Metro Countywide Sustainability Annual Report

APRIL 2019

Metro

Acknowledgments

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Table of Contents

Contents


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Introduction

The 2018 Countywide Sustainability Annual Report communicates progress made toward improving sustainability in Los Angeles County as defined by the sustainability principles and priorities in Metro's 2012 Countywide Sustainability Planning Policy (CSPP). The purpose of the CSPP is to act as a guide to integrate sustainability into Metro planning functions and in doing so incorporate sustainability into the Metro activities that shape our Los Angeles County economy, our communities, and our environment.

Three key themes compose the CSPP: Connect, Create, and Conserve. These themes are the summation of the principles and priorities illustrated below. The principles and priorities demonstrate the breadth of Metro's commitment to creating a sustainable region and future for Los Angeles County.

Three Principles and Priorities of CSPP

> Connect People and Places

> Create Community Value

> Conserve Resources

This report includes two main sections: 1) sustainability case studies, and 2) program metrics that provide status updates on Metro's efforts to implement the CSPP.

Case studies provide on-the-ground examples of sustainability progress that bring principles and concepts of sustainability to life. The transportation-related projects and initiatives showcased in this report highlight but a sample of countywide sustainability accomplishments of Metro and its partner agencies over the past several years. This array of success stories represents the conviction and determination with which people come together to improve their quality of life. All of the case studies promote sustainability features and demonstrate multiple project benefits, among them improved mobility and safety, reduced environmental impacts, and implementation of new technologies.

Following the case studies are a set of qualitative program metrics. This section provides a status update on implementation action items related to CSPP and various Metro sustainability programs. In addition, Metro staff are currently developing a set of quantitative sustainability performance metrics to more accurately measure countywide sustainability efforts. The metrics are being closely coordinated with the update of the Metro Long Range Transportation Plan (LRTP). Future Sustainability Annual Reports will include these metrics once completed.

Sustainability Case Studies

Sustainable mobility is a people-focused practice that takes a more expansive view of transportation planning. It not only asks the question of "How do we efficiently and safely move people?" but also explores how we can do so in a way that adds value for people, the environment, and the communities we connect. More than just an eco-friendly effort, sustainable mobility is a systems-based approach to transportation that seeks to advance social equity, conserve resources, create healthy communities, and support our regional economy—all in the service of connecting people to places.

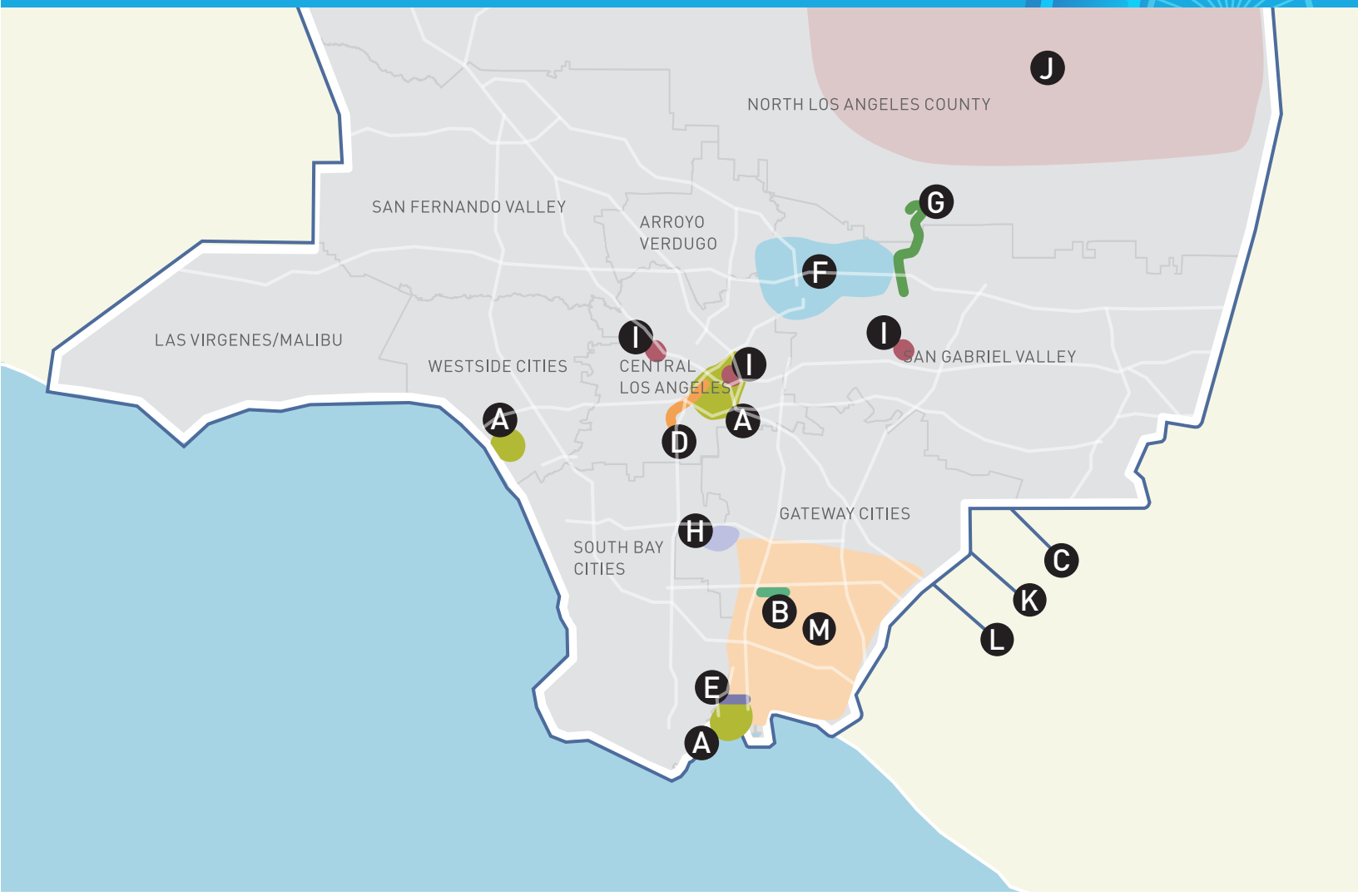
The case studies in this report illustrate this vision. They highlight key successes, creative approaches, and opportunities that are intended to inspire action in others. Many of these projects represent promising opportunities that other organizations in the county can emulate to advance sustainability throughout the region.

