asian American. However, co-chairs are also selected based on their desire to serve, knowledge of the responsibility, understanding of the area, whether representing non-profit, institutional, educational, business or a resident's perspective.

The search for volunteer co-chairs of the Leadership Council is achieved by working with existing council leaders and their community based networks to identify candidates. Project updates presented by Metro at community meetings often includes a summary on the Community Leadership Council's responsibilities. Also, the Community Leadership Council's Executive Committee Chair is often invited as a presenter, highlighting their charge while asking those who may be interested to come forward.

Since these project update meetings are held throughout the 1.9 mile route, this provides an opportunity for the public attending from each station area to be apprised of the opportunity to participate as a co-chair. In addition to the Executive Committee Chair, Co-chairs of the station area committees from Little Tokyo/Arts District, 2nd St/Broadway, 2nd Pl/Hope St and the Financial District are also introduced at various public meetings to engage with the public and to identify those who may wish to serve in the future.

Notices to Metro's list of area professional associations, organizations, committees, and ethnic press in downtown and social communication platforms are also tactics available to recruit ethnic leadership to ensure the areas distinct cultural and socio-economic interests are represented.

viii. Crenshaw/LAX Transit Project Community Leadership Council

In 2011, the surrounding communities of the City of Inglewood, City of Los Angeles, the County of Los Angeles, and Metro initiated a civic engagement process to ensure full community participation in the implementation of the Crenshaw/LAX Transit Project. A group of leading stakeholders including business, civic, faith, corporate and public safety officials were brought together to form what is known as the Crenshaw/LAX Community Leadership Council (CLC). Since inception, the CLC has worked to promote community-based dialogue around opportunities arising from the Crenshaw/LAX Line development and have engaged stakeholders with ongoing project activities along the Project alignment in a way that's equitable, beneficial, resourceful, and meets the needs of the community.

For more than four years, the CLC has participated in more than 75 project meetings, workgroups, and community events. These meetings have provided a platform to share concerns and develop solutions for priority issues such as expanding access to technical assistance and capital resources to small businesses impacted by construction, incorporating the Leimert Park and Westchester/Veterans stations in the scope of the project, enhancing safety outreach strategies to reach a wide audience of stakeholders and advocating for increase in diverse and disadvantaged small business subcontractors.

Strategies to reach low income population include holding meetings in transit-accessible locations and holding meetings at a variety of meeting times, evenings and weekends in order to allow for participation at multiple times. Many of the meeting announcements, flyers, advertisements, and other informational materials such as brochures are produced bilingually (in Spanish).

The CLC membership is comprised of stakeholders who:

- Live and/or work within the project area;
- Have specific knowledge about the communities served by the project;
- Reflect the diversity of the project area served; and
- Have membership or affiliation with one or more community organizations.

The CLC's membership is drawn from stakeholders who live and/or work within the boundaries of the Crenshaw/LAX Transit Corridor project area and include those with knowledge and background in the communities to be served by the project. The CLC is racially diverse, and includes representatives from small business, faith-based organizations, labor, local media, academia, local empowerment congress, chambers, local economic development corporations and law enforcement. CLC Members represent the following organization whose stakeholders and constituents include minority and low income groups: West Angeles Community Develop Corp, Earlez Grille, Empowerment Congress, Southern California Edison, GLAAAC, Metro Sheriff Department, Baldwin Hills Crenshaw Plaza, Los Angeles Urban League, Crenshaw Neighbors, Crenshaw Chamber of Commerce, Westchester Neighbors Association, Park Mesa Heights Community Council, First Church of God...Center of Hope, Inglewood Today, St. John's Chrysostom Church, Inglewood / Airport Chamber of Commerce, Southern California Edison and Faithful Central Bible Church.

7. Assisting and Monitoring Subrecipients

In accordance to FTA Circular 4702.1B, Metro is committed to ensuring that we distribute FTA funding without regard to race, color, or national origin and that our subrecipients are also in compliance with FTA Title VI regulations. Metro requires subrecipients to verify their compliance with FTA Title VI regulations by adhering to the requirements set forth in Circular 4702.1B and submitting a Title VI program to Metro on a triennial basis.

Since January 2013, Metro has had procedures in place to train and monitor all subrecipients with regard to FTA Title VI compliance. The dates for Title VI submission are assigned on a rolling basis as Metro currently oversees approximately 54 subrecipients.

Metro has continued with our Title VI Subrecipient Compliance Training program. Our training program consists on in-person, multimedia training to inform subrecipients of the FTA Title VI regulations and assist them with creating a Title VI Program for their organization.

Metro has and will continue to provide subrecipients with assistance in the form supplemental materials including:

- i. Sample documents: Title VI Program Updates, Notices to the Public, Complaint forms, Public Participation Plans, and Language Assistance Plans;
- ii. Demographic (Census) information; and
- iii. Tracking matrices to assist subrecipients with organizing their program updates and to allow Metro to document suggestions/corrections to a program update.

Metro's Civil Rights Compliance Administrator will conduct a full review of the subrecipient's Title VI Program Update. After a thorough review of the subrecipient's program update, Metro will determine if the update is compliant or noncompliant with Department of Transportation's (DOT) Title VI regulations. If the Program Update is compliant, Metro will send written notification informing the subrecipient of their compliance and the next triennial due date for their Title VI Program Update. If the subrecipient's Program Update is not fully compliant, Metro will inform subrecipients in writing of the deficient areas and offer assistance to cure the deficiencies. Metro's goal is to work closely with subrecipients to cure deficiencies within 30 days. All final subrecipient Title VI Program Updates will be stored electronically.

Metro will audit and monitor each subrecipient's Title VI Program. Metro's monitoring program will include documentation of any suggested changes made to the subrecipient's Title VI Program Update. Metro will also monitor subrecipients' websites to ensure ongoing compliance.

Periodic site visits will also be conducted as time and resources allow. During the site visits Metro will inspect the subrecipient vehicles and facilities for compliance with Title VI requirements such as: the posting of Notice to the Public, evidence of outreach to the limited English populations identified in the subrecipient's LEP Plan, and the location and distribution of complaint procedures.

The schedule of Title VI Program Update submissions is found in **Appendix I**.

8. Determination of Site or Location of Facilities

To ensure compliance with 49 CFR Section 21.9, Metro is required to conduct a Title VI equity analysis for new locations or facilities in order to ensure that locations are selected without regard to race, color, or national origin. Since the last program submission, Metro has approved construction of a transit facility. On January 23, 2014, the Metro Board of Directors approved facility improvements to the Rosa Parks/Willowbrook Metro Station. The Board approval allows for Metro to reconfigure the current Rosa Parks/Willbrook station area and improve safety, enhance transit customers' movements, and provide better connections to surrounding land uses in the Willowbrook community. The project requires Metro to acquire surrounding land and results in the displacement of four businesses. In accordance with FTA Title VI guidance, Metro conducted a Title VI equity analysis prior to the January 23, 2014 Board approval. The Title VI equity analysis resulted in no evidence of disparate impact. The methodology for the analysis was reviewed with the FTA in advance of submittal to the Board. The January 2014 Board Report, which includes the Title VI equity analysis, can be found in **Appendix J**. The January 2014 Board approval is listed as **Item 59**.

DRAFT

REQUIREMENTS FOR FIXED ROUTE TRANSIT PROVIDERS

This section addresses the Requirements for Fixed Route Transit Providers section of FTA C 4702.1B. The following information addresses the reporting requirements as described under Chapter IV of the Circular. Supporting documentation can be found in the Appendix to this report.

1. System-wide Service Standards and Policies

To ensure compliance with 49 CFR Section 21.5(b)(2), Section 21.5 (b)(7) and Appendix C to 49 CFR part 21, (3)iii, Metro has set service standards and service policies for each specific fixed route mode of service we provide. The service standards and polices address how services are distributed throughout our transit system and ensure that the manner of the distribution affords users access to these assets. The adopted standards and policies are included in **Appendix K**.

2. Collection and Reporting of Demographic Data

Demographic and service profile maps and charts are included in **Appendix L**.

Metro bi-annually collects ridership information relating to Title VI as described in FTA C 4702.1B. The Customer Satisfaction Survey is a self-administered, on-board, paper survey Metro performs twice a year. The survey has English on one side and Spanish on the other side. The survey is also offered in 9 additional foreign languages, Chinese (Mandarin), Russian, Armenian, Japanese, Vietnamese, Tagalog, Khmer, Korean and Thai.

It is a mostly yes/no survey that focuses on quality of service such as on-time performance, operator courtesy, passenger safety, perception of wait time, distribution of information, system cleanliness and overall satisfaction with service. It also monitors demographic information such as race, ethnicity, income, car availability, gender, and age. The results represent over 98% of Metro's weekday ridership. Every directly operated bus line and rail line is sampled. We survey weekday-daytime bus runs and rail lines. The final results are posted on the Research and Development webpage and presented in a board report and to the Regional Service Councils.

The most recent survey, fielded in late March 2016, resulted in 14,858 system-wide responses. The following information showing minority and non-minority breakdowns and poverty level on Metro transit is taken from that latest survey. About 88 % of passengers are minority and 12% are non-minority (white or Caucasian). About 45% of passengers are above the poverty line and 55% are below the poverty line.

A blank copy of the survey along with a language card used to inform limited English Proficient customers of the survey can be found in **Appendix M**. Some results of the survey are as follows:

Satisfaction with Service

Both minority and non-minority passengers agree that they are generally satisfied with Metro Transit service (89%).

Travel Information

A majority of minorities and non-minorities walk to their FIRST bus or rail for a particular trip (77% and 67% respectively). The difference in waiting time for the FIRST bus or rail for minorities and non-minorities is approximately one minute, with minorities waiting an average of 9.05 minutes and non-minorities 8.01 minutes.

Twenty-one (21) percent of minorities have a car available for the current transit trip versus 40% of non-minorities.

Fares

Below is a table of fare types for both minorities and non-minorities for the first Metro bus or train on the current trip. Most fare types are similar except for the 7-Day pass, Day Pass, TAP Stored Value and Cash (One Way).

Fare Type	Minority	Non-Minority
30-Day Pass	26%	21%
7-Day Pass	14%	7%
Day Pass	9%	6%
TAP Stored Value	17%	36%
Cash (One Way Ticket)	22%	15%
Token	3%	2%
Metro Transfer	1%	1%
EZ Transit Pass	1%	3%
Inter-Agency Transfer	1%	0%
Metrolink Transfer	1%	3%
Other	6%	7%
Total	100%	100%

Below is a table of discounted fare types for both minorities and non-minorities. Twenty-six (26) percent of minorities receive a discount on their fare versus 28% of non-minorities receive a discount on their fare.

Fare Type	Minority	Non-Minority
Student (K-12)	28%	12%
Student (College/VOC)	26%	17%
Rider-Relief	9%	4%
Senior/Disabled/Medicare	37%	68%
Total	100%	100%

3. Monitoring of Transit Service

The monitoring results assess conformance with Metro adopted Service Policies and Standards. In instances where standards are not met, the reasons for non-conformance and the incorporation of a plan of action for achieving conformance are discussed in depth in the report submitted to the Metro Board. A brief discussion of these same issues follows below.

The results of the monitoring program, accompanying Board Report and Meeting minutes approving the results can be found in **Appendix N**.

Metro has determined that a disparate impact will be found to exist where there is a 10% or greater difference between the percent conformance to a service standard or policy for predominantly minority areas versus non-minority areas. The results of the monitoring program indicate that a disparate impact exists in the area of on-time performance.

On-Time Performance

On-Time Performance Standards were recently revised in October 2015. The current standards are depicted in Table C-1. Ninety percent of bus lines must meet the standard in at least 90% of all time periods monitored. Rail lines are expected to achieve the standard or better on a daily basis. Monitoring data is from the January-March 2016 time period.

WEEKDAY	Minority Bus Lines	Non-Minority Bus Lines	Poverty Bus Lines	Non-Poverty Bus Lines
# of Bus Lines	70	70	70	70
# of Lines Meeting Std.	4	3	1	6
% Compliance	5.7%	4.3%	1.4%	8.6%
SATURDAY				
# of Bus Lines	55	53	58	50
# of Lines Meeting Std.	2	6	2	6
% Compliance	3.6%	11.3%	3.4%	12.0%
SUNDAY				
# of Bus Lines	49	52	54	47
# of Lines Meeting Std.	5	11	5	11
% Compliance	10.2%	21.2%	9.3%	23.4%

Observed data from Jan-Mar 2016
 90% of lines must meet standard at least 90% of all time periods

The conformance of Metro bus lines to these standards is summarized in the table above for weekdays, Saturdays and Sundays. Overall bus on-time performance compliance is poor with only 7 of 140 weekday bus lines (5.0%), 8 of 108 Saturday bus lines (7.4%), and 16 of 101 Sunday bus lines (15.8%) meeting the standard by exceeding the target in at least 90% of all time periods operated.

Therefore, although it appears Metro has a disparate impact in the area of bus On-Time Performance, the larger issue is Metro's non-conformance to bus on-time performance standards system wide. Metro is committed to reducing the disparate impact revealed in the area of bus on-time performance by reassessing our on-time performance standard and focusing on improving the overall on-time performance for all bus lines.

Vehicle Assignment

There was no disparate impact in bus fleet age for minority compared with non-minority bus lines. However, for rail lines, the Blue and Expo lines had significantly older equipment in comparison to other rail lines at the time the data was analyzed. A substantial order of new rail cars was in the early stages of delivery and acceptance at that time. In order to remedy the possible disparate impact in the area of rail vehicle assignment, new light rail cars will be deployed on both of these lines to replace older equipment. The Gold Line, a non-minority line, had significantly newer equipment because the first new vehicles had to be assigned to it in order to operate the Azusa Extension. These disparities should even out once the new car order is fully delivered and vehicle assignments are adjusted accordingly. Additionally, in June 2016, Metro updated the Rail Vehicle Assignment policy.

Rail Vehicle Deployment by Age and by Line – The rail vehicle deployment policy is revised so that the deployment of vehicles is clearly sensitive to average age of the fleet assigned to each rail line. The new policy objectives is that no line shall have an average age of fleet that is more than 20% greater than the average for the entirety of the Light Rail mode or Heavy Rail mode.

This update will ensure that Metro's Vehicle Assignments Service Policy will not create a disparate impact based on race, color, or national origin.

4. Equity Evaluation of Service and Fare Changes

The FTA Title VI regulations presented in Circular 4702.1B prohibit discrimination on the basis of race, color and national origin and require transit providers operating 50 or more vehicle during peak service and in a UZA of 200,000 or more, review their policies and practice to ensure that their service and fare changes do not result in disparate impacts on the basis of race, color and national origin. Therefore, Metro has developed major service change and fare change thresholds to determine whether those changes will have a discriminatory impact on the basis of race, color and national origin.

Bus and Rail services are adjusted two times per year, in June and December. The purpose of these adjustments, otherwise referred to as a Shake-Up, is to improve schedules and modify routes to adapt to the current operating environment. Not every adjustment during the biannual Shake-Up meets Metro's threshold for a major service change however for the adjustments that do meet the major

service change thresholds, Metro conducts a Title VI Service Equity Analysis to ensure that the planned changes do not have a disparate impact on the basis of race, color and national origin or a disproportionate burden on low-income individuals. In addition to the Title VI Service Equity Analysis, Metro conducts public hearings for the major service changes.

During this three year reporting period, Metro conducted Title VI Service Equity Analyses for the service changes in the June 2014, December 2015 and June 2016. The Title VI analysis and Board Minutes demonstrating Metro Board's considerations and approval of the Title VI analyses of the major services changes are found in **Appendix O**. Note that the June 2014 Service Change approval is listed as **Item 29**; the December 2015 Service Change approval is listed as **Item 38**; and the June 2016 Service Change is listed as **Item 28** in the board meeting minutes.

In addition to the major services changes, Metro had two New Start projects, the Gold Line Foothill Extension and Expo 2. Both rail extensions provide increased options for mobility for our customers. The Title VI Analyses and Board Minutes demonstrating Metro Board's approval of the Title VI analyses of the two New Start projects are found in **Appendix O**. The Gold Line Extension and Expo 2 approval is listed as **Item 66**.

Finally, the three fare changes that occurred during this reporting period were a Fare Restructuring in September 2014; Replacement of Interagency Transfers with a Tap Based Method; and All Door Boarding for our Metro Silver Line and Rapid Bus.

The Board Reports, which includes the Title VI analyses, are found in **Appendix P**, along with the notice of public hearing, agenda for the public hearing regarding the fare change, and the Board Minutes approving the change. Note that the 2014 Fare Restructuring approval is listed as **Item 54**; the Replacement of Interagency Transfers with a Tap Based Method is listed as **Item 9**; and the All Door Boarding for our Metro Silver Line and Rapid Busses is listed as **Item 31**.

Description of Public Engagement

As outlined in our 2013 Title VI Program Update, Metro Community Relations initiated an outreach program to solicit public input on the agency's proposed major service change policy and definitions of disparate impact and disproportionate burden in accordance with Title VI guidelines. Community Relations worked with Metro's Office of Civil Rights and the Communications department to develop a visual presentation that explained the proposed service change policy. Numerous presentations were given on the proposed major service change policy and disparate impact and disproportionate burden policy, including an overview of Title VI of the Civil Rights Act and the Executive Order on Environmental Justice. In September 2013, Metro's Board of Directors adopted the Major Service Change Policy, the Fare Change Policy, the Disparate Impact threshold and the Disproportionate Burden threshold.

Since the 2013 Title VI Program, Metro has not made any changes to the adopted Major Service Change Policy, Fare Change Policy, Disparate Impact threshold and Disproportionate Burden Policies. In July 2016, Metro made several informational presentations to our Service Councils to provide them with a refresher course on our Fare Change Policy, Major Service Change Policy, Disparate Impact and

Disproportionate Burden Policies. A copy of the Presentation can be found in **Appendix Q**. The Board adopted Major Service Change Policy, Disparate Impact Policies and Disproportionate Burden Policies are as follows:

Major Service Change Policy

A major service change is defined as any service change meeting at least one of the following criteria:

1. A revision to an existing transit route that increases or decreases the route miles by 25% or the revenue service miles operated by the lesser of 25%, or by 250,000 annual revenue service miles at one time or cumulatively in any period within 36 consecutive months;
2. A revision to an existing transit service that increases or decreases the revenue hours operated by at least 25% or by 25,000 annual revenue service hours at one time or cumulatively in any period within 36 consecutive months;
3. A change of more than 25% at one time or cumulatively over any period within 36 consecutive months in the number of total revenue trips scheduled on routes serving a rail or BRT station, or an off-street bus terminal serving at least 4 bus routes;
4. A change of more than 20% of the total system revenue miles or revenue hours in any 12 month period;
5. The implementation of any new transit route that results in a net increase of more than 25,000 annual revenue hours or 250,000 annual revenue miles; or
6. Six months prior to the opening of any new fixed guideway project (e.g. BRT line or rail line) regardless of whether or not the amount of service being changed meets the requirements in the subsections 1 – 5 above.

Fare Change Policy

A Fare Equity Analysis shall be prepared for any fare change (increase or decrease). This includes, but is not limited to:

1. Permanent fare changes, temporary changes, promotional fare changes and pilot fare programs. The analysis will evaluate the effects of fare changes on Title VI protected populations and low-income populations. The analysis will be done for fares not available to the general public such as special discount programs for students, groups or employers.
2. If fare changes are planned due to the opening of a new fixed guideway project, an equity analysis shall be completed six months prior to opening of the service.
3. Each Title VI Fare Equity Analysis shall be completed and presented for consideration of the board of Directors in advance of the approval of the proposed fare or fare media change by the Board of Directors. The Equity Analysis will then be forwarded to the FTA with a record of action taken by the Board.
4. A Title VI analysis is not required when:
 - A change is instituted that provides free fares for all passengers
 - Temporary fare reductions are provided to mitigate for other actions taken by Metro
 - Promotional fare reductions are less than six months duration

An equity analysis must be conducted prior to making any temporary fare change into a permanent part of the fare system.

Disparate Impact

Major Service Changes:

- A disparate adverse impact will be deemed to have occurred if the absolute difference between the percentage of minorities adversely affected and the overall percentage of minorities is at least 5% or if there is a 20% or greater percent difference between the percentages of these two groups.

Fare Changes:

- A disparate adverse impact will be deemed to have occurred if the absolute difference between the percentage of minorities adversely affected and the overall percentage of minorities is at least 5% or if there is a 35% or greater percent difference between the percentages of these two groups.

Disproportionate Burden

Major Service Changes

- A disproportionate burden will be deemed to exist if absolute difference between the percentage of low-income adversely affected by the service change and the overall percentage of low-income persons is at least 5% or if there is a 20% or greater percent difference between the percentages of these two groups.

Fare Changes

- A disproportionate burden will be deemed to exist if absolute difference between the percentage of low-income adversely affected by the fare change and the overall percentage of low-income persons is at least 5% or if there is a 35% or greater percent difference between the percentages of these two groups.

5. Metro Board Approval for 2016 Title VI Program Update

Documentation of Board approval for Metro's 2016 Title VI Program Update can be found in **Appendix R**.

To access the Appendix for the 2016 Draft Title VI Program, please visit:

<https://www.metro.net/about/civil-rights-policy/metro-2016-draft-title-vi-programupdate/>



U.S. Department
of Transportation

**Federal Transit
Administration**

CIRCULAR

FTA C 4702.1B

October 1, 2012

**Subject: TITLE VI REQUIREMENTS AND GUIDELINES FOR FEDERAL
TRANSIT ADMINISTRATION RECIPIENTS**

1. PURPOSE. The purpose of this Circular is to provide recipients of Federal Transit Administration (FTA) financial assistance with guidance and instructions necessary to carry out U.S. Department of Transportation (“DOT” or “the Department”) Title VI regulations (49 CFR part 21) and to integrate into their programs and activities considerations expressed in the Department’s Policy Guidance Concerning Recipients’ Responsibilities to Limited English Proficient (“LEP”) Persons (70 FR 74087, December 14, 2005).
2. CANCELLATION. This Circular supersedes FTA Circular 4702.1A “Title VI and Title VI-Dependent Guidelines for Federal Transit Administration Recipients,” dated May 13, 2007.
3. AUTHORITY.
 - a. Title VI of the Civil Rights Act of 1964, 42 U.S.C. § 2000d et seq.
 - b. Federal Transit Laws, Title 49, United States Code, Chapter 53.
 - c. 49 CFR § 1.51.
 - d. 49 CFR part 21.
 - e. 28 CFR § 42.401 et seq.
4. WAIVER. FTA reserves the right to waive any requirements of this Circular to the extent permitted by law.
5. FEDERAL REGISTER NOTICE. In conjunction with publication of this Circular, FTA published a notice in the *Federal Register* on August 28, 2012, addressing comments received during development of the Circular.
6. AMENDMENTS TO THE CIRCULAR. FTA reserves the right to update this Circular to reflect changes in other revised or new guidance and regulations that undergo notice and comment, without further notice and comment on this Circular. FTA will post updates on our

website at www.fta.dot.gov. The website allows the public to register for notification when FTA issues *Federal Register* notices or new guidance. Please visit the website and click on “Sign Up For Email Updates” for more information.

7. ACCESSIBLE FORMATS. This document is available in accessible formats upon request. To obtain paper copies of this Circular as well as information regarding these accessible formats, call FTA’s Administrative Services Help Desk, at 202-366-4865. Individuals with hearing impairments may contact the Federal Relay Service at 1-800-877-8339 for assistance with the call.

/s/
Peter Rogoff
Administrator

TITLE VI GUIDELINES FOR FTA RECIPIENTS

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CHAPTER I

INTRODUCTION AND BACKGROUND

1. **THE FEDERAL TRANSIT ADMINISTRATION (FTA)**. FTA is one of ten operating administrations within the U.S. Department of Transportation (DOT). Headed by an Administrator who is appointed by the President of the United States, FTA functions through a Washington, DC, headquarters office, ten regional offices, and five metropolitan offices that assist transit agencies in all 50 States, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, Guam, Northern Mariana Islands, and American Samoa.

Public transportation includes buses, subways, light rail, commuter rail, monorail, passenger ferry boats, trolleys, inclined railways, people movers, and vans. Public transportation can be either fixed route or demand response service.

The Federal Government, through FTA, provides financial assistance to develop new transit systems and improve, maintain, and operate existing systems. FTA oversees thousands of grants to hundreds of State and local transit providers, primarily through its ten regional offices. These grant recipients are responsible for managing their programs in accordance with Federal requirements, and FTA is responsible for ensuring that recipients follow Federal statutory and administrative requirements.

2. **AUTHORIZING LEGISLATION**. Most Federal transit laws are codified at title 49 U.S.C. Chapter 53. Authorizing legislation is substantive legislation enacted by Congress that establishes or continues the legal operation of a Federal program or agency. FTA's most recent authorizing legislation is the Moving Ahead for Progress in the 21st Century (MAP-21), Public Law 112-141, signed into law on July 6, 2012, and effective October 1, 2012.
3. **HOW TO CONTACT FTA**. FTA's regional and metropolitan offices are responsible for providing financial assistance to FTA recipients and oversight of grant implementation for most FTA programs. Certain specific programs are the responsibility of FTA headquarters. Inquiries should be directed to either the regional or metropolitan office responsible for the geographic area in which the recipient is located. See FTA's website for more information.

Visit FTA's website, <http://www.fta.dot.gov>, or contact FTA Headquarters at the following address and phone number:

Federal Transit Administration
Office of Communications and Congressional Affairs
1200 New Jersey Avenue SE
East Building
Washington, DC 20590
Phone: 202-366-4043; Fax: 202-366-3472

4. **GRANTS.GOV**. FTA posts all competitive grant opportunities on Grants.gov. Grants.gov is the one website for information on all discretionary Federal grant opportunities. Led by the U.S. Department of Health and Human Services (DHHS) and in partnership with Federal grant-making agencies, including 26 agencies, 11 commissions, and several States,

Grants.gov is one of 24 government-wide E-government initiatives. It is designed to improve access to government services via the Internet. More information about Grants.gov is available at <http://www.grants.gov/>.

5. DEFINITIONS. All definitions in chapter 53 of title 49, United States Code, and in 49 CFR part 21 apply to this Circular, as well as the following definitions:
- a. Applicant means a person or entity that submits an application, request, or plan required to be approved by the FTA Administrator or by a primary recipient, as a condition of eligibility for financial assistance from FTA, and “application” means such an application, request, or plan.
 - b. Demand response system: Any non-fixed route system of transporting individuals that requires advanced scheduling including services provided by public entities, non-profits, and private providers. An advance request for service is a key characteristic of demand response service.
 - c. Designated recipient means an entity designated, in accordance with the planning process under sections 5303 and 5304, by the Governor of a State, responsible local officials, and publicly owned operators of public transportation, to receive and apportion amounts under section 5336 to urbanized areas of 200,000 or more in population; or a State or regional authority, if the authority is responsible under the laws of a State for a capital project and for financing and directly providing public transportation.
 - d. Direct recipient means an entity that receives funding directly from FTA. For purposes of this Circular, a direct recipient is distinguished from a primary recipient in that a direct recipient does not extend financial assistance to subrecipients, whereas a primary recipient does.
 - e. Discrimination refers to any action or inaction, whether intentional or unintentional, in any program or activity of a Federal aid recipient, subrecipient, or contractor that results in disparate treatment, disparate impact, or perpetuating the effects of prior discrimination based on race, color, or national origin.
 - f. Disparate impact refers to a facially neutral policy or practice that disproportionately affects members of a group identified by race, color, or national origin, where the recipient’s policy or practice lacks a substantial legitimate justification and where there exists one or more alternatives that would serve the same legitimate objectives but with less disproportionate effect on the basis of race, color, or national origin.
 - g. Disproportionate burden refers to a neutral policy or practice that disproportionately affects low-income populations more than non-low-income populations. A finding of disproportionate burden requires the recipient to evaluate alternatives and mitigate burdens where practicable.
 - h. Disparate treatment refers to actions that result in circumstances where similarly situated persons are intentionally treated differently (i.e., less favorably) than others because of their race, color, or national origin.

- i. Fixed guideway means a public transportation facility—using and occupying a separate right-of-way for the exclusive use of public transportation; using rail; using a fixed catenary system; for a passenger ferry system; or for a bus rapid transit system.
- j. Fixed route refers to public transportation service provided in vehicles operated along pre-determined routes according to a fixed schedule.
- k. Federal financial assistance refers to
 - (1) grants and loans of Federal funds;
 - (2) the grant or donation of Federal property and interests in property;
 - (3) the detail of Federal personnel;
 - (4) the sale and lease of, and the permission to use (on other than a casual or transient basis), Federal property or any interest in such property without consideration or at a nominal consideration, or at a consideration which is reduced for the purpose of assisting the recipient, or in recognition of the public interest to be served by such sale or lease to the recipient; and
 - (5) any Federal agreement, arrangement, or other contract that has as one of its purposes the provision of assistance.
- l. Limited English Proficient (LEP) persons refers to persons for whom English is not their primary language and who have a limited ability to read, write, speak, or understand English. It includes people who reported to the U.S. Census that they speak English less than very well, not well, or not at all.
- m. Low-income person means a person whose median household income is at or below the U.S. Department of Health and Human Services (HHS) poverty guidelines.

Recipients are encouraged to use a locally developed threshold, such as the definition found in 49 U.S.C. 5302 as amended by MAP-21: “refers to an individual whose family income is at or below 150 percent of the poverty line (as that term is defined in Section 673(2) of the Community Services Block Grant Act (42 U.S.C 9902(2)), including any revision required by that section) for a family of the size involved” or another threshold, provided that the threshold is at least as inclusive as the HHS poverty guidelines.
- n. Low-income population refers to any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed FTA program, policy or activity.
- o. Metropolitan planning organization (MPO) means the policy board of an organization created and designated to carry out the metropolitan transportation planning process.

- p. Metropolitan transportation plan (MTP) means the official multimodal transportation plan addressing no less than a 20-year planning horizon that is developed, adopted, and updated by the MPO through the metropolitan transportation planning process.
- q. Minority persons include the following:
- (1) American Indian and Alaska Native, which refers to people having origins in any of the original peoples of North and South America (including Central America), and who maintain tribal affiliation or community attachment.
 - (2) Asian, which refers to people having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent, including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.
 - (3) Black or African American, which refers to people having origins in any of the Black racial groups of Africa.
 - (4) Hispanic or Latino, which includes persons of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.
 - (5) Native Hawaiian or Other Pacific Islander, which refers to people having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.
- r. Minority population means any readily identifiable group of minority persons who live in geographic proximity and, if circumstances warrant, geographically dispersed/transient populations (such as migrant workers or Native Americans) who will be similarly affected by a proposed DOT program, policy, or activity.
- s. Minority transit route means a route that has at least 1/3 of its total revenue mileage in a Census block or block group, or traffic analysis zone(s) with a percentage of minority population that exceeds the percentage of minority population in the transit service area. A recipient may supplement this service area data with route-specific ridership data in cases where ridership does not reflect the characteristics of the census block, block group, or traffic analysis zone.
- t. National origin means the particular nation in which a person was born, or where the person's parents or ancestors were born.
- u. Noncompliance refers to an FTA determination that the recipient is not in compliance with the DOT Title VI regulations, and has engaged in activities that have had the purpose or effect of denying persons the benefits of, excluding from participation in, or subjecting persons to discrimination in the recipient's program or activity on the basis of race, color, or national origin.
- v. Non-profit organization: A corporation or association determined by the Secretary of the Treasury to be an organization described by 26 U.S.C. 501(c) which is exempt from taxation under 26 U.S.C. 501(a) or one which has been determined under State law to be

non-profit and for which the designated State agency has received documentation certifying the status of the non-profit organization.

- w. Predominantly minority area means a geographic area, such as a neighborhood, Census tract, block or block group, or traffic analysis zone, where the proportion of minority persons residing in that area exceeds the average proportion of minority persons in the recipient's service area.
- x. Primary recipient means any FTA recipient that extends Federal financial assistance to a subrecipient.
- y. Provider of fixed route public transportation (or "transit provider") means any entity that operates public transportation service, and includes States, local and regional entities, and public and private entities. This term is used in place of "recipient" in chapter IV and is inclusive of direct recipients, primary recipients, designated recipients, and subrecipients that provide fixed route public transportation service.
- z. Public transportation means regular, continuing shared-ride surface transportation services that are open to the general public or open to a segment of the general public defined by age, disability, or low income; and does not include Amtrak, intercity bus service, charter bus service, school bus service, sightseeing service, courtesy shuttle service for patrons of one or more specific establishments, or intra-terminal or intra-facility shuttle services. Public transportation includes buses, subways, light rail, commuter rail, monorail, passenger ferry boats, trolleys, inclined railways, people movers, and vans. Public transportation can be either fixed route or demand response service.
- aa. Recipient as used in this Circular, means any public or private entity that receives Federal financial assistance from FTA, whether directly from FTA or indirectly through a primary recipient. This term includes subrecipients, direct recipients, designated recipients, and primary recipients. The term does not include any ultimate beneficiary under any such assistance program.
- bb. Secretary means the Secretary of the U.S. Department of Transportation.
- cc. Service area refers either to the geographic area in which a transit agency is authorized by its charter to provide service to the public, or to the planning area of a State Department of Transportation or Metropolitan Planning Organization.
- dd. Service standard/policy means an established service performance measure or policy used by a transit provider or other recipient as a means to plan or distribute services and benefits within its service area.
- ee. Statewide transportation improvement program (STIP) means a statewide prioritized listing/program of transportation projects covering a period of four years that is consistent with the long-range statewide transportation plan, metropolitan transportation plans, and TIPs, and required for projects to be eligible for funding under title 23 U.S.C. and title 49 U.S.C. Chapter 53.

- ff. Subrecipient means an entity that receives Federal financial assistance from FTA through a primary recipient.
 - gg. Title VI Program refers to a document developed by an FTA recipient to demonstrate how the recipient is complying with Title VI requirements. Direct and primary recipients must submit their Title VI Programs to FTA every three years. The Title VI Program must be approved by the recipient's board of directors or appropriate governing entity or official(s) responsible for policy decisions prior to submission to FTA. For State DOTs, the appropriate governing entity is the State's Secretary of Transportation or equivalent.
 - hh. Transportation improvement program (TIP) means a prioritized listing/program of transportation projects covering a period of four years that is developed and formally adopted by an MPO as part of the metropolitan transportation planning process, consistent with the metropolitan transportation plan, and required for projects to be eligible for funding under title 23 U.S.C. and title 49 U.S.C. Chapter 53.
 - ii. Transportation management area (TMA) means an urbanized area with a population over 200,000, as defined by the Bureau of the Census and designated by the Secretary of Transportation, or any additional area where TMA designation is requested by the Governor and the MPO and designated by the Secretary of Transportation.
6. ENVIRONMENTAL JUSTICE. Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," was signed by President Clinton on February 11, 1994. Subsequent to issuance of the Executive Order, the U.S. Department of Transportation (DOT) issued a DOT Order for implementing the Executive Order on environmental justice (EJ). The DOT Order (Order 5610.2(a), "Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," 77 FR 27534, May 10, 2012) describes the process the Department and its modal administrations (including FTA) will use to incorporate EJ principles into programs, policies, and activities.

The Presidential memorandum accompanying EO 12898 identified Title VI of the Civil Rights Act of 1964 as one of several Federal laws that should be applied "to prevent minority communities and low-income communities from being subject to disproportionately high and adverse environmental effects." According to the U.S. Department of Justice, "...the core tenet of environmental justice—that development and urban renewal benefitting a community as a whole not be unjustifiably purchased through the disproportionate allocation of its adverse environmental and health burdens on the community's minority—flows directly from the underlying principle of Title VI itself."¹

Title VI prohibits discrimination by recipients of Federal financial assistance on the basis of race, color, and national origin, including the denial of meaningful access for limited English proficient (LEP) persons. Under DOT's Title VI regulations, recipients of Federal financial assistance are prohibited from, among other things, using "criteria or methods of administering its program which have the effect of subjecting individuals to discrimination based on their race, color, or national origin." For example, facially neutral policies or

¹ See Title VI Legal Manual, U.S. Department of Justice Civil Rights Division (2001), page 59.

practices that result in discriminatory effects or disparate impacts violate DOT's Title VI regulations, unless the recipient can show the policies or practices are substantially justified and there is no less discriminatory alternative. In addition, Title VI and DOT regulations prohibit recipients from intentionally discriminating against people on the basis of race, color, and national origin.

