Agenda
Los Angeles County
Metropolitan Transportation Authority

TECHNICAL ADVISORY COMMITTEE

William Mulholland Conference Room – 15th floor

1. Call to Order/Roll Call  Action (Fanny Pan, Brian Lam)

2. Agenda Reports by Standing Committees
   - Bus Operations  Information (Jane Leonard)
   - Local Transit Systems  Information (Sebastian Hernandez)
   - Streets and Freeways  Information (Fulgene Asuncion)
   - TDM/Sustainability  Information (Mike Bagheri)
   Attachment 1: Subcommittee Agendas
   Attachment 2: Subcommittee Actions  5 min

3. Chairperson's Report  Information (Fanny Pan)

4. Consent Calendar  Action
   - Approval of Minutes
     Attachment 3: Draft January 4, 2017 Minutes

5. Metro Sustainability Vision  Information (Cris Liban)
   Attachment 4: February 18, 2016 Board Motion #57
   Attachment 5: October 20, 2016 Board Report #36  20 min

6. Measure M Advisory Committee Update  Information (Vivian Rescalvo)
   15 min

7. ATP Update  Information (Shelly Quan)
   10 min

8. CTC Update  Information (Zoe Unruh)
   5 min
9. Countywide Express Lanes Strategic Master Plan Information
   Attachment 6: Strategic Master Plan Presentation (Philbert Wong)
   15 min

10. Legislative Update Information
    15 min (Raffi Hamparian/Michael Turner)

11. Other Business

12. Adjournment

TAC Minutes and Agendas can be accessed at: http://www.metro.net/about/tac/

Please call Brian Lam at (213) 922-3077 or e-mail lamb@metro.net with questions regarding the agenda or meeting. The next meeting will be on March 1, 2017 at 9:30 a.m. in the William Mulholland Conference Room.
Attachment 1

Subcommittee Agendas
Agenda

Los Angeles County Metropolitan Transportation Authority

BUS OPERATIONS SUBCOMMITTEE
William Mulholland Conference Room – 15th Floor
9:30 am

1. Call to Order
   (1 minute)  Action
   Jane Leonard

2. Approval of December 6, 2016 Minutes
   (1 minute)  Action
   BOS

3. Chair’s Report
   (5 minutes)  Information
   Jane Leonard

4. FTA 5307 Process Working Group
   (10 minutes)  Action
   Jane Leonard

5. Metro Report
   (5 minutes)  Information
   Annelle Albarran

6. FTA Update
   (10 minutes)  Information
   Arianna Valle/Adam Stephenson/Stacy Alameida

7. DBE Collaboration Update
   Attachment 1: How to do Business with Metro
   (15 minutes)  Information
   Olga Lopez

8. TAP Update (Marketing & Outreach Efforts)
   (10 minutes)  Information
   Kyle Holland

9. Measure M Transit Ops 20% Working Group Update
   (10 minutes)  Information
   Rufus Cayetano
10. Metro Strategic Plan Overview  
   Attachment 2: Strategic Plan  
   (10 minutes)  
   Information  
   Tham Nguyen

11. FAP Update  
   (5 minutes)  
   Information  
   Manijeh Ahmadi

12. Access Update  
   (10 minutes)  
   Information  
   Matthew Avancena

13. Legislative Report  
   (10 minutes)  
   Information  
   Raffi Hamparian/Marisa Yeager  
   Michael Turner

14. Transit Industry Debriefing/Updates  
   (5 minutes)  
   Information  
   All

15. New Business  
   Information  
   All

16. Adjournment

Information Items:

90-day Rolling Agenda  
Summary of Invoices FY 2017  
Summary of EZ Pass Invoices FY 2017  
Subsidy Matrix FY 2017  
TDA-STA Capital Claims FY 2017  
TDA-STA Claims FY 2017

BOS Agenda Packages can be accessed online at:  
https://www.metro.net/about/bos/

Please call ANNELLE ALBARRAN at 213-922-4025 or SCOTT HARTWELL at 213-922-2836 if you have questions regarding the agenda or meeting. The next BOS meeting will be held on Tuesday, February 21, 2017, at 9:30 am in the Mulholland Conference Room, 15th Floor of the Metro Headquarters Building.
NOTE TIME: 1:30 PM

Thursday, January 26, 2017, 1:30 P.M.