Thirteen projects were selected that exemplify innovative, inspiring, and practical approaches to advancing sustainability in Los Angeles County. Each project illustrates benefits related to Metro's core sustainability principles and priorities: ***Access***, ***Green Modes***, ***Healthy Neighborhoods***, ***Prosperity***, ***System Productivity***, and ***Urban Greening***. These case studies created meaningful results that resonate with multiple audiences, encouraging people to opt for healthy travel modes and participate in physical activity. The case studies span a diversity of land uses, geography, and travel patterns around the county.

Many of the case study projects demonstrate multiple CSPP principles of sustainability; a primary sustainability principle has been identified for each case study as noted below.

Sustainability Case Studies	Primary Sustainability Principles
Metro Bike Share	System Productivity
Artesia Boulevard Protected Bike Lanes	Healthy Neighborhoods
Metro Open Streets Program	Healthy Neighborhoods
MyFigueroa	Healthy Neighborhoods
West Anaheim Street Reconstruction and Improvement	Urban Greening
Pasadena Sustainable Transportation Performance Measures	Green Modes
Chantry Flat Pilot Shuttle Project	Access
Willowbrook Area Access Improvements	Green Modes
Metro Bike Hubs	Prosperity
AVTA Electric Fleet Conversion Project	Green Modes
Metro CNG–Near-Zero Emission Buses	Green Modes
Metro Zero Emission Bus Master Plan	Green Modes
Long Beach Transit Clean Bus Fleet Conversion	Green Modes

Sustainability Case Study Locations



SUSTAINABILITY CASE STUDIES

- A Metro Bike Share
- B Artesia Boulevard Protected Bike Lanes
- C Metro Open Streets Program (countywide)
- D MyFigueroa
- E West Anaheim Street Reconstruction and Improvement
- F Pasadena Sustainable Transportation and Performance Measures
- G Chantry Flat Pilot Shuttle Project
- H Willowbrook Area Access Improvements
- I Metro Bike Hubs
- J AVTA Electric Fleet Conversion Project
- K Metro CNG – Near-Zero Emissions Buses (countywide)
- L Metro Zero Emission Bus Master Plan (countywide)
- M Long Beach Transit Clean Bus Fleet Conversion

Metro Bike Share

PRIMARY SUSTAINABILITY PRINCIPLE

SYSTEM PRODUCTIVITY

Project Description

Metro Bike Share is a point-to-point, 24-hour, on-demand transit system that allows customers to check a bike out in one location and check it in at their destination, without having to return to the point of origin. This regional program is accessible to locals and visitors alike. Anyone over the age of 16, with a registered Metro TAP card or credit card, is able to bike and ride. It integrates with existing Metro services and improves the reliability, efficiency, and usefulness of Metro's transportation system. The goal of this program is to build a robust system that offers transportation options for short trips, first/last mile connections, and a seamless user experience through Transit Access Pass (TAP) integration. There are multiple ways to ride with daily, monthly, and annual passes available.

Metro recently introduced 10 new electric pedal-assist bicycles to the existing bike-share fleet on a pilot basis. The electric pedal-assist bicycles are perfect for climbing hills, shortening commutes, or just covering more ground. With electric pedal-assist technology, bike share becomes a more accessible option for people of all fitness levels, seeking to get across town quickly and sustainably.

Bike-share stations are sited in convenient locations to connect riders to transit hubs and key activity centers. The stations are visible from the street, easy to reach, and located in areas with high demand. Their average size is approximately 50 feet in length, though they may be smaller or larger. Good locations include parking lanes, plazas, or open areas that do not affect traffic circulation.

One of the lessons learned is that the stations were initially placed too close together. The network needs to be extended across Downtown LA to reach more people and destinations. The program is currently working on a relocation plan to expand and improve service. The bike stations closest to rail see the highest ridership. Each bike station location is different, and some areas may require the reconfiguration of on-street parking to add a station.

Most of the bike stations run on solar power.