The overlap between the statutory obligation placed on Federal agencies under Title VI to ensure nondiscrimination in federally assisted programs administered by State and local entities, and the administrative directive to Federal agencies under the Executive Order to address disproportionate adverse impacts of Federal activities on minority and low-income populations explain why Title VI and environmental justice are often paired. The clear objective of the Executive Order and Presidential memorandum is to ensure that Federal agencies promote and enforce nondiscrimination as one way of achieving the overarching objective of environmental justice—fair distribution of the adverse impacts of, or burdens associated with, Federal programs, policies, and activities.

Over the years, U.S. DOT has encouraged a proactive approach to the implementation of environmental justice principles in its programs, policies, and activities. This is reflected in the DOT Order on Environmental Justice (DOT Order 5610.2(a)) which, consistent with E.O. 12898, sets forth a process by which DOT and its Operating Administrations, including FTA, will integrate the goals of environmental justice into their existing operations to ensure that consideration of EJ principles is an integral part of all programs, policies, and activities, from the inception of the planning process through to project completion, operations, and evaluation.

FTA has developed policy guidance in the form of a Circular (Circular 4703.1), “Environmental Justice Policy Guidance for Federal Transit Administration Recipients,” in order to provide recipients with a distinct framework to assist them as they integrate principles of environmental justice into their public transportation decision-making processes. FTA expects the clarification provided by the EJ Circular and the updated Title VI Circular will provide recipients with the guidance they need to properly incorporate both Title VI and environmental justice into their public transportation decision-making.

Because of the connection between EJ and Title VI, the consideration of EJ principles has sometimes been confused with the requirements of Title VI. Here is a summary of the key differences between the two:

Key Aspects of the Authorities	Title VI	Environmental Justice
What is the basis for the authority?	Title VI is a Federal statute and provides that no person shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving	The basis for addressing environmental justice is an Executive Order: EO 12898 directs each Federal agency to “make achieving environmental justice part of its mission.” The EO is intended to improve the internal management of the

Key Aspects of the Authorities	Title VI	Environmental Justice
	Federal financial assistance.	executive branch and not to create legal rights enforceable by a party against the U.S.
What is the purpose of the authority?	Title VI prohibits recipients of Federal financial assistance (e.g., states, local governments, transit providers) from discriminating on the basis of race, color, or national origin in their programs or activities, and it obligates Federal funding agencies to enforce compliance.	EO 12898 calls on each Federal agency to achieve "environmental justice...by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations...."
To whom does the authority apply?	Title VI is a Federal law that applies to recipients and subrecipients of Federal financial assistance (e.g., States, local governments, transit providers), and not to DOT itself.	EO 12898 applies to Federal agency actions, including DOT's and FTA's actions. Title VI is one of the tools used by Federal agencies to implement this directive.
What does the authority require, and of whom?	Under Title VI, DOT has the responsibility to provide oversight of recipients and to enforce their compliance with Title VI, to ensure that recipients do not use DOT funds to subsidize discrimination based on race, color, or national origin.	EO 12898 is a directive from the President of the United States to Federal agencies intended to improve the internal management of the Federal government. DOT issued its own Order implementing EO 12898, and updated the Order in May 2012 (Order 5610.2(a)).
What does the authority say with regard to negative effects or impacts?	In accordance with 49 CFR part 21 and Title VI case law, if an otherwise facially neutral program, policy, or activity will have a discriminatory impact on minority populations, that program, policy, or activity may only be carried out if (1) the recipient can demonstrate a substantial legitimate justification for the program, policy, or activity; (2) there are	In accordance with EO 12898 and the DOT Order on EJ, if a DOT program, policy, or activity will have a disproportionately high and adverse effect on minority or low-income populations, that program, policy, or activity may only be carried out if further mitigation measures or alternatives that would reduce the disproportionately high and

Key Aspects of the Authorities	Title VI	Environmental Justice
	no comparably effective alternative practices that would result in less-disparate impacts; and (3) the justification for the program, policy or activity is not a pretext for discrimination.	adverse effects are not practicable. In determining whether a mitigation measure or an alternative is “practicable,” the social, economic (including costs) and environmental effects of avoiding or mitigating the adverse effects will be taken into account.
Does the authority create any rights or remedies?	Title VI allows persons alleging discrimination based on race, color, or national origin by recipients of Federal funds to file administrative complaints with the Federal departments and agencies that provide financial assistance. Persons alleging intentional discrimination (i.e., disparate treatment) may bring a court action seeking to enforce Title VI but cannot do so with regard to allegations of discrimination based on agency disparate impact regulations. Disparate impact claims may be filed with the Federal agency.	EO 12898 establishes the Executive Branch policy on environmental justice; it is not enforceable in court and does not create any rights or remedies.

Thus, while Title VI is one tool for agencies to use to achieve the principles of environmental justice, it is important to recognize that Title VI imposes statutory and regulatory requirements that are broader in scope than environmental justice. Recipients are cautioned that while there may be overlap, engaging in an EJ analysis under Federal transportation planning and NEPA provisions will not satisfy Title VI requirements, as outlined in this Title VI Circular. Similarly, a Title VI analysis will not necessarily satisfy environmental justice, given that Title VI does not include low-income populations. Moreover, Title VI applies to all activities of Federal recipients, not solely those which may have disproportionately high and adverse human health or environmental effects on EJ populations.

For example, while a bus rehabilitation project may not impose disproportionately high or adverse health or environmental effects on minority or low-income populations, the *use* of those buses subsequent to the rehabilitation may be subject to a Title VI analysis to ensure that vehicles assigned to a particular area do not result in a disparate impact on the basis of

race, color, or national origin. In addition, if there are substantive changes to the service levels for which the rehabilitated or other buses will be used, i.e., the vehicles are deployed in such a way that the nature and quantity of service in a particular area is changed, then a service equity analysis must be conducted to determine whether this change results in a disparate impact on the basis of race, color, or national origin. The requirements for that particular analysis are part of the compliance determinations made for Federal transit recipients under chapter IV of this Circular.

CHAPTER II

PROGRAM OVERVIEW

1. **PROGRAM OBJECTIVES.** The direction, guidance and procedures in this document will help FTA recipients to:
 - a. Ensure that the level and quality of public transportation service is provided in a nondiscriminatory manner;
 - b. Promote full and fair participation in public transportation decision-making without regard to race, color, or national origin;
 - c. Ensure meaningful access to transit-related programs and activities by persons with limited English proficiency.
2. **STATUTORY AUTHORITY.** Section 601 of Title VI of the Civil Rights Act of 1964 states the following:

No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

The Civil Rights Restoration Act of 1987 clarified the broad, institution-wide application of Title VI. Title VI covers all of the operations of covered entities without regard to whether specific portions of the covered program or activity are Federally funded. The term “program or activity” means all of the operations of a department, agency, special purpose district, or government; or the entity of such State or local government that distributes such assistance and each such department or agency to which the assistance is extended, in the case of assistance to a State or local government.

Therefore, compliance with this Circular does not relieve a recipient from the requirements and responsibilities of the DOT Title VI regulation at 49 CFR part 21, or any other requirements under other Federal agencies’ Title VI regulations, as applicable. This Circular only provides guidance on the transit-related aspects of an entity’s activities. Recipients are responsible for ensuring that all of their activities are in compliance with Title VI. In other words, a recipient may engage in activities not described in the Circular, such as ridesharing programs, roadway incident response programs, or other programs not funded by FTA, and those programs must also be administered in a nondiscriminatory manner.

3. **REGULATORY AUTHORITY.** The U.S. Department of Justice (“DOJ”) Title VI regulations can be found at 28 CFR § 42.401 *et seq.*, and 28 CFR § 50.3. The U.S. Department of Transportation (“DOT”) Title VI implementing regulations can be found at 49 CFR part 21.

All programs receiving financial assistance from FTA are subject to Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d) and DOT’s implementing regulations. In addition, DOJ’s regulations require agencies such as DOT to issue guidelines to recipients to provide

detailed information on the requirements of Title VI. In order to assist recipients in carrying out the provisions of DOT's Title VI regulations, each of the requirements in this Circular includes a reference to the corresponding provision of 49 CFR part 21.

4. ADDITIONAL DOCUMENTS. In addition to the above-listed statute and regulations the following documents incorporate Title VI principles:
 - a. The Department's Policy Guidance Concerning Recipients' Responsibilities to Limited English Proficient Persons ("DOT LEP Guidance"), 70 FR 74087, (December 14, 2005). This guidance is based on the prohibition against national origin discrimination in Title VI of the Civil Rights Act of 1964, as it affects limited English proficient persons.
 - b. Section 12 of FTA's Master Agreement, which provides, in pertinent part, that recipients agree to comply, and assure the compliance of each subrecipient, lessee, third party contractor, or other participant at any tier of the Project, with all provisions prohibiting discrimination on the basis of race, color, or national origin of Title VI of the Civil Rights Act of 1964, as amended, 42 U.S.C. §§ 2000d *et seq.*, and with U.S. DOT regulations, "Nondiscrimination in Federally-Assisted Programs of the Department of Transportation—Effectuation of Title VI of the Civil Rights Act," 49 CFR part 21. Except to the extent FTA determines otherwise in writing, recipients agree to follow all applicable provisions of the most recent edition of FTA Circular 4702.1B, "Title VI Requirements and Guidelines for Federal Transit Administration Recipients," and any other applicable Federal directives that may be issued. Unless FTA states otherwise in writing, the Master Agreement requires all recipients to comply with all applicable Federal directives.
5. REPORTING REQUIREMENTS. Title 49 CFR Section 21.9(b) requires recipients to "keep such records and submit to the Secretary timely, complete, and accurate compliance reports at such times, and in such form and containing such information, as the Secretary may determine to be necessary to enable him to ascertain whether the recipient has complied or is complying with [49 CFR part 21]." FTA requires that all direct and primary recipients document their compliance by submitting a Title VI Program to their FTA regional civil rights officer once every three years. The Title VI Program must be approved by the direct or primary recipient's board of directors or appropriate governing entity or official(s) responsible for policy decisions prior to submission to FTA. For State DOTs, the appropriate governing entity is the State's Secretary of Transportation or equivalent. Recipients shall submit a copy of the Board resolution, meeting minutes, or similar documentation with the Title VI Program as evidence that the board of directors or appropriate governing entity or official(s) has approved the Title VI Program. FTA will review and concur or request the recipient provide additional information.

Subrecipients shall submit Title VI Programs to the primary recipient from whom they receive funding, in order to assist the primary recipient in its compliance efforts, on a schedule to be determined by the primary recipient. In the event an entity receives funds from more than one primary recipient, the subrecipient shall submit Title VI Programs to all primary recipients from which it receives funds. Chapters III, IV, V, and VI and appendices

detail the specific information that shall be included in Title VI Programs, based on recipient characteristics.

6. APPLICABILITY TO CONTRACTORS. Contractors and subcontractors are responsible for complying with the Title VI Program of the recipient with whom they are contracting. Contractors are not required to prepare or submit Title VI Programs. Recipients are responsible for ensuring that contractors are following the Title VI Program, and complying with Title VI.

CHAPTER III

GENERAL REQUIREMENTS AND GUIDELINES

1. **INTRODUCTION**. This chapter describes requirements that all FTA recipients must follow to ensure that their programs, policies, and activities comply with DOT's Title VI regulations.
2. **REQUIREMENT TO PROVIDE TITLE VI ASSURANCES**. In accordance with 49 CFR Section 21.7(a), every application for financial assistance from FTA must be accompanied by an assurance that the applicant will carry out the program in compliance with DOT's Title VI regulations. This requirement shall be fulfilled when the applicant/recipient submits its annual certifications and assurances to FTA. Primary recipients shall collect Title VI assurances from subrecipients prior to passing through FTA funds. The text of FTA's annual certifications and assurances is available on FTA's website.
3. **REQUIREMENTS FOR FIRST-TIME APPLICANTS**. First-time applicants must submit a Title VI Program that is compliant with this Circular, and submit an assurance (as noted in Section 2 above) that it will comply with Title VI. In addition, and consistent with 28 CFR § 50.3, entities applying for FTA funding for the first time shall provide information regarding their Title VI compliance history if they have previously received funding from another Federal agency. This shall include a copy of any Title VI compliance review activities conducted in the previous three years. The summary shall include:
 - a. The purpose or reason for the review.
 - b. The name of the agency or organization that performed the review.
 - c. A summary of the findings and recommendations of the review.
 - d. A report on the status and/or disposition of such findings and recommendations. This information shall be relevant to the organizational entity actually submitting the application, not necessarily the larger agency or department of which the entity is a part.

In addition, first-time applicants shall submit a brief description of any pending applications to other Federal agencies for assistance, and whether any Federal agency has found the applicant to be in noncompliance with any civil rights requirement.

4. **REQUIREMENT TO PREPARE AND SUBMIT A TITLE VI PROGRAM**. Title 49 CFR Section 21.9(b) requires recipients to "keep such records and submit to the Secretary timely, complete, and accurate compliance reports at such times, and in such form and containing such information, as the Secretary may determine to be necessary to enable him to ascertain whether the recipient has complied or is complying with this [rule]." FTA requires that all direct and primary recipients document their compliance with DOT's Title VI regulations by submitting a Title VI Program to their FTA regional civil rights officer once every three years or as otherwise directed by FTA. For all recipients (including subrecipients), the Title VI Program must be approved by the recipient's board of directors or appropriate governing entity or official(s) responsible for policy decisions prior to submission to FTA. For State

DOTs, the appropriate governing entity is the State's Secretary of Transportation or equivalent. Recipients shall submit a copy of the board resolution, meeting minutes, or similar documentation with the Title VI Program as evidence that the board of directors or appropriate governing entity or official(s) has approved the Title VI Program. FTA will review and concur or request the recipient provide additional information.

Subrecipients shall submit Title VI Programs to the primary recipient from whom they receive funding in order to assist the primary recipient in its compliance efforts. Such Programs may be submitted and stored electronically at the option of the primary recipient. Subrecipients may choose to adopt the primary recipient's notice to beneficiaries, complaint procedures and complaint form, public participation plan, and language assistance plan where appropriate. Operational differences between the primary recipient and subrecipient may require, in some instances, that the subrecipient tailor its language assistance plan. Subrecipients shall develop and submit to the primary recipient a list of complaints, investigations, or lawsuits. Subrecipients that have transit-related non-elected planning boards, advisory councils, or committees, the membership of which is selected by the subrecipient, must provide a table depicting the racial breakdown of the membership of those committees, and a description of efforts made to encourage the participation of minorities on such committees. Subrecipients must submit all the above information to the primary recipient on a schedule requested by the primary recipient. Collection and storage of subrecipient Title VI Programs may be electronic at the option of the primary recipient.

a. Contents. Every Title VI Program shall include the following information:

- (1) A copy of the recipient's Title VI notice to the public that indicates the recipient complies with Title VI, and informs members of the public of the protections against discrimination afforded to them by Title VI. Include a list of locations where the notice is posted. A sample Title VI notice is in Appendix B.
- (2) A copy of the recipient's instructions to the public regarding how to file a Title VI discrimination complaint, including a copy of the complaint form. Sample complaint procedures are in Appendix C, and a sample Title VI complaint form is in Appendix D.
- (3) A list of any public transportation-related Title VI investigations, complaints, or lawsuits filed with the recipient since the time of the last submission. See Appendix E for an example of how to report this information. This list should include only those investigations, complaints, or lawsuits that pertain to allegations of discrimination on the basis of race, color, and/or national origin in transit-related activities and programs and that pertain to the recipient submitting the report, not necessarily the larger agency or department of which the recipient is a part.
- (4) A public participation plan that includes an outreach plan to engage minority and limited English proficient populations, as well as a summary of outreach efforts made since the last Title VI Program submission. A recipient's targeted public participation plan for minority populations may be part of efforts that extend more broadly to

- include other constituencies that are traditionally underserved, such as people with disabilities, low-income populations, and others.
- (5) A copy of the recipient's plan for providing language assistance to persons with limited English proficiency, based on the DOT LEP Guidance.
 - (6) Recipients that have transit-related, non-elected planning boards, advisory councils or committees, or similar bodies, the membership of which is selected by the recipient, must provide a table depicting the racial breakdown of the membership of those committees, and a description of efforts made to encourage the participation of minorities on such committees or councils.
 - (7) Primary recipients shall include a narrative or description of efforts the primary recipient uses to ensure subrecipients are complying with Title VI, as well as a schedule of subrecipient Title VI program submissions.
 - (8) If the recipient has constructed a facility, such as a vehicle storage facility, maintenance facility, operation center, etc., the recipient shall include a copy of the Title VI equity analysis conducted during the planning stage with regard to the location of the facility.
 - (9) Additional information as specified in chapters IV, V, and VI, depending on whether the recipient is a fixed route transit provider, a State, or an MPO.
- b. Upload Title VI Program to TEAM. Direct and primary recipients must upload their Title VI Program into FTA's Transportation Electronic Award Management (TEAM) system, or other tracking system as directed by FTA. The Title VI Program shall be attached via the paper clip function on the Civil Rights screen, and not attached to a particular grant. Recipients must also notify their FTA Regional Civil Rights Officer via email that they have uploaded their Title VI Program to TEAM. The Title VI Program must be uploaded to TEAM no fewer than sixty calendar days prior to the date of expiration of the Title VI Program.
- c. Determinations. The status of a direct or primary recipient's Title VI Program will be noted in TEAM. The three status determinations are:
- (1) Concur. This status indicates that the recipients' Title VI Program meets the requirements as set out in this Circular. The recipient may receive grant funds.
 - (2) In review. This status indicates that the recipient's Title VI Program is being reviewed by FTA staff and a determination as to sufficiency has not yet been made. "In review" status is only effective for sixty days and grants may be processed while a Title VI Program has an "in review" status.
 - (3) Expired/Expiration. This status indicates that the recipients' Title VI Program has expired and that an updated Title VI Program must be submitted. A recipient with an expired Title VI Program may have its draw-down privileges suspended and grants may not be processed.

- d. Reporting Requirement Exemptions. Recipients whose only FTA funding is through FTA's University Transportation Center Program, National Research and Technology Program, Transportation Cooperative Research Program, Over the Road Bus Accessibility program, or the Public Transportation on Indian Reservations program are exempt from submitting a Title VI Program to FTA. In addition, FTA may exempt a recipient, upon receipt of a request for a waiver submitted to the Director of the Office of Civil Rights, from the requirement to submit a Title VI Program, or from some elements of the Title VI Program. The absence of the requirement to submit a Title VI Program does not obviate the underlying obligations to comply with DOT's Title VI regulations. Furthermore, with the exception of the Public Transportation on Indian Reservation program, FTA may, at any time, request information from an exempt recipient in order to determine compliance with Title VI regulations and statutes.
5. REQUIREMENT TO NOTIFY BENEFICIARIES OF PROTECTION UNDER TITLE VI. Title 49 CFR Section 21.9(d) requires recipients to provide information to the public regarding the recipient's obligations under DOT's Title VI regulations and apprise members of the public of the protections against discrimination afforded to them by Title VI. At a minimum, recipients shall disseminate this information to the public by posting a Title VI notice on the agency's website and in public areas of the agency's office(s), including the reception desk, meeting rooms, etc. Recipients should also post Title VI notices at stations or stops, and/or on transit vehicles. A sample Title VI notice to the public is provided in Appendix B.
 - a. Contents. The Title VI notice shall include:
 - (1) A statement that the agency operates programs without regard to race, color, or national origin.
 - (2) A description of the procedures that members of the public should follow in order to request additional information on the recipient's Title VI obligations.
 - (3) A description of the procedures that members of the public shall follow in order to file a Title VI discrimination complaint against the recipient.
 - b. Effective Practices for Fulfilling the Notification Requirement.
 - (1) Dissemination. Agencies shall inform the public of their rights under Title VI through such measures as posting the Title VI notice on posters, comment cards, or flyers placed at stations, bus shelters, and in transit vehicles. The type, timing, and frequency of these measures are at the recipient's discretion, as long as the type, timing, and frequency are sufficient to notify passengers and other interested persons of their rights under DOT's Title VI regulations with regard to the recipient's program.
 - (2) Document translation. Notices detailing a recipient's Title VI obligations and complaint procedures shall be translated into languages other than English, as needed and consistent with the DOT LEP Guidance and the recipient's language assistance plan.

- (3) Subrecipients. In order to reduce the administrative burden associated with this requirement, subrecipients may adopt the Title VI Notice developed by the primary recipient; however, subrecipients shall notify passengers and other interested persons that they may file discrimination complaints directly with the subrecipient.
6. REQUIREMENT TO DEVELOP TITLE VI COMPLAINT PROCEDURES AND COMPLAINT FORM. In order to comply with the reporting requirements established in 49 CFR Section 21.9(b), all recipients shall develop procedures for investigating and tracking Title VI complaints filed against them and make their procedures for filing a complaint available to members of the public. Recipients must also develop a Title VI complaint form, and the form and procedure for filing a complaint shall be available on the recipient's website. FTA requires direct and primary recipients to report information regarding their complaint procedures in their Title VI Programs in order for FTA to determine compliance with DOT's Title VI regulations. In order to reduce the administrative burden associated with this requirement, subrecipients may adopt the Title VI complaint investigation and tracking procedures and complaint form developed by the primary recipient. Sample complaint procedure and complaint forms are located in Appendices C and D. See Chapter IX of this Circular for more information on complaints.
7. REQUIREMENT TO RECORD AND REPORT TRANSIT-RELATED TITLE VI INVESTIGATIONS, COMPLAINTS, AND LAWSUITS. In order to comply with the reporting requirements of 49 CFR Section 21.9(b), FTA requires all recipients to prepare and maintain a list of any of the following that allege discrimination on the basis of race, color, or national origin: active investigations conducted by entities other than FTA; lawsuits; and complaints naming the recipient. This list shall include the date that the investigation, lawsuit, or complaint was filed; a summary of the allegation(s); the status of the investigation, lawsuit, or complaint; and actions taken by the recipient in response, or final findings related to, the investigation, lawsuit, or complaint. This list shall be included in the Title VI Program submitted to FTA every three years. See Appendix E for an example of how to report this information.
8. PROMOTING INCLUSIVE PUBLIC PARTICIPATION. The content and considerations of Title VI, the Executive Order on LEP, and the DOT LEP Guidance shall be integrated into each recipient's established public participation plan or process (i.e., the document that explicitly describes the proactive strategies, procedures, and desired outcomes that underpin the recipient's public participation activities). Recipients have wide latitude to determine how, when, and how often specific public participation activities should take place, and which specific measures are most appropriate. Recipients should make these determinations based on a demographic analysis of the population(s) affected, the type of plan, program, and/or service under consideration, and the resources available. Efforts to involve minority and LEP populations in public participation activities can include both comprehensive measures, such as placing public notices at all transit stations, stops, and vehicles, as well as targeted measures to address linguistic, institutional, cultural, economic, historical, or other barriers that may prevent minority and LEP persons from effectively participating in a recipient's decision-making process. FTA has developed a Circular, 4703.1, "Environmental Justice Policy Guidance for Federal Transit Administration Recipients," that includes many examples of effective strategies for engaging minority and low-income populations. FTA

encourages recipients to review that Circular for ideas when developing their public engagement strategy. Some of those effective practices include:

- a. Scheduling meetings at times and locations that are convenient and accessible for minority and LEP communities.
- b. Employing different meeting sizes and formats.
- c. Coordinating with community- and faith-based organizations, educational institutions, and other organizations to implement public engagement strategies that reach out specifically to members of affected minority and/or LEP communities.
- d. Considering radio, television, or newspaper ads on stations and in publications that serve LEP populations. Outreach to LEP populations could also include audio programming available on podcasts.
- e. Providing opportunities for public participation through means other than written communication, such as personal interviews or use of audio or video recording devices to capture oral comments.

Grant recipients are required to comply with the public participation requirements of 49 U.S.C. Sections 5307(b) (requires programs of projects to be developed with public participation) and 5307(c)(1)(I) (requires a locally developed process to consider public comment before raising a fare or carrying out a major reduction in transportation service). FTA/FHWA (Federal Highway Administration) joint planning regulations (23 CFR part 450) require States and MPOs engaged in planning activities to seek out and consider the needs and input of the general public, including interested parties and those traditionally underserved by existing transportation systems, such as minority and LEP persons, who may face challenges accessing employment and other services, as States and MPOs develop and conduct their public involvement activities. Recipients engaged in planning and other decision-making activities at the local level should consider the principles embodied in the planning regulations, and develop and use a documented public participation plan or process that provides adequate notice of public participation activities, as well as early and continuous opportunities for public review and comment at key decision points.

9. REQUIREMENT TO PROVIDE MEANINGFUL ACCESS TO LEP PERSONS. Consistent with Title VI of the Civil Rights Act of 1964, DOT's implementing regulations, and Executive Order 13166, "Improving Access to Services for Persons with Limited English Proficiency" (65 FR 50121, Aug. 11, 2000), recipients shall take reasonable steps to ensure meaningful access to benefits, services, information, and other important portions of their programs and activities for individuals who are limited-English proficient (LEP). This Circular contains only a summary of the LEP requirements as they apply to FTA recipients; recipients are encouraged to review DOT's LEP guidance for additional information (70 FR 74087, Dec. 14, 2005) <http://www.gpo.gov/fdsys/pkg/FR-2005-12-14/pdf/05-23972.pdf>. Recipients are also encouraged to review DOJ's guidelines on self-assessment, Language Access Assessment and Planning Tool for Federally Conducted and Federally Assisted Programs (May 2011), as well as other materials, available at www.lep.gov.

- a. Four Factor Analysis. In order to ensure meaningful access to programs and activities, recipients shall use the information obtained in the Four Factor Analysis to determine the specific language services that are appropriate to provide. A careful analysis can help a recipient determine if it communicates effectively with LEP persons and will inform language access planning. The Four Factor Analysis is an individualized assessment that balances the following four factors:

(1) **The number or proportion of LEP persons eligible to be served or likely to be encountered by the program or recipient.** This population will be program-specific. In addition to the number or proportion of LEP persons served, the recipient's analysis should, at a minimum, identify:

- (a) How LEP persons interact with the recipient's agency;
- (b) Identification of LEP communities, and assessing the number or proportion of LEP persons from each language group to determine the appropriate language services for each language group;
- (c) The literacy skills of LEP populations in their native languages, in order to determine whether translation of documents will be an effective practice; and
- (d) Whether LEP persons are underserved by the recipient due to language barriers.

(2) **The frequency with which LEP persons come into contact with the program.** Recipients should survey key program areas and assess major points of contact with the public, such as:

- (a) Use of bus and rail service;
- (b) Purchase of passes and tickets through vending machines, outlets, websites, and over the phone;
- (c) Participation in public meetings;
- (d) Customer service interactions;
- (e) Ridership surveys;
- (f) Operator surveys.

(3) **The nature and importance of the program, activity, or service provided by the program to people's lives.** Generally speaking, the more important the program, the more frequent the contact and the likelihood that language services will be needed. The provision of public transportation is a vital service, especially for people without access to personal vehicles. An MPO's regional planning activities will impact every person in a region. Development of a coordinated plan to meet the specific

transportation needs of seniors and people with disabilities will often also meet the needs of LEP persons. A person who is LEP may have a disability that prevents the person from using fixed route service, thus making the person eligible for ADA complementary paratransit. Transit providers, States, and MPOs must assess their programs, activities and services to ensure they are providing meaningful access to LEP persons. Facilitated meetings with LEP persons are one method to inform the recipient on what the local LEP population considers to be an essential service, as well as the most effective means to provide language assistance.

- (4) **The resources available to the recipient for LEP outreach, as well as the costs associated with that outreach.** Resource and cost issues can often be reduced by technological advances, reasonable business practices, and the sharing of language assistance materials and services among and between recipients, advocacy groups, LEP populations and Federal agencies. Large entities and those entities serving a significant number of LEP persons should ensure that their resource limitations are well substantiated before using this factor as a reason to limit language assistance.
- b. Developing a Language Assistance Plan. After completing the Four Factor Analysis, the recipient shall use the results of the analyses to determine which language assistance services are appropriate. Additionally, the recipient shall develop an assistance plan to address the identified needs of the LEP population(s) it serves. The DOT LEP Guidance recognizes that certain recipients, such as those serving very few LEP persons or those with very limited resources, may choose not to develop a written plan. However, FTA has determined it is necessary to require its recipients to develop an assistance plan in order to ensure compliance. A recipient may formally request an exemption from this requirement if it believes it fits within the exception described.

Recipients have considerable flexibility in developing a Language Assistance Plan, or LEP Plan. An LEP Plan shall, at a minimum:

- (a) Include the results of the Four Factor Analysis, including a description of the LEP population(s) served;
- (b) Describe how the recipient provides language assistance services by language;
- (c) Describe how the recipient provides notice to LEP persons about the availability of language assistance;
- (d) Describe how the recipient monitors, evaluates and updates the language access plan; and
- (e) Describe how the recipient trains employees to provide timely and reasonable language assistance to LEP populations.

FTA will solely determine, at the time the recipient submits its Title VI Program or subsequent to a complaint investigation or compliance review, whether a recipient's plan is sufficient to ensure meaningful access and thus ensure the recipient is not engaging in discrimination on the basis of national origin.

After completing the Four Factor Analysis, a recipient may determine that an effective LEP plan for its community includes the translation of vital documents into the language of each frequently encountered LEP group eligible to be served and/or likely to be affected by the recipient's programs and services. Vital written documents include, but are not limited to, consent and complaint forms; intake and application forms with the potential for important consequences; written notices of rights; notices of denials, losses, or decreases in benefits or services; and notices advising LEP individuals of free language assistance services. Examples of vital documents include an ADA complementary paratransit eligibility application, a Title VI complaint form, notice of a person's rights under Title VI, and other documents that provide access to essential services. Failure to translate these vital documents could result in a recipient denying an eligible LEP person access to services and discrimination on the basis of national origin.

- c. Safe Harbor Provision. DOT has adopted DOJ's Safe Harbor Provision, which outlines circumstances that can provide a "safe harbor" for recipients regarding translation of written materials for LEP populations. The Safe Harbor Provision stipulates that, if a recipient provides written translation of vital documents for each eligible LEP language group that constitutes five percent (5%) or 1,000 persons, whichever is less, of the total population of persons eligible to be served or likely to be affected or encountered, then such action will be considered strong evidence of compliance with the recipient's written translation obligations. Translation of non-vital documents, if needed, can be provided orally. If there are fewer than 50 persons in a language group that reaches the five percent (5%) trigger, the recipient is not required to translate vital written materials but should provide written notice in the primary language of the LEP language group of the right to receive competent oral interpretation of those written materials, free of cost.

These safe harbor provisions apply to the translation of written documents only. They do not affect the requirement to provide meaningful access to LEP individuals through competent oral interpreters where oral language services are needed and are reasonable. A recipient may determine, based on the Four Factor Analysis, that even though a language group meets the threshold specified by the Safe Harbor Provision, written translation may not be an effective means to provide language assistance measures. For example, a recipient may determine that a large number of persons in that language group have low literacy skills in their native language and therefore require oral interpretation. In such cases, background documentation regarding the determination shall be provided to FTA in the Title VI Program.

10. MINORITY REPRESENTATION ON PLANNING AND ADVISORY BODIES. Title 49 CFR Section 21.5(b)(1)(vii) states that a recipient may not, on the grounds of race, color, or national origin, "deny a person the opportunity to participate as a member of a planning, advisory, or similar body which is an integral part of the program." Recipients that have transit-related, non-elected planning boards, advisory councils or committees, or similar committees, the membership of which is selected by the recipient, must provide a table depicting the racial breakdown of the membership of those committees, and a description of efforts made to encourage the participation of minorities on such committees.

11. PROVIDING ASSISTANCE TO SUBRECIPIENTS. Title 49 CFR Section 21.9(b) states that if “a primary recipient extends Federal financial assistance to any other recipient, such other recipient shall also submit such compliance reports to the primary recipient as may be necessary to enable the primary recipient to carry out its obligations under this part.” See Appendix L for clarification of reporting responsibilities by recipient category. Primary recipients should assist their subrecipients in complying with DOT’s Title VI regulations, including the general reporting requirements. Assistance shall be provided to the subrecipient as necessary and appropriate by the primary recipient. Primary recipients should provide the following information to subrecipients; such information, forms, and data may be kept in a central repository and available for all subrecipients:

- a. Sample notices to the public informing beneficiaries of their rights under DOT’s Title VI regulations, procedures on how to file a Title VI complaint, and the recipient’s Title VI complaint form.
- b. Sample procedures for tracking and investigating Title VI complaints filed with a subrecipient, and when the primary recipient expects the subrecipient to notify the primary recipient of complaints received by the subrecipient.
- c. Demographic information on the race and English proficiency of residents served by the subrecipient. This information will assist the subrecipient in assessing the level and quality of service it provides to communities within its service area and in assessing the need for language assistance.
- d. Any other recipient-generated or obtained data, such as travel patterns, surveys, etc., that will assist subrecipients in complying with Title VI.

12. MONITORING SUBRECIPIENTS. In accordance with 49 CFR 21.9(b), and to ensure that subrecipients are complying with the DOT Title VI regulations, primary recipients must monitor their subrecipients for compliance with the regulations. Importantly, if a subrecipient is not in compliance with Title VI requirements, then the primary recipient is also not in compliance.

- a. In order to ensure the primary and subrecipient are in compliance with Title VI requirements, the primary recipient shall undertake the following activities:
 - (1) Document its process for ensuring that all subrecipients are complying with the general reporting requirements of this circular, as well as other requirements that apply to the subrecipient based on the type of entity and the number of fixed route vehicles it operates in peak service if a transit provider.
 - (2) Collect Title VI Programs from subrecipients and review programs for compliance. Collection and storage of subrecipient Title VI Programs may be electronic at the option of the primary recipient.
 - (3) At the request of FTA, in response to a complaint of discrimination, or as otherwise deemed necessary by the primary recipient, the primary recipient shall request that subrecipients who provide transportation services verify that their level and quality of

service is provided on an equitable basis. Subrecipients that are fixed route transit providers are responsible for reporting as outlined in Chapter IV of this Circular.

- b. When a subrecipient is also a direct recipient of FTA funds, that is, applies for funds directly from FTA in addition to receiving funds from a primary recipient, the subrecipient/direct recipient reports directly to FTA and the primary recipient/designated recipient is not responsible for monitoring compliance of that subrecipient. The supplemental agreement signed by both entities in their roles as designated recipient and direct recipient relieves the primary recipient/designated recipient of this oversight responsibility. See Appendix L for clarification of reporting responsibilities by recipient category.

13. DETERMINATION OF SITE OR LOCATION OF FACILITIES. Title 49 CFR Section 21.9(b)(3) states, “In determining the site or location of facilities, a recipient or applicant may not make selections with the purpose or effect of excluding persons from, denying them the benefits of, or subjecting them to discrimination under any program to which this regulation applies, on the grounds of race, color, or national origin; or with the purpose or effect of defeating or substantially impairing the accomplishment of the objectives of the Act or this part.” Title 49 CFR part 21, Appendix C, Section (3)(iv) provides, “The location of projects requiring land acquisition and the displacement of persons from their residences and businesses may not be determined on the basis of race, color, or national origin.” For purposes of this requirement, “facilities” does not include bus shelters, as these are transit amenities and are covered in Chapter IV, nor does it include transit stations, power substations, etc., as those are evaluated during project development and the NEPA process. Facilities included in this provision include, but are not limited to, storage facilities, maintenance facilities, operations centers, etc. In order to comply with the regulations:

- a. The recipient shall complete a Title VI equity analysis during the planning stage with regard to where a project is located or sited to ensure the location is selected without regard to race, color, or national origin. Recipients shall engage in outreach to persons potentially impacted by the siting of facilities. The Title VI equity analysis must compare the equity impacts of various siting alternatives, and the analysis must occur before the selection of the preferred site.
- b. When evaluating locations of facilities, recipients should give attention to other facilities with similar impacts in the area to determine if any cumulative adverse impacts might result. Analysis should be done at the Census tract or block group where appropriate to ensure that proper perspective is given to localized impacts.
- c. If the recipient determines that the location of the project will result in a disparate impact on the basis of race, color, or national origin, the recipient may only locate the project in that location if there is a substantial legitimate justification for locating the project there, and where there are no alternative locations that would have a less disparate impact on the basis of race, color, or national origin. The recipient must show how both tests are met; it is important to understand that in order to make this showing, the recipient must consider and analyze alternatives to determine whether those alternatives would have less

of a disparate impact on the basis of race, color, or national origin, and then implement the least discriminatory alternative.