Agenda
Los Angeles County
Metropolitan Transportation Authority

LOCAL TRANSIT SYSTEMS SUBCOMMITTEE
Gateway Building – TAP Conference Room (4th floor)

Call in (213) 922-4940
In house call ext. 24940

1. Call to Order
   Action
   Sebastian Hernandez, Chair

2. Approval of Minutes
   Action
   Sebastian Hernandez, Chair

3. Group Transit Asset Management (TAM) Targets for Local Provider Sub-recipients
   Action
   Randy Lamm, Metro

4. Access Services
   Information
   Eric Haack, Access

5. Metro Strategic Plan
   Information
   Tham Nguyen, Metro

6. Annual Nominations for LTSS
   Possible Action
   Sebastian Hernandez, Chair
   Susan Richan, Metro

7. Status of MOUs for FY17-21 (voluntary & non-voluntary)
   Information
   Susan Richan, Metro

8. Measure M Local Return Update
   Information
   Susan Richan, Metro

9. New Business, Date of Next LTSS Meeting
   Sebastian Hernandez, Chair
Agenda

Los Angeles County
Metropolitan Transportation Authority

Streets and Freeways Subcommittee

William Mulholland Conference Room – 15th Floor

1. Call to Order
   1 min
   Action (Bahman Janka)

2. Approval of Minutes
   Attachment 1: November 17, 2016 Minutes
   Attachment 2: Sign-in Sheet/Attendance Sheet
   Attachment 3: 90-Day Rolling Agenda
   Action (Subcommittee)

3. Election of 2017 Subcommittee Chair and Vice Chair
   5 min
   Action (Subcommittee)

4. Chair Report
   • Bicycle Coordinator Vacancy
   5 min
   Information (Bahman Janka)

5. Metro Report
   5 min
   Information (Fulgene Asuncion)

6. Caltrans Update
   5 min
   Information (Steve Novotny)

7. CTC Update
   5 min
   Information (Zoe Unruh/Patricia Chen)

8. Measure M Update
   15 min
   Information (Kalieh Honish)
9. Measure M Local Return Guidelines Working Group  
   Information (Susan Richan)  
   5 min

10. Metro Strategic Plan  
    Information (Tham Nguyen)  
    10 min

11. State and Federal Legislative Update  
    Information (Raffi Hamparian/Michael Turner)  
    10 min

12. New Business  
    5 min

13. Adjournment  
    1 min

The next meeting for the Streets and Freeways Subcommittee will be held on February 16th at 9:30 a.m. on the 15th floor, Mulholland Conference Room. Please contact Fulgene Asuncion at (213) 922 – 3025 should you have any questions or comments regarding this or future agendas.

Agendas can be accessed online at: http://www.metro.net/about/sfs/
Attachment 2

Subcommittee Actions
Disposition of Subcommittee Actions

January 2017

Bus Operations Subcommittee:

- Approved the December 6, 2016 meeting minutes
- Joyce Rooney (Beach Cities Transit) made motion to establish an FTA 5307 Process Working Group to revise the guidelines and update the application for the FY 2018 cycle. The motion was seconded by Susan Lipman (Santa Clarita Transit). The Motion was approved unanimously.
  - The Working Group will include the following individuals: Dana Pynn (Long Beach Transit), David Feinberg (Santa Monica’s Big Blue Bus), Nora Chin (LADOT), Susan Lipman, Joyce Rooney, and Michelle Caldwell (Foothill Transit)

Local Transit Systems Subcommittee:

- Approved the October 20, 2016 meeting minutes

Streets and Freeways Subcommittee:

- Approved the November 17, 2016 meeting minutes
- Approved the following 2017 Subcommittee positions
  - Chair: Bahman Janka
  - Vice Chair: Elizabeth Shavelson

TDM/Sustainability Subcommittee:

- Did not meet in January
Attachment 3

Draft January 4, 2017 Minutes

January 4, 2017 Sign-In Sheets
1. Call to Order/Roll Call
Brian Lam (Alternate Chair) called the meeting to order at 9:32 A.M., took roll and declared a quorum was present.

2. Agenda Reports by Standing Committees
   
   **Bus Operations Subcommittee (BOS)**
   - Last met on December 6, 2016
   - Received updates on:
     - Measure R Local Return Guidelines
     - State Transit Assistance (STA) Efficiency Standards
     - Working Group for Development of Measure M 20% Operations Guidelines and Memorandum of Understanding (MOU)
     - Collaborative Disadvantaged Business Enterprise (DBE) Efforts
   - Next meeting is scheduled for January 17, 2017

   **Local Transit Systems Subcommittee (LTSS)**
   - Did not meet in December
   - Next meeting is January 26, 2017

   **Streets and Freeways Subcommittee**
   - Last met on November 17, 2016
   - Received updates on:
     - Arterial ITS Configuration Management Group
     - Federal Transportation Earmark Repurposing
     - I-605 Corridor Improvement Project
     - California Local Streets and Roads Needs Assessment
   - Next meeting is scheduled for January 19, 2017
     - New Chair and Alternate Chair will be elected
Transportation Demand Management (TDM)/Sustainability Subcommittee

- Did not meet in December
- Next meeting date is to be determined

3. Chairperson’s Report (Fanny Pan, Metro)
A handout of the December 1, 2016 Metro Board meeting recap was distributed in lieu of an oral report.