Metro has plans to expand the bike share system to bring it to new communities through the year 2021.

Location
Los Angeles

Lead Agency
Metro

Total Cost
$22 million

Dates
2016-2018

Project Type
Bikeshare, Pilot Project

Funding Type
LA Metro and City of Los Angeles

Funding Sources
Local Transportation Fund, Local Return Funds (Measure R and Proposition C), Proposition A, Reallocated Community Redevelopment Agency Project Funding

Metro Bike Share

Hundreds of bikes available 24/7, 365 days a year within a half-mile radius of transit stations in Downtown Los Angeles

Project Benefits

The project reduces single-occupancy vehicle trips and provides a healthy and active mobility option.

Locating bike-share stations in underrepresented communities can improve residents' mobility by providing affordable access to bicycles. Placing the stations near neighborhoods and transit lines that low-income riders use will increase the likelihood that these customers can use the shared bikes to connect with transit as part of their regular travel.

A cultural shift in viewing bike share as a mode of travel rather than recreation requires a new pricing structure and system orientation geared toward transportation use.

Artesia Boulevard Protected Bike Lanes

PRIMARY SUSTAINABILITY PRINCIPLE HEALTHY NEIGHBORHOODS

Project Description

The City of Long Beach created protected bike lanes along a half-mile stretch in both directions of Artesia Boulevard from Atlantic Avenue to Orange Avenue. Portions of the paths are "parking-protected," meaning that bicyclists ride between parked cars and the sidewalk. This buffer of parked cars protects cyclists from moving vehicles. Merge zones at intersections and bus stops where vehicles may cross the bike lane are marked with a dashed green pavement to reduce conflicts between people walking and driving. This project piggybacked on an opportunity to reconfigure and restripe Artesia Boulevard in 2016 when a gas line project along the corridor required resurfacing of the road.

The lanes feature green flexible marker posts, rubber curbs, and intermittent green pavement markings, which together serve as traffic-calming devices. The marker posts are reflective bollards made of polyethylene plastic with ultraviolet-light inhibitors to increase durability. The City of Long Beach has since extended the bike lane bollards on similar projects. Long Beach would like to phase out the use of wheel stops due to potential negative impacts on drainage, street cleaning, and maintenance costs. However, they are helpful in identifying the parking lanes and guiding motorists to park in the right locations.

The City plans to develop protected bike lanes for the entire length of Artesia Boulevard. The Long Beach Department of Public Works regularly evaluates other routes where protected bike lanes can be installed. Long Beach has demonstrated a strong commitment to supporting bicycling. Its Bike Long Beach initiative focuses on three areas: bicycle friendly roads and bikeways, bicycle parking and support facilities, and community outreach addressing safety and education.

Location
City of Long Beach

Lead Agency
City of Long Beach

Total Cost
$216,000

Project Type
Protected Bicycle Lanes

Funding Type
Metro Local Return

Funding Sources
Proposition C Local Return

Artesia Boulevard Protected Bike Lanes

"By creating additional protected bike lanes and expanding our bicycle network, we are ensuring our streets contribute to community life and our overall livability." –Mayor Robert Garcia

Project Benefits

Bike Long Beach programs build and encourage a thriving bike culture within the city. This project helps to implement the City's vision not only for bicycling and walking as a transportation mode but also as a way of life. The bike program is designed to improve the safety, health, and economic well-being of the community.

Bike Long Beach offers classes and workshops for all ages, rides around the City, and incentives from local businesses. Bicycle safety rodeos, discounts, and safety tips are available on the program's website.

This project has been well-received by the adjacent businesses and nearby communities.

Metro Open Streets Program

PRIMARY SUSTAINABILITY PRINCIPLE

HEALTHY NEIGHBORHOODS

Project Description

Open Street events are temporary one-day events that close streets to vehicle traffic and open them to people. The community can reimagine and experience their streets while walking, biking, rollerblading, or pushing a stroller in a car-free environment. Open Streets are a popular strategy in communities looking for innovative ways to encourage shifts to sustainable modes of transportation, reduce traffic congestion, and improve public health.

The inspiration came from Central and South America. "Ciclovias" which translates to "bike path," originated in Bogota, Colombia, in 1974. The City of Los Angeles adopted this concept in 2010 and named it CicLAvia. The first Metro Open Street event was in organized in 2014.

Metro Board Motion 72 directed staff to develop a competitive grant process and allow cities to implement Open Street events. The program provides opportunities for riding transit, walking, and riding bikes on city streets. Further, the initiative encourages people to try new transportation modes and supports local multimodal policies and infrastructure.

Metro provides grant funding for Open Streets events in communities throughout the county. The first two grant cycles were successful in aligning with the Board's recommendations.

All past and upcoming events and grant cycles are available at www.metro.net/projects/active-transportation/metro-open-streets-grant-program/

Location

Los Angeles County

Lead Agency

Metro

Total Cost

$8 million to date

Project Type

Outreach and Education, Complete Streets

Funding Type

Federal funding from 2014 to mid-2016, Metro since July 2016

Funding Sources

June 2014-June 2016: Congestion Mitigation and Air Quality (CMAQ) Program by the U.S. Department of Transportation's Federal Highway Administration
July 2016-Present: Metro Right-of-Way Lease Funds

Metro Open Streets Program

Photo credit: BraceroLA, CicLAvia

Awards and Recognition

> Certificate of Recognition, City of Downey, June 2017

Project Benefits

Open Streets have become a significant contributor to Metro's overall strategy to increase mobility and expand multimodal infrastructure throughout the region. They promote first/last mile connections and fulfill the Sustainable Communities Strategy Plan, as developed by the Southern California Association of Governments.