14. REQUIREMENT TO PROVIDE ADDITIONAL INFORMATION UPON REQUEST. FTA may request, at its discretion, information other than that required by this Circular from a recipient in order for FTA to investigate complaints of discrimination or to resolve concerns about possible noncompliance with DOT's Title VI regulations.

CHAPTER IV

REQUIREMENTS AND GUIDELINES FOR FIXED ROUTE TRANSIT PROVIDERS

1. **INTRODUCTION.** The requirements described in this chapter apply to all providers of fixed route public transportation (also referred to as transit providers) that receive Federal financial assistance, inclusive of States, local and regional entities, and public and private entities. Contractors are responsible for following the Title VI Program(s) of the transit provider(s) with whom they contract. Transit providers that are subrecipients will submit the information required in this chapter to their primary recipient (the entity from whom they directly receive transit funds) every three years on a schedule determined by the primary recipient. Direct and primary recipients will submit the information required in this chapter to FTA every three years. See Appendix L for clarification of reporting responsibilities by recipient category.

All transit providers—whether direct recipients, primary recipients or subrecipients—that receive financial assistance from FTA are also responsible for following the general requirements in Chapter III of this circular. The requirements in this chapter are scaled based on the size of the fixed route transit provider.

Providers of public transportation that only operate demand response service are responsible only for the requirements in Chapter III. Demand response includes general public paratransit, Americans with Disabilities Act complementary paratransit, vanpools, and Section 5310 non-profits that serve only their own clientele (closed door service). Providers of public transportation that operate fixed route and demand response service, or only fixed route service, are responsible for the reporting requirements in this chapter, but these requirements only apply to fixed route service.

Requirement	Transit Providers that operate fixed route service	Transit Providers that operate 50 or more fixed route vehicles in peak service and are located in a UZA of 200,000 or more in population
Set system-wide standards and policies	Required	Required
Collect and report data	Not required	Required: <ul style="list-style-type: none"> • Demographic and service profile maps and charts • Survey data regarding customer demographic and travel patterns
Evaluate service and fare equity changes	Not required	Required
Monitor transit service	Not required	Required

a. If a transit provider:

- (1) Operates 50 or more fixed route vehicles in peak service and is located in an Urbanized Area (UZA) of 200,000 or more in population; or
- (2) Has been placed in this category at the discretion of the Director of Civil Rights in consultation with the FTA Administrator,

Then the transit provider's Title VI Program must contain all of the elements described in this chapter.

- b. If a fixed route transit provider does not meet the threshold in paragraph a, then the transit provider is only required to set system-wide standards and policies, as further described below.
- c. Threshold. FTA requires all transit providers to submit a Title VI Program to comply with DOT Title VI regulations; the threshold provides a distinction regarding the degree of evidence a fixed route transit provider must provide to demonstrate compliance with those regulations.
- d. Determination. As of the effective date of this circular (4702.1B), those transit providers that operate 50 or more fixed route vehicles in peak service and are located in a UZA of 200,000 or more in population, are required to meet all requirements of this chapter (i.e., setting service standards and policies, collecting and reporting data, monitoring transit service, and evaluating fare and service changes).

2. IMPLEMENTATION. Fixed route transit providers with Title VI Programs due between October 1, 2012 and March 31, 2013 must submit a Title VI Program that is compliant with this Circular by March 31, 2013. On or about October 1, 2012, FTA will publish a list of recipients that are in this group, and FTA will also reach out to each recipient to ensure awareness of the requirement.

- a. All fixed route transit providers with Title VI Programs that do not expire between October 1, 2012, and March 31, 2013, are required to develop or update their system-wide standards and policies and submit them into TEAM by March 31, 2013.
- b. Title VI Programs due to expire on or after April 1, 2013, must comply with the reporting requirements of this Circular, 4702.1B.
- c. Service Equity Analyses. Transit providers with 50 or more vehicles in fixed route service that are located in large UZAs and have major service changes scheduled between October 1, 2012 and March 31, 2013, may follow the service equity analysis guidance provided in FTA Circular 4702.1A. A transit provider may conduct a service equity analysis consistent with the new Circular for major service changes occurring prior to April 1, 2013, but is not required to do so. All major service changes occurring on or after April 1, 2013 must be analyzed with the framework outlined in section 7 of this chapter.

- d. Surveys. Transit providers with 50 or more vehicles in fixed route service that are located in large UZAs and that have not conducted passenger surveys in the last five years will have until December 31, 2013, to conduct these surveys.
3. REQUIREMENT TO PREPARE AND SUBMIT A TITLE VI PROGRAM. As stated in Chapter III of this Circular, in order to ensure compliance with the reporting requirements of 49 CFR Section 21.9(b), FTA requires that all direct and primary recipients document their compliance by submitting a Title VI Program to their FTA regional civil rights officer once every three years or as otherwise directed by FTA. For all transit providers (including subrecipients), the Title VI Program must be approved by the transit provider's board of directors or appropriate governing entity or official(s) responsible for policy decisions prior to submission to FTA. For State DOTs, the appropriate governing entity is the State's Secretary of Transportation or equivalent. Transit providers shall submit a copy of the board resolution, meeting minutes, or similar documentation with the Title VI Program as evidence that the board of directors or appropriate governing entity or official(s) has approved the Title VI Program. FTA will review and concur or request the recipient provide additional information. Subrecipients shall submit Title VI Programs to the primary recipient from whom they receive funding, on a schedule to be determined by the primary recipient, in order to assist the primary recipient in its compliance efforts. Collection and storage of subrecipient Title VI Programs may be electronic at the option of the primary recipient.
 - a. Contents of the Title VI Program. Providers of fixed route public transportation shall include the following information in their Title VI Program.
 - (1) All fixed route transit providers shall submit:
 - (a) All general requirements set out in Section 4 of Chapter III of this Circular; and
 - (b) System-wide service standards and system-wide service policies, whether existing or new (i.e., adopted by the transit provider since the last submission) as described in this chapter.
 - (2) Transit providers that operate 50 or more fixed route vehicles in peak service and are located in a UZA of 200,000 or more in population shall include the information in paragraph a(1) above, and will also include:
 - (a) A demographic analysis of the transit provider's service area. This shall include demographic maps and charts completed since submission of the last Title VI Program that contains demographic information and service profiles;
 - (b) Data regarding customer demographics and travel patterns, collected from passenger surveys;
 - (c) Results of the monitoring program of service standards and policies and any action taken, including documentation (e.g., a resolution, copy of meeting minutes, or similar documentation) to verify the board's or governing entity or official(s)'s consideration, awareness, and approval of the monitoring results;

- (d) A description of the public engagement process for setting the “major service change policy” and disparate impact policy;
- (e) A copy of board meeting minutes or a resolution demonstrating the board’s or governing entity or official(s)’s consideration, awareness, and approval of the major service change policy and disparate impact policy.
- (f) Results of equity analyses for any major service changes and/or fare changes implemented since the last Title VI Program submission; and
- (g) A copy of board meeting minutes or a resolution demonstrating the board’s or governing entity or official(s)’s consideration, awareness, and approval of the equity analysis for any service or fare changes required by this circular.

4. REQUIREMENT TO SET SYSTEM-WIDE SERVICE STANDARDS AND POLICIES.

These requirements apply to all fixed route providers of public transportation service. Title 49 CFR Section 21.5 states the general prohibition of discrimination on the grounds of race, color, or national origin. Section 21.5(b)(2) specifies that a recipient shall not “utilize criteria or methods of administration which have the effect of subjecting persons to discrimination because of their race, color, or national origin, or have the effect of defeating or substantially impairing accomplishment of the objectives of the program with respect to individuals of a particular race, color, or national origin.” Section 21.5(b)(7) requires recipients to “take affirmative action to assure that no person is excluded from participation in or denied the benefits of the program or activity on the grounds of race, color, or national origin.” Finally, Appendix C to 49 CFR part 21 provides in Section (3)(iii) that “[n]o person or group of persons shall be discriminated against with regard to the routing, scheduling, or quality of service of transportation service furnished as a part of the project on the basis of race, color, or national origin. Frequency of service, age and quality of vehicles assigned to routes, quality of stations serving different routes, and location of routes may not be determined on the basis of race, color, or national origin.”

All fixed route transit providers shall set service standards and policies for each specific fixed route mode of service they provide. Fixed route modes of service include but are not limited to, local bus, express bus, commuter bus, bus rapid transit, light rail, subway, commuter rail, passenger ferry, etc. These standards and policies must address how service is distributed across the transit system, and must ensure that the manner of the distribution affords users access to these assets.

These system-wide service standards differ from any standards set by the APTA Standards Development Program and other standards development organizations (SDOs), in that they will be set by individual transit providers and will apply agency-wide rather than industry-wide.

Providers of fixed route public transportation shall also adopt system-wide service policies to ensure service design and operations practices do not result in discrimination on the basis of race, color, or national origin. Service policies differ from service standards in that they are not necessarily based on a quantitative threshold.

- a. Effective Practices to Fulfill the Service Standard Requirement. FTA requires all fixed route transit providers to develop quantitative standards for all fixed route modes of operation for the indicators listed below. Providers of public transportation may set additional standards as appropriate or applicable to the type of service they provide. See Appendix G for an example of how to report this information.
- (1) Vehicle load for each mode. Vehicle load can be expressed as the ratio of passengers to the total number of seats on a vehicle. For example, on a 40-seat bus, a vehicle load of 1.3 means all seats are filled and there are approximately 12 standees. A vehicle load standard is generally expressed in terms of peak and off-peak times. Transit providers that operate multiple modes of transit must describe the specific vehicle load standards for peak and off-peak times for each mode of fixed route transit service (i.e., bus, express bus, bus rapid transit, light rail, heavy rail, commuter rail, passenger ferry, etc., as applicable), as the standard may differ by mode.
 - (2) Vehicle headway for each mode. Vehicle headway is the amount of time between two vehicles traveling in the same direction on a given line or combination of lines. A shorter headway corresponds to more frequent service. Vehicle headways are measured in minutes (e.g., every 15 minutes); service frequency is measured in vehicles per hour (e.g., 4 buses per hour). Headways and frequency of service are general indications of the level of service provided along a route. Vehicle headway is one component of the amount of travel time expended by a passenger to reach his/her destination. A vehicle headway standard is generally expressed for peak and off-peak service as an increment of time (e.g., peak: every 15 minutes; and off peak: every 30 minutes). Transit providers may set different vehicle headway standards for different modes of transit service. A vehicle headway standard might establish a minimum frequency of service by area based on population density. For example, service at 15-minute peak headways and 30-minute off-peak headways might be the standard for routes serving the most densely populated portions of the service area, whereas 30-minute peak headways and 45-minute off-peak headways might be the standard in less densely populated areas. Headway standards are also typically related to vehicle load. For example, a service standard might state that vehicle headways will be improved first on routes that exceed the load factor standard or on routes that have the highest load factors.
 - (3) On-time performance for each mode. On-time performance is a measure of runs completed as scheduled. This criterion first must define what is considered to be “on time.” For example, a transit provider may consider it acceptable if a vehicle completes a scheduled run between zero and five minutes late in comparison to the established schedule. On-time performance can be measured against route origins and destinations only, or against origins and destinations as well as specified time points along the route. Some transit providers set an on-time performance standard that prohibits vehicles from running early (i.e., ahead of schedule) while others allow vehicles to run early within a specified window of time (e.g., up to five minutes ahead of schedule). An acceptable level of performance must be defined (expressed as a percentage). The percentage of runs completed system-wide or on a particular route or line within the standard must be calculated and measured against the level of

performance for the system. For example, a transit provider might define on-time performance as 95 percent of all runs system-wide or on a particular route or line completed within the allowed “on-time” window.

- (4) Service availability for each mode. Service availability is a general measure of the distribution of routes within a transit provider’s service area. For example, a transit provider might set a service standard to distribute routes such that a specified percentage of all residents in the service area are within a one-quarter mile walk of bus service or a one-half mile walk of rail service. A standard might also indicate the maximum distance between stops or stations. These measures related to coverage and stop/station distances might also vary by population density. For example, in more densely populated areas, the standard for bus stop distance might be a shorter distance than it would be in less densely populated areas, and the percentage of the total population within a one-quarter mile walk of routes or lines might be higher in more densely populated areas than it would be in less densely populated areas. Commuter rail service or passenger ferry service availability standards might include a threshold of residents within a certain driving distance as well as within walking distance of the stations or access to the terminal.
- b. Effective Practices to Fulfill the Service Policy Requirement. FTA requires fixed route transit providers to develop a policy for each of the following service indicators. Transit providers may set policies for additional indicators as appropriate. See Appendix H for an example of how to report this information.
- (1) Distribution of transit amenities for each mode. Transit amenities refer to items of comfort, convenience, and safety that are available to the general riding public. Fixed route transit providers must set a policy to ensure equitable distribution of transit amenities across the system. Transit providers may have different policies for the different modes of service that they provide. Policies in this area address how these amenities are distributed within a transit system, and the manner of their distribution determines whether transit users have equal access to these amenities. This subparagraph is not intended to impact funding decisions for transit amenities. Rather, this subparagraph applies after a transit provider has decided to fund an amenity.

This policy does not apply to transit providers that do not have decision-making authority over the siting of transit amenities. Transit providers are not responsible for setting a policy for transit amenities that are solely sited by a separate jurisdiction (e.g., a city, town, or county) unless the transit provider has the authority to set policies to determine the siting of these amenities. Transit providers are responsible for setting a policy for transit amenities that are installed under a contract between the transit provider and a private entity. In these cases, the transit provider shall communicate its service policy to the private entity.

Transit providers shall submit their siting policy where the definition of transit amenities includes but is not limited to:

- (a) Seating (i.e., benches, seats at stops/stations)

- (b) Bus and rail shelters and rail platform canopies
 - (c) Provision of information:
 - i. Printed signs, system maps, route maps, and schedules.
 - ii. Digital equipment such as next vehicle arrival time signs along bus routes and at fixed guideway stations (i.e., electronic signage that depicts when a transit vehicle will next arrive at the station or stop).
 - (d) Escalators
 - (e) Elevators
 - (f) Waste receptacles (including trash and recycling)
- (2) Vehicle assignment for each mode. Vehicle assignment refers to the process by which transit vehicles are placed into service in depots and on routes throughout the transit provider's system. Policies for vehicle assignment may be based on the age of the vehicle, where age would be a proxy for condition. For example, a transit provider could set a policy to assign vehicles to depots so that the age of the vehicles at each depot does not exceed the system-wide average. The policy could also be based on the type of vehicle. For example, a transit provider may set a policy to assign vehicles with more capacity to routes with higher ridership and/or during peak periods. The policy could also be based on the type of service offered. For example, a transit provider may set a policy to assign specific types of vehicles to express or commuter service. Transit providers deploying vehicles equipped with technology designed to reduce emissions could choose to set a policy for how these vehicles will be deployed throughout the service area.
5. REQUIREMENT TO COLLECT AND REPORT DEMOGRAPHIC DATA. This requirement applies only to transit providers that operate 50 or more fixed route vehicles in peak service and are located in Urbanized Areas (UZA) of 200,000 or more in population or that otherwise meet the threshold in the Introduction section of this chapter. Title 49 CFR Section 21.9(b) requires recipients to keep records and submit compliance reports (a Title VI Program) to FTA. Title VI Programs shall contain "such information, as the Secretary may determine to be necessary to enable him to ascertain whether the recipient has complied or is complying with this part." In addition, 49 CFR 21.9(b) states that recipients "should have available for the Secretary racial and ethnic data showing the extent to which members of minority groups are beneficiaries of programs receiving Federal financial assistance." In order to ensure compliance with the regulation, FTA requires these transit providers to prepare data regarding demographic and service profile maps and charts as well as customer demographics and travel patterns.

In order to comply with the reporting requirements in 49 CFR Section 21.9(b), transit providers that operate 50 or more fixed route vehicles in peak service and are located in a UZA of 200,000 or more in population shall collect and analyze racial and ethnic data as described below in order to determine the extent to which members of minority groups are beneficiaries of programs receiving Federal financial assistance from FTA.

- a. Demographic and Service Profile Maps and Charts. Transit providers shall prepare demographic and service profile maps and charts after each decennial census and prior to proposed service reductions or eliminations. Transit providers may use decennial census

data to develop maps and charts until the next decennial census or they may use American Community Survey (ACS) data between decennial censuses. These maps and charts will help the transit provider determine whether and to what extent transit service is available to minority populations within the transit provider's service area. These maps may be prepared using Geographic Information System (GIS) technology, although transit providers without access to GIS technology may prepare the maps in alternative formats. FTA requires transit providers to prepare the following maps and charts:

- (1) A base map of the transit provider's service area that overlays Census tract, Census block or block group, traffic analysis zone (TAZ), or other locally available geographic data with transit facilities—including transit routes, fixed guideway alignments, transit stops and stations, depots, maintenance and garage facilities, and administrative buildings—as well as major activity centers or transit trip generators, and major streets and highways. Major activity centers and transit trip generators can include, but are not necessarily limited to, the central business district, outlying high employment areas, schools, and hospitals. This map shall overlay Census tract, block or block group data depicting minority populations with fixed transit facilities, such as bus shelters, transit stations, and fixed guideways. Another map shall highlight those transit facilities that were recently replaced, improved or are scheduled (projects identified in planning documents) for an update in the next five years.
 - (2) A demographic map that plots the information listed in (1) above and also shades those Census tracts, blocks, block groups, TAZs, or other geographic zones where the percentage of the total minority population residing in these areas exceeds the average percentage of minority populations for the service area as a whole. Transit providers may elect to produce maps that highlight separately the presence of specific minority populations if this information will assist the transit provider in determining compliance with Title VI and/or LEP. Transit providers shall also prepare a GIS or alternative map overlaying minority populations with fixed transit facilities, such as bus shelters, transit stations, and fixed guideways.
 - (3) For purposes of addressing environmental justice, and in order to evaluate the impacts of major service changes on low-income populations, demographic maps shall also depict those Census tracts, blocks, block groups, TAZs, or other geographic zones where the percentage of the total low-income population residing in these areas exceeds the average percentage of low-income populations for the service area as a whole.
- b. Demographic Ridership and Travel Patterns. Fixed route providers of public transportation that meet the threshold in the Introduction section of this chapter shall collect information on the race, color, national origin, English proficiency, language spoken at home, household income and travel patterns of their riders using customer surveys. Transit providers shall use this information to develop a demographic profile comparing minority riders and non-minority riders, and trips taken by minority riders and non-minority riders. Demographic information shall also be collected on fare usage by fare type amongst minority users and low-income users, in order to assist with fare equity

analyses. The demographic information shall be displayed in tabular format. An example of this analysis is depicted in Appendix I.

The information required in this subparagraph may be integrated into passenger surveys employed by transit providers on a schedule determined by the transit provider but no less than every five years and may be collected at the time that such surveys are routinely performed, such as customer satisfaction surveys and origin and destination surveys used to update travel demand models. Transit providers should contact FTA for further guidance on survey sample sizes, data expansion procedures, and data collection methods suitable to the transit provider's specific situation.

Transit providers shall take steps to translate customer surveys into languages other than English as necessary, or to provide translation services in the course of conducting customer surveys consistent with the DOT LEP guidance and the recipient's language assistance plan.

6. REQUIREMENT TO MONITOR TRANSIT SERVICE. This requirement applies only to providers of public transportation that operate 50 or more fixed route vehicles in peak service and are located in a UZA of 200,000 or more in population or that otherwise meet the threshold in the Introduction section of this chapter. In order to ensure compliance with DOT's Title VI regulations, FTA requires these transit providers to monitor the performance of their transit system relative to their system-wide service standards and service policies (i.e., vehicle load, vehicle assignment, transit amenities, etc.) not less than every three years using the following method:
 - a. Transit providers shall use the minority transit route definition to implement this monitoring program. Transit providers shall select a sample of minority and non-minority routes from all modes of service provided, e.g., local bus, bus rapid transit, light rail, etc. The sample shall include routes that provide service to predominantly minority areas and non-minority areas. Transit providers should bear in mind that the greater the sample size, the more reliable the results.

As defined in Chapter I, a minority transit route is one in which at least one-third of the revenue miles are located in a Census block, Census block group, or traffic analysis zone where the percentage minority population exceeds the percentage minority population in the service area. Transit providers may supplement this with ridership data and adjust route designations accordingly. For example, a commuter bus that picks up passengers in generally non-minority areas and then travels through predominantly minority neighborhoods but does not pick up passengers who live closer to downtown might be more appropriately classified as a non-minority route, even if one-third of the route mileage is located in predominantly minority Census blocks or block groups. On the other hand, a light rail line may carry predominantly minority passengers to an area where employment centers and other activities are located, but the minority population in the surrounding Census blocks or block groups does not meet or exceed the area average. This route may be more appropriately classified as a minority transit route. Transit providers should ensure they have

- adequate ridership data before making these determinations, and include that data in their analyses.
- b. Transit providers shall assess the performance of each minority and non-minority route in the sample for each of the transit provider's service standards and service policies.
 - c. Transit providers shall compare the transit service observed in the assessment to the transit provider's established service policies and standards.
 - d. For cases in which the observed service for any route exceeds or fails to meet the standard or policy, depending on the metric measured, the transit provider shall analyze why the discrepancies exist, and take steps to reduce the potential effects.
 - e. Transit providers shall evaluate their transit amenities policy to ensure amenities are being distributed throughout the transit system in an equitable manner.
 - f. Transit providers shall develop a policy or procedure to determine whether disparate impacts exist on the basis of race, color, or national origin, and apply that policy or procedure to the results of the monitoring activities;
 - g. Transit providers shall brief and obtain approval from the transit providers' policy-making officials, generally the board of directors or appropriate governing entity responsible for policy decisions regarding the results of the monitoring program;
 - h. Submit the results of the monitoring program as well as documentation (e.g., a resolution, copy of meeting minutes, or similar documentation) to verify the board's or governing entity or official(s)'s consideration, awareness, and approval of the monitoring results to FTA every three years as part of the Title VI Program. See Appendix J for an example of how to report this information.

Transit providers shall undertake these periodic service monitoring activities to compare the level of service provided to predominantly minority areas with the level of service provided to predominantly non-minority areas to ensure the end result of policies and decision-making is equitable. A transit provider at its discretion may choose to conduct service monitoring more frequently than every three years.

If a transit provider determines, based on its monitoring activities, that prior decisions have resulted in a disparate impact on the basis of race, color, or national origin, the transit provider shall take corrective action to remedy the disparities to the greatest extent possible, and shall discuss in the Title VI Program these disparate impacts and actions taken to remedy the disparities.

7. REQUIREMENT TO EVALUATE SERVICE AND FARE CHANGES. This requirement applies only to transit providers that operate 50 or more fixed route vehicles in peak service and are located in a UZA of 200,000 or more in population or that otherwise meet the threshold in the Introduction section of this chapter. These transit providers are required to prepare and submit service and fare equity analyses as described below. Transit providers not

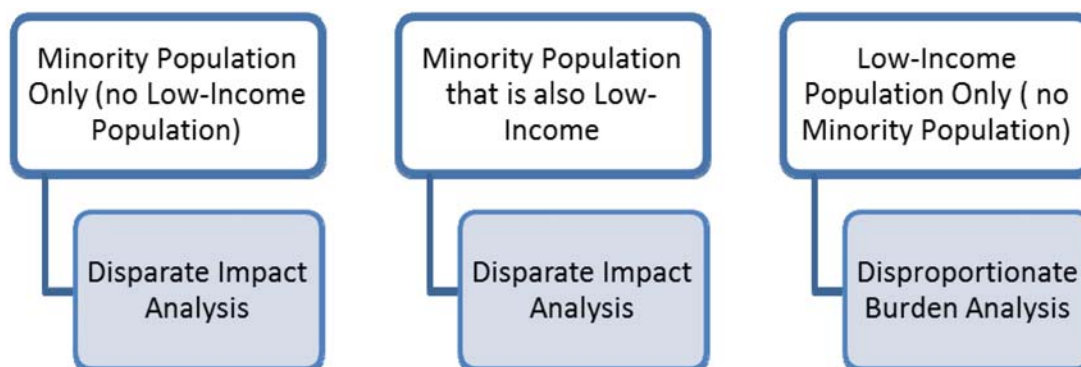
subject to this requirement are responsible for complying with the DOT Title VI regulations which prohibit disparate impact discrimination, and therefore should review their policies and practices to ensure their service and fare changes do not result in disparate impacts on the basis of race, color, or national origin.

To further ensure compliance with 49 CFR Section 21.5(b)(2), 49 CFR Section 21.5(b)(7), and Appendix C to 49 CFR part 21, all providers of public transportation to which this Section applies shall develop written procedures consistent with this Section to evaluate, prior to implementation, any and all service changes that exceed the transit provider's major service change threshold, as well as all fare changes, to determine whether those changes will have a discriminatory impact based on race, color, or national origin. The written procedures and results of service and/or fare equity analyses shall be included in the transit provider's Title VI Program.

One purpose of conducting service and fare equity analyses prior to implementing service and/or fare changes is to determine whether the planned changes will have a disparate impact on the basis of race, color, or national origin.

The typical measure of disparate impact involves a comparison between the proportion of persons in the protected class who are adversely affected by the service or fare change and the proportion of persons not in the protected class who are adversely affected. The comparison population for a statistical measure of disparate impact is all persons who are either affected by the service or fare changes or who could possibly be affected by the service or fare change (e.g., potential passengers). When a transit provider uses ridership as the comparison population, the transit provider will compare the ridership of the affected route(s) with the ridership of the system. For example, if the ridership of affected route(s) is 60 percent minority and the system ridership is 40 percent minority, then changes to the route(s) may have a disparate impact. When a transit provider uses the population of the service area as the comparison population, it will compare the population in Census blocks or block groups served by the affected route(s) with the population in the service area. For example, if affected route(s) serves Census blocks that are 40 percent minority and the service area is 45 percent minority, there would likely not be a disparate impact. Examples of this analysis are provided in Appendix K.

Low-income populations are not a protected class under Title VI. However, recognizing the inherent overlap of environmental justice principles in this area, and because it is important to evaluate the impacts of service and fare changes on passengers who are transit-dependent, FTA requires transit providers to evaluate proposed service and fare changes to determine whether low-income populations will bear a disproportionate burden of the changes. As depicted below, when a minority population is present, the correct analysis is a disparate impact analysis:



Transit providers shall use tables similar to those provided in Appendix K to depict the results of the service and/or fare equity analysis. Transit providers should refer to the checklist and examples in the Appendix for additional technical assistance with service and fare equity analyses.

Upon completion of a service or fare equity analysis, the transit provider shall brief its board of directors, top executive, or appropriate governing entity or official(s) responsible for policy decisions regarding the service and/or fare change(s) and the equity impacts of the service and/or fare change(s). The transit provider shall submit documentation such as a board resolution, copy of meeting minutes, or similar documentation with the Title VI Program as evidence of the board or governing entity or official's consideration, awareness, and approval of the analysis.

a. Service Equity Analysis

FTA encourages transit providers to contact their FTA Regional Civil Rights Officer for technical assistance when they have determined that a service equity analysis is necessary. Upon request, FTA can provide technical assistance related to methodology and analysis prior to a transit provider's board of directors taking action.

Transit providers shall evaluate the impacts of their proposed service changes on minority and low-income populations separately, using the following methods:

(1) Service Equity Analysis for Minority Populations:

- (a) Major Service Change Policy. In order to begin the analysis, the transit provider must first identify what constitutes a "major service change" for its system, as only "major service changes" are subject to a service equity analysis. The transit provider must conduct a service equity analysis for those service changes that meet or exceed the transit provider's "major service change policy."

A major service change policy is typically presented as a numerical standard, such as a change that affects "x" percent of a route, "x" number of route miles or hours, or some other route-specific or system-wide change, or the number or concentration of people affected. The major service change policy will include

adding service and reducing service. The threshold for analysis shall not be set so high so as to never require an analysis; rather, agencies shall select a threshold most likely to yield a meaningful result in light of the transit provider's system characteristics.

A transit provider may exempt a temporary addition of service (e.g., demonstration projects), including those that would otherwise qualify as a major service change, from its definition of major service change. If a temporary service addition or change lasts longer than twelve months, then FTA considers the service addition or change permanent and the transit provider must conduct a service equity analysis if the service otherwise qualifies as a major service change.

- (b) Adverse Effects. The transit provider shall define and analyze adverse effects related to major changes in transit service. The adverse effect is measured by the change between the existing and proposed service levels that would be deemed significant. Changes in service that have an adverse effect and that may result in a disparate impact include reductions in service (e.g., elimination of route, shortlining a route, rerouting an existing route, increase in headways). Elimination of a route will generally have a greater adverse impact than a change in headways. Additions to service may also result in disparate impacts, especially if they come at the expense of reductions in service on other routes. Transit providers shall consider the degree of adverse effects, and analyze those effects, when planning their service changes.
- (c) Disparate Impact Policy. The transit provider shall develop a policy for measuring disparate impacts. The policy shall establish a threshold for determining when adverse effects of service changes are borne disproportionately by minority populations. The disparate impact threshold defines statistically significant disparity and may be presented as a statistical percentage of impacts borne by minority populations compared to impacts borne by non-minority populations. The disparate impact threshold must be applied uniformly, regardless of mode, and cannot be altered until the next Title VI Program submission.

For illustrative purposes only, here is an example: a transit provider adopts a disparate impact policy that provides any time there is a difference in adverse impacts between minority and non-minority populations of plus or minus ten percent, this is statistically significant, and such differences in adverse impacts are disparate. For example, if minorities make up 30 percent of the overall population, but would bear 45 percent of the impacts, and the non-minority group would bear 55 percent, there may be a disparate impact insofar as the minority group bears 15 percent more than its expected share, from 45 percent of the burden to 30 percent of the population; while the non-minority group bears 15 percent less than its expected share of 55 percent of burden compared to 70 percent of population—even though the absolute majority of the burden rests with the non-minority group. Applying the ten percent disparate impact policy, the provider will find a disparate impact and must therefore consider

modifying the proposed changes in order to avoid, minimize, or mitigate the disparate impacts of the proposed changes. [NOTE: Ten percent is not a suggested baseline or standard, and is used here solely as an example. As described above, each transit provider will adopt a disparate impact policy.]

- (d) Public Participation. The transit provider shall engage the public in the decision-making process to develop the major service change policy and disparate impact policy.
- (e) Data Analysis. The transit provider shall describe the dataset(s) the transit provider will use in the service equity analysis, i.e., whether the provider is using American Community Survey (ACS), Census blocks, block groups, traffic analysis zone (TAZ) level, or using ridership data. The transit provider shall also describe what techniques and/or technologies were used to collect the data. When relying on population data instead of ridership data, the choice of dataset should be the smallest geographic area that reasonably has access to the bus or rail stop or station. For example, passengers will generally walk up to one-quarter mile to a bus stop or one-half mile to a light or heavy rail station, or drive up to three miles to a commuter rail station. The demographics of the neighborhoods within those distances should be the datasets used. Transit providers may use the data from an entire Census block or block group when a portion of the area is within the walking or driving distance described above.
- (f) Assessing Service Impacts. Transit providers shall evaluate the impacts of proposed service changes on minority populations using the following framework:
 - (i) The typical measure of disparate impact involves a comparison between the proportion of persons in the protected class who are adversely affected by the service or fare change and the proportion of persons not in the protected class who are adversely affected. The population for a statistical measure of disparate impact is all persons that are either affected by the service or fare changes or that could possibly be affected by the service or fare change (e.g., potential passengers), thus the comparison population may vary depending on the type of change under evaluation. The transit provider shall include in the analysis the reason for the comparison population selected.

For example, when making headway changes, eliminating a route, or increasing service to an area currently served by the transit system, the appropriate comparison population would likely be ridership, and the transit provider would compare the ridership of the affected route(s) with the ridership of the system.

On the other hand, when proposing to provide new service to a neighborhood or corridor not served by the transit system, the appropriate comparison population would likely be the population of the service area, and the transit

provider would compare the population in Census blocks or block groups served by the proposed route(s) with the population in the service area.

Further, if a transit provider is proposing a major service change that involves both headway changes and new service to a neighborhood or corridor not served by the transit system, the transit provider would not have to use different comparison populations for the different types of changes. The transit provider would select either ridership or population of the service area and conduct an analysis using the same comparison population.

Transit providers are cautioned not to “mix and match” their comparison populations. Ridership of affected route(s) should be compared to ridership of the system, and Census blocks or block groups should be compared with the population of the service area.

In instances where a transit provider does not have adequate ridership data or is otherwise uncertain as to which population to use for comparison purposes, the transit provider should contact their FTA regional office for technical assistance.

- (ii) Ridership Data. When the transit provider determines that the correct population base is ridership, the transit provider shall document the reasons for selecting this population base and analyze any available information generated from ridership surveys to determine the minority and non-minority population ridership of the affected route(s) and the minority and non-minority ridership of the entire system.
- (iii) GIS or Alternative Maps. When the transit provider determines that the correct population base is Census blocks or block groups, the transit provider shall document the reasons for selecting this population base and shall prepare maps of the routes that would be reduced, increased, eliminated, added, or restructured, overlaid on a demographic map of the service area, in order to study the affected population. Transit providers may also find it helpful to prepare these maps when doing an analysis based on ridership.
- (iv) Determination of Disparate Impact. Each service change analysis must compare existing service to proposed changes, and calculate the absolute change as well as the percent change. The transit provider shall use its adverse effects definition and disparate impact threshold to determine whether the proposed major service change will result in adverse effects that are disproportionately borne by minority populations, by comparing the proportion of minorities adversely affected to the proportion of non-minorities adversely affected. The transit provider shall consider the degree of the adverse effects when doing this analysis. Any service change analysis shall be expressed as a percent change in tabular format. See Appendix K for an example of how to report this data.

(v) Analysis of Modifications. If the transit provider finds potential disparate impacts and then modifies the proposed changes in order to avoid, minimize, or mitigate potential disparate impacts, the transit provider must reanalyze the proposed changes in order to determine whether the modifications actually removed the potential disparate impacts of the changes.

(vi) Finding a Disparate Impact on the Basis of Race, Color, or National Origin. If a transit provider chooses not to alter the proposed service changes despite the potential disparate impact on minority populations, or if the transit provider finds, even after the revisions, that minority riders will continue to bear a disproportionate share of the proposed service change, the transit provider may implement the service change *only* if:

- the transit provider has a substantial legitimate justification for the proposed service change, **and**
- the transit provider can show that there are no alternatives that would have a less disparate impact on minority riders but would still accomplish the transit provider's legitimate program goals.

It is important to understand that in order to make this showing, the transit provider must consider and analyze alternatives to determine whether those alternatives would have less of a disparate impact on the basis of race, color, or national origin, and then implement the least discriminatory alternative.

(vii) Examining Alternatives. If the transit provider determines that a proposed service change will have a disparate impact, the transit provider shall analyze the alternatives (identified in the second bullet above) to determine whether alternatives exist that would serve the same legitimate objectives but with less of a disparate effect on the basis of race, color, or national origin. The existence of such an alternative method of accomplishing the transit provider's substantial and legitimate interests demonstrates that the disparate effects can be avoided by adoption of the alternative methods without harming such interests. In addition, if evidence undermines the legitimacy of the transit provider's asserted justification - that is, that the justification is not supported by demonstrable evidence - the disparate effects will violate Title VI, as the lack of factual support will indicate that there is not a substantial legitimate justification for the disparate effects. At that point, the transit provider must revisit the service changes and make adjustments that will eliminate unnecessary disparate effects on populations defined by race, color, or national origin. Where disparate impacts are identified, the transit provider shall provide a meaningful opportunity for public comment on any proposed mitigation measures, including the less discriminatory alternatives that may be available.

(2) Service Equity Analysis for Low-Income Populations. As noted above, low-income populations are not a protected class under Title VI. However,

recognizing the inherent overlap of environmental justice principles in this area, and because it is important to evaluate the impacts of service and fare changes on passengers who are transit-dependent, FTA requires transit providers to evaluate proposed service and fare changes to determine whether low-income populations will bear a disproportionate burden of the changes.