Ms. Pan announced that Trolis Niebla (City of Lancaster) will be the new primary TAC representative for the League of California Cities – North Los Angeles County, and Mike Behen (City of Palmdale) will be the Alternate representative.

Ms. Pan reported that Renee Berlin (Senior Executive Officer, Countywide Planning) and Frank Flores (Executive Officer, Countywide Planning) have recently retired from the agency.

Ms. Pan announced that the US-101 Vignes Street on and off ramps towards Patsaouras Bus Plaza will be closed for construction for the next four months.

4. Consent Calendar
A motion to approve the November 2, 2016 TAC minutes was made by Jane Leonard (BOS) and seconded by Pat Proano (County of Los Angeles). The minutes were approved.

5. Measure M Update (Kalieh Honish, Metro)
Ms. Honish reported that Metro CEO, Phil Washington presented a Measure M Guidelines Development Plan in December 2016 and that staff is in the process of creating a Policy Advisory Council. Staff anticipates having the Advisory Council selected by April 1, 2017 in order to review the Measure M Master Guidelines. Release of the Measure M Master Guidelines for comment is expected in April 2017 and scheduled to be presented to the Board for adoption in June 2017. Ms. Honish noted that Metro had originally recommended that the Advisory Council would represent Transportation Consumers, Transportation Providers, and Accountable Jurisdictions, with eight members from each respective group; however, that will be expanded to nine members for each respective group in order to accommodate all the Council of Governments (COGs). All information regarding the Advisory Council has been released through Board Boxes that was sent to TAC members via email after the meeting.

Ellen Blackman (ADA) asked if the Consumer representatives will include persons with disabilities? Ms. Honish confirmed it will and noted that the Consumers group includes a category for Elderly and Disabled. Staff will also reach out to the American Association of Retired Persons (AARP) and other entities that serve the elderly and disabled population.

Ms. Honish reported that staff is hoping to conduct outreach in February 2017. The main criteria for members to serve on the Advisory Council are that they have access to resources that would allow them to provide quality representation and the outreach needed for their represented group. Staff is also available to provide resources to potential members to ensure that they are an appropriate conduit to serve as a representative.
Ms. Leonard asked if the Advisory Council is intended to be perpetual after the Measure M Guidelines are approved? Ms. Honish replied that the Advisory Council will most likely be perpetual as they will also be providing input on the Long Range Transportation Plan update and the Measure M decennial review. She elaborated that the Advisory Council will focus on advising policy decisions.

Larry Stevens (League of California Cities – San Gabriel Valley COG) asked what is the process for selecting members and if the Board will be making the final selection? Ms. Honish replied that the selection process has not been determined at the moment. Staff is still developing the Communication Plan for outreach and the basic structure of the guidelines.

Mr. Stevens asked how the role of the Advisory Council will affect the current role of TAC? Ms. Honish replied that both groups will have different roles. The role of TAC is to make specific comments on technical issues, whereas the Advisory Council only comments on high-level policy, focusing on the issues of equity, comprehensiveness, and communication.

Mr. Stevens commented that technical issues and policy are hard to separate. He is concerned that TAC’s role will be marginalized. David Feinberg (League of California Cities – Westside Cities) agreed and stated that the role of the Advisory Council sounds very similar to TAC. He is concerned about overlap. Ms. Honish replied that both groups complement each other in many ways, and overlap will sometimes occur because the COGs, City of Los Angeles, and the County of Los Angeles are represented in both groups. Staff hopes that this overlap will ensure better coverage.

Mr. Stevens asked if staff is intending to create Working Groups for each of the Measure M areas? Ms. Honish replied that there are Working Groups set up for Local Return, Advisory Council, and Oversight Committee. Ms. Leonard added that there is also a Working Group for Transit Operations composed of General Managers (GM) and Bus Operations Subcommittee (BOS) representatives.

Ms. Blackman asked if there is a way to recommend specific groups to be included in consideration for the Working Groups? Ms. Honish replied yes and to contact her directly with any recommendations on specific groups. She reiterated that staff does not have a plan in place yet but noted that they are working with the Communications team to ensure they are including all appropriate groups. She asked TAC members to forward suggestions to either herself or Ms. Pan to ensure that they are included in the future outreach effort.