The events have taken a significant number of cars off the streets over the last three years, decreasing the region's carbon footprint. Estimates show that the program directly results in an estimated annual reduction of 41,000 pounds of emissions and a decrease of 9.5 million vehicle miles traveled per year.

MyFigueroa

PRIMARY SUSTAINABILITY PRINCIPLE HEALTHY NEIGHBORHOODS

Project Description

MyFigueroa (MyFig) is a transformative complete street corridor project that delivers streetscape, safety, and mobility improvements for all road users. The project showcases how well a street can function and feel when it is focused on people. Complete streets provide a better balance of amenities for people on foot, on bike, using transit, and driving.

The MyFig corridor stretches along South Figueroa Street from 7th Street south to Martin Luther King Jr Blvd. It also includes extensions on 11th Street east of Figueroa and Martin Luther King Jr Blvd west of Figueroa.

Project elements, such as bicycle facility improvements, new bus stop islands, curb extensions, street trees, bicycle signal detector loops, high-visibility crosswalks, wider sidewalks, and curb extensions make this street an attractive and safe location. Street trees and 3,500 square feet of landscaping help transform 11th Street into a linear park.

Connectivity is a primary feature of MyFig. The corridor connects multiple residential areas and activity centers with transportation hubs. For example, several affordable housing projects and other residential centers have access to bus and rail stations. Other hubs serve the Silver, Expo, Blue, Red, and Purple lines. Furthermore, it allows reaching numerous regional activity centers along the Figueroa corridor like the Exposition Park Museums, the University of Southern California, the Sports and Entertainment District, and the Financial District in Downtown Los Angeles. Finally, it provides new and safe transportation options to connect new residents and visitors to transit, parks, and other parts of downtown.

Location

Figueroa Street from 7th Street to Martin Luther King Jr Blvd

Lead Agency

City of Los Angeles

Total Cost

$21.5 million to date

Project Type

Complete Street Project

Funding Type

State of California Infill Infrastructure Grant Program through the State Housing and Community Development Department

Funding Sources

Prop 1C Grant

MyFigueroa

Awards and Recognition

> American Society of Landscape Architects Quality of Life

Project Benefits

More than a mobility project, MyFig is about encouraging the development of new housing along the Figueroa corridor and in the entire project area (including 11th St. and Martin Luther King Jr Blvd). When the project funding was granted in 2008, at least 12 housing developments were planned within the project area, with over 2,200 units and 338 of those slated to be affordable.

Now, most of those developments are complete, and the stretch of Figueroa through South Park and towards Exposition Park has already been transformed into a denser, more vibrant area. Parking lots have given way to new businesses and new homes—including the YWCA Los Angeles Jobs Corps Center (Olive and 11th Streets), which provides 200 new units of affordable housing, as well as career technical training for young people.

West Anaheim Street Reconstruction and Improvement

PRIMARY SUSTAINABILITY PRINCIPLE — **URBAN GREENING**

Project Description

The Port of Long Beach (POLB), in partnership with the Long Beach Public Works, improved West Anaheim Street from the Los Angeles River to the western city limit. The port viewed this project as an opportunity not only to repair the deteriorated pavement but also to address accessibility deficiencies for people walking and to improve the quality of life in the community with sustainable design and construction.

The port was able to stockpile and recycle the majority of the existing pavement for the new roadway and other port projects. It eliminated the need for hundreds of long-distance truck trips. This portion of West Anaheim Street serves as a gateway for the port to the I-710 corridor, and local businesses need to accommodate large truck access.

The project team conducted an extensive outreach program to determine the impacts and remediation needed for local businesses and the surrounding community. Information collected during the outreach effort was incorporated into traffic management plans, phasing and detours plan to minimize construction impacts to port operations, public transit, local businesses, and the community, while assuring reliable goods movement throughout the project.