- (a) Major Service Change Policy. As described under the Service Equity Analysis for Minority Populations, the transit provider must first identify what constitutes a “major service change” for its system, as only “major service changes” are subject to a service equity analysis. The transit provider’s major service change policy will apply to both analyses.
- (b) Adverse Effects. As described under the Service Equity Analysis for Minority Populations, the transit provider shall define and analyze adverse effects related to major changes in transit service. The transit provider’s adverse effects policy will apply to both analyses.
- (c) Disproportionate Burden Policy. The transit provider shall develop a policy for measuring disproportionate burdens on low-income populations. The policy shall establish a threshold for determining when adverse effects of service changes are borne disproportionately by low-income populations. The disproportionate burden threshold defines statistically significant disparity and may be presented as a statistical percentage of impacts borne by low-income populations as compared to impacts borne by non-low-income populations. The disproportionate burden threshold must be applied uniformly, regardless of mode.
- (d) Public Participation. The transit provider shall engage the public in the decision-making process to develop the disproportionate burden policy.
- (e) Selection of Comparison Population. Transit providers may use ridership data or population of the service area for the comparison population. If a transit provider uses ridership as the comparison population for the Title VI (minority populations) service equity analysis, the transit provider should use ridership as the comparison population for the low-income equity analysis. Similarly, if the transit provider uses the service area as the comparison population for the Title VI (minority populations) analysis, the provider should use the service area as the comparison population for the low-income analysis.
- (f) Data Analysis. The transit provider shall describe the dataset(s) the transit provider will use in the service equity analysis, i.e., whether the provider is using American Community Survey (ACS), Census blocks, block groups, or traffic analysis zone (TAZ) level, or using ridership data. The transit provider shall also describe what techniques and/or technologies were used to collect the data. When relying on population data instead of ridership data, the choice of dataset should be the smallest geographic area that reasonably has access to the bus or rail stop or station. [NOTE: Census tract level may be used if that is the smallest geographic area available for income data]. For example,

passengers will generally walk up to one-quarter mile to a bus stop or one-half mile to a light or heavy rail station, or drive up to three miles to a commuter rail station. The demographics of the neighborhoods within those distances should be the datasets used. Transit providers may use the data from an entire Census block or block group when a portion of the area is within the walking or driving distance described above.

- (g) Assessing Service Impacts. Transit providers shall evaluate the impacts of proposed service changes on low-income populations using the following method:
- (i) Ridership Data. When the transit provider determines that the correct comparison population is ridership, the transit provider shall document the reasons for selecting this comparison population and analyze any available information generated from ridership surveys to determine the low-income and non-low-income population ridership of the affected route(s) and the low-income and non-low-income ridership of the entire system.
 - (ii) GIS or Alternative Maps. When the transit provider determines that the correct population base is Census blocks or block groups, the transit provider shall document the reasons for selecting this population base and shall prepare maps of the routes that would be reduced, increased, eliminated, added, or restructured/rerouted, overlaid on a demographic map of the service area, in order to study the affected population. Transit providers may also find it helpful to prepare these maps when doing an analysis based on ridership.
 - (iii) Determination of Disproportionate Burden. Each service change analysis must compare existing service to proposed service, and calculate the absolute change as well as the percent change. The transit provider shall use its disproportionate burden threshold to determine whether the proposed change will result in adverse effects that are disproportionately borne by low-income populations, by comparing the proportion of low-income persons adversely affected to the proportion of non-low-income persons adversely affected. Any service change analysis shall be expressed as a percent change in tabular format. See Appendix K for an example of how to report this data.
 - (iv) Avoid, Minimize, Mitigate. At the conclusion of the analysis, if the transit provider finds that low-income populations will bear a disproportionate burden of the proposed major service change, the transit provider should take steps to avoid, minimize, or mitigate impacts where practicable. The provider should also describe alternatives available to low-income passengers affected by the service changes.
 - (v) FTA considers the disproportionate burden analysis for low-income populations described above to be important for planning and environmental justice analysis purposes; however, since low-income populations are not a protected class under Title VI, failure to complete this analysis will not result in a finding of noncompliance under Title VI.

b. Fare Equity Analysis

(1) Fare Changes. The fare equity analysis requirement applies to all fare changes regardless of the amount of increase or decrease. As with the service equity analysis, FTA requires transit providers to evaluate the effects of fare changes on low-income populations in addition to Title VI-protected populations.

(a) Exceptions.

(i) “Spare the air days” or other instances when a local municipality or transit agency has declared that all passengers ride free.

(ii) Temporary fare reductions that are mitigating measures for other actions. For example, construction activities may close a segment of a rail system for a period of time and require passengers to alter their travel patterns. A reduced fare for these impacted passengers is a mitigating measure and does not require a fare equity analysis.

(iii) Promotional fare reductions. If a promotional or temporary fare reduction lasts longer than six months, then FTA considers the fare reduction permanent and the transit provider must conduct a fare equity analysis.

(2) Data Analysis. For proposed changes that would increase or decrease fares on the entire system, or on certain transit modes, or by fare payment type or fare media, the transit provider shall analyze any available information generated from ridership surveys indicating whether minority and/or low-income riders are disproportionately more likely to use the mode of service, payment type, or payment media that would be subject to the fare change. Notably, Census data will not be effective data for fare analyses, since it is impossible to know, based on Census data, what fare media people are using. The transit provider shall describe the dataset(s) the transit provider will use in the fare change analysis. This section shall also describe what techniques and/or technologies were used to collect the data. The transit provider shall—

(i) Determine the number and percent of users of each fare media being changed;

(ii) Review fares before the change and after the change;

(iii) Compare the differences for each particular fare media between minority users and overall users; and

(iv) Compare the differences for each particular fare media between low-income users and overall users.

Please see Appendix K for a sample analysis.

(3) Assessing Impacts. Transit providers shall evaluate the impacts of their proposed fare changes (either increases or decreases) on minority and low-income populations separately, using the following framework:

- (a) Minority Disparate Impact Policy. The transit provider shall develop a policy for measuring disparate impact to determine whether minority riders are bearing a disproportionate impact of the change between the existing cost and the proposed cost. The impact may be defined as a statistical percentage. The disparate impact threshold must be applied uniformly, regardless of fare media, and cannot be altered until the next Title VI Program submission.
- (b) Public Participation Process. The transit provider shall engage the public in the decision-making process to develop the disparate impact threshold.
- (c) Modification of Proposal. If the transit provider finds potential disparate impacts and then modifies the proposed changes in order to avoid, minimize or mitigate those impacts, the transit provider must reanalyze the proposed changes in order to determine whether the modifications actually removed the potential disparate impacts of the changes.
- (d) Finding a Disparate Impact on the Basis of Race, Color, or National Origin. If a transit provider chooses not to alter the proposed fare changes despite the disparate impact on minority ridership, or if the transit provider finds, even after the revisions, that minority riders will continue to bear a disproportionate share of the proposed fare change, the transit provider may implement the fare change only if:
- the transit provider has a substantial legitimate justification for the proposed fare change, **and**
 - the transit provider can show that there are no alternatives that would have a less disparate impact on minority riders but would still accomplish the transit provider's legitimate program goals.

It is important to understand that in order to make this showing, the transit provider must consider and analyze alternatives to determine whether those alternatives would have less of a disparate impact on the basis of race, color, or national origin, and then implement the least discriminatory alternative.

- (e) Examining Alternatives. If the transit provider determines that a proposed fare change will have a disparate impact, the transit provider shall analyze the alternatives (identified in the second bullet above) to determine whether alternatives exist that would serve the same legitimate objectives but with less of a disparate effect on the basis of race, color, or national origin. The existence of such an alternative method of accomplishing the transit provider's substantial and legitimate interests demonstrates that the disparate effects can be avoided by adoption of the alternative methods without harming such interests. In addition, if evidence undermines the legitimacy of the transit provider's asserted justification—that is, that the justification is not supported by demonstrable evidence—the disparate effects will violate Title VI, as the lack of factual support will indicate that there is not a substantial legitimate justification for the disparate effects. At that point, the transit provider must revisit the fare changes and make

adjustments that will eliminate unnecessary disparate effects on populations defined by race, color, or national origin. Where disparate impacts are identified, the transit provider shall provide a meaningful opportunity for public comment on any proposed mitigation measures, including any less discriminatory alternatives that may be available.

- (f) Low-Income Disproportionate Burden Policy. The transit provider shall develop a policy for measuring the burden of fare changes on low-income riders to determine when low-income riders are bearing a disproportionate burden of the change between the existing fare and the proposed fare. The impact may be defined as a statistical percentage. The disproportionate burden threshold must be applied uniformly, regardless of fare media, and cannot be altered until the next program submission.
 - (i) The transit provider shall engage the public in the decision-making process to develop the disproportionate burden threshold.
 - (ii) At the conclusion of the analysis, if the transit provider finds that low-income populations will bear a disproportionate burden of the proposed fare change, the transit provider should take steps to avoid, minimize or mitigate impacts where practicable. The transit provider should describe alternatives available to low-income populations affected by the fare changes.
- c. Service and Fare Equity Analysis for New Starts and Other New Fixed Guideway Systems. Transit providers that have implemented or will implement a New Start, Small Start, or other new fixed guideway capital project shall conduct a service and fare equity analysis. The service and fare equity analysis will be conducted six months prior to the beginning of revenue operations, whether or not the proposed changes to existing service rise to the level of “major service change” as defined by the transit provider. All proposed changes to parallel or connecting service will be examined. If the entity that builds the project is different from the transit provider that will operate the project, the transit provider operating the project shall conduct the analysis. The service equity analysis shall include a comparative analysis of service levels pre-and post- the New Starts/Small Starts/new fixed guideway capital project. The analysis shall be depicted in tabular format and shall determine whether the service changes proposed (including both reductions and increases) due to the capital project will result in a disparate impact on minority populations. The transit provider shall also conduct a fare equity analysis for any and all fares that will change as a result of the capital project.

CHAPTER V

REQUIREMENTS FOR STATES

1. INTRODUCTION. This chapter provides requirements for States. States that receive financial assistance from FTA are also responsible for following:
 - a. The general requirements in Chapter III of this Circular; and
 - b. The requirements in Chapter IV of this Circular if the State is a provider of fixed route public transportation.
2. REQUIREMENT TO PREPARE AND SUBMIT A TITLE VI PROGRAM. Title 49 CFR Section 21.9(b) requires recipients to submit reports to FTA in order for FTA to ascertain whether the recipient is in compliance with the DOT Title VI regulations, and recipients must have available “racial and ethnic data showing the extent to which members of minority groups are beneficiaries of programs receiving Federal financial assistance.” As stated in Chapter III of this Circular, FTA requires that all direct and primary recipients document their compliance by submitting a Title VI Program to their FTA regional civil rights officer once every three years, or as otherwise directed by FTA.

For all recipients (including subrecipients), the Title VI Program must be approved by the recipient’s board of directors or appropriate governing entity or official(s) responsible for policy decisions prior to submission to FTA. For State DOTs, the appropriate governing entity is the State’s Secretary of Transportation or equivalent. States shall submit a copy of the appropriate documentation demonstrating that the State’s Secretary of Transportation or equivalent official has approved the Title VI Program. FTA will review and concur or request the recipient provide additional information. Subrecipients, including MPOs that receive planning money from the State, shall submit Title VI Programs to the State as the primary recipient from whom they receive funding, in order to assist the State in its compliance efforts, on a schedule determined by the State. Collection and storage of subrecipient Title VI Programs may be electronic at the option of the State. See Appendix L for clarification of reporting responsibilities by recipient category.

States shall include the following information in their Title VI Program:

- a. All general requirements set out in section 4 of Chapter III of this Circular;
- b. All requirements for transit providers set out in Chapter IV of this Circular if the State is a provider of fixed route public transportation services;
- c. A demographic profile of the State that includes identification of the locations of minority populations in the aggregate;
- d. Demographic maps that overlay the percent minority and non-minority populations as identified by Census or American Community Survey data at Census tract or block group level, and charts that analyze the impacts of the distribution of State and Federal funds in

the aggregate for public transportation purposes, including Federal funds managed by the State as a designated recipient;

- e. An analysis of impacts identified in paragraph d that identifies any disparate impacts on the basis of race, color, or national origin, and, if so, determines whether there is a substantial legitimate justification for the policy that resulted in the disparate impacts, and if there are alternatives that could be employed that would have a less discriminatory impact.
 - f. A description of the statewide transportation planning process that identifies the transportation needs of minority populations;
 - g. A description of the procedures the State uses to pass through FTA financial assistance to subrecipients in a non-discriminatory manner; and
 - h. A description of the procedures the State uses to provide assistance to potential subrecipients applying for funding, including its efforts to assist applicants that would serve predominantly minority populations.
3. PLANNING. All States are responsible for conducting planning activities that comply with 49 U.S.C. Section 5304, Statewide Transportation Planning, as well as subpart B of 23 CFR part 450, Statewide Transportation Planning and Programming. Since States “pass through” planning funds to the MPO, the State as primary recipient is responsible for collecting Title VI programs from MPOs on a schedule to be determined by the State. Collection and storage of subrecipient Title VI Programs may be electronic at the option of the State. The State is thus responsible for monitoring the Title VI compliance of the MPO for those activities for which the MPO is a subrecipient.

Self-certification of compliance with all applicable Federal requirements is required of all States, which is reviewed by FTA and the Federal Highway Administration (FHWA) in the joint Statewide Planning Finding, rendered at the time of update or amendment of the Statewide Improvement Program (STIP). The joint FTA/FHWA planning certification review includes a review of Title VI compliance. The self-certification and joint FTA/FHWA “Finding” include a review of Title VI compliance. As part of the planning certification review, FTA/FHWA review State-developed documentation to determine whether States have:

- a. Analyzed regional demographic data to identify minority populations within the non-urbanized areas of the State.
- b. Where necessary, provided local service providers and agencies with data to assist them in identifying minority populations in their service area.
- c. Ensured that members of minority communities are provided with full opportunities to engage in the Statewide Transportation Planning process. This includes actions to eliminate language, mobility, temporal, and other obstacles to allow these populations to participate fully in the process.

- d. Monitored the activities of subrecipients with regard to Title VI compliance, where the State passes funds through to subrecipients.
4. REQUIREMENTS FOR PROGRAM ADMINISTRATION. In order to comply with 49 CFR Section 21.5, the general nondiscrimination provision, States shall document that they pass through FTA funds under the Enhanced Mobility for Seniors and Individuals with Disabilities (Section 5310) program, the Formula Grants for Rural Areas (Section 5311) program, and any other FTA funds, to subrecipients without regard to race, color, or national origin, and assure that minority populations are not being denied the benefits of or excluded from participation in these programs.

States shall prepare and maintain, but not report unless requested by FTA, the following information:

- a. A record of funding requests received from private non-profit organizations, State or local governmental authorities, and Indian tribes. The record shall identify those applicants that would use grant program funds to provide assistance to predominantly minority populations. The record shall also indicate which applications were rejected and accepted for funding.
- b. A description of how the agency develops its competitive selection process or annual program of projects submitted to FTA as part of its grant applications. This description shall emphasize the method used to ensure the equitable distribution of funds to subrecipients that serve predominantly minority populations, including Native American tribes, where present. Equitable distribution can be achieved by engaging in outreach to diverse stakeholders regarding the availability of funds, and ensuring the competitive process is not itself a barrier to selection of minority applicants.
- c. A description of the agency's criteria for selecting entities to participate in an FTA grant program.

When a subrecipient is also a direct recipient of FTA funds, that is, applies for funds directly from FTA in addition to receiving funds from a State, the subrecipient/direct recipient reports directly to FTA and the State as designated recipient is not responsible for monitoring compliance of that subrecipient/direct recipient. The supplemental agreement signed by both entities in their roles as designated recipient and direct recipient relieves the State as designated recipient of this oversight responsibility. See Appendix L for clarification of reporting responsibilities by recipient category.

CHAPTER VI

REQUIREMENTS FOR METROPOLITAN TRANSPORTATION PLANNING ORGANIZATIONS

1. **INTRODUCTION**. This chapter describes the procedures that metropolitan planning organizations (MPOs) shall follow in order to comply with the DOT's Title VI regulations. MPOs are also responsible for following the general requirements in Chapter III of this circular.

An MPO may serve many different roles depending on its "recipient" status, i.e., designated recipient, direct recipient, primary recipient, or subrecipient. This chapter describes the many roles an MPO may fill, and provides guidance on Title VI compliance for each of those roles.

2. **REQUIREMENT TO PREPARE AND SUBMIT A TITLE VI PROGRAM**. Title 49 CFR Section 21.9(b) requires recipients to submit reports to FTA in order for FTA to ascertain whether the recipient is in compliance with the DOT Title VI regulations, and recipients must have available "racial and ethnic data showing the extent to which members of minority groups are beneficiaries of programs receiving Federal financial assistance." As stated in Chapter III of this Circular, FTA requires that all direct and primary recipients document their compliance by submitting a Title VI Program to their FTA regional civil rights officer once every three years, or as otherwise directed by FTA.

For all recipients (including subrecipients), the Title VI Program must be approved by the recipient's board of directors or appropriate governing entity or official(s) responsible for policy decisions prior to submission to FTA. FTA will review and concur or request the recipient provide additional information. Subrecipients, including MPOs that receive Federal planning money from the State, shall submit Title VI Programs to the State as the primary recipient from whom they receive funding, on a schedule to be determined by the State, in order to assist the State in its compliance efforts. Collection and storage of subrecipient Title VI Programs may be electronic at the option of the State. See Appendix L for clarification of reporting responsibilities by recipient category.

MPOs shall include the following information in their Title VI Programs.

- a. In its regional transportation planning capacity, the MPO shall submit to the State as the primary recipient, and also to FTA:
 - (1) All general requirements set out in section 4 of Chapter III of this Circular;
 - (2) A demographic profile of the metropolitan area that includes identification of the locations of minority populations in the aggregate;
 - (3) A description of the procedures by which the mobility needs of minority populations are identified and considered within the planning process;

- (4) Demographic maps that overlay the percent minority and non-minority populations as identified by Census or ACS data, at Census tract or block group level, and charts that analyze the impacts of the distribution of State and Federal funds in the aggregate for public transportation purposes, including Federal funds managed by the MPO as a designated recipient;
 - (5) An analysis of impacts identified in paragraph (4) that identifies any disparate impacts on the basis of race, color, or national origin, and, if so, determines whether there is a substantial legitimate justification for the policy that resulted in the disparate impacts, and if there are alternatives that could be employed that would have a less discriminatory impact.
- b. In its capacity as a direct recipient, the MPO shall submit to FTA:
- (1) The information required under section 2a of this chapter; and
 - (2) If the MPO is a provider of fixed route public transportation service, the information required under section 2 of chapter IV (Requirements and Guidelines for Fixed Route Transit Providers). The reporting requirements that the MPO must follow for the provision of public transportation service will be based on whether the MPO serves a large UZA with 200,000 or more in population and whether the number of fixed route vehicles in peak service is 50 or more.
- c. In its capacity as a primary recipient, the MPO shall submit to FTA:
- (1) The information required under section 2a of this chapter;
 - (2) A description of the procedures the MPO uses to pass through FTA financial assistance to subrecipients in a nondiscriminatory manner; and
 - (3) A description of the procedures the MPO uses to provide assistance to potential subrecipients applying for funding, including its efforts to assist applicants that would serve predominantly minority populations.

See Appendix L for clarification of reporting responsibilities by recipient category.

3. **PLANNING.** All MPOs are responsible for conducting planning activities that comply with 49 U.S.C. Section 5303, Metropolitan Transportation Planning, as well as subpart C of 23 CFR part 450, Metropolitan Transportation Planning and Programming, for a specified metropolitan planning area. Since States “pass through” planning funds to the MPO, MPOs are subrecipients of the State and must submit Title VI compliance reports for planning activities to the State in order to assist the State in demonstrating compliance with Title VI. The State is thus responsible for monitoring the Title VI compliance of the MPO for those activities for which the MPO is a subrecipient. If the MPO passes planning funds through to one or more subrecipients, the MPO is responsible for ensuring those subrecipients comply with Title VI.

All MPOs are required to self-certify compliance with all applicable Federal requirements. Planning certification reviews conducted jointly by FTA and FHWA of the metropolitan transportation planning processes of transportation management areas include a review of Title VI compliance. As part of the planning certification review, FTA/FHWA review MPO-developed documentation to determine whether MPOs have:

- a. Analyzed regional demographic data to identify minority populations within the region.
 - b. Where necessary, provided member agencies with regional data to assist them in identifying minority populations in their service area.
 - c. Ensured that members of minority communities are provided with full opportunities to engage in the transportation planning process. This includes actions to eliminate language, mobility, temporal, and other obstacles to allow these populations to participate fully in the process.
 - d. Monitored the activities of subrecipients with regard to Title VI compliance, where the MPO passes funds through to subrecipients.
4. DESIGNATED RECIPIENT. MPOs sometimes serve the role of designated recipient. FTA apportions funds each year to the MPO as designated recipient, and the MPO, in turn, suballocates funds (without receiving the actual funds from FTA) to various entities and/or retains funds to carry out its own projects or activities, or to pass through to subrecipients. If the MPO as designated recipient simply suballocates the funds to other entities, and those entities apply to FTA directly for the funds, the MPO and each entity to which it suballocates funds enter into a “supplemental agreement.” Under a supplemental agreement, the direct recipient is responsible for demonstrating compliance with Federal law, including Title VI, and the MPO is not in any manner subject to or responsible for the direct recipient’s compliance with the DOT Title VI regulations.

However, the MPO as designated recipient is responsible for suballocating FTA funds without regard to race, color, or national origin. Suballocations must be based on project implementation priorities in the MTP, which includes a robust public participation process. Each MPO must have a locally developed process that establishes criteria for making determinations of funding priorities in a nondiscriminatory manner.

5. DIRECT RECIPIENT. An MPO that receives funding directly from FTA for its own activities is a direct recipient, and therefore must develop a Title VI Program and report Title VI compliance to FTA for those activities for which it is a direct recipient. As a direct recipient, an MPO may also pass through funds to subrecipients. When an MPO receives funds directly from FTA and then passes funds through to subrecipients, the MPO becomes a primary recipient under the DOT Title VI regulations and is responsible for monitoring the compliance of its subrecipients with Title VI, unless that subrecipient is also an FTA direct recipient. Refer to Appendix L for clarification of reporting responsibilities by recipient category.
6. REQUIREMENTS FOR PROGRAM ADMINISTRATION. In order to comply with 49 CFR Section 21.5, the general nondiscrimination provision, MPOs shall document that they pass

through FTA funds under any FTA programs (e.g., 49 U.S.C. 5310, Enhanced Mobility for Seniors and Individuals with Disabilities), to subrecipients without regard to race, color, or national origin, and assure that minority populations are not being denied the benefits of or excluded from participation in these programs.

MPOs shall prepare and maintain, but not report unless requested by FTA, the following information:

- a. A record of funding requests received from private non-profit organizations, State or local governmental authorities, and Indian tribes. The record shall identify those applicants that would use grant program funds to provide assistance to predominantly minority populations. The record shall also indicate which applications were rejected and accepted for funding.
- b. A description of how the MPO develops its competitive selection process or annual program of projects submitted to FTA as part of its grant applications. This description shall emphasize the method used to ensure the equitable distribution of funds to subrecipients that serve predominantly minority populations, including Native American tribes, where present. Equitable distribution can be achieved by engaging in outreach to diverse stakeholders regarding the availability of funds, and ensuring the competitive process is not itself a barrier to selection of minority applicants.
- c. A description of the MPO's criteria for selecting entities to participate in an FTA grant program.

CHAPTER VII

EFFECTING COMPLIANCE WITH DOT TITLE VI REGULATIONS

1. INTRODUCTION. This chapter outlines procedures when FTA determines that a recipient is noncompliant with the DOT Title VI regulations. Title 49 CFR Section 21.13(a) states the following:

If there appears to be a failure or threatened failure to comply with this part, and if the noncompliance or threatened noncompliance cannot be corrected by informal means, compliance with this part may be effected by the suspension or termination of or refusal to grant or to continue Federal financial assistance or by any other means authorized by law. Such other means may include, but are not limited to: (1) A reference to the Department of Justice with a recommendation that appropriate proceedings be brought to enforce any rights of the United States under any law of the United States (including other titles of the [Civil Rights] Act), or any assurance or other contractual undertaking, and (2) any applicable proceeding under State or local law.

2. PROCEDURES FOR SECURING VOLUNTARY COMPLIANCE. FTA may determine a recipient is noncompliant with DOT's Title VI regulations following a compliance review or after FTA completes an investigation in response to a Title VI complaint. Prior to taking measures to effect compliance, FTA will attempt to resolve noncompliance informally and by using the following procedures.
 - a. Notification to the Recipient. When FTA has determined that a recipient is noncompliant with DOT's Title VI regulations, it will transmit a letter of finding to the recipient that describes FTA's determination and requests that the recipient voluntarily take corrective action(s) that FTA deems necessary and appropriate.
 - b. Recipient Response. Within 30 days of receipt of FTA's letter of finding, the recipient must submit a remedial action plan, including a list of planned corrective actions and, if necessary, sufficient reasons and justification for FTA to reconsider any of its findings or recommendations. The recipient's plan shall:
 - (1) List all corrective action(s) accepted by the recipient.
 - (2) Describe how the corrective actions will be implemented, and provide a timeline for achieving compliance.
 - (3) Include a written assurance that the recipient will implement the accepted corrective action(s) and has the capability to implement the accepted corrective action(s) in the manner discussed in the plan.
 - (4) A copy of the board resolution, meeting minutes, or similar documentation with evidence that the board of directors or appropriate governing entity or official(s) has approved the remedial action plan.

- c. Request for Reconsideration. A recipient may request that FTA reconsider its finding. A request for reconsideration shall provide a justification for the request to reconsider, including any evidence or information supporting such a request, and include a written assurance that on the basis of the requested reconsideration, the agency is or otherwise will come into compliance with DOT's Title VI regulations. This request shall be submitted within 30 days of FTA's notification to the recipient.
 - d. FTA Review of the Recipient Response. Within 30 days after receiving the recipient's response, FTA will review the submitted remedial action plan and any request for reconsideration and decide what remedial action(s) are necessary and appropriate to bring the recipient into compliance. If necessary, before making a decision, FTA may conduct a site visit to substantiate information or statements contained in the recipient's response. FTA will issue a decision, including its findings and recommendations, as part of a final remedial action plan. The final remedial action plan will be sent to the recipient for review and consent. Consent means the recipient agrees to initiate action(s) specified in the plan.
 - e. Conditions for Declining the Remedial Action Plan. The recipient has 15 days from the date of notification by FTA to agree or disagree with the final remedial action plan. If a recipient disagrees with this plan, it must submit a written statement of its reasons for not agreeing to the remedial actions contained in the plan. Under those circumstances, the recipient will be considered in noncompliance, and FTA will schedule a meeting with the recipient within 30 days to resolve the disagreements.
3. PROCEEDINGS. When FTA and the recipient cannot agree on a final remedial action plan and the recipient continues to be in noncompliance with DOT Title VI regulations, in accordance with 49 CFR Section 21.13, FTA may suspend, terminate, or refuse to grant or continue Federal financial assistance to the recipient. This will generally occur when all means of informal resolution have failed to get the recipient to comply with the law. FTA may refer a matter to DOJ with a recommendation that appropriate proceedings be brought to enforce any rights of the United States under any law of the United States or any assurance or other contractual undertaking.
 - a. Termination of or refusal to grant or to continue Federal financial assistance. In accordance with 49 CFR Section 21.13(c), FTA will not suspend, terminate, or refuse to grant or continue Federal financial assistance until:
 - (1) FTA has notified the applicant or recipient of its failure to comply and has determined that compliance cannot be secured by voluntary means;
 - (2) FTA has found, after opportunity for a hearing, that the applicant or recipient has failed to comply with Title VI regulations;
 - (3) The action has been approved by the Secretary of Transportation; and
 - (4) 30 days have passed after FTA has filed with the Transportation and Infrastructure Committee of the House of Representatives; and the Banking, Housing and Urban

Affairs Committee of the Senate, a full written report of the circumstances and the grounds for such action.

- b. Other means authorized by law. In accordance with 49 CFR Section 21.13(d), FTA will not refer the matter to DOJ or take any other action to effect compliance until:
- (1) FTA has determined that compliance cannot be secured by voluntary means;
 - (2) FTA has notified the recipient of its failure to comply and the action FTA intends to take; and
 - (3) At least 10 days have passed from the mailing of such notice to the recipient. During this 10-day period, FTA will make additional efforts to persuade the recipient to comply with the regulation and to take such corrective action as may be appropriate.
- c. Hearings. Whenever FTA has determined that it is appropriate to terminate or refuse to grant or continue Federal financial assistance, prior to such action FTA will provide the applicant or recipient with an opportunity for a hearing, in accordance with 49 CFR Section 21.15. FTA will provide reasonable notice of the hearing by registered or certified mail, return receipt requested, to the applicant or recipient. The notice will advise the applicant or recipient of the action proposed to be taken, the specific provision under which the proposed action against it is to be taken, and the matters of fact or law asserted as the basis for this action. The notice will either:
- (1) Fix a date not less than 20 days after the date of such notice within which the applicant or recipient may request of the FTA Administrator that the matter be scheduled for hearing; or
 - (2) Advise the applicant or recipient that the matter in question has been scheduled for a hearing at a stated place and time. The time and place will be reasonable and subject to change for cause.
- The complainant, if any, shall be advised of the time and place of the hearing.
- d. Waiver of Hearing. An applicant or recipient may waive a hearing and submit written information and argument for the record. The failure of an applicant or recipient to request a hearing or to appear at a hearing for which a date has been set shall be deemed to be a waiver of the right to a hearing under Section 602 of the Civil Rights Act of 1964 and 49 CFR Section 21.13(c), and consent to FTA making a decision on the basis of the available information.
- e. Time and Location of Hearing. Hearings will be held at the FTA Headquarters office in Washington, DC, at a time fixed by the FTA Administrator unless the convenience of the applicant or recipient or of FTA requires that another place be selected.

- f. Hearing officer. Hearings will be held before the Secretary of Transportation or before a hearing examiner appointed in accordance with Section 3105 of title 5, United States Code.
 - g. Right to counsel. In all proceedings carried out under the authority of 49 CFR Section 21.15, the applicant or recipient and FTA shall have the right to be represented by counsel.
 - h. Procedures, evidence, and record. Pursuant to 49 CFR 21.15(d), the hearing, decision, and any administrative review thereof shall be conducted in conformity with Sections 554 through 557 of title 5, United States Code, and in accordance with such rules of procedure as are proper relating to the conduct of the hearing, giving of notices to the applicant or recipient, taking of testimony, exhibits, arguments and briefs, requests for findings, and other related matters. FTA and the applicant or recipient shall be entitled to introduce all relevant evidence on the issues as stated in the notice for hearing or as determined by the officer conducting the hearing at the outset of or during the hearing.
4. JUDICIAL REVIEW. When FTA issues a final order after a hearing on the record, such final action is subject to judicial review.

CHAPTER VIII

COMPLIANCE REVIEWS

1. **INTRODUCTION**. This chapter describes the review process FTA will follow when determining whether a recipient is compliant or noncompliant with DOT Title VI regulations, subsequent to the award of Federal financial assistance, and describes the information and actions expected from recipients that are subject to these reviews.
2. **COMPLIANCE PROCEDURES**. Title 49 CFR Section 21.11(a) requires FTA to conduct compliance reviews of its recipients. These reviews are separate from and may be in addition to a Triennial Review, State Management Review, or Planning Certification Review and will be conducted either as a desk audit or an on-site visit. The review may cover all or a portion of the recipient's compliance with Title VI. Such reviews are conducted at the discretion of FTA, and the scope of a review is defined on a case-by-case basis.
3. **CRITERIA**. The following list of factors will contribute to the selection of recipients for compliance reviews:
 - a. Lawsuits, complaints, or investigations conducted by organizations other than FTA alleging the recipient is noncompliant with DOT Title VI regulations;
 - b. Alleged noncompliance brought to the attention of FTA by other Federal, State, or local agencies;
 - c. A recipient submitting an incomplete or insufficient Title VI Program; and
 - d. Title VI findings or recommendations on prior Triennial, State Management, or Planning Certification Reviews that have not been sufficiently resolved or implemented, or repeat findings in any FTA review concerning Title VI.
4. **SCOPE**. In general, compliance reviews will assess the following information:
 - a. The recipient's documented efforts to meet the requirements under Chapter III and the program-specific sections of this Circular.
 - b. Other information that is necessary and appropriate to make a determination that the recipient is in compliance with Title VI.
5. **DETERMINATIONS**. After reviewing the recipient's or subrecipient's efforts to meet the general reporting and program-specific reporting sections of the Circular, FTA will issue a compliance report that includes findings of no deficiency, deficiency, or noncompliance.
 - a. **Findings of no deficiency** are determinations that no deficiency was found in review of the recipient's Title VI Program or after the results of an investigation or compliance review. Agencies are not expected to take any corrective action in response to findings of no deficiency except with regard to advisory comments. Advisory comments are recommendations that the recipient undertake activities in a manner more consistent with

the guidance provided in the pertaining section of the Circular. FTA expects recipients to notify FTA as to whether the recipient will take action in response to the advisory comments.

- b. Findings of deficiency are determinations that the recipient has not complied with one or more of the pertinent provisions of this circular. Recipients are expected to take corrective actions in response to findings of deficiency and the compliance review will provide specific instructions to the recipient on how the corrective action shall be taken.
 - c. Findings of noncompliance are determinations that the recipient has engaged in activities that have had the purpose or effect of denying persons the benefits of, excluding them from participation in, or subjecting persons to discrimination on the basis of race, color, or national origin under the recipient's program or activity; upon such determination, FTA will consider the recipient to be noncompliant with Title VI. If noncompliance cannot be corrected informally, the recipient may be subject to remedial action or proceedings under Chapter VII of this Circular and the DOT Title VI regulations at 49 CFR Sections 21.13, 21.15, and 21.17.
6. RESULTS OF COMPLIANCE REVIEW ACTIVITIES. FTA will summarize the results of the review in a draft compliance report, which will include findings of no deficiency, findings of deficiency, and advisory comments, as appropriate. If findings of deficiency remain in the final compliance report, the recipient will be required to take corrective action, develop a timeline for compliance, and report on its progress to FTA on, at minimum, a quarterly basis. Once FTA determines that the recipient has satisfactorily responded to the review's findings, it will inform the recipient that the review process has ended and release it from further progress reporting in response to the review. FTA may follow up on a compliance review with additional reviews as necessary.
 7. EFFECTING COMPLIANCE. Consistent with the provisions of 49 CFR Sections 21.13, 21.15, and 21.17, and as explained in Chapter VII of this Circular, if a recipient fails to take appropriate corrective action in response to the findings of deficiency in the report, FTA may initiate proceedings that could result in action taken by the U.S. DOT to suspend, terminate, refuse to grant or continue Federal financial assistance to a recipient, or may make a referral to the Department of Justice (DOJ) with a recommendation that appropriate proceedings be brought to enforce any rights of the United States under any law of the United States or any assurance or other contractual undertaking.

CHAPTER IX

COMPLAINTS

1. INTRODUCTION. This chapter describes how FTA will respond to complaints filed with FTA alleging that an FTA recipient has violated the DOT Title VI regulations. FTA will promptly investigate all complaints in accordance with 49 CFR Section 21.11. FTA may delay its investigation if the complainant and the party complained against agree to postpone the investigation pending settlement negotiations.
2. RIGHT TO FILE A COMPLAINT. Any person who believes himself, herself, or any specific class of persons to be subjected to discrimination on the basis of race, color, or national origin may by himself or by a representative file a written complaint with FTA. A complaint must be filed no later than 180 days after the date of the alleged discrimination, unless the time for filing is extended by FTA.
3. COMPLAINT ACCEPTANCE. Once a complaint has been accepted by FTA for investigation, FTA will notify the recipient that it is the subject of a Title VI complaint and ask the recipient to respond in writing to the complainant's allegations. If the complainant agrees to release the complaint to the recipient, FTA will provide the agency with the complaint, which may have personal information redacted at the request of the complainant. If the complainant does not agree to release the complaint to the recipient, FTA may choose to close the complaint.
4. INVESTIGATIONS. FTA will make a prompt investigation whenever a compliance review, report, complaint, or any other information indicates a possible failure to comply with DOT's Title VI regulations. The investigation will include, where appropriate, a review of the pertinent practices and policies of the recipient, the circumstances under which the possible noncompliance with DOT's Title VI regulations occurred, and other factors relevant to a determination as to whether the recipient has failed to comply with DOT's Title VI regulations.
5. LETTERS OF FINDING. After FTA has concluded the investigation, FTA's Office of Civil Rights will transmit to the complainant and the recipient one of the following letters based on its findings:
 - a. A letter of finding indicating FTA did not find a violation of DOT's Title VI regulations. This letter will include an explanation of why FTA did not find a violation. If applicable, the letter may include a list of procedural violations or concerns, which will put the recipient on notice that certain practices are questionable and that without corrective steps, a future violation finding is possible.
 - b. A letter of finding indicating the recipient is in violation of DOT's Title VI regulations. The letter will include each violation referenced to the applicable regulation, a brief description of proposed remedies, notice of the time limit on coming into compliance, the consequences of failure to achieve voluntary compliance, and an offer of assistance to the recipient in devising a remedial plan for compliance, if appropriate.