Mr. Feinberg asked how Active Transportation Program (ATP) funding will apply to the Measure M Master Guidelines? Ms. Honish replied that the plan is still being developed.

Mike Behen (League of California Cities – North Los Angeles County) asked if there is a formal definition for “shovel-ready projects” that would be eligible for acceleration in Measure M? Ms. Honish replied that the acceleration of projects is being discussed in the Guideline development, but explained that “shovel-ready” as a term does not appear in the Measure M Ordinance. Mr. Behen requested that a formal definition of shovel-ready be included in the guidelines so there is no ambiguity. Ms. Honish replied that she would take the comment back to Metro’s Legal team.
Mr. Stevens asked how the projects prioritized by the COGs in the 2015 Subregional Mobility Matrix will be affected by the Master Guidelines? He cited for example, that the San Gabriel Valley COG identified $99 million for first/last mile improvements and is concerned that the projects prioritized by the COGs would not be considered. Heather Hills (Metro) referenced the third page of Attachment A of Ordinance #16-01, which lists all the Multi-Year Subregional Programs that Metro worked with the COGs to prioritize in the Subregional Mobility Matrix.

Mr. Stevens asked how the Master Guidelines will affect how funding for the Multi-Year Subregional Programs will flow to the COGs? Ms. Honish replied that the Master Guidelines will help determine project eligibility for the Multi-Year Subregional Programs, but assured TAC members that the Master Guidelines are not meant to get in the way of the COG’s priorities.

David Kriske (League of California Cities – Arroyo Verdugo Cities) asked how the COGs will be involved when funds are allocated? Mr. Hills replied that staff is still unclear on the mechanism of funding allocation. Ms. Honish replied that there will be a draft allocation process available by April 1, 2017 and assured TAC members that everyone will have a chance to provide input before Board adoption.

Mr. Kriske stated that Measure R had an open process that allowed the COGs to fund their projects and noted that the Arroyo Verdugo Cities would like Measure M to have a similar process. He noted that the Arroyo Verdugo Cities would like to be involved in developing the new process for Measure M. Ms. Honish noted that the intention of the new Master Guidelines is to ensure that funds dedicated to a certain category are spent for their appropriate purpose.

Mr. Kriske noted that it is important to develop a clear definition of a “shovel-ready project”. He noted that it was difficult to determine a definition for Highway Operational Improvements in Measure R, so it would be good to avoid any similar confusions for Measure M. Ms. Honish replied that she would relay the request to management, and reiterated that the term “Highway Operational Improvements” was in Measure R, whereas “shovel-ready” is not in Measure M.

Mr. Behen agreed that the definition of shovel-ready needs to be addressed. Ms. Honish replied that staff will also be defining what acceleration means.

6. **Metro Strategic Plan (Tham Nguyen, Metro)**
Ms. Nguyen reported that the Metro Strategic Plan is will codify Metro’s vision and mission, articulate its values, identify and describe its goals, and define strategies to achieve these goals. The Strategic Plan will create a 10-year plan that is consistent with the Long Range Transportation Plan (LRTP) and will include an update every five years.

The Strategic Plan involves a four step process. Step one involves reviewing existing plans; surveying employees, customers, and citizens; baseline existing functions and operations; and interviewing stakeholders. Step two is drafting the Strategic Plan, which would involve
trends, opportunities and challenges, establishing a vision, mission, guiding principles, and goals; a marketing strategy; and public input. Step three is Board adoption of the Final Metro Strategic Plan. Step four involves implementation and monitoring of the plan.

The next steps involve outreach from winter to summer 2017, which will involve reaching out to key stakeholders and conducting surveys to employees and to the public. Summer to fall 2017 will involve the completion and Board adoption of the Strategic Plan.

7. FTA Section 5310, 5316, 5317 (Ashad Hamideh, Metro)
Mr. Hamideh reported that staff released a Solicitation for Proposals for three federal funding sources: Section 5310: Enhanced Mobility of Seniors and Individuals with Disabilities Program; Section 5316: Job Access and Reverse Commute (JARC) Program; and Section 5317: New Freedom (NF) Program. A Section 5310 Working Group prepared recommendations for the allocation process for Section 5310, 5316, and 5317 funds, which staff will be moving forward with. The Working Group was comprised of members from LTSS, BOS, and the Accessibility Advisory Committee (AAC).

Mr. Hamideh reported that staff will be combining all three programs (Section 5310, 5316, and 5317) into one solicitation and will be requesting approval from the Board at the January 26, 2017 meeting. Staff will return to TAC at the June 7, 2017 meeting if there are any Appeals.