Location

Anaheim Street in West Long Beach from the Los Angeles River to 9th Street

Lead Agency

Port of Long Beach, City of Long Beach Department of Public Woks

Total Cost

$11 million

Project Type

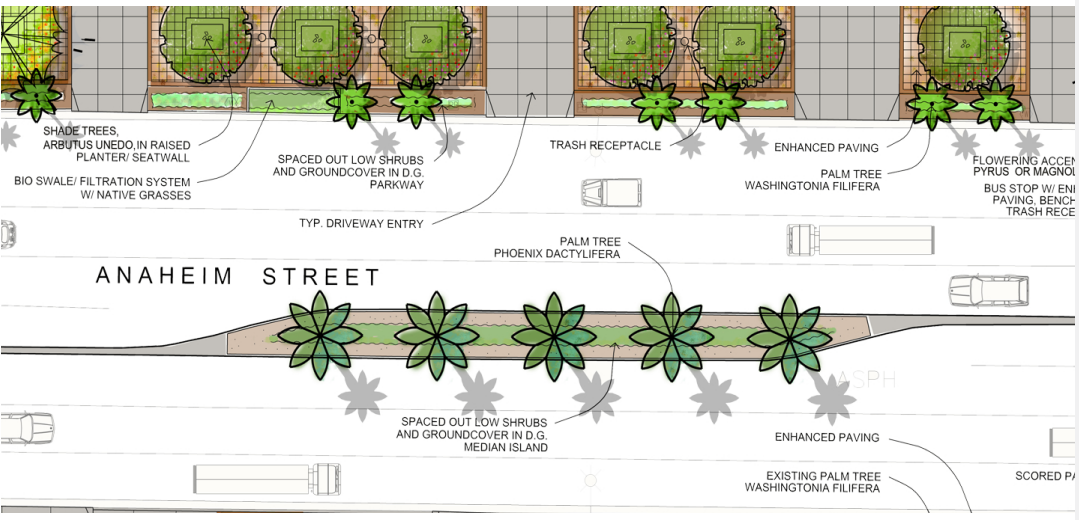
Street Improvement

Funding Type

Port Operations Fund and Los Angeles County Measure R Fund

Funding Sources

Port of Long Beach Revenue and Los Angeles County Tax



West Anaheim Street Reconstruction and Improvement

Project Benefits

In addition to the pavement reconstruction, the agency provided access for people with limited mobility, improved water quality, installed parkway and median landscaping, integrated new technology, and improved sidewalks, driveways, and bus-stops.

Long-term water quality enhancements include low-flow irrigation, drought-tolerant landscaping, permeable pavers, vegetated bioswales, and biofiltration devices. Drought-tolerant landscaping helps conserve water, bioswales naturally filter heavy metals and other contaminants, and stormwater-filtering tree box planters minimize polluted runoff. Upgrades to curb ramps, sidewalks, and driveways improved access for people walking, while ADA-compliant sidewalks, wheelchair-access ramps, and user-friendly bus-stop furnishings gave access for people rolling. Energy-efficient LED streetlights, in-road traffic monitoring loops, adjustable signals to ease the flow of traffic and traffic signals improvements for better visibility help both drivers and people on foot. Other technology upgrades, such as push buttons and countdown signals for crosswalks, were installed to improve and increase foot traffic. The construction crew also reused Crushed Miscellaneous Base (CMB) and smoothened roadway surface to improve driving conditions.

Since West Anaheim Street is a major access road for the port complex, its reconstruction created a safer and more environmentally friendly corridor. The project is an excellent example of balancing demands for goods movement and environmental stewardship.

Coordination between local, regional, and state agencies, with extensive outreach to local businesses and neighborhood groups, ensured every community member had a voice. With a lifespan of 25 years, the improvements will serve the community well into the future.

The project's environmentally sustainable design serves as a model for future roadway reconstruction projects.

Awards and Recognition

- 2014 American Public Works Association Project of the Year Award
- 2015 California Transportation Foundation (CTF) Transportation Awards
- 2015 American Association of Port Authorities (AAPA) Environmental Awards

Pasadena Sustainable Transportation Performance Measures

PRIMARY SUSTAINABILITY PRINCIPLE

GREEN MODES

Project Description

The City of Pasadena is the first city in Southern California to adopt new transportation impact measures to analyze projects under the California Environmental Quality Act (CEQA). The new measures move Pasadena beyond the prior car-focused standard "Auto Level of Service (LOS)" to a new set of performance measures that support reduction of greenhouse gas emissions, development of multimodal transportation networks, and a variety of land uses. The five new measures are:

- **Vehicle Miles Traveled (VMT)** Per Capita, with a goal to decrease VMT and reduce greenhouse gas (GHG) emissions
- **Vehicle Trips Per Capita** to reduce GHG emissions by transportation demand management (TDM) project approval conditions
- **Quality Bike Network Accessibility** to increase mode share for people biking and reduce GHG emissions
- **Quality Transit Accessibility** to increase transit mode share and reduce GHG emissions
- **Pedestrian Accessibility** to increase foot traffic mode share and reduce GHG emissions

With an emphasis on sustainability and livability, the City worked to balance trade-offs among travel modes and community mobility needs. The efficiency of projects by travel mode is evaluated per person, based on the length and number of trips as well as changes in land use.

The City also updated the Mobility Element of its General Plan to include new goals and objectives to support complete streets. To support infrastructure improvements for people walking, biking, and riding transit, the City of Pasadena also updated its Traffic Reduction and Transportation Improvement Fee (TRTIF) to provide funding for the multimodal transportation improvements identified in the updated General Plan.

Complete streets enable safe access for all users. Pasadena recognizes that streets should reflect the individual character and needs of a neighborhood, accommodate all users, and support healthy activities such as walking and bicycling. People of all ages and abilities should be able to move along and across a complete street safely—whether they are walking, biking, driving, riding transit, skateboarding, or in a wheelchair. The new performance measures improve safety and mobility for all road users.