6. ADMINISTRATIVE CLOSURE. FTA will administratively close Title VI complaints before a resolution is reached where (1) the complainant decides to withdraw the case; (2) the complainant is not responsive to FTA's requests for information or to sign a consent release form; (3) FTA has conducted or plans to conduct a related compliance review of the agency against which the complaint is lodged; (4) litigation has been filed raising similar allegations involved in the complaint; (5) the complaint was not filed within 180 days of the alleged discrimination; (6) the complaint does not indicate a possible violation of 49 CFR part 21; (7) the complaint is so weak, insubstantial, or lacking in detail that FTA determines it is without merit, or so replete with incoherent or unreadable statements that it, as a whole, cannot be considered to be grounded in fact; (8) the complaint has been investigated by another agency and the resolution of the complaint meets DOT regulatory standards; (9) the complaint allegations are foreclosed by previous decisions of the Federal courts, the Secretary, DOT policy determinations, or the U.S. DOT's Office of Civil Rights; (10) FTA obtains credible information that the allegations raised by the complaint have been resolved; (11) the complaint is a continuation of a pattern of previously filed complaints involving the same or similar allegations against the same recipient or other recipients that have been found factually or legally insubstantial by FTA; (12) the same complaint allegations have been filed with another Federal, state, or local agency, and FTA anticipates that the recipient will provide the complainant with a comparable resolution process under comparable legal standards; or (13) the death of the complainant or injured party makes it impossible to investigate the allegations fully.

INTRODUCTION TO TECHNICAL APPENDICES

The following Appendices A through M provide sample checklists, templates, standards, policies, tables and maps for FTA recipients to consult when preparing their Title VI Programs. FTA is issuing these appendices in order to provide technical assistance and guidance and thereby increase the level of clarity, organization, and uniformity across Title VI Programs. The samples are provided as guidance; recipients may revise as appropriate for their purposes.

APPENDIX A

TITLE VI PROGRAM CHECKLIST

Every three years, on a date determined by FTA, each recipient is required to submit the following information to the Federal Transit Administration (FTA) as part of their Title VI Program. Subrecipients shall submit the information below to their primary recipient (the entity from whom the subrecipient receives funds directly), on a schedule to be determined by the primary recipient.

General Requirements (Chapter III)

All recipients must submit:

- Title VI Notice to the Public, including a list of locations where the notice is posted
- Title VI Complaint Procedures (i.e., instructions to the public regarding how to file a Title VI discrimination complaint)
- Title VI Complaint Form
- List of transit-related Title VI investigations, complaints, and lawsuits
- Public Participation Plan, including information about outreach methods to engage minority and limited English proficient populations (LEP), as well as a summary of outreach efforts made since the last Title VI Program submission
- Language Assistance Plan for providing language assistance to persons with limited English proficiency (LEP), based on the DOT LEP Guidance
- A table depicting the membership of non-elected committees and councils, the membership of which is selected by the recipient, broken down by race, and a description of the process the agency uses to encourage the participation of minorities on such committees
- Primary recipients shall include a description of how the agency monitors its subrecipients for compliance with Title VI, and a schedule of subrecipient Title VI Program submissions
- A Title VI equity analysis if the recipient has constructed a facility, such as a vehicle storage facility, maintenance facility, operation center, etc.
- A copy of board meeting minutes, resolution, or other appropriate documentation showing the board of directors or appropriate governing entity or official(s) responsible for policy decisions reviewed and approved the Title VI Program. For State DOT's, the appropriate governing entity is the State's Secretary of Transportation or equivalent. The approval must occur prior to submission to FTA.
- Additional information as specified in chapters IV, V, and VI, depending on whether the recipient is a transit provider, a State, or a planning entity (see below)

Requirements of Transit Providers (Chapter IV)

All Fixed Route Transit Providers must submit:

- All requirements set out in Chapter III (General Requirements)
- Service standards

- Vehicle load for each mode
- Vehicle headway for each mode
- On time performance for each mode
- Service availability for each mode
- Service policies
 - Transit Amenities for each mode
 - Vehicle Assignment for each mode

Transit Providers that operate 50 or more fixed route vehicles in peak service and are located in an Urbanized Area (UZA) of 200,000 or more people must submit:

- Demographic and service profile maps and charts
- Demographic ridership and travel patterns, collected by surveys
- Results of their monitoring program and report, including evidence that the board or other governing entity or official(s) considered, was aware of the results, and approved the analysis
- A description of the public engagement process for setting the “major service change policy,” disparate impact policy, and disproportionate burden policy
- Results of service and/or fare equity analyses conducted since the last Title VI Program submission, including evidence that the board or other governing entity or official(s) considered, was aware of, and approved the results of the analysis

Requirements of States (Chapter V)

States must submit:

- All requirements set out in Chapter III (General Requirements)
- The requirements set out in Chapter IV (Transit Provider) if the State is a provider of fixed route public transportation
- Demographic profile of the State
- Demographic maps that show the impacts of the distribution of State and Federal funds in the aggregate for public transportation projects
- Analysis of the State’s transportation system investments that identifies and addresses any disparate impacts
- A description of the Statewide planning process that identifies the transportation needs of minority populations
- Description of the procedures the agency uses to ensure nondiscriminatory pass-through of FTA financial assistance
- Description of the procedures the agency uses to provide assistance to potential subrecipients, including efforts to assist applicants that would serve predominantly minority populations

Requirements of MPOs (Chapter VI)

Metropolitan Planning Organizations and other planning entities must submit:

- All requirements set out in Chapter III (General Requirements)

- The requirements set out in Chapter IV (Transit Provider) if the MPO is a provider of fixed route public transportation
- Demographic profile of the metropolitan area
- A description of the procedures by which the mobility needs of minority populations are identified and considered within the planning process
- Demographic maps that show the impacts of the distribution of State and Federal funds in the aggregate for public transportation projects
- Analysis of the MPO's transportation system investments that identifies and addresses any disparate impacts
- Description of the procedures the agency uses to ensure nondiscriminatory pass-through of FTA financial assistance (if requested)
- Description of the procedures the agency uses to provide assistance to potential subrecipients in a nondiscriminatory manner (if requested)

APPENDIX B**TITLE VI NOTICE TO THE PUBLIC (GENERAL REQUIREMENT)****Background**

A Title VI Notice to the Public must be displayed to inform a recipient's customers of their rights under Title VI. At a minimum, recipients must post the notice on the agency's website and in public areas of the agency's office(s), including the reception desk, meeting rooms, etc. Many agencies display their Title VI Notices in transit facilities (e.g., headquarters, transit shelters and stations, etc.), and on transit vehicles (e.g., buses, rail cars, etc.). The Title VI Notice is a vital document. If any of the Limited English Proficient (LEP) populations in your service area meet the Safe Harbor threshold (see Chapter III), then the Notice should be provided in English and in any other language(s) spoken by LEP populations that meet the Safe Harbor Threshold. At a minimum, this statement in the Notice—"If information is needed in another language, then contact [phone number]"—should be stated in English and in any other language(s) spoken by LEP populations that meet the Safe Harbor threshold.

The sample below is provided for the purposes of guidance only.

SAMPLE Title VI Notification to the Public

Notifying the Public of Rights Under Title VI
THE CITY OF USA

- The City of USA operates its programs and services without regard to race, color, and national origin in accordance with Title VI of the Civil Rights Act. Any person who believes she or he has been aggrieved by any unlawful discriminatory practice under Title VI may file a complaint with the City of USA.
- For more information on the City of USA's civil rights program, and the procedures to file a complaint, contact 800-555-1212, (TTY 800-555-1111); email title.vi.complaint@city.ca.us; or visit our administrative office at 1234 Center Street, City of USA, State 11111. For more information, visit www.city.ca.us
- A complainant may file a complaint directly with the Federal Transit Administration by filing a complaint with the Office of Civil Rights, Attention: Title VI Program Coordinator, East Building, 5th Floor-TCR, 1200 New Jersey Ave., SE, Washington, DC 20590
- If information is needed in another language, contact 800-555-1212.
 - *MAKE SURE THE SENTENCE ABOVE IS ALSO PROVIDED IN ANY LANGUAGE(S) SPOKEN BY LEP POPULATIONS THAT MEET THE SAFE HARBOR THRESHOLD*

APPENDIX C

TITLE VI COMPLAINT PROCEDURE (GENERAL REQUIREMENT)

Background

Recipients' Title VI Programs must include a copy of the agency's Title VI complaint procedure. The complaint procedure and complaint form shall be available on the recipient's website. The Title VI Complaint Procedure is a vital document. If any of the Limited English Proficient (LEP) populations in your service area meet the Safe Harbor threshold (see Chapter III), then the complaint procedure should be provided in English and in any other language(s) spoken by LEP populations that meet the Safe Harbor Threshold. At a minimum, the complaint procedure should include a notice—"If information is needed in another language, then contact [phone number]"—should be stated in English and in any other language(s) spoken by LEP populations that meet the Safe Harbor threshold.

The sample below is provided for the purposes of guidance only.

SAMPLE Title VI Complaint Procedure

Any person who believes she or he has been discriminated against on the basis of race, color, or national origin by the City of USA Transit Authority (hereinafter referred to as "the Authority") may file a Title VI complaint by completing and submitting the agency's Title VI Complaint Form. The City of USA Transit Authority investigates complaints received no more than 180 days after the alleged incident. The Authority will process complaints that are complete.

Once the complaint is received, the Authority will review it to determine if our office has jurisdiction. The complainant will receive an acknowledgement letter informing her/him whether the complaint will be investigated by our office.

The Authority has XX days to investigate the complaint. If more information is needed to resolve the case, the Authority may contact the complainant. The complainant has XX business days from the date of the letter to send requested information to the investigator assigned to the case. If the investigator is not contacted by the complainant or does not receive the additional information within XX business days, the Authority can administratively close the case. A case can be administratively closed also if the complainant no longer wishes to pursue their case.

After the investigator reviews the complaint, she/he will issue one of two letters to the complainant: a closure letter or a letter of finding (LOF). A closure letter summarizes the allegations and states that there was not a Title VI violation and that the case will be closed. An LOF summarizes the allegations and the interviews regarding the alleged incident, and explains whether any disciplinary action, additional training of the staff member, or other action will occur. If the complainant wishes to appeal the decision, she/he has XX days after the date of the letter or the LOF to do so.

A person may also file a complaint directly with the Federal Transit Administration, at FTA Office of Civil Rights, 1200 New Jersey Avenue SE, Washington, DC 20590.

APPENDIX D

SAMPLE TITLE VI COMPLAINT FORM (GENERAL REQUIREMENT)

Background

Recipients must create and make available a Title VI Complaint Form for use by customers who wish to file a Title VI complaint. The complaint form shall be available on the recipient’s website. A recipient’s Title VI Complaint Form shall specify the three classes protected by Title VI—race, color, and national origin—and allow the complainant to select one or more of those protected classes as the basis/bases for discrimination. The Title VI Complaint Form is a vital document. If any of the Limited English Proficient (LEP) populations in your service area meet the Safe Harbor threshold (see Chapter III), then the procedure should be provided in English *and* in any other language(s) spoken by LEP populations that meet the Safe Harbor Threshold.

The sample below is provided for the purposes of guidance only.

Section I:				
Name:				
Address:				
Telephone (Home):			Telephone (Work):	
Electronic Mail Address:				
Accessible Format Requirements?	Large Print		Audio Tape	
	TDD		Other	
Section II:				
Are you filing this complaint on your own behalf?			Yes*	No
*If you answered "yes" to this question, go to Section III.				
If not, please supply the name and relationship of the person for whom you are complaining:				
Please explain why you have filed for a third party: _____				
Please confirm that you have obtained the permission of the aggrieved party if you are filing on behalf of a third party.			Yes	No
Section III:				
I believe the discrimination I experienced was based on (check all that apply):				
[] Race [] Color [] National Origin				
Date of Alleged Discrimination (Month, Day, Year): _____				
Explain as clearly as possible what happened and why you believe you were discriminated against. Describe all persons who were involved. Include the name and contact information of the person(s) who discriminated against you (if known) as well as names and contact information				

APPENDIX E

LIST OF TRANSIT-RELATED TITLE VI INVESTIGATIONS, COMPLAINTS, AND LAWSUITS (GENERAL REQUIREMENT)

Background

All recipients shall prepare and maintain a list of any of the following that allege discrimination on the basis of race, color, or national origin:

- Active investigations conducted by FTA and entities other than FTA;
- Lawsuits; and
- Complaints naming the recipient.

This list shall include the date that the transit-related Title VI investigation, lawsuit, or complaint was filed; a summary of the allegation(s); the status of the investigation, lawsuit, or complaint; and actions taken by the recipient in response, or final findings related to the investigation, lawsuit, or complaint. This list shall be included in the Title VI Program submitted to FTA every three years.

The sample below is provided for the purposes of guidance only.

SAMPLE List of Investigations, Lawsuits and Complaints

	Date (Month, Day, Year)	Summary (include basis of complaint: race, color, or national origin)	Status	Action(s) Taken
Investigations				
1.				
2.				
Lawsuits				
1.				
2.				
Complaints				
1.				
2.				

APPENDIX F**TABLE DEPICTING MINORITY REPRESENTATION ON COMMITTEES AND COUNCILS SELECTED BY THE RECIPIENT (GENERAL REQUIREMENT)****Background**

Recipients that have transit-related, non-elected planning boards, advisory councils or committees, or similar bodies, the membership of which is selected by the recipient, must provide a table depicting the membership of those committees broken down by race, and a description of efforts made to encourage the participation of minorities on such committees.

The sample below is provided for the purposes of guidance only.

SAMPLE Table Depicting Membership of Committees, Councils, Broken Down by Race

Body	Caucasian	Latino	African American	Asian American	Native American
Population	46%	28%	14%	8%	4%
Access Committee	60%	23%	10%	7%	0%
Citizens Advisory Council	40%	25%	20%	10%	5%
Bicycle Pedestrian Committee	45%	30%	15%	5%	5%

APPENDIX G

SERVICE STANDARDS (REQUIREMENT FOR ALL FIXED ROUTE TRANSIT PROVIDERS)

Background

FTA requires all fixed route transit providers of public transportation to develop *quantitative* standards for the following indicators. Individual public transportation providers will set these standards; therefore, these standards will apply to each individual agency rather than across the entire transit industry.

- *Vehicle load for each mode:* Generally expressed as the ratio of passengers to the number of seats on a vehicle, relative to the vehicle’s maximum load point. For example, on a 40-seat bus, a vehicle load of 1.3 means all seats are filled and there are approximately 12 standees. Transit providers can specify vehicle loads for peak vs. off-peak times, and for different modes of transit.
- *Vehicle headways for each mode:* The amount of time between two vehicles traveling in the same direction on a given line or combination of lines.
- *On-time performance for each mode:* A measure of runs completed as scheduled.
- *Service availability for each mode:* A general measure of the distribution of routes within an agency’s service area.

The samples below are provided for the purposes of guidance only.

SAMPLE Standards

SAMPLE Vehicle Load Standards

1. Expressed in writing

The average of all loads during the peak operating period should not exceed vehicles’ achievable capacities, which are 30 passengers for a 15’ mini-bus, 51 passengers for low-floor 40-foot buses, 60 passengers for standard 40-foot buses, and 133 passengers on a light rail car.

2. Expressed in tabular format

Vehicle Type	Average Passenger Capacities			
	Seated	Standing	Total	Maximum Load Factor
15’ Mini-Bus	28	2	30	1.1
40’ Low Floor Bus	39	12	51	1.3
40’ Standard Bus	43	17	60	1.4
Light Rail Vehicle	64	69	133	2.1

SAMPLE Vehicle Headway Standards

1. Expressed in writing

Service operates on regional trunk lines every 15 minutes or better from early morning to late in the evening, seven days a week. On weekdays, 15 minute or better service should begin no later than 6:00 a.m. and continue until 10:30 p.m. On weekends, 15 minute or better service should begin by 8:00 a.m. and continue until 10:30 p.m.

Scheduling involves the consideration of a number of factors including: ridership productivity, transit/pedestrian friendly streets, density of transit-dependent population and activities, relationship to the *Regional Transportation Plan*, relationship to major transportation developments, land use connectivity, and transportation demand management.

2. Expressed in tabular format

POLICY HEADWAYS AND PERIODS OF OPERATION

WEEKDAY	Peak	Base	Evening	Night
Regional Trunk	10	15	15	30
Urban Radial	15	15	30	60
Cross-Town	15	15	30	--
Secondary Radial	30	30	60	--
Feeder	30	30	60	--
Peak Express	30	--	--	--
Employer Feeder	60	--	--	--

** Peak: 7-9 am and 4-6 pm; Base 9am - 4pm; Evening: 6-9:30 pm; Night: 9:30pm-Midnight;*

"--" means no service is provided during that time period.

SATURDAY	Day	Evening	Night
Regional Trunk	15	30	30
Urban Radial	30	60	--
Cross-Town	15	30	--
Secondary Radial	60	60	--
Feeder	60	60	--
Peak Express	--	--	--
Employer Feeder	--	--	--

** Day 7am - 6pm; Evening: 6-9:30 pm; Night: 9:30pm - Midnight;*

"--" means no service is provided during that time period.

SUNDAY	Day	Evening	Night
Regional Trunk	30	60	--
Urban Radial	30	60	--
Cross-Town	30	--	--
Secondary Radial	--	--	--
Feeder	--	--	--
Peak Express	--	--	--
Employer Feeder	--	--	--

** Day 7am - 6pm; Evening: 6-9:30 pm; Night: 9:30pm-Midnight; "--" means no service is provided during that time period.*

SAMPLE On-Time Performance Standards

Expressed in writing

- Sample 1:
 - Ninety-five (95) percent of the City of USA’s transit vehicles will complete their established runs no more than 5 minutes early or late in comparison to the established schedule/published timetables.
- Sample 2:
 - A vehicle is considered on time if it departs a scheduled timepoint no more than 1 minute early and no more than 5 minutes late. The City of USA’s on-time performance objective is 90% or greater. The City of USA continuously monitors on-time performance and system results are published and posted as part of monthly performance reports covering all aspects of operations.

SAMPLE Service Availability Standards

Expressed in writing

The City of USA will distribute transit service so that 90% of all residents in the service area are within a ¼ mile walk of bus service or within a ½ mile walk of rail service.

AND/OR

Local bus stops will be not more than 3 blocks apart. Express bus stops will be one-half to three-quarters of a mile apart.

APPENDIX H

SERVICE POLICIES (REQUIREMENT FOR ALL FIXED ROUTE TRANSIT PROVIDERS)

Background

FTA requires that all providers of fixed route public transportation develop *qualitative* policies for the following procedures. These policies are to be set by individual transit providers; therefore, these policies will apply to individual agencies rather than across the entire transit industry.

- Vehicle Assignment
- Transit Amenities

The samples below are provided for the purposes of guidance only.

Policies

SAMPLE Vehicle Assignment Policy

Expressed in writing

Vehicles will be assigned to the South, North, and East depots such that the average age of the fleet serving each depot does not exceed “x” years. Low-floor buses are deployed on frequent service and other high-ridership lines, so these buses carry a higher share of ridership than their numerical proportion of the overall bus fleet. Low-floor buses are also equipped with air conditioning and automated stop announcement systems.

All rail cars are equipped with air conditioning, and high-floor rail cars are always paired with a low-floor car to provide accessibility.

Bus assignments take into account the operating characteristics of buses of various lengths, which are matched to the operating characteristics of the route. Local routes with lower ridership may be assigned 30-foot buses rather than the 40-foot buses. Some routes requiring tight turns on narrow streets are operated with 30-foot rather than 40-foot buses.

SAMPLE Transit Amenities Policy

Expressed in writing

Installation of transit amenities along bus and rail routes are based on the number of passenger boardings at stops and stations along those routes.

APPENDIX I

DEMOGRAPHIC PROFILE AND TRAVEL PATTERNS (REQUIREMENT FOR TRANSIT PROVIDERS THAT OPERATE 50 OR MORE FIXED ROUTE VEHICLES IN PEAK SERVICE AND ARE LOCATED IN URBANIZED AREAS (UZA) OF 200,000 OR MORE PEOPLE, OR THAT OTHERWISE MEET THE THRESHOLD DEFINED IN CHAPTER IV)

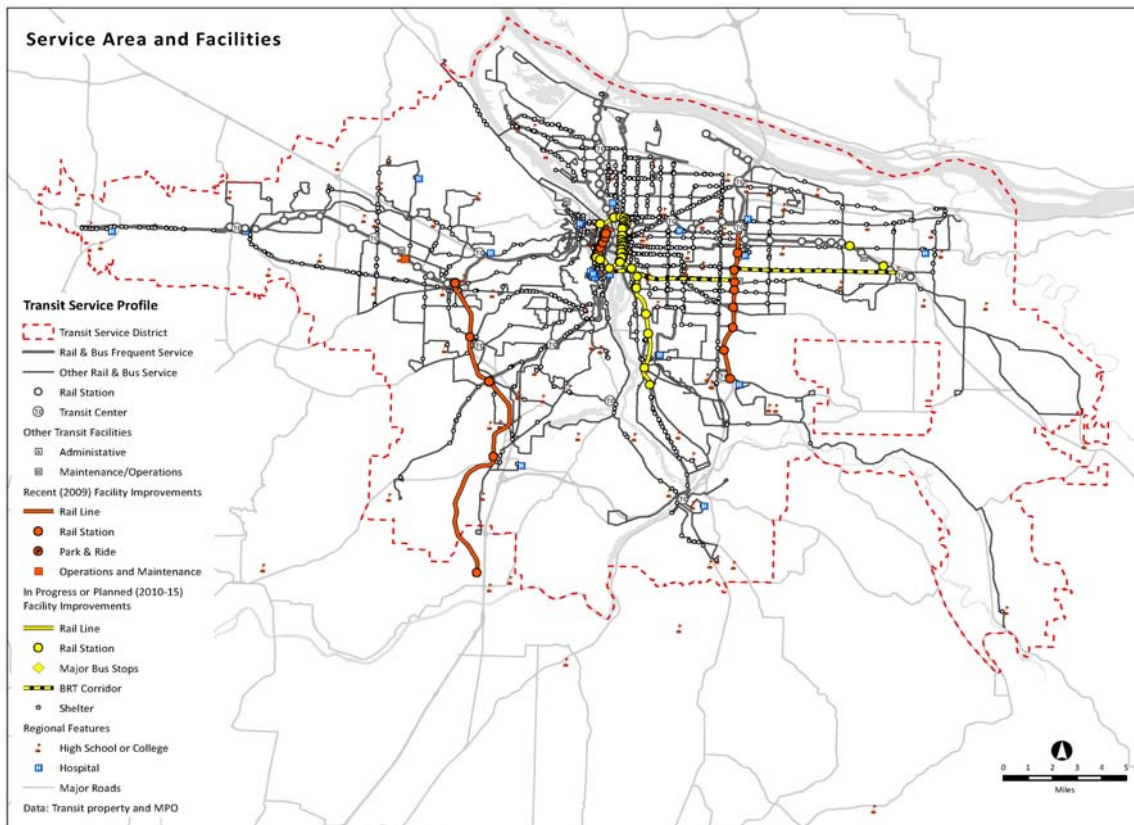
Background

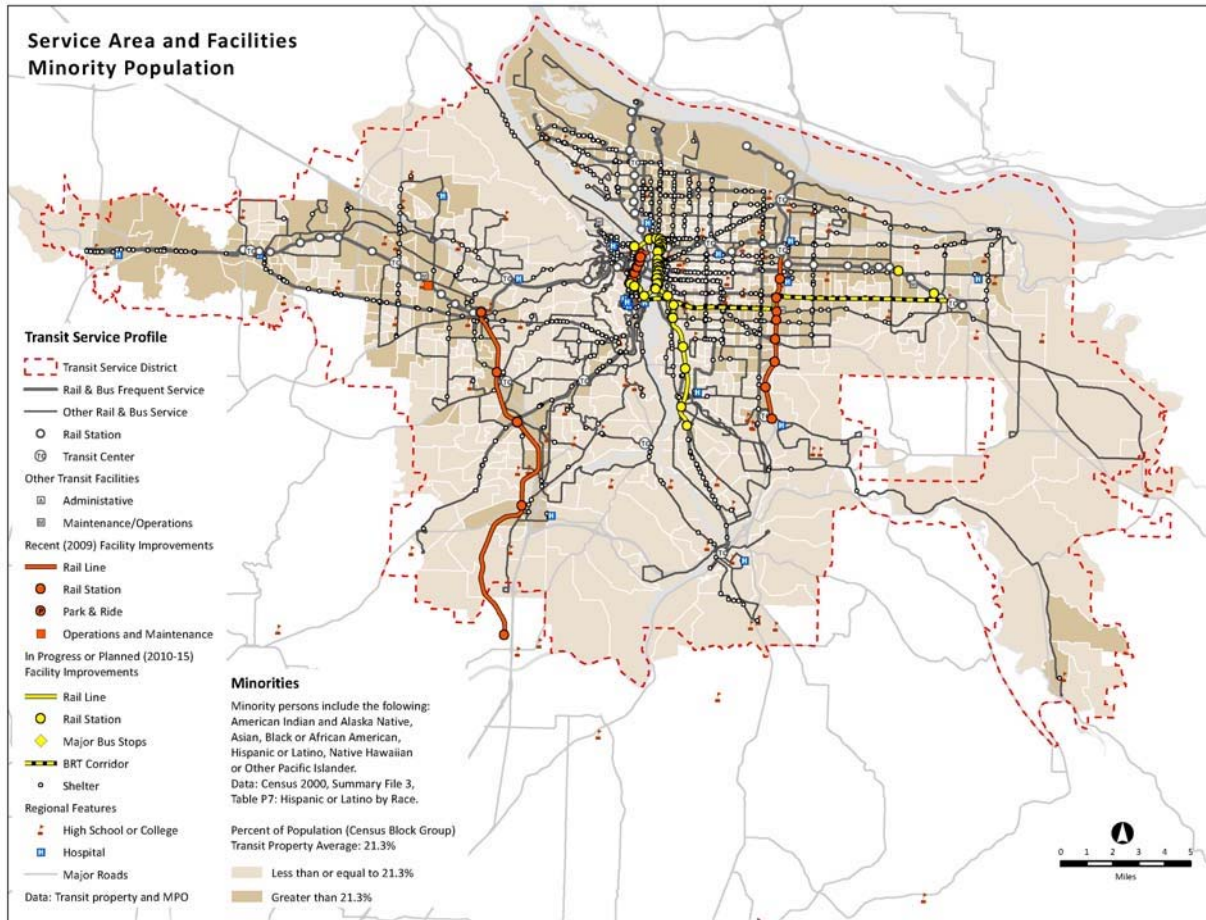
Transit service providers that operate 50 or more fixed route vehicles in peak service and are located in urbanized areas (UZA) of 200,000 or more people, or that otherwise meet the threshold defined in Chapter IV, are required to prepare demographic and service profile maps and charts to determine whether and to what extent transit service is available to minority populations within the recipient’s service area. Transit providers shall include charts and tables summarizing data in their Title VI Programs. Transit providers shall not send raw data to FTA unless requested.

The aforementioned transit providers are also required to prepare data regarding customer demographics and travel patterns.

The sample below is provided for the purposes of guidance only.

SAMPLE Demographic and Service Profile Maps and Charts





Additional guidance

FTA will publish additional guidance, and/or update this appendix, with detailed approaches to data collection, surveys, and analysis methods.

APPENDIX J

REQUIREMENT TO MONITOR TRANSIT SERVICE (REQUIREMENT FOR TRANSIT PROVIDERS THAT OPERATE 50 OR MORE FIXED ROUTE VEHICLES IN PEAK SERVICE AND ARE LOCATED IN URBANIZED AREAS (UZA) OF 200,000 OR MORE PEOPLE, OR THAT OTHERWISE MEET THE THRESHOLD DEFINED IN CHAPTER IV)

Background

FTA requires transit providers that operate 50 or more fixed route vehicles in peak service and are located in urbanized areas (UZA) of 200,000 or more people, or that otherwise meet the threshold defined in Chapter IV, to monitor their service standards and policies. Service standards and policies provide the framework for monitoring and assessment of service to compare service provided in areas with a percentage of minority population that exceeds the percentage of minority population in the service area to service provided in areas with a percentage of minority populations that is below the percentage of minority population in the service area.

The following tables and maps are provided as examples of how to assess the performance of service on minority and non-minority routes for each of the transit provider's service standards and service policies. Providers of fixed route public transportation should follow these examples for submitting data in their Title VI Programs. Transit providers should assess transit service and compare actual/observed service to the established service policies and standards. The standards and policies that must be monitored are:

- Standards
 - Vehicle Load for each mode
 - Vehicle Headway for each mode
 - On-Time Performance for each mode
 - Service Accessibility for each mode
- Policies
 - Vehicle Assignment for each mode
 - Distribution of Transit Amenities (Policy and Standards) for each mode

The samples below are provided for the purposes of guidance only.

SAMPLE Methodology

This section describes a sample methodology to determine the minority populations served by each bus and rail line, and provides a framework for comparisons.

For each individual bus and/or rail line, calculate the percentages of all persons residing in areas served by the line who are minority persons. Define a unique geographic area of coverage for each line by including all Census Block Groups within one-quarter mile walking distance of bus stops and/or within one-half mile walking distance of rail stations served by that line. For each

line, calculate the number of minority persons residing in all Block Groups served, and determine the percentage of minority persons among all persons served by the line.

SAMPLE Monitoring of Service Standards

SAMPLE Vehicle Load Monitoring

Table 1 below shows passenger capacities for buses and light rail cars as the average maximum number of persons seated and standing during the peak one-hour in the peak direction. Maximum load factors represent the maximum achievable capacity, and are calculated by dividing the total seated and standing capacity by the seated capacity of the vehicle.

Table 1. SAMPLE Passenger Capacities

Average Passenger Capacity					
Vehicle Type	Seated	Standing	Total	Load Standard	Maximum Load Factor
30' Bus	28	2	30	1.1	1.5
40' Low-Floor Bus	39	12	51	1.3	1.6
40' Standard Bus	43	17	60	1.4	1.7
Light Rail Vehicle	64	69	133	2.1	2.5

Assessment: Average weekday loads on each line were determined for the following time periods and directions of travel:

- AM in peak direction (7-9 a.m.)
- PM in peak direction (4-6 p.m.)
- Midday in both directions (9 a.m. – 4 p.m.)

Transit providers may create a more sensitive set of analyses by breaking routes into quartiles to determine the highest concentration or they may simply compare minority routes with non-minority routes. Either way they must compare the minority routes with non-minority routes in order to monitor the routes compared to the standards and policies.

Table 2 below shows the average vehicle loads by time period for lines in each quartile, for minority lines, for non-minority lines, and for all lines in the system.

In this example the transit provider uses quartiles to identify all Census Block Groups served by bus lines within $\frac{1}{4}$ mile walking distance from bus stops and $\frac{1}{2}$ mile walking distance from rail stations. The agency calculated the percentage and number of minority and non-minority populations served by the line. Then, staff ranked all lines by the highest percentage of minority populations and further subdivided the list into four quartiles; Q1, Q2, Q3, Q4; and Q1 being the lines with the lowest percentage of minority populations served and Q4 being the lines with the

highest percentage of minority populations served. The breakpoint for Q4 and Q3 were determined by comparing the percent minority with the median percentage of these populations within the agencies service area.

Table 2. Vehicle Loads for Minority and Non-Minority Lines

Shaded Cells Represent Lines Serving Areas with Minority Populations Above the Service Area Average

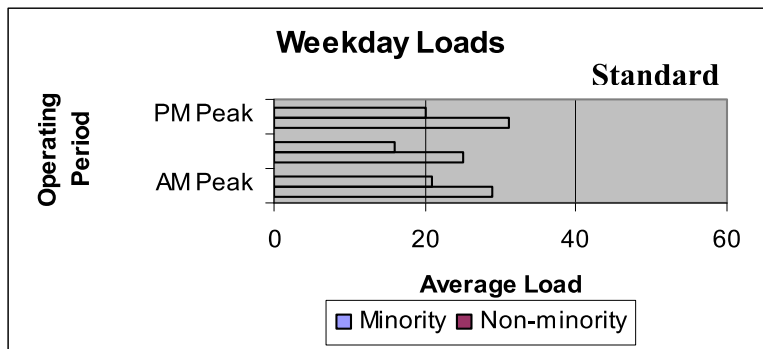
Lines and System	AM Peak IB		Midday IB & OB		PM Peak OB	
	Load/Seats	Avg Load	Load/Seats	Avg Load	Load/Seats	Avg Load
4th Quartile (Minority Population > 29%)	0.62	34	0.55	28	0.65	37
3rd Quartile (Minority Population > 21.6%)	0.60	24	0.54	21	0.62	24
2nd Quartile (Minority Population > 16.6%)	0.59	23	0.49	18	0.59	22
1st Quartile (Minority Population < 16.6%)	0.49	18	0.39	14	0.48	18
Minority Lines (3rd and 4th Quartiles)	0.61	29	0.54	25	0.64	31
Non-Minority Lines (1st and 2nd Quartiles)	0.54	21	0.44	16	0.54	20
System	0.58	25	0.49	21	0.59	26

Currently, no line exceeds the standard.

The average load factors in the AM peak were .61 for minority lines and .54 for non-minority lines. The average load factors in the PM peak were .64 for minority lines and .54 for non-minority lines. No lines exceeded the vehicle load standard during the peak periods.

Figure 1 below depicts the average loads for minority and non-minority lines for PM peak, midday, and AM peak as shown in Table 2 above, in comparison to the maximum capacity of 62 passengers for a 40-foot bus.

Figure 1. Vehicle Loads for Minority and Non-Minority Lines by Peak Period



SAMPLE Vehicle Headway Monitoring

SAMPLE Assessment: Table 3 below shows the average headway in minutes for minority and non-minority lines for AM peak, midday, PM peak, evening, and night periods, for weekday, Saturday, and Sunday, respectively. The average span of service in hours and tenths of hours is shown for minority and non-minority lines for weekdays, Saturdays, and Sundays, respectively.