Mr. Hamideh noted that funds can be spent in the urbanized areas (UZAs) of Los Angeles-Long Beach-Anaheim, Lancaster-Palmdale, and Santa Clarita. The Federal Transit Administration (FTA) confirmed that a UZA can solicit funds from another UZA, provided that there is a nexus between the UZA that receives the funds and the project. For example, the agencies in the Santa Clarita UZA can solicit funds from the Los Angeles-Long Beach-Anaheim UZA if their project services both UZAs.

8. Call Project F3136 Update per May 2016 TAC Appeal (Lance Grindle, Los Angeles County Department of Public Works)
Ms. Pan reported at the May 2016 TAC Appeals meeting, the project sponsor stated that environmental issues had caused project delays. TAC had requested that the project sponsor return and provide a status update and a viable path forward through construction.

Mr. Grindle reported that the project consists of a road widening and two bridge reconstructions on The Old Road, from Magic Mountain Parkway to Turnberry Lane. TAC granted an extension for the project until June 2017. Mr. Grindle reported that LADWP has taken the necessary steps to move forward with the project. They have worked with the California Department of Fish and Wildlife to devise a methodology for demolishing the existing bridge and constructing the replacement bridge in a way to avoid all contact with the waters of the Santa Clara River and ensure no change in the morphology of the streambed. LADWP now has a model for which to base their demolition/construction plan and meet regulatory agency requirements for environmental impacts. Construction is expected to begin in 2021. LADWP would like to request a reprogramming of funds to FY 2020-2021.
Ms. Leonard asked what Call year the project was approved? Ms. Pan replied that the project was from the 2009 Call, with funding programmed for FY 14 and 15, for $15 million in Regional Surface Transportation Program (RSTP) funds.

Ms. Pan asked if LADWP has obligated any funds yet? Mr. Grindle replied no.

Ms. Pan asked TAC members if they are supportive of what LADWP is requesting? No TAC members had any objections. Ms. Pan noted that this is a reprogramming action that will require Board approval.

Mr. Stevens asked what specific milestones did TAC request from the project sponsor in the project update? Ms. Pan replied that at the May 2016 TAC Appeal meeting, TAC members requested the project sponsor to return at the January 4, 2017 meeting to provide a “viable and timely path forward to complete the project.” Attachment 5 of the agenda packet provides an updated project schedule, with project completion expected in September 2023.

Ms. Leonard asked if any other project funds are at-risk because of the delays? Mr. Grindle replied that the only funding source at-risk is from the Call. The project has acquired federal Highway Bridge funds, but that can be used for at least 10 years or more.

Ms. Pan noted that since there are no TAC objections, staff will be taking the project back to management for review.

9. Measure M Local Return Guidelines Working Group (Susan Richan, Metro)
A handout of a memo for Measure M Local Return Guidelines from Mr. Washington was distributed to TAC members. Ms. Richan reported that the Local Return Guidelines Working Group will consist of representatives from both small and large jurisdictions from across the County. Staff will announce the Working Group participants on January 6, 2017. Four to six bi-weekly meetings will be held starting Thursday January 19, 2017, at 2:00 PM at Metro headquarters.

Ms. Richan reported that staff received 46 volunteers for the Working Group. Staff will be meeting on Friday January 6th to narrow down the volunteers to approximately 12 members. Ms. Richan noted that attending all the meetings will be necessary to meet the March 30, 2017 deadline for creating the guidelines.

Mr. Stevens asked if the Working Group members will only consist of staff or if it also included elected officials? Ms. Richan replied that the current list of 46 people are all volunteers, and she did not know if they are staff or elected officials.

Mr. Stevens noted that the San Gabriel Valley COG felt that this process was conducted as an open call, instead of being more geographically representative. Ms. Richan replied that staff wanted to give everyone a chance to volunteer, since there are 88 cities plus the unincorporated County to consider.

Mr. Kriske noted that this process is very administrative-heavy and asked if the process will be streamlined, such as by making it consistent with Measure R, Prop A, and Prop C guidelines?
Ms. Leonard replied that the purpose of the Master Guidelines is to create a consistent approach.

Lisa Rapp (League of California Cities – Gateway Cities) asked if staff has a method for narrowing down the list of volunteers? Ms. Richan replied that the biggest factor will be geographical representation.

Valerie Watson (Pedestrian Coordinator) asked if there have been other factors in the Working Group selection besides geography? Ms. Richan replied that geography is currently the only factor. Ms. Watson suggested also considering areas of expertise as a factor. Justine Garcia (LTSS) agreed with Ms. Watson and noted that areas of expertise vary widely among different city staff, so finding a balance in expertise is important to balanced representation. Ms. Richan acknowledged and replied that she would let staff know.