Location

City of Pasadena

Lead Agency

City of Pasadena

Total Cost

$250,000

Project Type

CEQA Reform and Sustainable Transportation Performance Measures

Funding Type

City of Pasadena General Fund

Funding Sources

City of Pasadena General Fund

Pasadena Sustainable Transportation Performance Measures

Project Benefits

The project provides multiple advantages, including increased transportation choices, economic revitalization, higher return on infrastructure investments, improved development and design, and increased safety, which can lead to more people walking and bicycling.

Streets that provide travel choices give people the option to avoid traffic congestion and increase the overall capacity of the transportation network. Complete streets can reduce transportation costs and travel time, while increasing property values and job growth in communities. Integrating sidewalks, bike lanes, transit amenities, and safe crossings into the initial design of a project spares the expense of retrofits in the future.

Public health experts encourage walking and bicycling to counter the epidemic of obesity. Designing streetscapes to provide for people walking and people biking can encourage this activity. Moreover, providing design consideration for all users can reduce collisions and improve safety for all users of the road regardless of age, ability, or mode of travel.

Pasadena's new sustainable transportation performance measures and CEQA thresholds will guide systemwide bike and local transit improvements, reducing traffic congestion along with harmful GHG emissions from cars and trucks.

Awards and Recognition

- American Society of Civil Engineers (ASCE) Metropolitan Los Angeles – 2015 Outstanding Transportation Planning Project Award
- American Planning Association (APA) Los Angeles – 2015 Award of Excellence for Transportation Planning
- APA California – 2015 Award of Excellence for Transportation Planning

Chantry Flat Pilot Shuttle Project

PRIMARY SUSTAINABILITY PRINCIPLE

ACCESS

Project Description

The Angeles National Forest (ANF) completed a pilot shuttle project to provide the public with free transportation from the Metro Gold Line Arcadia Station to Chantry Flat Recreation Area—a popular and highly congested destination in the San Gabriel Mountains. For three weekends in September and October, including National Public Lands Day, a total of 842 riders participated in the pilot project. This transit project is in line with the agency's goals of providing alternative transportation into the San Gabriel Mountains National Monument. ANF will continue to work with partners and local communities in support of this effort.

This pilot program was created as a small-scale version of what might be possible in a large urban area if there is a collective effort to connect underserved communities with public lands.

Three 18-passenger shuttles transported visitors to and from the Arcadia Station on the Gold Line. Pick-up and drop-off was from the adjacent REI store parking lot at East Santa Clara Street. The shuttles ran throughout the day to the Chantry Flat picnic area, with the first trip of the day beginning at 7:00 a.m. and the last shuttle leaving Chantry Flat at 4:00 p.m. (The estimated interval between the stops was 30 to 45 minutes.)

Location

Arcadia Station (REI store) to Chantry Flat Recreation Area

Lead Agency

USDA Forest Service—Angeles National Forest

Total Cost

$35,000

Project Type

Transportation / Pilot Project

Funding Type

One-time $15,000 grant from "CAR-*LESS* California," a U.S. Forest Service Regional Project funded by a grant from Federal Transit Administration. (CAR-*LESS* California stands for California Alternative Transportation for Recreation – *Leisure for Everyone that is Seamless and Sustainable*.)

Funding Sources

CAR-*LESS* California, Angeles National Forest (ANF), The Wilderness Society (for shuttle signage)

Chantry Flat Pilot Shuttle Project

Awards and Recognition

- Recognized by the Angeles National Forest for the efforts of the team
- Nominated for a Regional Forester's Honor Award, Category of "Sustainable Operations and Energy Management"

Project Benefits

Strong community interest will support continuation of the Chantry Flat shuttle program. It offered an example of social justice to provide improved access to public lands for underserved communities.

The project promoted Leave No Trace principles by showing a video in the shuttle buses and by encouraging users to use public transit (Metro Gold Line) in traveling to Arcadia Station.

Willowbrook Area Access Improvements

PRIMARY SUSTAINABILITY PRINCIPLE

GREEN MODES

Project Description

The Willowbrook Area Access Improvements project enhances the mobility of people and bicyclists in the vicinity of the Martin Luther King Jr. Community Hospital. The County's Department of Public Works repaired pavement, upgraded curb ramps, enhanced crosswalks and sidewalks, and installed colored concrete pavers designed to look and function like natural stone. People riding bicycles enjoy new bike lanes and routes.

New site furnishings for bus stop shelters, benches, trash receptacles, and bike racks improve the area for people walking, biking, and riding transit. Newly installed lighting and modernized traffic signals increase both visibility and safety, and wayfinding and monument signage help visitors reach their destinations. The County installed sustainable landscaping and irrigation throughout the project and added new landscaped medians and parkways. The landscape contractors also removed 55 destructive parkway trees and planted 126 new trees.

Location

Los Angeles

Total Cost

Total Project: $7.2 million*
Construction: $4.1 million*
Reimbursable Federal Grant Funds: $4 million

** not including wayfinding and monument signage*

Project Type

Complete Streets

Funding Type/Agency

Federal aid funds, Proposition C local return, and Measure R local return funds

Local transportation funds from Metro and Los Angeles County

Funding Sources

California Active Transportation program funds and Los Angeles County local funds

Willowbrook Area Access Improvements

Multiple agencies are working with local residents to build a revitalized gateway into and for the Willowbrook community

Project Benefits

This project enhances the environment and safety for people walking and biking in the Willowbrook area and improves connections to key attractions.