Table 3. Weekday, Saturday and Sunday Headways and Span of Service on Weekdays, Saturdays, and Sundays, for Minority and Non-Minority Lines

WEEKDAY	Lines Operating	% Operating	Freq Lines	Rail Lines	Service Begins	AM Peak Headway	Midday Headway	PM Peak Headway	Evening Headway	Night Headway	Service Ends	Span (Hours)
4th Quartile (Minority Population > 29%)	25	100%	5	3	5:14 a	26	28	27	31	41	9:48 p	16.6
3rd Quartile (Minority Population > 21.6%)	24	100%	6		5:14 a	21	26	22	30	44	10:52 p	17.6
2nd Quartile (Minority Population > 16.6%)	24	100%	3		5:33 a	27	39	27	38	42	8:56 p	15.4
1st Quartile (Minority Population < 16.6%)	24	100%	2		5:45 a	30	38	31	45	53	8:13 p	14.5
Minority Lines (3rd and 4th Quartiles)	49	100%	11		5:14 a	24	27	24	30	43	10:19 p	17.1
Non-Minority Lines (1st and 2nd Quartiles)	48	100%	5		5:39 a	29	38	29	41	47	8:35 p	14.9
System	97	100%	16		5:26 a	26	32	27	34	44	9:29 p	16.0

SATURDAY	Lines Operating	% Operating	Freq Lines	Rail Lines	Service Begins	Daytime Headway	Evening Headway	Night Headway	Service Ends	Span (Hours)
4th Quartile (Minority Population > 29%)	18	72%	5	3	5:35 a	33	37	36	10:22 p	16.8
3rd Quartile (Minority Population > 21.6%)	19	79%	6		5:52 a	25	38	45	12:00 a	18.1
2nd Quartile (Minority Population > 16.6%)	16	67%	3		6:50 a	43	48	48	8:56 p	14.1
1st Quartile (Minority Population < 16.6%)	11	46%	2		7:50 a	37	45	50	9:11 p	13.3
Minority Lines (3rd and 4th Quartiles)	37	76%	11		5:43 a	29	38	42	11:13 p	17.5
Non-Minority Lines (1st and 2nd Quartiles)	27	56%	5		7:15 a	40	47	49	9:02 p	13.8
System	64	66%	16		6:21 a	34	41	44	10:19 p	16.0

SUNDAY	Lines Operating	% Operating	Freq Lines	Rail Lines	Service Begins	Daytime Headway	Evening Headway	Night Headway	Service Ends	Span (Hours)
4th Quartile (Minority Population > 29%)	17	68%	5	3	6:08 a	34	39	33	10:38 p	16.5
3rd Quartile (Minority Population > 21.6%)	19	79%	6		6:27 a	32	46	46	11:33 p	17.1
2nd Quartile (Minority Population > 16.6%)	13	54%	3		7:02 a	45	48	48	9:55 p	14.9
1st Quartile (Minority Population < 16.6%)	7	29%	2		7:57 a	34	40	45	8:52 p	12.9
Minority Lines (3rd and 4th Quartiles)	37	76%	11		6:18 a	33	43	42	11:07 p	16.8
Non-Minority Lines (1st and 2nd Quartiles)	27	56%	5		7:21 a	41	46	47	9:33 p	14.2
System	64	66%	16		6:40 a	36	44	44	10:33 p	15.9

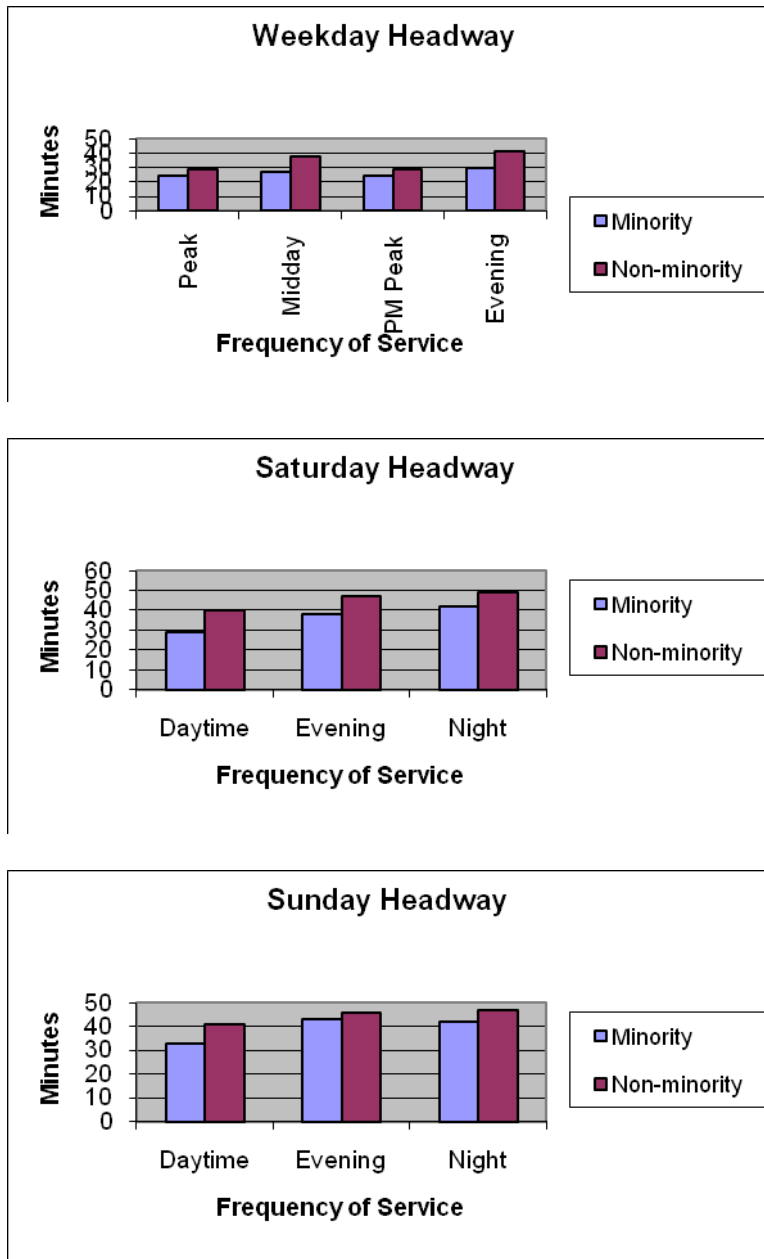
Shaded cells represent minority lines.

On weekdays, Saturdays, and Sundays, eleven (11) minority lines and five (5) non-minority lines were designated as Frequent Service lines (i.e., Freq Lines). On weekdays, the average AM and PM peak headway on minority lines was 24 minutes, versus 29 minutes on non-minority lines. Average headways on minority lines during weekday midday, evening, and night periods were lower (i.e., provided more frequent service) than on non-minority lines. Minority lines had an average weekday span of service of 17.1 hours, as compared with a 14.9 span of service on non-minority lines.

On Saturdays and Sundays, average daytime headways on minority lines were 29 and 33 minutes, respectively, versus 40 and 41 minutes, respectively, for non-minority lines. Average headways on minority lines during Saturday and Sunday evening and night periods were lower (i.e., provided more frequent service) than on non-minority lines. Minority lines had average Saturday and Sunday span of service of 17.5 and 16.8 hours, respectively, as compared with a 13.8 and 14.2 span of service on non-minority lines.

Figure 2 below depicts weekday headways for minority and non-minority lines for AM peak, midday, PM peak, and evening. Saturday and Sunday headways for minority and non-minority lines are shown for daytime, evening, and night periods. In all days and time periods, average frequency of service on minority lines exceeded frequency of service on non-minority lines (i.e., the average headway in minutes was lower on minority lines).

Figure 2. Headways for Minority and Non-Minority Lines on Weekdays, Saturdays, and Sundays by Time Period

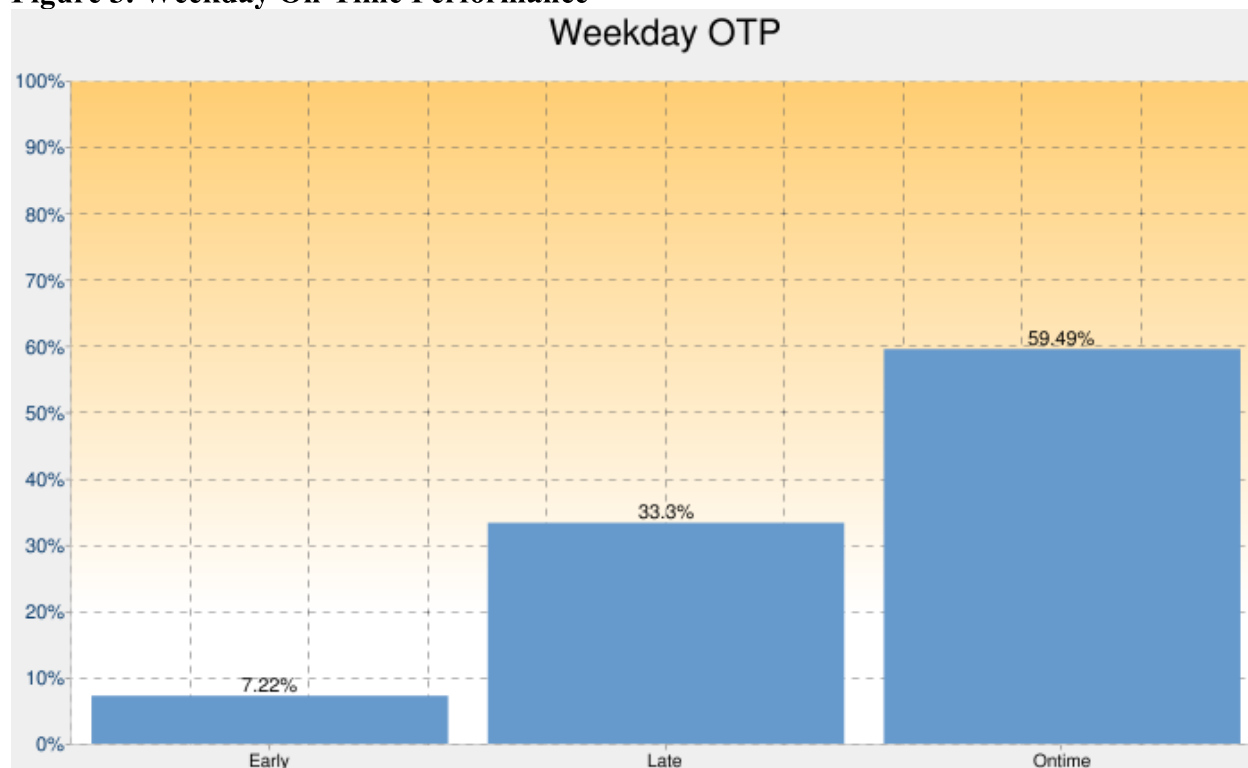


SAMPLE On-Time Performance Monitoring

- SAMPLE Figure:*** Figure 3 below shows that 59.49% of transit vehicles passed time points on time, 7.22% passed time points early, and 33.3% passed time points late. This

information would be compared with the On-Time Performance Standard and analyzed to determine potential disparate impacts.

Figure 3. Weekday On-Time Performance



Courtesy of ACE Transit

- **SAMPLE Assessment:** The City of USA initiated a random spot check program to assess a variety of performance measures, including on-time performance. This “Mystery Rider” program completed a total 77 observations during the past fiscal year. Of the 77 bus trips observed, approximately five (5) percent were found departing a schedule time point late (i.e., more than 5 minutes after the departure time in the printed schedule). These routes on which late departures were observed were:
 - B07
 - R10
 - R24
 - B48

Of these four routes, three (B07, R10, and R24) have a greater-than-average proportion of route miles in minority Census blocks. These findings suggest that additional monitoring of on-time performance to assess potential disparate impacts is warranted. The City of USA will initiate additional on-time performance monitoring as part of the “Mystery Rider” spot check program.

SAMPLE Service Availability Monitoring

SAMPLE Assessment: Table 4 below shows the percentages of minority and non-minority households served. The percentage of minority households within a ½ mile walk of stops and/or

stations was 86.6%. The percentage of non-minority households within a ½ mile walk of stops and/or stations was 76.8%.

Table 4. Service Availability for Minority and Non-Minority Residents

Households	Within ½ Mile	More than ½ Mile
Minority	86.6%	13.4%
Non-Minority	76.8%	23.2%
System	78.5%	21.5%

Source: 2000 Census Block Group Data

All residents of Census Block Groups where geographic center of the Block Group is within ½-mile walk of a bus stop and/or rail station are considered within ½-mile of service.

SAMPLE Monitoring of Service Policies

SAMPLE Vehicle Assignment Monitoring

SAMPLE Assessment: Table 5 below shows the average age of buses in relation to minority population served. In this case, all rail lines are minority lines, so rail vehicle age is excluded from the calculation of average vehicle age. Buses on minority lines had an average age of 12.1 years, compared to the system bus fleet average age of 12.7 years.

SAMPLE Table:

Table 5. Vehicle Assignment

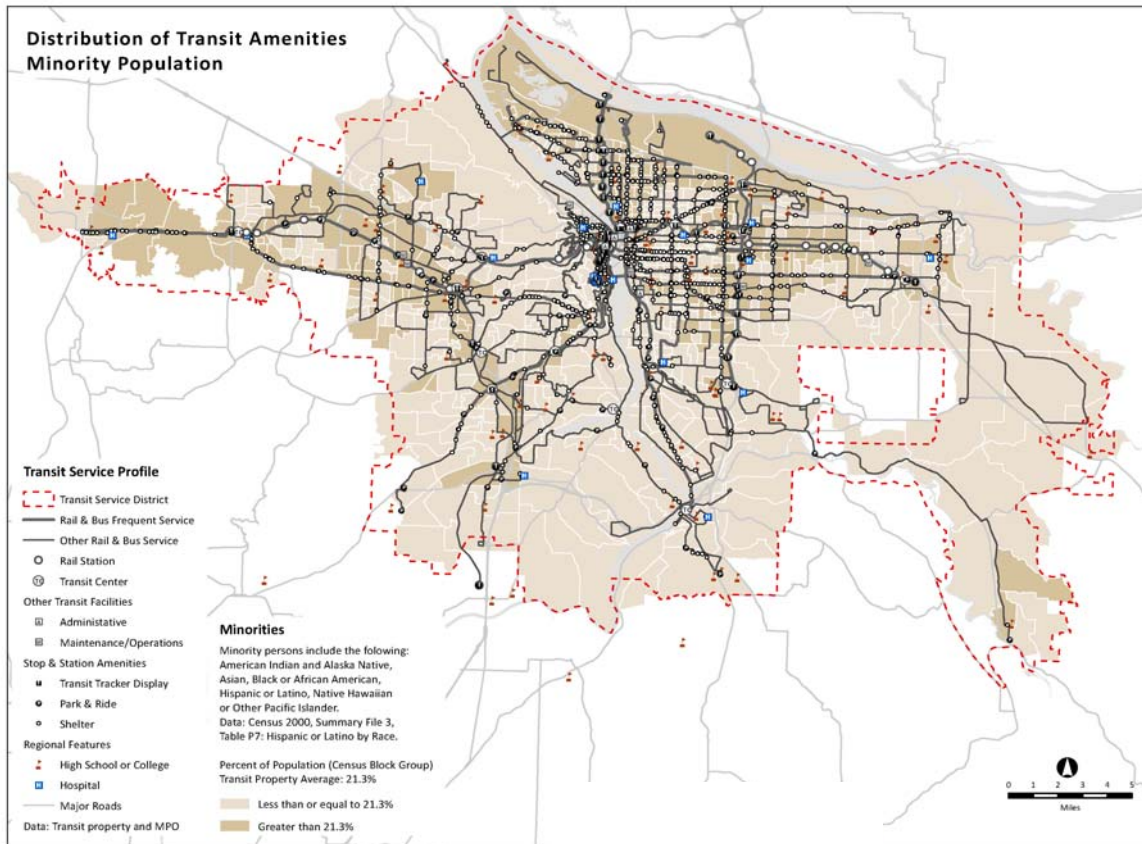
Shaded Cells Represent Lines Serving Areas with Minority Percentages Above the Median

Average Vehicle Age	Avg Date of Purchase	Avg Age of Buses	Lines with Low Floor Buses
4 th Quartile (Minority Population > 29%)	1994.4	13.1	8
3 rd Quartile (Minority Population > 21.6%)	1996.3	11.2	9
2 nd Quartile (Minority Population > 16.6%)	1994.3	13.2	4
1 st Quartile (Minority Population < 16.6%)	1994.3	13.2	5
Minority Lines (3 rd and 4 th Quartiles)	1995.4	12.1	17
Non-Minority Lines (1 st and 2 nd Quartiles)	1994.3	13.2	9
System	1994.8	12.7	26

SAMPLE Transit Amenities Monitoring

The overlay map below shows the locations of many of the transit agency’s amenities, including park and ride facilities, transit centers, pedestrian improvements, and bus shelters, relative to the locations of bus and rail routes and the locations of minority and non-minority populations. Such a map is one way to demonstrate how amenities are distributed across the transit system.

Figure 4. Transit Amenities Overlay Map



APPENDIX K

SERVICE AND FARE EQUITY ANALYSIS QUESTIONNAIRE CHECKLIST (REQUIREMENT FOR TRANSIT PROVIDERS THAT OPERATE 50 OR MORE FIXED ROUTE VEHICLES IN PEAK SERVICE AND ARE LOCATED IN URBANIZED AREAS (UZA) OF 200,000 OR MORE PEOPLE, OR THAT OTHERWISE MEET THE THRESHOLD DEFINED IN CHAPTER IV)

Background

Transit providers that operate 50 or more fixed route vehicles in peak service and are located in urbanized areas (UZA) of 200,000 or more people, or that otherwise meet the threshold defined in Chapter IV, must conduct a Title VI equity analysis whenever they plan a fare change and/or a major service change. Equity analyses are required regardless of whether proposed changes would cause positive or negative impacts to riders. In other words, transit providers must conduct an equity analysis for all fare changes and for major service reductions and major service expansions. Financial exigencies and other special circumstances (e.g., economic hardships, size of transit provider's service area or staff) do not exempt transit providers from the requirement to conduct equity analyses.

The checklist below is provided for the purposes of guidance only.

Service and Fare Equity Questionnaire Checklist

(1) Considerations for Service Equity Analysis

A. Major Service Change Policy

- We have briefly and clearly stated our Major Service Change Policy.
- We have briefly and clearly explained how this particular service change meets or exceeds our Major Service Change Policy.
- Our Major Service Change Policy is presented as a numerical standard, applies to both service reductions and service increases, and is not set so high as to never require an analysis.
- We have included a description of the public engagement process for setting the major service change policy.
- We have included a copy of board meeting minutes or a resolution demonstrating the board's or governing entity or official(s)'s consideration, awareness, and approval of the major service change policy.

B. Adverse Effects

- We have defined and analyzed adverse effects related to major service changes, paying attention to the fact that elimination of a route will likely have a greater adverse effect than a reduced frequency (headway change) in service. We have analyzed service between the existing and proposed service, and have considered the degree of the adverse effects when planning service changes.

C. Disparate Impact Policy

- We have briefly and clearly stated our policy to determine when a “disparate impact” occurs in the context of major service changes, including both service reductions and/or expansions. In particular, our agency has established a threshold for determining whether adverse effects are borne disproportionately by minority populations.
- Our agency applies the disparate impact policy uniformly to all major service changes, regardless of mode.
- Our policy describes how we engaged the public in developing our policy for measuring disparate impacts.
- We have included a copy of board meeting minutes or a resolution demonstrating the board’s or governing entity or official(s)’s consideration, awareness, and approval of the disparate impact policy.

D. Disproportionate Burden Policy

- We have briefly and clearly stated our policy to determine when a disproportionate burden occurs in the context of major service changes. In particular, our agency has established a threshold for determining whether adverse effects are borne disproportionately by low-income populations.
- Our agency applies the disparate impact policy uniformly to all major service changes, regardless of mode
- Our policy describes how we engaged the public in developing the disproportionate burden policy.
- We have included a copy of board meeting minutes or a resolution demonstrating the board’s or governing entity or official(s)’s consideration, awareness, and approval of the disproportionate burden policy.

E. Analysis Framework

- We have described the dataset(s) used in the analysis and provided the reason for the dataset(s) selected, as well as the techniques and/or technologies used to collect the data.
- If using general population for the comparison population, we have described the geographic level (e.g., Census block, Census block group, TAZ, etc.) at which we have measured minority and low-income concentrations.
- If using ridership as the comparison population, we have described how we determined the minority and low-income ridership of affected routes and the system as a whole.

F. Assessing Impacts

- We have shown how the proposed major service changes would impact minority and low-income populations at the geographic level by including the following:
 - **Overlay maps** showing proposed service changes as well as demographic data in order to study the affected population
 - **Tables** showing impacts associated with each type of route or service change (e.g., routing, frequency, span of service, addition or elimination of routes).
- We have used our adverse effects definition and our disparate impact policy and compared the proportion of minorities adversely affected to the proportion of non-minorities adversely affected.
- We have provided a step-by-step description of the analytical methodology we followed to determine whether the proposed change(s) would have a disparate impact on minority populations.
- We have identified whether minority populations will experience disparate impacts.
- If we have determined that a disparate impact exists, we have considered modifying our proposal to remove these impacts. If we modified our proposal, we have analyzed the modified proposal to determine whether minority populations will experience disparate impacts.
- If we have determined that a disparate impact exists and we will make the service changes despite these impacts, we have also:
 - Clearly demonstrated that we have a substantial legitimate justification for the proposed service changes; and

- Clearly demonstrated that we analyzed alternatives to determine whether the proposed service changes are the least discriminatory alternative.
- ☐ We have used our adverse effects definition and our disproportionate burden policy and compared the proportion of low-income persons adversely affected to the proportion of non-low-income persons adversely affected.
- ☐ We have provided a step-by-step description of the analytical methodology we followed to determine whether the proposed change(s) would have a disproportionate burden on low-income populations.
- ☐ We have identified whether low-income populations will experience disproportionate burdens.
- ☐ If we have determined that a disproportionate burden exists, we have also taken steps to avoid, minimize, or mitigate impacts where practicable. We have also described alternatives available to low-income passengers affected by the service changes.
 - Note: Alternatives could include the availability of other lines or services, potentially involving transfers and/or other modes, which connect affected riders with destinations that they commonly access. Depending on the nature of impacts, service-related mitigation could include strategies such as alignment or frequency changes to nearby lines or services to offer more convenient access to affected areas.
- ☐ If we are proposing a service improvement, we have analyzed accrual of benefits for minority populations as compared to non-minority populations, and low-income populations as compared to non-low-income populations, using the comparison population we selected (i.e., ridership or service area).
- ☐ If service is proposed to be increased and/or expanded, but minority and/or low-income populations are not expected to benefit from the expansion as much as non-minority and/or non-low-income populations, then we have explained how our agency plans to improve service to the minority and/or low-income populations.
- ☐ We have described any plans our agency has developed to restore service as additional funds become available.

Exhibit 1.

SAMPLE reporting of proposed headway change based on ridership.

Impact of Potential Service Adjustments on Minority and Low Income Passengers									
Weekly Numbers									
Bus Lines	Wkly Ons	Under20k	Minority	% <20k	% Min	Impacted Ons	Under20k	Minority	
1	50,340	25,081	21,602	50%	43%	1,453	724	624	
2	56,929	20,727	10,639	36%	19%	4,623	1,683	864	
3	39,479	15,902	7,414	40%	19%	2,396	965	450	
4	18,396	7,309	4,509	40%	25%	688	273	169	
5	52,845	21,450	13,172	41%	25%	1,572	638	392	
6	952	446	248	47%	26%	237	111	62	
7	4,562	679	2,012	15%	44%	659	98	291	
8	1,781	455	414	26%	23%	280	71	65	
9	13,596	4,177	4,093	31%	30%	1,161	357	349	
10	19,346	7,186	4,965	37%	26%	1,014	377	260	
11	65,337	33,005	22,653	51%	35%	998	402	187	
12	19,406	7,565	3,864	39%	20%	378	150	93	
13	21,728	7,379	4,359	34%	20%	931	378	232	
Ridership Adjusted Lines	364,697	151,360	99,943	42%	28%	16,390	6,228	4,037	
Total Percent impacted								38%	25%
Ridership All Bus Lines	1,266,568	527,728	381,169	42%	30%				

“Impacted Ons” is calculated by taking the number of trips eliminated in a given hour times the number of passengers per trip during that hour and adding up the number of passengers impacted in a week.

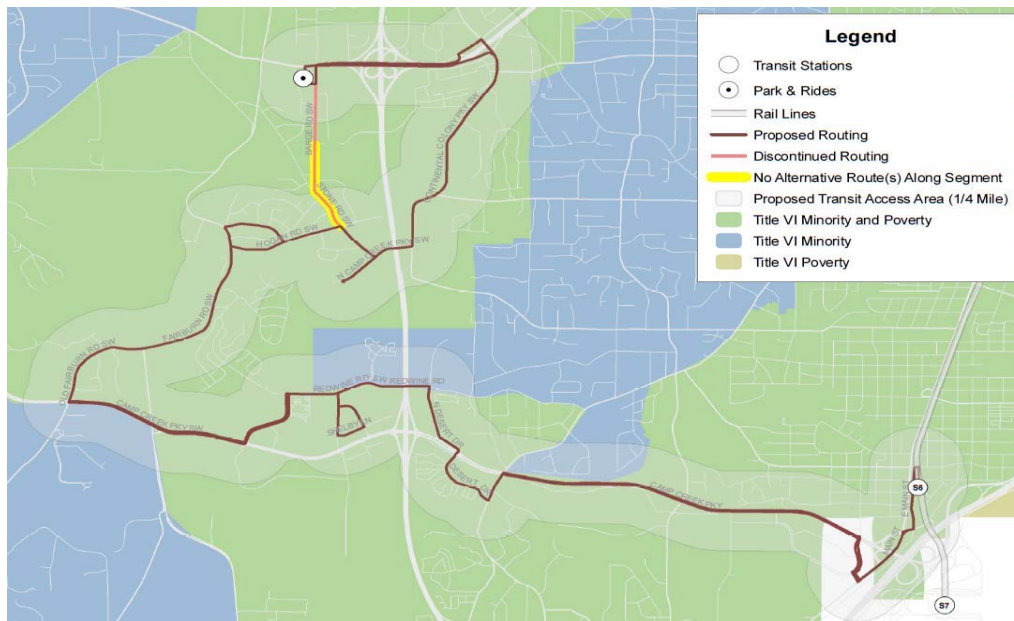
In the table above, an agency has assessed how proposed reductions in service frequency (headway changes) would impact minority and low-income passengers on a bus-only system. Here, the cumulative proposed reduction in service frequency will impact minority and low-income passengers slightly less than their proportion of ridership of the system.

Notably, assessing the cumulative impacts of the route changes appears to reduce the impacts of some of the changes, while increasing the impacts of other changes. Transit providers should consider whether to evaluate changes to routes separately or cumulatively and include this in their disparate impact policy.

If the cumulative impact analysis showed a different result, i.e., a higher percent of minority or low-income populations being impacted than their presence in the overall ridership, the transit provider would likely want to take another look at the routes with high passenger counts and higher-than-system-average minority and/or low-income passengers in order to adjust the changes and reduce the adverse effects.

Exhibit 2.

SAMPLE GIS map depicting proposed route changes and nearby minority and low-income concentrations.



Type of Service Change	Minority Proportion of Population		Low-Income Proportion of Population	
	Census blocks along routes	Average population in service area	Census blocks along routes	Average population in service area
Changes in Routing	38.9%	34.3%	13.7%	12.2%
Headway Changes	27.5%	34.3%	11.0%	12.2%
Route discontinuation	30.6%	34.3%	12.8%	12.2%

In the table above, the transit provider has analyzed the cumulative impacts of each type of service change on minority populations and low-income populations in its service area. The analysis is based on block-level Census demographic data and therefore does not represent ridership directly.

The changes in routing appear to affect minority populations more adversely than the population as a whole, and the changes in routing and route discontinuations appear to affect low-income populations more adversely than the population as a whole. The transit provider’s ultimate determination of disparate impact on minority riders or disproportionate burden on low-income riders would depend on the disparate impact and disproportionate burden threshold policies developed by the transit provider through a public participation process.

Exhibit 3.

SAMPLE Population Comparison

Table 1 - Regional Population Data				
Total Population of Service Area	Minority Population	Percent Minority	Low-income Population	Percent Low-Income
242,916	50,829	21%	43,000	18%

Table 2 - Affected Census Block Area Population Data						
Route #	Change type	Total Population affected Census blocks	Minority Population	Percent Minority	Low-Income Population	Percent Low-Income
Route 6	Discontinued	5870	800	14%	250	4%
Route 7	Discontinued	9500	2500	26%	2100	22%
Total		15370	3300	21%	2350	15%

Here, the transit provider is proposing elimination of two routes, and is using population data, not ridership data. The affected population is the Census blocks with access to the route, generally defined as a one-quarter mile walk to a bus stop or a one-half mile walk to a rail station. While the elimination of Route 7 appears to affect low-income and minority populations more adversely than the population as a whole, the provider’s ultimate determination of disparate impact on minority riders or disproportionate burden on low-income riders would depend on the disparate impact and disproportionate burden threshold policies developed by the transit provider through a public participation process.

Notably, assessing the cumulative impacts of the two route changes appears to reduce the impacts of the elimination of Route 7. Transit providers should consider whether to evaluate changes to routes separately or cumulatively and include this in their disparate impact policy. See the example on the next page for a different result.

Exhibit 4.

SAMPLE Ridership Comparison

Table 3 - Regional Ridership Data				
Total System-wide Riders	Minority Riders	Percent Minority	Low-Income Riders	Percent Low-Income
3,224,000	1,346,000	42%	1,235,000	38%

Table 4 - Affected Route Ridership Data					
	Discontinued Segment - Ridership	Minority Riders	% Minority Riders	Low-Income Riders	% Low-Income Riders
Route 1	20,800	6,000	29%	4,700	23%
Route 2	72,600	33,400	46%	31,200	43%
Total	93,400	39,400	42%	35,900	38%

Here, the transit provider is proposing eliminating segments of two different routes (shortlining). The elimination of a segment of Route 2 appears to affect minority and low-income passengers more adversely than ridership of the system as a whole; however, the provider’s ultimate determination of disparate impact on minority passengers or disproportionate burden on low-income passengers would depend on the disparate impact and disproportionate burden threshold policies developed by the transit provider through a public participation process.

Here, assessing the cumulative impacts of two shortlined routes appears to increase the adverse effects of the change to Route 1, and decrease the effects of the change to Route 2. Transit providers should consider whether to evaluate changes to routes separately or cumulatively and include this in their disparate impact policy.

*Exhibit 5.***SAMPLE Impacts to passengers**

Type of Service Change	Ridership of affected route			Ridership of system	
	Total Boardings	% Minority	% Low-Income	% Minority	% Low-Income
Service span (reduction of entire trips)	24	83%	17%	73.7%	10%

Here, a transit provider that operates service into the late evening has proposed to discontinue trips that begin after 10:00 p.m. In this example, the provider's ridership is the basis of the analysis, not the population of adjacent Census blocks. The table shows that both minority populations and low-income populations would bear a disproportionate share of the service change, when comparing the ridership of the affected route with the ridership of the system as a whole. However, the ridership that is affected is relatively small, particularly if it is divided over a number of trips.

As with the other examples, the provider's ultimate determination of disparate impact on minority passengers or disproportionate burden on low-income passengers would depend on the disparate impact and disproportionate burden threshold policies developed by the transit provider through a public participation process.

When changes are disproportionately borne by minority passengers, and the provider determines there is a disparate impact based on its policy, the transit provider can make the change as long as it can clearly demonstrate that it has a substantial legitimate justification for the proposed service changes; and the transit provider clearly demonstrates that it analyzed alternatives to determine whether the proposed service changes are the least discriminatory alternative.

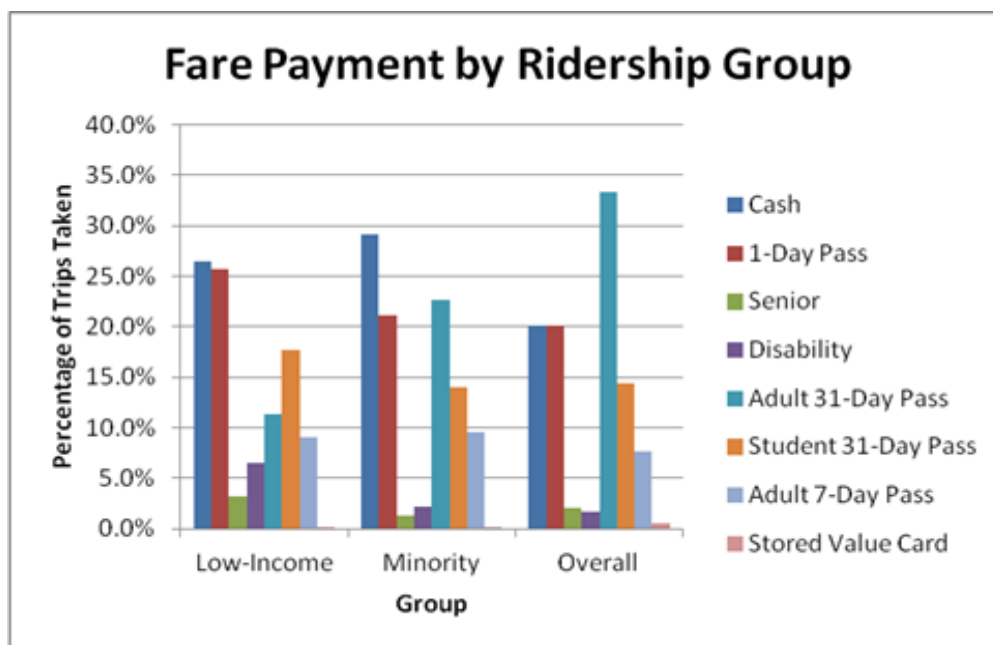
If the transit provider determines there is a disproportionate burden on low-income passengers, the transit provider should review alternatives to see if the impacts on the low-income passengers can be avoided, minimized, or mitigated.

(2) Considerations for a Fare Equity Analysis

- We have briefly and clearly stated our policy to determine when a “disparate impact” occurs in the contexts of fare changes. In particular, our agency has developed policy thresholds (in terms of absolute numbers or proportions) for identifying disparate impacts.
- Our policy specifies how we engaged the public in developing our policy for measuring disparate impacts.
- We have briefly and clearly stated our disproportionate burden policy, and our policy describes how we engaged the public in developing the disproportionate burden policy.
- We have analyzed the fare media generated from ridership surveys indicating whether minority and/or low-income riders are disproportionately more likely to use the mode of service, payment type, or fare media that would be subject to the fare increase or decrease (see sample, page K-12).
- We have determined the number and percent of users of each fare media proposed for increase or decrease.
 - Our analysis includes a profile of fare usage by group—minority, low-income, and overall ridership—as shown below.
 - If the proposed changes would only affect certain fare media, the analysis should address whether focusing changes on those fare media may lead to a disparate impact or disproportionate burden.
- We have clearly depicted the information in tabular format.
 - The table depicts the fare media comparing the existing cost, the percent change, and the usage of minority groups as compared to overall usage and low-income groups as compared to overall usage. We have clearly analyzed fare media for minority groups distinct from low-income.
- We have compared the differences in impacts between minority users and overall users.
- We have compared the differences in impacts between low-income users and overall users.
- We have analyzed any alternative transit modes, fare payment types, or fare media available for people affected by the fare change.
 - Analysis compared the fares paid by the proposed changes with fares that would be paid through available alternatives.

- Analysis shows whether vendors that distribute/sell the fare media are located in areas that would be convenient to impacted populations.
- ☐ We have identified whether minority populations will experience disparate impacts.
- ☐ If we have determined that a disparate impact exists, we have considered modifying our proposal to remove these impacts. If we modified our proposal, we have analyzed the modified proposal to determine whether minority populations will experience disparate impacts.
- ☐ If we have determined that a disparate impact exists and we will make the fare changes despite these impacts, we have also:
 - Clearly demonstrated that we have a substantial legitimate justification for the proposed fare changes; and
 - Clearly demonstrated that we analyzed alternatives to determine whether the proposed fare changes are the least discriminatory alternative.
- ☐ If we have documented a disparate impact or a disproportionate burden, we have explored alternatives and mitigation, including the timing of implementing the fare increases, providing discounts on passes to social service agencies that serve the impacted populations, and other alternatives as appropriate.

Charting fare payment by ridership group (as shown on the next page) can be a useful early step in a fare equity analysis to understand how fare media usage varies between low-income riders, minority riders, and overall ridership. Comparing fare payment patterns for minority versus non-minority and low-income versus higher-income riders can yield even clearer depictions of differences that should be considered when developing fare change proposals.