Mr. Stevens asked if the Working Group will be all jurisdictional representatives or will there be public consumers or other interest groups? Ms. Richan replied that it will only consist of jurisdictional representatives.

10. Cesar Chavez Bus Stop Improvements (Marie Sullivan, Metro)
Ms. Sullivan reported that Metro received $2 million from the FTA Ladders of Opportunity grant for the Cesar Chavez Bus Stop Improvements project. Staff is considering six improvement sites along Cesar Chavez Ave. for bus stop improvements.

Two sites on the corner of Cesar Chavez Ave. and Alameda St. include existing City of Los Angeles bus shelters and street furnishings. Staff will be working with the City for street furniture upgrades. The eastbound stop on the corner of Cesar Chavez Ave. and Vignes St. will be a discharge only stop, and primary boarding and alighting have been moved to the eastside of Vignes St. Ms. Sullivan reported that the stop currently has an average of 1,700 daily boardings, and the project will build a transit pavilion for this stop. Amenities proposed for the transit pavilion include a shade structure, seating for transit riders, system maps, real time signage, bicycle lockers, bicycle racks, a bike share kiosk, and enhanced landscaping.

Ms. Sullivan reported that Gensler has been procured as the project designer, and that staff has completed the site analysis and first outreach meeting. The project goals for the bus stop would include a space that would be safe, comfortable, intuitive, informative, maintainable, and beautiful. Ms. Sullivan noted that safety will be a key design feature. The first outreach meeting consisted of surveys from current transit riders using the stop. Notable results were a need for bike storage rather than racks because of safety concerns, and an innovative bus shelter. Real-time digital signage was the biggest request from the surveys.

Next steps for the project include developing a design vision, holding a second community meeting in late January 2017 and conducting an online survey, and obtaining a 35% design from Gensler. Staff is anticipating to release an RFP for construction during summer 2017 and begin construction in fall 2017.

Ms. Leonard asked if there are other transit agencies using the stop? Ms. Sullivan replied that currently only Metro buses use the stop.
Ms. Blackman asked if there will be design considerations for persons with disabilities? Ms. Sullivan replied yes, that is a key concern for staff. Staff is ensuring that crossing Vignes to reach the stop will be as safe as possible for ADA passengers.

Ferdy Chan (City of Los Angeles) asked if the project will include an easement with the City of Los Angeles? Ms. Sullivan replied that all of the transit pavilion improvements will be on Metro property. Metro will be working with the City of Los Angeles and their street furniture contractor for the two sites on the corner of Cesar Chavez Ave. and Alameda St.

Mike Bagheri (TDM/Sustainability) asked if the buses will stop on the right-turn only lane on Cesar Chavez Ave.? He noted that cars may try to bypass the stopped bus and make a right turn from the second lane, which may cause a safety issue. Ms. Sullivan replied that Metro has moved the stop across Vignes St., which helped to alleviate that issue.

Ms. Watson asked if the grant funding could also be used towards signal improvements? Ms. Sullivan replied that wasn’t in the original scope, but is a good idea to incorporate. Staff would have to work with FTA to incorporate the idea. Mr. Kriske also agreed that signal improvements would be a good idea.

Mr. Bagheri asked if a scramble crossing is warranted? Ms. Sullivan replied that most of the existing travel patterns are not diagonal, so a scramble may not be the most appropriate strategy.

11. First/Last Mile Activities (Jacob Lieb, Metro)
Mr. Lieb reported that the Board approved work approach and resources needed to carry out the direction in Motions 14.1 and 14.2 for first/last mile. The next steps will involve procuring consultants in three areas of work. The first task of consultant work will involve preparing first/last mile station area plans for 254 locations on the existing transit network. The second task is to create a set of guidelines describing how Metro will integrate first/last mile components into future transit capital projects. Mr. Lieb noted that one of the directions from the Board Motions was that starting with the Purple Line Extension, all future capital projects will have to include a first/last mile component. The third task of consultant work will be preparation of first/last mile plans for the Purple Line Extension Section 2 and 3 stations. Staff will be in discussion with cities that have Phase 2 and 3 stations in their jurisdictions before procurement takes place.

Mr. Lieb noted that the Board action also approved new staffing to support the first/last mile efforts, so staff will also be hiring and Mr. Lieb welcomed referrals.

Mr. Lieb reported that as a part of Measure M, staff will also be creating Program Guidelines for the region wide 2% ATP and numerous subregional active transportation and first/last mile programs.