Six Low Impact Development (LID) tree wells have been constructed as part of the project's sustainable features. The tree wells are designed to capture polluted runoff from the adjacent roadways and other paved surfaces. Installation of a trench drain along the Fire Station driveway also helps to catch runoff and redirect it to the parkway trees and LID tree wells.

Metro Bike Hubs

PRIMARY SUSTAINABILITY PRINCIPLE **PROSPERITY**

Project Description

A Metro Bike Hub is a high-capacity secure bicycle parking facility with bike commuter support services. With a single registration, Metro Bike Hub users gain 24-hour-a-day, 7-days-a-week access to any of Metro's secure bike parking locations. Bikes are parked in an enclosed room, such as a storefront space, building, or gated structure. Each location is equipped with an access-controlled door system, cameras, monitors, alarm system, as well as telecommunication and networking systems to ensure the safety and security of people and their bicycles. On-call mechanics and friendly staff are available to assist, make necessary repairs, sell bike parts, or provide bike education and outreach.

Bike hubs can also operate as unattended, self-serve facilities. Registered users lock their bikes to available bike racks with their own lock. They can also gain access to different hub locations through a single registration.

Metro opened its first bike hub at the El Monte Station in 2015 and expanded the program to locations in Hollywood and Union Stations in 2017. Bike hubs are recommended at Metro stations with frequent transit service. They should be highly visible and located near main entrances or within close proximity of 50 feet. Additional bike hubs are planned at the Culver City, Expo Line Station, Willowbrook/Rosa Parks, Blue Line Station, North Hollywood, Orange/Red Line Station, and Airport Metro Connector Station.

The Metro bike hubs vary in size, accommodating from 56 bikes (El Monte) to 64 bikes (Hollywood) to 192 bikes (Union Station) in secure parking spaces. Additional support features include bathroom facilities, repair stands, and tools as well as a retail and service shop. Metro also provides periodic bicycle commuter clinics—covering bike repair and commuting information—for free at each of the bike hubs.

Location

El Monte, Hollywood, and Union Stations (additional sites planned)

Lead Agency

Metro

Total Cost

$635,000 construction cost

Project Type

Active Transportation—secure controlled-access bike parking with attendant providing rentals, repairs, and sales

Funding Type

Federal and Local

Funding Sources

Federal Transit Administration (FTA), Prop A, Caltrans Transportation Development Act (TDA)

Metro Bike Hubs

Metro Bike Hubs offer secure parking, on-call mechanics, and friendly staff. One TAP account provides access to Metro Bike, Bus, Rail, and more.

Project Benefits

Bike hubs offer high-capacity bicycle parking equipment. Also, the program provides free bicycle commuter clinics where users can have their bikes repaired, learn, and obtain commuting information. The centers facilitate active transportation community outreach and workshops. Through the education clinics, users can learn how to fix a flat tire, perform essential bike fixes, and learn bike commuting tips.

AVTA Electric Fleet Conversion

PRIMARY SUSTAINABILITY PRINCIPLE

GREEN MODES

Project Description

AVTA provides local, commuter, and dial-a-ride service to a population of more than 450,000 residents in the cities of Lancaster and Palmdale as well as the unincorporated portions of northern Los Angeles County. Its total service area covers 1,200 square miles, and it is bounded by Kern County to the north, San Bernardino County to the east, the Angeles National Forest to the south, and Interstate 5 to the West.

In fall 2013, AVTA began the initial phase of its Electric Fleet Conversion Project as a demonstration project with the first two 40-foot all-electric zero-emission buses. The year-long demonstration proved so successful that the buses began running regular revenue service in October 2014, and in February 2015 the AVTA Board of Directors authorized staff to release an RFP for additional electric buses, with the goal calling for aging local transit buses to be replaced with electric vehicles by 2018 and for commuter buses to be replaced with electric vehicles by 2020.

Location

Lancaster, Palmdale, and unincorporated northern Los Angeles County

Lead Agency

Antelope Valley Transit Authority

Total Cost

$95-$100 million, including onsite infrastructure, buses, and transit center construction and infrastructure improvements

Project Type

Bus Fleet Conversion

Funding Type

Federal and Local

Funding Sources

- Federal Transit Administration: Low or No Emission Vehicle Program
- Caltrans: Low Carbon Transit Operations Program (LCTOP); the Public Transportation Modernization, Improvement, and Service Enhancement Account Program (PTMISEA)—SB1, and Transit and Intercity Rail Capital Program (TIRCP)
- Antelope Valley Air Quality Management District (AVAQMD)
- Metro
- Matching funds from AVTA Capital Reserve
- Credits through Bus Voucher Incentive Project (HVIP)

AVTA Electric Fleet Conversion

Awards and Recognition

> BYD and Long Beach Transit Receive Inaugural CleanTech Award 2016

Project Benefits

The most significant impact of this project is that AVTA has demonstrated that all-electric bus fleets can work, despite many who thought it was impossible. Through this project, AVTA helped develop and implement clean new technology that will transform public transportation. The agency also learned that it takes many different entities working together with a common goal of making the local community and the world a better place.