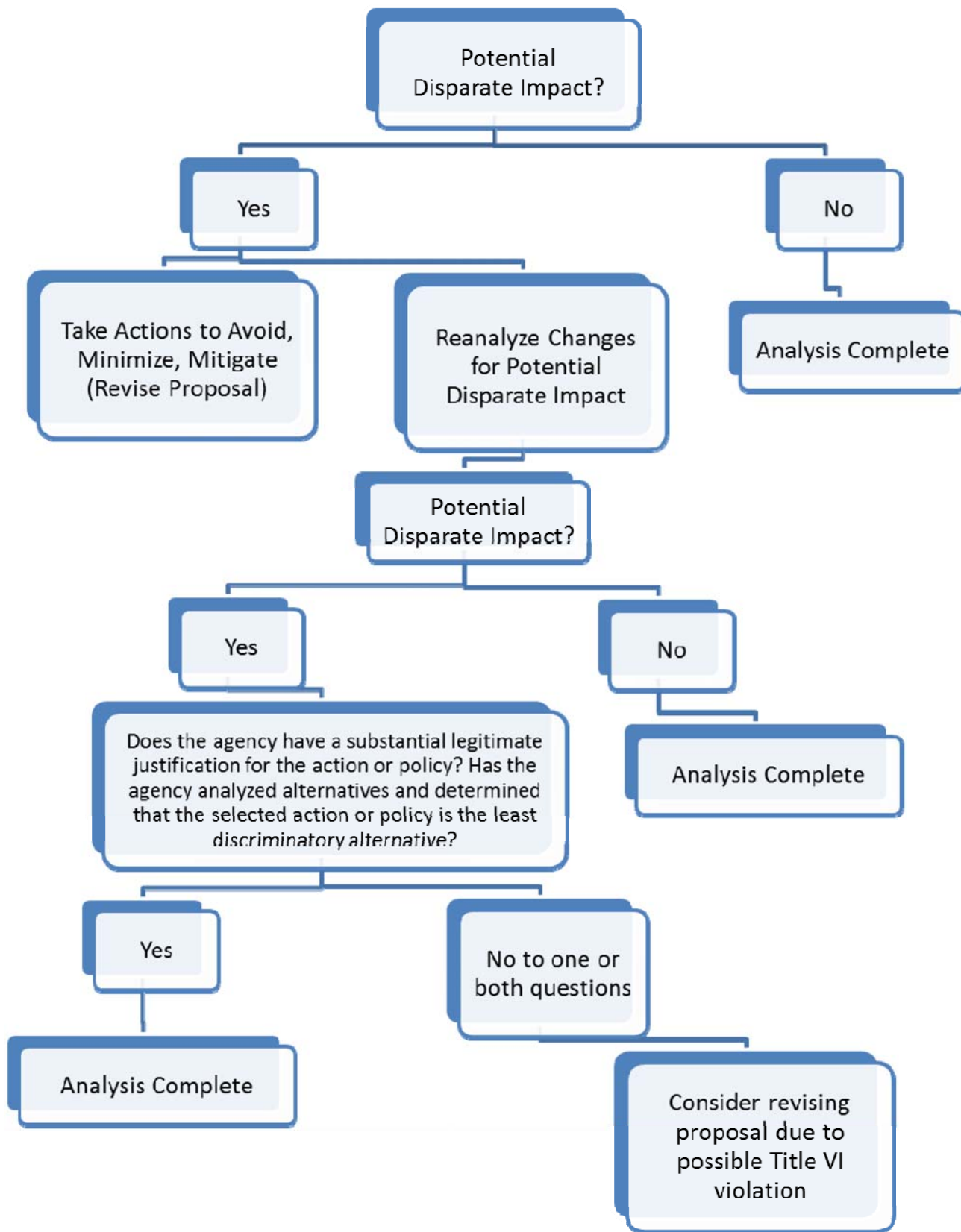
SAMPLE Fare Equity Analysis

Count	Cost		Change		Usage by Group		
	Existing	Proposed	Absolute	Percentage	Low-Income	Minority	Overall
Cash	\$1.50	\$2.00	\$0.50	33.3%	308,287	402,021	451,152
1-Day Pass	\$4.50	\$5.50	\$1.00	22.2%	299,880	290,456	448,907
Senior	\$0.50	\$0.75	\$0.25	50.0%	37,536	17,681	46,077
Disability	\$0.50	\$1.00	\$0.50	100.0%	75,440	29,280	38,600
Adult 31-Day Pass	\$57.00	\$63.00	\$6.00	10.5%	132,720	311,225	746,769
Student 31-Day Pass	\$30.00	\$35.00	\$5.00	16.7%	205,708	192,661	323,150
Adult 7-Day Pass	\$15.00	\$17.00	\$2.00	13.3%	105,831	132,135	170,300
10-Ride Card	\$13.50	\$18.00	\$4.50	33.3%	184	780	11,400
Total					1,165,586	1,376,239	2,236,355

% of Total	Cost		Change		Usage by Group		
	Existing	Proposed	Absolute	Percentage	Low-Income	Minority	Overall
Cash	\$1.50	\$2.00	\$0.50	33.3%	26.4%	29.2%	20.2%
1-Day Pass	\$4.50	\$5.50	\$1.00	22.2%	25.7%	21.1%	20.1%
Senior	\$0.50	\$0.75	\$0.25	50.0%	3.2%	1.3%	2.1%
Disability	\$0.50	\$1.00	\$0.50	100.0%	6.5%	2.1%	1.7%
Adult 31-Day Pass	\$57.00	\$63.00	\$6.00	10.5%	11.4%	22.6%	33.4%
Student 31-Day Pass	\$30.00	\$35.00	\$5.00	16.7%	17.6%	14.0%	14.4%
Adult 7-Day Pass	\$15.00	\$17.00	\$2.00	13.3%	9.1%	9.6%	7.6%
Stored Value Card	\$13.50	\$18.00	\$4.50	33.3%	0.0%	0.1%	0.5%
Total					100.0%	100.0%	100.0%

Here, an agency has presented a fare increase proposal and determined fare media usage for low-income, minority and overall ridership from a rider survey. Although a price increase is proposed for all fare media, certain media used disproportionately by low-income and/or minority riders (such as cash fares, one-day passes, and disability fares) are proposed for more substantial price increases than other media used more commonly by other riders (particularly the adult 31-day pass). In order to make an appropriate assessment of disparate impact or disproportionate burden, the transit provider must compare the survey data, and show the number and percent of minority riders and low-income riders using a particular fare media. While the changes appear to affect low-income and minority riders more adversely than other riders, the agency's ultimate determination of disparate impact on minority riders or disproportionate burden on low-income riders would depend on the disparate impact and disproportionate burden threshold policies developed by the transit provider through a public participation process.

Disparate Impact Analysis



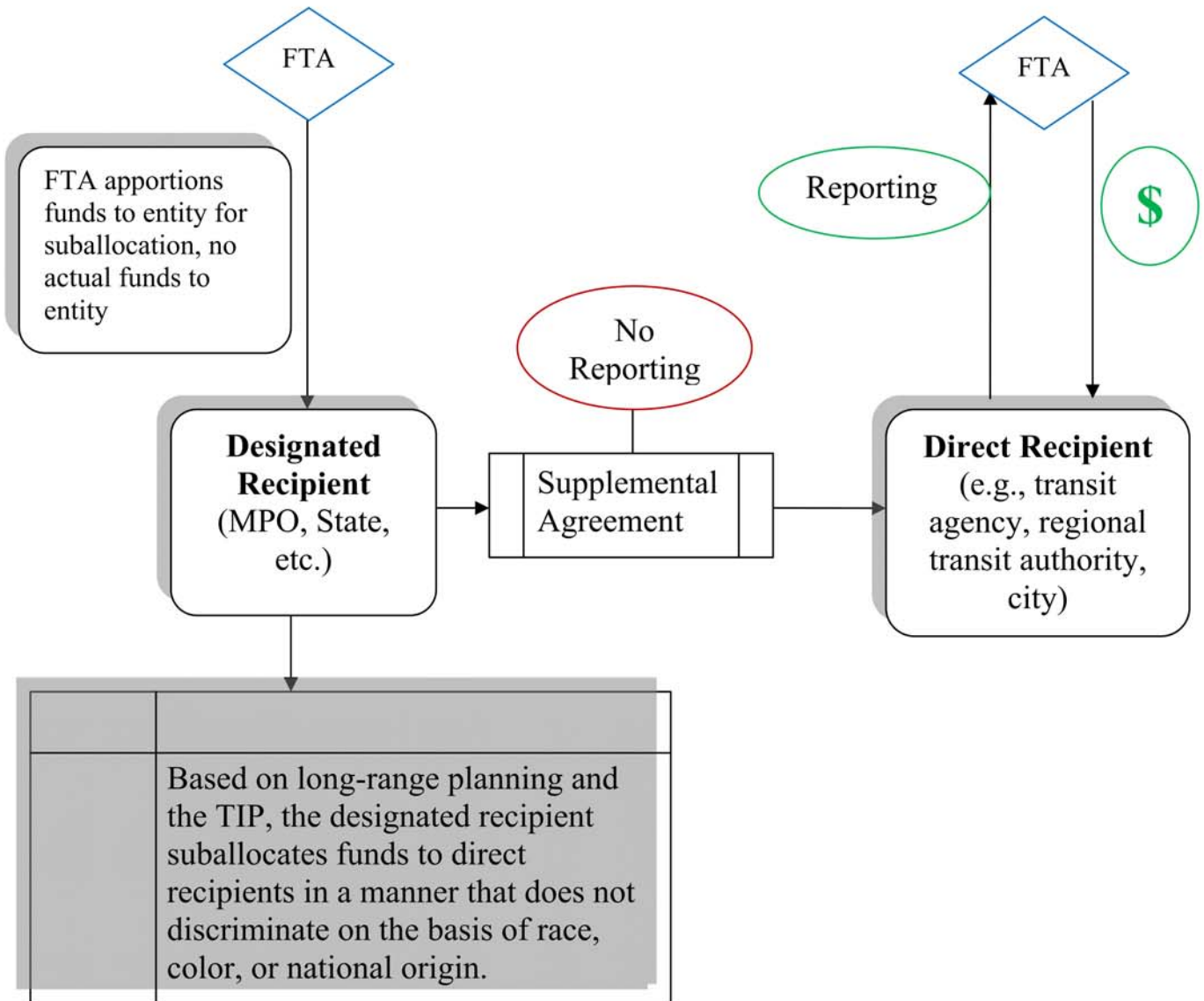
APPENDIX L

REPORTING REQUIREMENTS

1. RECIPIENT TYPE. This circular defines many types of recipients of Federal financial assistance: designated recipients, direct recipients, primary recipients and subrecipients. The reporting and monitoring requirements vary depending on what role an entity serves. One entity could be all four types of recipients, and therefore have many different reporting and monitoring requirements. The following questions are designed to assist recipients in determining what their responsibilities are:
 - a. Have you been designated by the Governor of your State or other local officials to receive and apportion funds from FTA? If yes, you are a ***designated recipient***.
 - b. Do you apply to FTA for funds for programs you operate/manage? If yes, you are a ***direct recipient***. You will submit a Title VI Program directly to FTA.
 - c. Do you pass through funds you receive directly from FTA to subrecipients? If yes, then you are a ***primary recipient*** and you must monitor your subrecipients' compliance with Title VI requirements, and collect Title VI Programs from them.
 - d. Do you receive funds from another FTA recipient, that is, are funds "passed through" to you from an entity that received those funds from FTA or another recipient? If yes, then you are a ***subrecipient***. You must submit a Title VI Program to the entity that passed funds through to you.
 - e. Do you suballocate funds to recipients that apply directly to FTA for their funds (i.e., direct recipients)? If yes, have you signed a supplemental agreement? If yes, you do not have any responsibility to monitor the Title VI Program of direct recipients, even if you also "pass through" funds to those recipients (i.e., subrecipients).
 - f. Do you receive discretionary, specialized funding (e.g., TIGER, Livability Urban Circulator)? If yes, do you regularly apply for funds from FTA, i.e., are you a traditional recipient of FTA funds? If you are not a traditional recipient of FTA funds, or are a first-time applicant for FTA funds, special rules may apply.

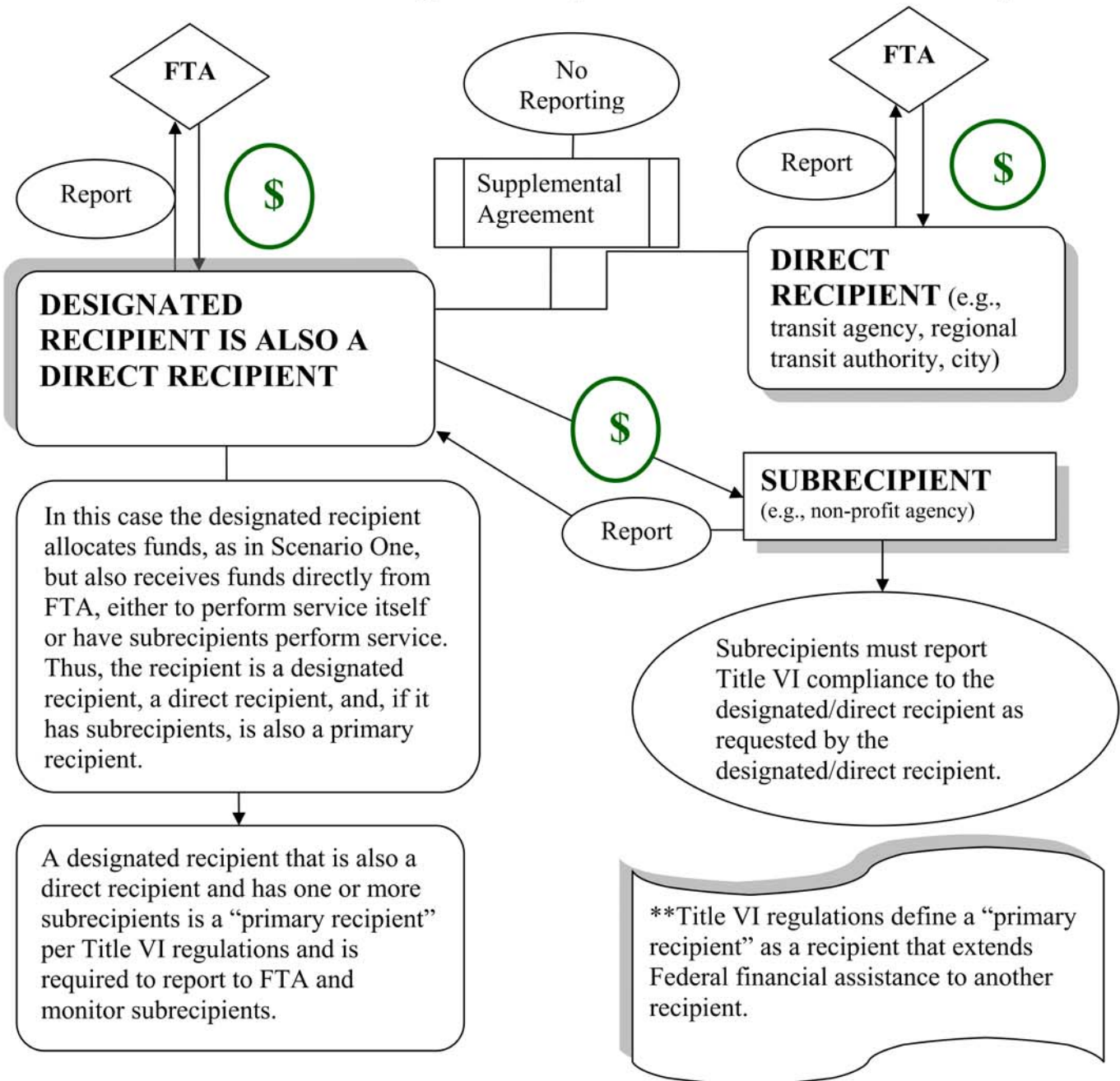
On the following pages are flowcharts that demonstrate the reporting requirements of various types of entities.

Scenario One—States, Designated Recipients, MPOs, and Other Entities That Suballocate FTA Funds



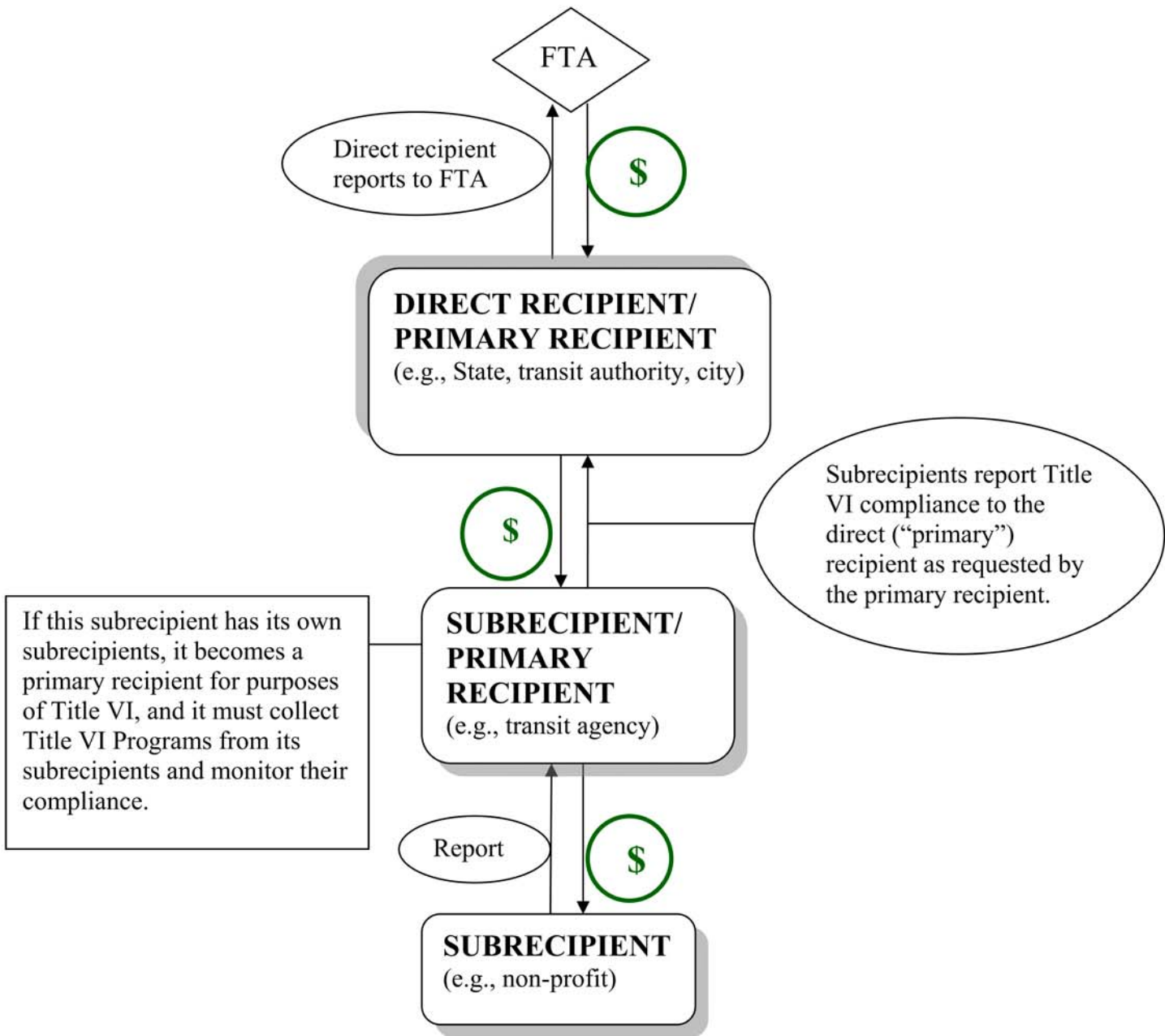
Reporting requirements follow the source of Federal funds. In this case, the designated recipient receives no funding from FTA; it only receives notice of an apportionment and then suballocates funds to direct recipients; therefore, the designated recipient has no oversight responsibility for direct recipients that receive their funding directly from FTA. Direct recipients submit Title VI reports to FTA.

Scenario Two—Designated Recipients That Are Also Direct Recipients



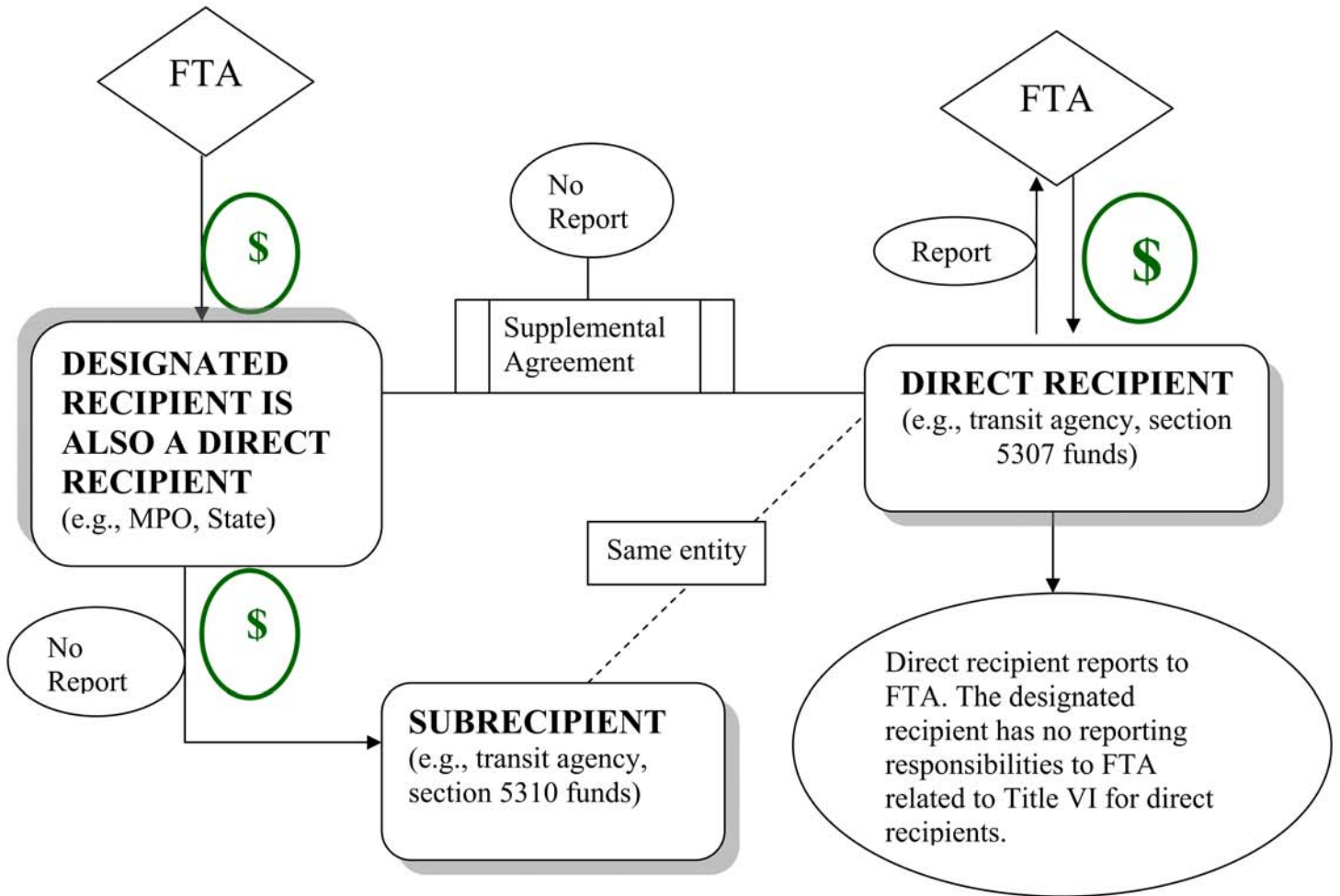
Reporting requirements follow the source of Federal funds. In this case, the designated recipient receives funding from FTA; therefore the designated recipient submits a Title VI Program to FTA and includes a description of how it monitors subrecipients. The designated recipient does not collect Title VI Programs from direct recipients to whom it only allocates funds. Direct recipients submit Title VI Programs to FTA.

Scenario Three—Direct Recipients, Including States



Reporting requirements follow the source of Federal funds. In this case, the direct (primary) recipient submits a Title VI Program to FTA and monitors subrecipients at all tiers.

Scenario Four—Designated Recipients That Pass Funds Through to Direct Recipients That Are Covered by a Supplemental Agreement

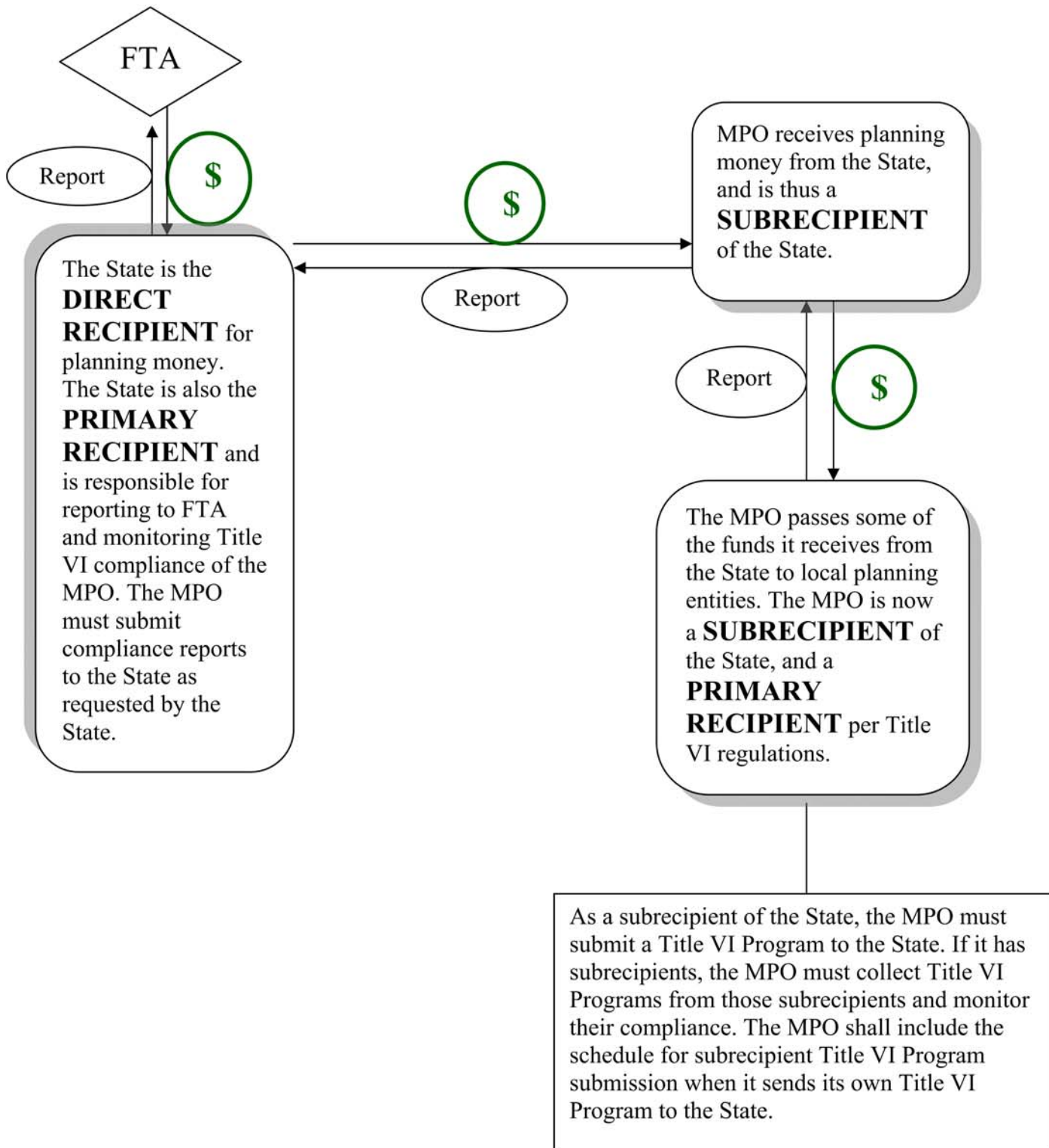


A subrecipient that is also a direct recipient is required to have an FTA approved Title VI Program in place, and the funds the subrecipient receives through the designated recipient must be utilized in accordance with that Title VI Program. Since the subrecipient/direct recipient must report compliance to FTA, it is not required to report to the designated recipient, and the designated recipient, consistent with the supplemental agreement, is not required to oversee the subrecipient's Title VI Program.

NOTE: If the direct recipient relationship with FTA changes, such that the entity becomes only a subrecipient of the designated recipient, then the subrecipient will report to the designated recipient, and the designated recipient will report to FTA.

NOTE also that while the designated recipient is not reporting to FTA for the direct/subrecipient, when the designated recipient is also a direct recipient it will report directly to FTA, and it may also have other reporting responsibilities, as when the designated recipient is an MPO or provides transit service itself.

**Scenario Five—Role of MPOs and States With Regard to Planning Funds
(Other Scenarios May Also Apply)**



APPENDIX M

TITLE VI AND LIMITED ENGLISH PROFICIENCY TECHNICAL ASSISTANCE RESOURCES

The following resources should help recipients integrate the guidance and procedures of this circular into their planning and operations. Recipients seeking additional resources that may have been published subsequent to the date of this circular may inquire with their local FTA Regional Office or FTA's Office of Civil Rights. Technical assistance resources will be published on the FTA Office of Civil Rights website, http://www.fta.dot.gov/civil_rights.html, on an ongoing basis.

1. **Relevant Websites.** Recipients and subrecipients are encouraged to review information on the following websites:
 - a. **FTA's Title VI Website.** www.fta.dot.gov/civilrights/civil_rights_5088.html. This website provides an overview of FTA's Title VI activities, including links to recent compliance reviews of recipients, related websites, policy guidance and procedures, and instructions on how to file a Title VI complaint.
 - b. **Federal Interagency Working Group on Limited English Proficiency.** www.lep.gov promotes a cooperative understanding of the importance of language access to Federal programs and Federally-assisted programs. The site acts as a clearinghouse, providing and linking to information, tools, and technical assistance regarding limited English proficiency and language services for Federal agencies, recipients of Federal funds, users of Federal programs and Federally-assisted programs, and other stakeholders.
 - c. **U.S. Department of Justice Civil Rights Division.** <http://www.justice.gov/crt/> The Civil Rights Division of the Department of Justice, established in 1957, is the program institution within the Federal government responsible for coordinating the implementation and enforcement of Federal statutes prohibiting discrimination on the basis of race, color, national origin, and other protected classes.
 - d. **Community Impact Assessment Website.** <http://www.ciatrans.net>. The Community Impact Assessment (CIA) website seeks to inform transportation officials and the general public about the potential impacts of proposed transportation actions on communities and their subpopulations.
 - e. **United We Ride.** www.unitedweride.gov. United We Ride is an interagency Federal national initiative that supports States and their localities in developing coordinated human service delivery systems originating from the Office of Program Management or the Federal Transit Administration. In addition to State coordination grants, United We Ride provides State and local agencies a transportation-coordination and planning self-assessment tool, help along the way, technical assistance, and other resources to help their communities succeed.

2. Technical Assistance Products. Recipients and subrecipients are encouraged to review information on the following technical assistance products. Interested parties can access these products through the relevant website or by contacting FTA's Office of Civil Rights.
 - a. "How to Engage Low-Literacy and Limited English Proficient Populations in Transportation Decision-making." <http://www.fhwa.dot.gov/hep/lowlim/>. This report documents "best practices" in identifying and engaging low-literacy and limited-English-proficiency populations in transportation decision-making. These "best practices" were collected during telephone interviews with individuals in 30 States.
 - b. "Disaster Response and Recovery Resource for Transit Agencies" <http://transit-safety.volpe.dot.gov/Publications/order/singledoc.asp?docid=437>. This resource provides local transit agencies and transportation providers with useful information and best practices in emergency preparedness and disaster response and recovery, including information on how to respond to the needs of low-income persons, limited English proficient persons, persons with disabilities, and older adults.

REFERENCES

- a. Title VI of the Civil Rights Act of 1964, as amended, 42 U.S.C. Section 2000d.
- b. Federal Transit Laws, Title 49, United States Code, Chapter 53.
- c. National Environmental Policy Act of 1969, as amended, 42 U.S.C. Section 4321 *et seq.*
- d. Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, 42 U.S.C. Section 4601, *et seq.*
- e. U.S. Department of Justice regulations, “Coordination of Enforcement of Nondiscrimination in Federally-Assisted Programs,” 28 CFR part 42, Subpart F.
- f. U.S. DOT regulations, “Nondiscrimination in Federally-Assisted Programs of the Department of Transportation—Effectuation of Title VI of the Civil Rights Act of 1964,” 49 CFR part 21.
- g. Joint FTA/Federal Highway Administration (FHWA) regulations, “Environmental Impact and Related Procedures,” 23 CFR part 771 and 49 CFR part 622.
- h. Joint FTA/FHWA regulations, “Planning Assistance and Standards,” 23 CFR part 450 and 49 CFR part 613.
- i. Executive Order 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,” Feb. 11, 1994, 59 FR 7629 (Feb. 16, 1994).
- j. Executive Order 13166, “Improving Access to Services for Persons With Limited English Proficiency,” Aug. 11, 2000, 65 FR 50121 (Aug. 16, 2000).
- k. U.S. Department of Transportation Order to Address Environmental Justice in Minority Populations and Low-Income Populations, 62 FR 18377 (Apr. 15, 1997).
- l. U.S. DOT Policy Guidance Concerning Recipients’ Responsibilities to Limited English Proficient (LEP) Persons, 70 FR 74087 (Dec. 14, 2005).
- m. FTA Master Agreement, FTA MA (17), Oct. 1, 2010.

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Board Report

File #: 2016-0642, File Type: Informational Report

Agenda Number: 41.

**EXECUTIVE MANAGEMENT COMMITTEE
OCTOBER 20, 2016**

SUBJECT: METRO EXPRESSLANES OPERATION AND MAINTENANCE

ACTION: AUTHORIZE THE CHIEF EXECUTIVE OFFICER (CEO) TO EXERCISE CONTRACT OPTION AND MODIFY CONTRACT

RECOMMENDATION

CONSIDER:

- A. AUTHORIZING the Chief Executive Officer (CEO) to exercise Option 4.4, Additional Year of Operation and Maintenance (O&M) - Year 4, Modification No. 71 for Contract No. PS0922102333 with **Atkinson Contractors, LP (Atkinson) for Metro ExpressLanes Operation and Maintenance** in the amount of \$3,096,000, increasing the total Contract price from \$136,236,656 to \$139,332,656.
- B. AUTHORIZING the CEO to execute Contract Modification No. 72 for additional **O&M Support Costs** for Option Year 4 in the amount of \$12,636,000, increasing the total contract price from \$139,332,656 to \$151,968,656.
- C. AUTHORIZING the CEO to negotiate and execute Contract Modification No. 73 for **Additional Transponders** in the amount not-to-exceed \$12,200,000, increasing the total contract price from \$151,968,656 to \$164,168,656; and
- D. APPROVING an increase in Contract Modification Authority (CMA) for Contract No. PS0922102333, to Atkinson in the amount of \$29,216,913 increasing the total CMA from \$78,138,041 to \$107,354,954 to cover the costs of the recommended Contract Modifications above, and any pending and future changes listed in the Contract Modification/Change Order Log (Attachment C).

ISSUE

In December 2010, Atkinson was awarded a Design, Build, Operate and Maintain (DBOM) contract for the Metro ExpressLanes project that included all activities needed to implement and operate the ExpressLanes through the demonstration period. The DBOM contract included various options including five, one year options for operation and maintenance beyond the demonstration period, but none of these was authorized at the time of contract award. The exercising of the third of the one-

year options was approved by the Board on December 3, 2015 and expires on February 23, 2017.

The ExpressLanes continue to be a successful program with over 512,000 accounts opened and 600,000 transponders distributed since opening in November 2012. To continue the operation of the ExpressLanes, staff is asking the Board to approve exercising the fourth of the five, one-year options to extend O & M to February 23, 2018.

DISCUSSION

Recommendation A: Additional Year of O & M

Staff is currently working on new specifications for ExpressLanes O & M services. The Requests for Proposals (RFPs) are scheduled to be advertised in early 2017. Until we are in a position to execute new contracts for these services, it will be necessary to continue to execute the existing Option Years in the current contract. Since Option Year Three will expire in February 2017, staff is requesting Board authorization to enter into the fourth of the five, one-year options for O & M to continue to operate and maintain the Metro ExpressLanes.

Recommendation B: Additional O & M Support

The recommended funding action is required due to the successful launch of the ExpressLanes and includes many activities driven mainly by customer and non-customer demand - additional account support for new accounts, costs for mailing of customer correspondence and violations and fees related to the processing of payments.

The base O & M contract for the ExpressLanes includes customer service related activities for up to 100,000 transponders, which was the target for the demonstration period. However, there are currently in excess of 600,000 transponders in circulation exceeding all expectations for the program and requiring more effort related to customer service than originally included in the base contract. The distribution of additional transponders results in establishment of new accounts that requires order fulfillment and additional contractor staffing support to service these accounts. Servicing activities include answering calls, handling correspondence, responding to customer inquiries, postage, and processing transactions.

Correspondingly, the success of the Metro ExpressLanes has increased violation processing beyond the original contract numbers, generating additional costs associated with license plate image processing, postage and mailing, phone services, and responding to online inquiries.

In addition, resources will continue to be needed for the maintenance of the tolling equipment and real-time traffic monitoring utilizing "EarthCam" cameras and staffing of the Traffic Management Center for incident management and monitoring of all toll-related systems. The Contract Modification in Recommendation B addresses this additional operational support required to operate and maintain the ExpressLanes through the balance of O & M Option Year 4.