Mr. Stevens asked if there is specific funding allocated to the first/last mile analysis of the Purple Line Extension? Mr. Lieb replied yes. Mr. Stevens asked why there is not similar funding for the Gold Line Foothill Extension Phase 2? He noted that the Gold Line
Construction Authority staff informed him that they do not want to incorporate first/last mile components, so he wants Metro to step in to apply those strategies. Mr. Lieb replied that because Purple Line Extension Phase 2 is going into construction and Phase 3 is going into final design, staff must act quickly in order to incorporate first/last mile components into the design. He noted that staff would like to apply first/last mile strategies to projects as a whole, but every project will be different because of the different phases of development. He noted that the Gold Line Foothill Extension Phase 2 will be given attention in the future and welcomed Mr. Stevens’s advice when the time comes.

Ms. Watson asked what is the catchment area of each station? Mr. Lieb replied that the studies will be incorporating a half-mile walkshed and a three-mile bikeshed, consistent with the First/Last Mile Strategic Plan. He noted that staff is also currently developing plans for the Blue Line, which involves an intensive analysis of the streets and intersections within the walkshed and a less intensive analysis for bike access.

Ms. Watson asked what are the sources of funding for these studies? Mr. Lieb replied that for the Purple Line Extension study, staff will develop a funding plan and then go to the Board for further direction. For capital projects other than the Purple Line Extension, first/last mile components will be defined as part of the project as a whole, and therefore first/last mile efforts are included in the entire project cost.

Ms. Watson commented that first/last mile components should be incorporated into the planning or design stage of a transit project, rather than adding features after the capital project has already been built. She suggested taking this approach in future scoping efforts, noting that many station designs and their connectivity to the surrounding areas don’t seem to be pedestrian-friendly. Mr. Lieb acknowledged and agreed with Ms. Watson. He noted that at the current stage, staff is catching up with the Purple Line Extension stations, but their goal and vision would be to have all components designed as one project.

Corinne Ralph (City of Los Angeles) asked if the definition of first/last mile involve modes of transportation other than walking or biking? Mr. Lieb replied the First/Last Mile Strategic Plan places an emphasis on reaching Metro stations through active modes, but staff’s approach is to include any component that will help riders get to Metro stations more easily and safely. He noted that staff has had ongoing discussions with Transportation Network Companies (TNCs) about the potential for pilot studies. Mr. Lieb noted that he is particularly interested in studying demand for curb space for TNC pick-ups and drop-offs at Metro stations.

Ms. Ralph noted that many Metro riders also connect to the system using LADOT DASH buses, and would like to see DASH connections considered. Mr. Lieb agreed and noted that Metro’s Systemwide Planning group is currently completing a Metro Transfers Design Study, which seeks to improve bus-to-rail, bus-to-bus, and rail-to-rail plus bus connections.

John Walker (County of Los Angeles) asked if allocation of the 2% ATP funds from Measure M will be part of the guidelines being developed? Mr. Lieb replied that it is currently too early to say, but what staff will be doing for certain is developing a set of master guidelines that would start to address how funding is allocated.
12. ATP Update
A handout of the ATP update was distributed to TAC members in lieu of an oral report.

13. CTC Update
A handout of the California Transportation Commission (CTC) update was distributed in lieu of an oral report.

14. Other Business
Mr. Stevens presented his concern that TAC members’ comments on items are not being taken into consideration. As an example, he noted that he had commented on the Parking Management Program when it was an informational item on the TAC agenda. He had commented that Metro staff should coordinate with cities on the parking impacts that paid parking might have on the surrounding city streets. However, the staff report to the Board showed no mention of his concern. He requested to schedule an agenda item at a future TAC meeting to have a discussion to address this issue.

15. Adjournment
Ms. Pan adjourned the meeting and reported that the next scheduled TAC meeting is February 1, 2017 in the William Mulholland Conference Room on the 15th floor at 9:30 am. If you have questions regarding the next meeting, please contact Brian Lam at (213) 922-3077 or email lamb@metro.net.
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<td>1. Susan Price/Vacant</td>
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<td>1. Anne Louise Rice/Karen Sakoda</td>
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<td>1. Eyvonne Drummonds/Kathryn Higgins</td>
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<td>1. Warren Whiteaker/Annie Nam</td>
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<td>1. Lupe Valdez/LaDonna DiCamillo</td>
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TAC Audience Attendance
January 4, 2017
Attachment 4

February 18, 2016 Board Motion – Agenda Item #57

Environmental & Sustainability Efforts to Further Metro’s Goals to Reduce Emissions, Clean the Air & Improve Urban Areas
EXECUTIVE MANAGEMENT COMMITTEE
FEBRUARY 18, 2016

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.

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.