Recommendation C: Additional Transponders

Since there continues to be steady growth in transponder distribution at a rate of 10,000 to 12,000 transponders issued per month, additional funds will be required to purchase transponders for new accounts. In addition, since the useful life of a transponder is approximately 5 years, funds are needed to purchase transponders to replace those that have been in circulation since the opening of the ExpressLanes. Over the next 12 to 18 months we expect to replace more than 250,000 transponders. The recommended funding action ensures that the supply of transponders continues to be sufficient to fulfill customer orders, replace existing aging transponders, and keeps us in the queue for manufacturing which requires a long lead item.

Recommendation D: Additional CMA

The additional CMA request of \$29,216,913, when combined with previous Board Approved CMA remaining, will be used to authorize Recommendations A, B and C (O & M Option Year Four, associated O & M Support Costs and Additional Transponders) as well as additional pending Modifications.

The request for authorization to increase the CMA will serve as a management tool for staff to issue contract modifications to compensate the contractor for additional costs incurred for the completion of the above services.

To ensure there is no interruption in O & M services, staff requests authority be granted to the CEO to execute a Contract Modification for the additional O&M support costs for Option Year 4.

DETERMINATION OF SAFETY IMPACT

Approval of these recommendations will improve safety for Metro ExpressLanes patrons.

FINANCIAL IMPACT

Because this is a multi-year program, the cost center manager and Executive Officer, Congestion Reduction will be responsible for budgeting the remaining CMA in future years.

Impact to Budget

The funding for this action will come from toll revenues generated from the Metro ExpressLanes operation. No other funds were considered for this activity.

ALTERNATIVES CONSIDERED

The Board may decline to approve the recommended actions. This is not recommended as staff cannot immediately re-procure a new contractor to operate and maintain the ExpressLanes and ensure uninterrupted operations. Additionally, this will most likely require re-negotiation of all rates under the existing contract and result in higher costs.

NEXT STEPS

Upon Board approval of the Recommendations, staff will take the necessary steps to amend the

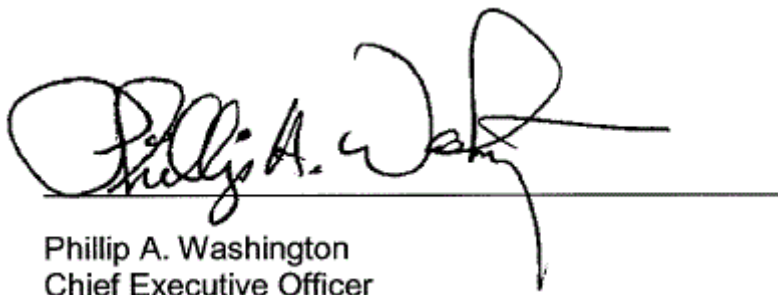
budget, notify the contractor of the exercising of Option Year Four for O & M and execute all required Contract Modifications.

ATTACHMENTS

- A. Procurement Summary
- B. Contract Modification Authority Summary
- C. DEOD Summary

Prepared by: Joe O'Donnell, Director, (213) 922-7231
Tim Lew, Sr. Mgr, Transportation Planning, (213) 922-1071
Kathy McCune, DEO (213) 922-7241
Shahrzad Amiri, Executive Officer, (213) 922-3061

Reviewed by: Debra Avila, Chief, Vendor/Contract Management Officer,
(213) 418-3051
Stephanie Wiggins, Deputy CEO, (213) 922-1023



Phillip A. Washington
Chief Executive Officer

PROCUREMENT SUMMARY

METRO EXPRESSLANES OPERATIONS AND MAINTENANCE

1.	Contract Number: PS092210233		
2.	Contractor: Atkinson Contractors, LP		
3.	Mod. Work Description: Exercise Option 4.4: Additional Year of O&M - Year 4; Additional O&M Support Costs for Option Year 4; Additional Transponders		
4.	Contract Work Description: Design, Build, Operate and Maintain the Metro ExpressLanes		
5.	The following data is current as of: September 6, 2016		
6.	Contract Completion Status:		
	Bids/Proposals Due:	8/31/10	% Completion \$s: 86.4%
	Contract Awarded:	12/16/10	% Completion time: 97%
	NTP:	01/11/11	Original Contract Days: 990
	Original Complete Date:	09/28/13	Change Order Days: 1,244
	Current Est. Complete Date:	02/23/16	Suspended Days: 0
	Total Revised Days:		2,234
7.	Financial Status:		
	Contract Award:		\$72,363,702
	Total Contract Modifications Approved:		\$63,872,954
	Current Contract Value:		\$136,236,656
	Contract Administrator: Joe O'Donnell	Telephone Number: 213-922-7231	
8.	Project Manager: Shahzad Amiri	Telephone Number: 213-922-3061	

A. Contract Action Summary

This Board Action is to approve Contract Modification No. 71 issued in support of Contract Option 4.4: Operations and Maintenance of the ExpressLanes - Year 4, Contract Modification No. 72, for Additional O&M Support Costs for Option Year 4, and Contract Modification No. 73, for Additional Transponders.

These Contract Modifications will be processed in accordance with Metro's Acquisition Policy and the contract type is a firm fixed priced price.

On December 16, 2010, Contract No. PS0922102333 was awarded to Atkinson Contractors, LP in the amount of \$72,363,702, to Design, Build, Operate and Maintain the Metro ExpressLanes Project.

Attachment B shows that 66 Contract Modifications/change orders have been issued to date to add and/or delete work, and shows the exercise of Option Years 1 through 3 for Operations and Maintenance. Nine Contract Modifications are currently pending or in negotiations.

The recommended Contract Modifications are for a total amount of \$27,933,000.

B. Cost/Price Analysis

The recommended price for Contract Modification No. 71 is at the amount originally bid for Option Year 4. A market survey was performed that confirmed the Option price is fair and reasonable.

The recommended price for Contract Modification No. 72 has been determined to be fair and reasonable based upon an independent cost estimate, cost analysis, technical evaluation, fact finding, and negotiations. An audit of Option Year 3 rates was conducted and found no issues with those additional O&M support costs. The Contractor has agreed to maintain all Option Year 3 rates for Option Year 4, except those that were increased due to collective bargaining agreements, therefore it was determined and agreed with MASD that an audit of the proposed amount for Option Year 4 was not necessary.

The amount shown for Contract Modification No. 73, is a not-to-exceed amount for additional transponders. A pre-negotiation plan is prepared. The final value for this Modification will be determined, based unit prices, to be fair and reasonable based upon an independent cost estimate, cost analysis, technical evaluation, fact finding, and negotiations.

Mod No.	Changes	Proposal amount	Metro ICE	Negotiated or NTE amount
71	Additional Year of O&M – Option Year 4	\$3,096,000	N/A*	\$3,092,000
72	Additional O&M Support Costs for Option Year 4	\$12,636,920	\$12,593,590	\$12,636,000
73	Additional Transponders	N/A*	N/A*	\$12,200,000

* Mod. No. 71 price was a bid rate. Mod. No. 72 pricing is based OY3 rates with affected rates escalated per 2016 collective bargaining agreements. Pricing for Mod No. 73 is an estimated NTE amount.

CONTRACT MODIFICATION AUTHORITY (CMA) SUMMARY

METRO EXPRESSLANES OPERATIONS AND MAINTENANCE

Mod. No.	Description	Status	Contract Value	Mods	Board Approved CMA (C)
		(Approved or Pending)	(A)		
N/A	Initial Award	Approved	\$72,363,702		\$7,236,370
1	Exercise Options 1 and 2	Approved		\$4,250,000	
2	Admin Modification of Audit Requirements	Approved		\$0	
3	Install Fiber Cables & Splice Vaults on I-110	Approved		\$470,487	
4	Toll System Digital Visual Aids	Approved		\$65,100	
5	Modification to Field Office	Approved		\$3,228	
6	Drainage Improvements on I-110 (Const.)	Approved		\$1,867,000	
7	Exercise Option 3	Approved		\$2,475,000	
N/A	Board Approved CMA Increase (1/12)	Approved			\$11,592,445
8	Construction of Divider Wall	Approved		\$821	
9	Drainage Improvement on I-110 (Design)	Approved		\$234,440	
10	Harbor Gateway Transit Center	Approved		\$0	
11	Retail Transponder Sales	Approved		\$347,854	
12	Differing Site Condition – CIDH Pile Install.	Approved		\$384,768	
13	Modified Striping for Toll Lanes	Approved		\$607,964	
14	Audible and Visible Warning System	Approved		\$316,334	
15	Adams Blvd/Flower St. OCS (Construction)	Approved		\$80,061	
16	DSC – CIDH Piles Along I-10 Fwy	Approved		\$78,448	
17	Retail Packaging for Add'l Transponders	Approved		\$337,500	
18	Additional Design Support	Approved		\$137,879	
19	Rehabilitation of I-10 Shoulder	Approved		\$633,414	
20	Perforated Steel Pipe	Approved		\$160,276	
21	Temporary Customer Service Center	Approved		\$193,383	
22	Closure of Patsaouras Plaza Ramps	Approved		\$69,524	
23	Modify Conflicting Expo Signs	Approved		\$25,508	
24	Metro's TAP Interface Program	Approved		\$25,734	
25	I-10 Traffic Loops	Approved		\$126,598	
26	Additional Traffic Monitoring Support	Approved		\$957,186	
27	Additional Video Cameras	Approved		\$726,288	
28	Adams Blvd/Flower St. OCS (Design)	Approved		\$59,331	
29	Mobile Van Retail Unit/Extended Hours	Approved		\$50,000	
30	Additional Barrier Markers	Approved		\$39,128	
31	Toll System Software Modifications for Grace Period	Approved		\$9,724	
32	Release of Additional Transponders	Approved		\$450,000	
33	Mailing Costs	Approved		\$450,000	
34	Additional Account Support	Approved		\$1,000,000	
35	Contract Milestone Revision	Approved		\$2,749,778	
N/A	Board Approved CMA Increase (9/13)	Approved			\$2,335,035
36	Reduction of Provisional Sum Line Items	Approved		(\$2,147,709)	
38	Add'l Transponders Option 3 and Retail Packaging	Approved		\$459,375	
39	Additional Contaminated Material	Approved		\$150,000	
40	Additional Mailing Costs	Approved		\$1,000,000	

41	Additional Static and Digital Messaging Signs	Approved		\$432,463	
42	Permanent. Redundant Fiber Comm Network	Approved		\$341,738	
43	Digital Messaging Sign at Santa Anita	Approved		\$481,827	
CO12	Additional Computer Programming	Approved		\$250,000	
CO13	Credit Card Transaction Costs	Approved		\$270,000	
44	Exercise Option 4.1, Add'l Year of O&M – Year 1	Approved		\$3,024,000	\$3,024,000
45	Additional Account Support for Option Year 1	Approved		\$2,900,000	\$2,900,000
46	Add'l Transponders Option 3 and Retail Packaging	Approved		\$1,350,000	\$1,350,000
47	Additional Mailing Costs - Option Year 1	Approved		\$1,700,000	\$1,700,000
N/A	Board Approved CMA Increase (2/14)	Approved			\$1,254,862
48	Interface Configuration Document	Approved		\$35,924	
49	Additional TMO Labor - Option Year 1	Approved		\$445,000	
50	Additional Marketing Support – Option Year 1	Approved		\$304,399	
52	Additional Credit Card Transaction Fees – Option Year 1	Approved		\$300,000	
53	Additional Violations Processing Beyond Base Contract	Approved		\$750,000	\$750,000
54	Additional Transponders – Option Year 1	Approved		\$432,000	
55	Exercise Option 4.2, Add'l Year of O&M – Year 2	Approved		\$3,048,000	\$3,048,000
56	Additional O&M Support Costs for Option Year 2	Approved		\$6,717,874	\$6,717,874
57	Additional Transponders and Retail Packaging	Approved		\$4,999,986	\$4,999,986
60	Replacement of Pavement Stencils and Striping and New Delineators on I-10/I-110	Approved		\$1,708,334	\$1,708,334
62	Add Funds for Additional Violation Processing and Violation Credit Card Fees	Approved		\$605,000	
63	Exercise Option 4.3, Add'l Year of O&M – Year 3	Approved		\$3,072,000	\$3,072,000
64	Additional O&M Support Costs for Option Year 3	Approved		\$10,383,408	\$10,383,408
N/A	Board Approved CMA Increase (12/15)	Approved			\$507,655
66	Preliminary Design for Additional Toll Sites, Signage, Improvements	Approved		\$157,043	
67	Additional Funding for Operations Support Costs	Approved		\$900,000	
68	Marketing Data Analysis	Approved		\$90,470	
69	Earthcam Permanent Locations	Approved		\$250,622	
70	New CHP Beacon Light System - Design	Approved		\$78,444	
Subtotal (Approved)				\$63,872,954	\$62,579,969
58	Replacement and Additional Static Message and Dynamic Message Signs for I-10/I-110 and I-105	In-Process		\$2,650,000	\$2,650,000
59	New Toll Gantries	In-Process		\$2,500,000	\$2,500,000
65	Additional Transponders and Retail Packaging	In-Process		\$3,240,000	\$3,240,000
Subtotal (In-Process)				\$8,390,000	\$8,390,000
71	Exercise Option 4.4, Add'l Year of O&M – Year 4	Recommended		\$3,096,000	

72	Additional O&M Support Costs for Option Year 4		Recommended	\$12,636,000	
73	Additional Transponders		Recommended	\$12,200,000	
Subtotal (Recommended)				\$27,932,000	
61	Pavement Markings, Signage and Tolling Equipment at I-710/I-10 Interchange	Pending		\$2,250,000	\$2,250,000
TBD	Upgrade all CHP Gantry Enforcement Lights Construction	Pending		\$300,000	
TBD	Maintenance of Additional Tolling Equipment and DMS	Pending		\$260,000	
TBD	Additional Bond and Insurance Costs	Pending		\$250,000	
TBD	Unforeseen Potential Changes	Pending		\$3,900,000	\$3,900,000
TBD	Modification of Toll System Software for New & Replacement Sensys Equipment and Informational Dashboard	Pending		\$200,000	
Subtotal (Pending)				\$7,160,000	\$6,150,000

Subtotal - Approved Modifications			\$63,872,954	
Subtotal - In-Process Modifications			\$8,390,000	
Subtotal - Recommended Modifications			\$27,932,000	
Subtotal - Pending Changes/Modifications			\$7,160,000	
Total Modifications and Pending Changes			\$107,354,954	
Total Contract Value (including Approved, In-Process, Recommended and Pending Modifications)		\$179,718,656		
Board Approved CMA (C)				\$78,138,041
Requested CMA – Total Modifications and Pending Changes (\$107,354,954, minus Board Approved CMA, \$78,138,041)				\$29,216,913

DEOD SUMMARY

METRO EXPRESSLANES OPERATION AND MAINTANANCE

A. Small Business Participation

This Contract, funded by the Federal Highway Administration, falls under the Caltrans Underutilized Disadvantaged Business Enterprise Program (UDBE) requirements. Atkinson Contractors, LP (Atkinson) made a 16.20% UDBE, and a 1.87% DBE (race neutral) commitment. Atkinson is exceeding its commitment with current UDBE participation of 16.56%, and DBE participation of 2.40%. UDBE and DBE participation covers Design, Civil, and Operation & Maintenance work.

SMALL BUSINESS COMMITMENT	16.20% UDBE 1.87% DBE	SMALL BUSINESS PARTICIPATION	16.56% UDBE 2.40% DBE
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UDBE Subcontractors	Commitment	Participation
1. MARRS Corp (Design)	0.18%	0.11%
2. Lin Consulting (Design)	1.20%	0.77%
3. Abratique & Assoc. (Civil)	0.16%	0.07%
4. SafeProbe (Civil)	0.27%	0.43%
5. G&C Equipment Corp (Civil)	4.02%	4.12%
6. Mariman Security (Civil)	0.35%	0.48%
7. Davis Blue Print Co. (Civil)	Added	0.01%
8. Payco Specialties (Civil)	1.19%	1.17%
9. Fine Grade Equipment (Civil)	1.82%	1.92%
10. American Steel Placers (Civil)	0.79%	0.60%
11. DNS Solutions (Civil)	0.07%	0.04%
12. R.J. Lalonde (Civil)	Added	0.01%
13. Ace Fence (Civil)	0.28%	0.23%

14. Sequoia Consultants (Civil)	Added	0.18%
15. Rivera Trucking (Civil)	Added	0.24%
16. JC Supply & Manufacturing (Civil)	Added	0.07%
17. TEC Management Consultants (Civil)	0.19%	0.19%
18. G&F Concrete	0.14%	0.28%
18. E-Nor Innovations (Civil)	Added	0.05%
19. G&C Equipment (O&M)	5.30%	4.64%
20. G&C Equipment/Xerox (O&M)	Added	0.43%
21. Noble Insight (O&M)	0.24%	0.52%
Total	16.20%	16.56%

DBE Subcontractors	Commitment	Participation
1. Intueor Consulting (Design)	0.65%	0.39%
2. Diaz Yourman Assoc. (Design)	0.19%	0.19%
3. Seville Construction (Civil)	1.03%	1.82%
Total	1.87%	2.40%

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

Project Labor Agreement/Construction Careers Policy is not applicable to this contract because the Contract was awarded prior to the Metro approved PLA.

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 is not applicable to this modification.



Board Report

File #: 2016-0765, **File Type:** Contract

Agenda Number: 20.

**CONSTRUCTION COMMITTEE
EXECUTIVE MANAGEMENT COMMITTEE
OCTOBER 20, 2016**

SUBJECT: METRO PILOT CRENSHAW/LAX TRANSIT PROJECT BUSINESS SOLUTION CENTER

ACTION: AWARD CONTRACT

RECOMMENDATION

CONSIDER AUTHORIZING the Chief Executive Officer to:

- A. AWARD a two-year, firm fixed price Contract No. PS2890900 to Del Richardson & Associates, Inc. for **professional services to operate the Metro Pilot Crenshaw/LAX Transit Project Business Solution Center (BSC)** in the amount of \$849,008 for the two-year period, subject to resolution of protest(s), if any; and
- B. AMEND the FY17 budget in the amount of \$380,000 to fund the award of Contract No. PS2890900 for professional services to operate the pilot BSC.

ISSUE

In July 2014, Metro's Board of Directors issued Motion 79 which authorized the CEO to establish a Metro Pilot Business Solution Center to provide hands-on case management services and business assistance to small businesses along the Crenshaw Corridor between 48th and 60th Streets during the four-year term of the Crenshaw/LAX Transit Line Project.

The BSC formally launched operations in February 2015; and Metro staff completed a program assessment in February 2016 which included feedback from Metro's Contractor and members of the business community engaged in the BSC services. As a result, Metro staff assessed the feasibility of re-scoping the pilot program model and contract scope of work and issued a new solicitation to perform BSC services. In recognition of Motion 79 (Attachment B) and the vital role Metro's BSC provides to the small business community within the Crenshaw Corridor, this contract award will enable Metro to meet the objective of securing a service provider to operate the Pilot BSC for the remaining two years of operations for the pilot program.

DISCUSSION

Recognizing the BSC is Metro's first-ever pilot program, staff continues to provide ongoing review and assessment of the program; and in light of the program being operational for more than one year a comprehensive program assessment was initiated in January 2016. The assessment included: feedback from business owners about their experience and interactions with the BSC through a facilitated focus group; review of the program model with Metro project staff and the Contractor through a facilitated project review meeting; review of the original report entitled "Recommendations for a Pilot Metro Business Solutions Center;" and an assessment of program metrics such as the number of businesses along the project alignment seeking support services including the number of businesses internal and external of the the BSC target area of 48th - 60th Street. In addition, Metro staff conducted another series of market research interviews with five small business service providers to obtain best practices and industry standards for small business assistance programs.

The program model for Metro's pilot BSC was developed through the framework outlined in the "Recommendations for a Pilot Metro Business Solutions Center" and Motion 79 that recommended the BSC provide business assistance including expert business advice, technical assistance and other focused resources for businesses in the target area of 48th - 60th Street based on construction activity of the at-grade portion of the transit rail project. As a result, the current scope of work provides focused resources such as hands-on case-management only for small businesses in the BSC target area. However, as with any pilot program, Metro has gained additional information, observations and lessons learned to allow enhancements to be made to the project model and scope of work. For example, more than 60% of small businesses seeking BSC support services are outside the predefined BSC target area thus they do not have access to the hands-on case management services. In addition, based on the business demographic data and the areas of services additional insights have been attained to support enhancements to the types of specialized services and resources provided by the BSC. Re-scoping the program model and contract scope of work will enhance the level of services provided to businesses located outside the target area along the Crenshaw Corridor. Furthermore, based on their interactions with the BSC, participants of the business focus group stressed the need for Metro to enhance the case management model and scope; and to provide access to specialized subject matter experts for technical business support.

Moreover, Metro's BSC has achieved program successes within the first year of operations through providing technical support services and referrals for more than 200 businesses in the areas of marketing, access to capital including referral to Metro's Business Interruption Fund, social media and technology and others. The BSC continues to provide small businesses along the Crenshaw Corridor access to business experts and customized small business programs such as "Salon Management," "Building Your Brand" and the "Brainstorming over Breakfast" workshop which focused on restaurateurs. Recently, through collaboration with the Los Angeles Urban League the BSC delivered a Google sponsored program "Get Your Business Online;" which focused on introducing social media and technology based tools to the small business community. These intensive workshops are a demonstration of the types of innovative support services and programs offered to the small business community through Metro's BSC. Re-scoping the program model will not only enhance the level of services provided by the BSC but also enhance the level of expert services available to businesses within the Crenshaw Corridor regardless of their location within the

predefined area of 48th - 60th Street; and provide the businesses access to the one-on-one focused client services throughout the remaining two-year term of the BSC operations.

The objective of the solicitation was to procure a Contractor to operate the pilot BSC inclusive of: (1) one-on-one focused client services for small and micro businesses located along the Corridor, (2) access to services via multiple avenues including a field and virtual (web based) presence, and (3) an outreach program for small and micro businesses on the Corridor to facilitate the utilization of available services and resources including access to other business experts and resource providers referred through the BSC. The Contractor shall perform one-on-one client services and outreach functions for potentially more than 200 businesses along the Crenshaw Corridor that have experienced the impacts of the transit rail construction. Metro staff will continue to provide proactive oversight and assessment of the pilot program and the Contractor during the final years of operations.

DETERMINATION OF SAFETY IMPACT

The Pilot BSC will have no impact on safety of Metro's patrons or employees.

FINANCIAL IMPACT

Metro staff previously identified Measure R Admin funds as the most suitable funding source to support the implementation and administration of the Pilot BSC. Therefore, Metro will continue to fund the Pilot BSC's remaining two-year activities for fiscal years 2017 and 2018 for the total negotiated amount. An adjustment will be made to the FY17 budget to fund the contract award for professional services to operate the remaining two years of the Pilot BSC. Since this is a multi-year contract, Vendor/Contract Management will be responsible for budgeting funds for FY18 in Cost Center 0691Non-Departmental Procurement; Project Number 100055, Project Name - Admin-Measure R; Task No. 05.01 and Task Name Crenshaw BSC.

Impact to Budget

The source of funds for this project will be from Measure R Admin. Upon review of operating and project source of funds, the identified funds were deemed most suitable. An amendment will be made to the FY17 budget for an increase in the amount of \$380,000 to fund the award of Contract No. PS2890900 for professional services to operate the pilot BSC.

ALTERNATIVES CONSIDERED

1. Not awarding this Contract. Staff is not recommending this alternative because it will affect Metro's ability to provide the identified services to small and micro businesses along the Crenshaw Corridor during the remaining two-year term of construction of the Crenshaw/LAX Transit Line.
2. Utilizing Metro staff to operate the Pilot BSC. This alternative is not recommended because Metro does not have the required staffing availability, dedicated resources or expertise to operate the pilot BSC and perform the services as outlined in the SOW.

NEXT STEPS

Upon Board approval, staff will execute Contract No. PS2890900 with Del Richardson & Associates, Inc.. In compliance with Board Motion 57 dated September 14, 2014, Metro staff will continue to report back to the Board of Directors on the status of the BSC and services to be performed by the Contractor.

ATTACHMENTS

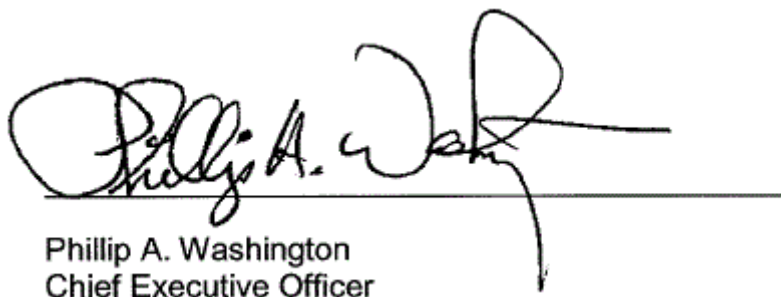
Attachment A - Procurement Summary

Attachment B - Motion 79

Attachment C - DEOD Summary

Prepared by: Shalonda Baldwin, Deputy Executive Officer of Project Management,
Vendor/Contract Management, (213) 922-4488

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



Phillip A. Washington
Chief Executive Officer

PROCUREMENT SUMMARY

METRO PILOT CRENSHAW/LAX TRANSIT PROJECT BUSINESS SOLUTION
CENTER / PS2890900

1.	Contract Number: PS2890900	
2.	Recommended Vendor: Del Richardson & Associates, Inc.	
3.	Type of Procurement (check one): <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.	Procurement Dates:	
	A. Issued: May 24, 2016	
	B. Advertised/Publicized: May 24, 2016	
	C. Pre-Proposal/Pre-Bid Conference: June 6, 2016	
	D. Proposals/Bids Due: June 27, 2016	
	E. Pre-Qualification Completed: September 13, 2016	
	F. Conflict of Interest Form Submitted to Ethics: July 5, 2016	
	G. Protest Period End Date: October 26, 2016	
5.	Solicitations Picked up/Downloaded: 42	Proposals Received: 1
6.	Contract Administrator: Lily Lopez	Telephone Number: (213) 922-4639
7.	Project Manager: Shalonda Baldwin	Telephone Number: (213) 922-4488

A. Procurement Background

This Board Action is to approve Contract No. PS2890900 issued in support of the Metro Pilot Crenshaw/LAX Transit Project Business Solution Center (BSC) to operate the BSC inclusive of providing: (1) one-on-one focused client services for small and micro businesses located along the Crenshaw/LAX Transit Project Corridor, (2) access to services via multiple avenues including a field and virtual (web based) presence, and (3) an outreach program for small and micro businesses on the Corridor to facilitate the utilization of available services and resources including access to other business experts and resource providers referred through the BSC. Board approval of contract awards are subject to resolution of all properly submitted protests.

The Request for Proposals (RFP) was issued in accordance with Metro's Acquisition Policy and the contract type is a firm fixed price. The RFP was issued with an SBE/DVBE goal of 23% (SBE 20% and DVBE 3%).

One amendment was issued during the solicitation phase of this RFP:

- Amendment No. 1, issued on June 7, 2016, provided responses to questions received, and documents related to the pre-proposal conference held on June 6, 2016.

A pre-proposal conference was held on June 6, 2016, attended by 11 participants representing seven companies. There were five questions asked and responses were released prior to the proposal due date.

A total of 42 firms downloaded the RFP and were included in the planholders list.

One proposal was received on June 27, 2016. A market survey was conducted of planholders that did not submit a proposal to ascertain the reason(s) for non-submittal. Fifteen responses were received. Reasons given for not submitting proposals included limited resources, time constraints and firm's capabilities did not align with requested services.

B. Evaluation of Proposal

The Proposal Evaluation Team (PET) consisting of staff from Metro's Vendor Contract Management and Risk Management was convened and conducted a comprehensive technical evaluation of the proposal received.

The proposal was evaluated based on the following evaluation criteria and weights:

- | | |
|---|------------|
| • Service Provider Experience and Qualifications | 30 percent |
| • Service Provider Experience with Similar Services | 15 percent |
| • Project Understanding and Approach | 30 percent |
| • Business Finance Support Experience | 5 percent |
| • Cost Proposal | 20 percent |

The evaluation criteria are appropriate and consistent with criteria developed for other, similar procurements for professional services. Several factors were considered when developing these weights, giving the greatest importance to both service provider experience and qualifications and project understanding and approach.

During the week of July 4, 2016, the PET completed its independent evaluation of the proposal. An oral presentation was held on August 2, 2016. At the conclusion of the oral presentation, the PET re-evaluated the proposal based on the information in the technical proposal and discussion held, and it was determined that Del Richardson & Associates, Inc. (DRA) was qualified to render the required services.

Qualifications Summary:

DRA

DRA is a Metro-certified SBE firm with demonstrated community engagement and outreach experience. DRA's proposed approach is comprehensive and provides a clear plan to provide a wide range of services and access to resources for the

Crenshaw/LAX business community. Their previous experience with Metro projects and their role as the incumbent contractor has equipped DRA for this work effort and places them in an ideal position to benefit both from their knowledge of the current operations as well as affording them the opportunity to enhance their services through innovative programs designed to engage participating businesses.

A summary of the PET scores is provided below:

1	Firm	Average Score	Factor Weight	Weighted Average Score	Rank
2	DRA				
3	Service Provider Experience and Qualifications	92.33	30.00%	27.70	
4	Service Provider Experience with Similar Services	83.33	15.00%	12.50	
5	Project Understanding and Approach	90.00	30.00%	27.00	
6	Business Finance Support Experience	86.60	5.00%	4.33	
7	Cost	100.00	20.00%	20.00	
8	Total		100.00%	91.53	1

C. Cost Analysis

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

The ICE was based on an estimate from 2013 for the original Pilot BSC program. Due to the unique attributes of the project, Metro did not have reliable data to adequately estimate the actual level of effort that such a program would require. As such, the enhanced focused client support services needed to support the greater number of businesses outside the initial target area requires a greater level of effort and resources as the initial model for the pilot was based on the reliance of services and experts through pre-identified "business development partners." Additionally, the ICE did not account for two major components: (1) the inclusion of subject matter experts to deliver educational and informational business resources to businesses engaged in the BSC; and (2) the outreach and engagement in light of the new program model comprised of one-on-one client services for potentially 200 businesses along the corridor.

Metro staff successfully negotiated a cost savings of \$707,034 by reducing the duplication of efforts and clarifying the intent of the Statement of Work.

	Proposer Name	Proposal Amount	Metro ICE	Negotiated Amount
1.	DRA	\$1,556,042	\$390,000	\$849,008

D. Background on Recommended Contractor

The recommended firm, DRA located in Inglewood, California, and founded in 1998, provides real estate and personal property acquisition, relocation and community engagement and outreach services to the public, profit and non-profit agencies. DRA is the incumbent on the existing BSC contract awarded in October 2014, and has performed satisfactorily and has been responsive to the community needs.

**Motion by Supervisor Mark Ridley-Thomas, Mayor Eric Garcetti and Director
Jacquelyn Dupont-Walker**

**Implementation of a Pilot Business Solution Center for the Crenshaw/LAX Line
Relates to Item 79**

July 24, 2014

Since construction began on the Crenshaw/LAX Line Project (the Project) earlier this year, doing business on the Crenshaw Corridor (the Corridor) has become more challenging for businesses and patrons. Many businesses are already experiencing significant impacts created by construction activities, specifically at the intersections of Crenshaw Boulevard and Martin Luther King Jr. Boulevard and Exposition Boulevard where work is underway to lay the groundwork for future underground stations. Businesses between 48th Street and 60th Street, where the line will run at-grade, are also anticipated to face significant challenges when construction begins on that segment.

Under both Federal and State law, Metro is prevented from providing direct cash subsidies to businesses unless access to the business is denied due to construction impacts. While this has not technically been the case on the Corridor, there is a clear nexus between construction activities and reduced business activity, especially the walk-in traffic that many of the retail businesses rely on.

In April 2014, Metro retained a consultant to assess and provide recommendations on how to address the economic impacts of construction activities on small businesses on the Corridor. The consultant's report encourages the development of a pilot Business Solution Center that would provide direct sector-specific technical assistance to businesses along the Corridor to help them through construction activities. Services that could be provided to businesses include financial planning and advice on small business operations as well as dealing with municipal permits and regulations, legal assistance, marketing and grant/loan application management. The consultant specifically suggests that a pilot effort be established to provide proactive and hands-on business assistance to support the over 100 businesses at the at-grade portion of the

Project between 48th and 60th Streets, as well as a walk-in location along the Corridor for which businesses along the entire rail alignment can receive information, resources and referrals.

The establishment of a Business Solution Center would meaningfully enhance Metro's construction and external relations protocol. While serving as a relatively nominal financial investment for Metro, it would go a long way in helping to build the capacity of small businesses to survive the construction period and ultimately contribute to a vibrant transit corridor upon completion of the Line. If the Metro Board wants to pursue future funding measures to fully build out the system, it will be fundamental that we demonstrate to local small businesses that we are a committed partner during construction periods. This pilot Business Solution Center can serve as a model for such an effort, and to do so, it is essential that Metro partner with a capable and well established service provider to roll-out these services as quickly as possible. Furthermore, it is consistent with Metro's Construction Impact Response Program (CIRP) which was developed in response to construction on the Gold and Red Lines in the 1990s. The CIRP program provided various forms of relief for businesses including economic support and rapid response teams. These resources should also be made available for the Crenshaw Corridor.

The pilot Business Solution Center would also complement Metro's other ongoing efforts to address business' needs during construction. For example, Metro continues to modify construction signage based on the feedback of surrounding business' to highlight the names of businesses, parking locations and to clarify that businesses are open during construction. In addition, Metro is finalizing a communications strategy to promote an "Eat, Shop and Play Local" campaign during construction.

WE THEREFORE MOVE THAT THE BOARD OF DIRECTORS:

1. Receive and file the "Recommendations for a Pilot Metro Business Solution Center";

2. Authorize the CEO to immediately solicit proposals to establish a Pilot Metro Business Services Center along the Crenshaw Corridor that includes a physical presence with consistent staffing hours for the duration of the construction of the Crenshaw/LAX Line, as well as a Business Solutions Outreach Strategy for the at-grade portion of the alignment on Crenshaw between 48th and 60th Streets and other locations that are determined to be significantly impacted by construction activities, and authorize the CEO to execute a contract with the most responsive and qualified bidder, with the objective of beginning operations by October 2014;
3. Direct the CEO to identify up to \$250,000 and amend the current budget to fund the initial year activities, with an overall project budget expected to be approximately \$1,000,000, to be included in future budgets for fiscal year 2016, 2017 and 2018 at \$250,000 per year;
4. Direct the CEO to report back in September on a plan to utilize existing Full-Time Equivalent position(s) to staff the Business Solutions Center.
5. Direct the CEO to incorporate the following elements into the Pilot Business Solution Center Program:
 - a. A single point-of-contact or case management approach for each business; and
 - b. A 72 hour quick response plan.
6. Direct the CEO to establish an additional mitigation menu and criteria based on MTA's previous Construction Impact Response Program that includes:
 - a. Marketing campaigns for impacted businesses;
 - b. Rent and mortgage subsidies to businesses;
 - c. A low-interest loan fund that is accessible to small and micro-businesses;
 - d. Report back to the Board in September with funding recommendations;
7. Direct the CEO to report back on a Post-Construction Façade Improvement Program in conjunction with the approved Design-Build Contract for the Crenshaw/LAX Transit Line;
8. Direct the CEO to report back on the feasibility of establishing Memorandums of Understanding with local business and community stakeholder groups, as has been

done in Denver, Colorado, to ensure that we are maximizing community involvement and engagement as it relates to construction activities;

9. Direct the Diversity and Economic Opportunity Department to manage and oversee the Business Solution Center Project; and
10. Provide quarterly updates to the Executive Management and Construction Committees on the Pilot Business Solution Center and the “Eat, Shop and Play Local” campaign beginning in September 2014.

DEOD SUMMARY

**METRO PILOT CRENSHAW/LAX TRANSIT PROJECT BUSINESS SOLUTION
CENTER / PS2890900**

A. Small Business Participation

The Diversity and Economic Opportunity Department (DEOD) established a 23% goal, inclusive of a 20% Small Business Enterprise (SBE) and 3% Disabled Veteran Business Enterprise (DVBE) goal for this project. Del Richardson & Associates, Inc. exceeded the goal by making a 65.46% Small Business participation, inclusive of a 62.37% SBE commitment and a 3.09% DVBE commitment.

Small Business Goal	20% SBE 3% DVBE	Small Business Commitment	62.37% SBE 3.09% DVBE
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	SBE Prime	% Commitment
1.	Del Richardson & Associates, Inc.	62.37%
	Total Commitment	62.37%

	DVBE Subcontractors	% Commitment
1.	It Is, LLC	3.09%
	Total Commitment	3.09%

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.