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:
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
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.
Attachment 5

October 20, 2016 Board Report – Agenda Item #36

Sustainability Strategies
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 is 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 FY 18. 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

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Phillip A. Washington
Chief Executive Officer
Attachment 6

Countywide ExpressLanes Strategic Master Plan Presentation
Countywide ExpressLanes Strategic Plan

Metro Technical Advisory Committee
February 1, 2017

Background and Study Assumptions

• In November 2014, the Metro Board directed staff to prepare an ExpressLanes Strategic Plan

• Key Features:
  – Consistent with SCAG Regional ExpressLanes Study
  – Developed in conjunction with Caltrans District 7
  – Freeways with existing, in construction, or planned HOV (High Occupancy Vehicle) lanes were considered for conversion into ExpressLanes
Methodology

- Corridor Screening
- Financial Screening
- Refinement

**Corridor Screening**

- Two step process –
  - SCAG regional travel demand model used to forecast traffic volume in 2020 and 2035
  - RapidTOM (Toll Optimization Model) takes SCAG model output and calculates the number of vehicles and amount they are willing to pay to use the ExpressLanes
- Evaluation Metrics:
  1) Value of travel time savings
  2) HOT lane person throughput
  3) Average peak period vehicle speeds in the general purpose lanes
Financial Screening

Two step process:

1) Estimate gross revenue generation for each corridor

2) Estimate Net revenue, calculated by subtracting projected gross revenue from construction and operations costs based on actual costs incurred on the I-10 and I-110 ExpressLanes

Composite Score

- Each corridor was ranked into quintiles (top 20%, second 20%, third 20%, fourth 20%, and fifth 20%) for the three corridor screening metrics and financial screening
- The ranks were averaged to get a composite score. For example, if a project scored in the top 20% in each criteria then the composite ranking would be in the first quintile.
Refinement

Four qualitative criteria were used to refine the results of the corridor and financial screening:
- Connectivity with other existing and potential express lane corridors;
- Transit benefits;
- Funding availability;
- Ability to provide two ExpressLanes in each direction.

Project Tiers

- Based on the corridor financial screening metrics and the refinement criteria, projects were placed into three tiers:
  - Tier 1 – near-term (within 5-10 years)
  - Tier 2 – mid-term (within 15 years)
  - Tier 3 – longer-term (within 25 years)
## Recommended Tier 1 Projects (5 to 10 Years)

<table>
<thead>
<tr>
<th>Project</th>
<th>Measure M Funding</th>
<th>Funding Availability</th>
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<tbody>
<tr>
<td>I-405 from I-10 to US-101</td>
<td>$260,000,000</td>
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</tr>
<tr>
<td>I-105 from I-405 to I-605</td>
<td>$175,000,000</td>
<td>2027</td>
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<tr>
<td>I-405/I-110 Int. HOV Connect Ramps and Interchange Improvements</td>
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<tr>
<td>I-605/SR-60 Interchange HOV Direct Connectors</td>
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<td>2043</td>
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<td>I-110 ExpressLane extension south to I-405/I-110 interchange</td>
<td>$51,500,000</td>
<td>2044</td>
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<tr>
<td>I-605 from I-10 to I-405</td>
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<td>I-405 from I-10 to LA/Orange County line</td>
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<td>I-10 from I-605 to LA/San Bernardino County line</td>
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[Map of Recommended Tier 1 Projects (5 to 10 Years)]
### Recommended Tier 2 Projects (15 Years)

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<td>I-5 from I-605 to LA/Orange County line</td>
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<td>I-5 from SR-134 to SR-170</td>
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<td>SR-57 from SR-60 to LA/Orange County line</td>
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<td>SR-91 from I-110 to LA/Orange County line</td>
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<td>SR-134 from SR-170 to I-210</td>
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<td>I-210 from SR-134 to LA/San Bernardino County line</td>
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<td>I-405 from I-101 to I-5</td>
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### Recommended Tier 3 Projects (25+ Years)

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<td>I-5 from SR-170 to SR-14</td>
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<td>SR-60 from I-605 to LA/San Bernardino County line</td>
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<td>SR-170 from I-5 to SR-134</td>
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<td>SR-14 from I-5 to Avenue P8</td>
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<td>SR-118 from I-5 to LA/Ventura County line</td>
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Funding Options

- Measure M
- Bonding
- TIFIA loans
- Grants
- Net toll revenue loans from other ExpressLanes

Recommendations/Board Actions

Request the Board to:

- Receive and file the report; and,

- Authorize the CEO to:
  - Initiate planning studies including a comprehensive financial plan for Tier 1 projects and submit those projects as a network to the California Transportation Commission to request tolling authority