AVTA's diesel bus fleet averages 4.0 miles per gallon, while the electric buses average 18.0 mpg equivalent. The change will boost fleet energy efficiency by 78%. The zero-emission fleet will reduce AVTA's carbon footprint by a whopping 1,330,000 pounds of carbon dioxide annually. All-electric buses will cut about 50 percent noise pollution and improve air quality through the elimination of CO_2, NO_x, PM_{10}, and $PM_{2.5}$. The project will further create more than 1,000 new jobs through the partnership with BYD, the electric bus manufacturer. Since the first delivery of electric buses, the agency has improved physical mobility and economic accessibility through service expansion to economically disadvantaged communities. The project has also increased ridership, improved health and well-being of maintenance staff and operators, as well as provided significant cost savings of $46,000 per bus per year.

Metro CNG–Near-Zero Emissions Buses

PRIMARY SUSTAINABILITY PRINCIPLE

GREEN MODES

Project Description

Metro invested in compressed natural gas (CNG) buses to replace 900 aging diesel buses that will reach the end of their useful life. Metro retired buses that were purchased between 1998 and 2001 and had exceeded 12 years of age and 500,000 miles. The delivery of the 900 buses began in December 2013 and concluded in October 2016.

CNG is considered a near-zero emission technology. Metro purchased the most advanced CNG buses available. New CNG engines are 1,000 times cleaner than the diesel buses Metro operated during the 1980s and 1990s. The engines are also projected to reduce emissions 25 percent more than Metro's 2014 CNG transit vehicles.

Metro has the largest CNG bus fleet in the United States, with 2,500 CNG buses that travel more than 85 million miles per year. Since the program's inception in 1992, CNG buses have operated about 1.5 billion miles in the Los Angeles County and saved the agency an average of 47 cents per mile on fuel costs.

Location

Countywide Metro Bus System

Lead Agency

Metro

Total Cost

$503.4 million

Project Type

Bus Fleet Conversion

Funding Type

Federal and Local

Funding Sources

- Congestion Mitigation and Air Quality (CMAQ) Program by U.S. Department of Transportation Federal Highway Administration; State of Good Repair by Federal Transit Administration Sections 5307 and 5339
- Caltrans Transportation Development Act (TDA) and Public Transportation Modernization, Improvement, and Service Enhancement Account Program (PTMISEA)—SB1
- Measure R 35% (bus capital)
- Prop C 40%

Metro CNG–Near-Zero Emissions Buses

30 next-generation, near-zero emissions compressed natural gas buses are now serving the South Bay and Gateway Cities region

Project Benefits

The CNG purchase is part of Metro's bus fleet replacement plans for 2018 to 2022, which set minimum retirement eligibility age and mileage for Metro buses. It will also allow Metro to lower the average age of its fleet and ensure that passengers experience safe, reliable, and comfortable travel.

Grant funding also allowed Metro to build two new CNG bus refueling facilities. Additionally, an innovative workplace development program provides workers with training opportunities enabling them to operate and maintain buses around the county.

Zero Emission Bus Master Plan

PRIMARY SUSTAINABILITY PRINCIPLE

GREEN MODES

Project Description

Metro, the largest American transportation agency to commit to a zero emission goal by 2030, has taken the first step with purchase of 100 electric buses.

The first phase will convert the Metro Orange Line to full Zero Emission operation by 2020 and the Metro Silver Line to follow as soon as feasible after that. The agency awarded two contracts totaling approximately $108 million for manufacture and delivery of 60 forty-foot zero-emission buses and 40 sixty-foot zero emission articulated buses. The new buses will replace retirement-eligible compressed natural gas (CNG) buses currently operating on the lines.

The second phase of the project is to create a Zero Emission Master Plan. The plan will evaluate the entire Metro bus system and outline the best strategy and anticipated cost to convert to zero-emission operations.

The two critical factors for the program's success are continuous advancements in electric bus technology and a price reduction as the technology develops. Necessary technology advancements include an increase in range, a decrease of bus weight, reduction of charging times, and extension of battery life cycles.

In September 2018, the Metro Board approved the technical consultant who will develop comprehensive plans for phasing in zero-emission buses (ZEB) on Metro's entire system, including Local and Rapid bus routes, by 2030. Completion of Phase 2, the Zero Emission Master Plan, is expected in 2019.

Photo credit: New Flyer

Location

Countywide Metro Bus System

Lead Agency

Metro

Total Cost

$7.1 million (to develop the strategic plan, not for bus acquisition)

Project Type

Planning

Funding Type

Local (Metro)

Funding Sources

Measure R Administrative Funds

Photo credit: New Flyer

Metro leads the nation in setting an ambitious 2030 zero-emission bus goal

Project Benefits

Electric bus technology continuously advances, and renewable sources transform California's electricity grid at an accelerated rate. A complete transition to zero-emission buses, combined with a renewable energy portfolio, will significantly reduce the carbon footprint from mobility and revolutionize transit in Southern California. The final report will demonstrate how Metro can effectively transition to full zero-emission operations by 2030.

Long Beach Transit Clean Bus Fleet Conversion

PRIMARY SUSTAINABILITY PRINCIPLE

GREEN MODES

Project Description

The Long Beach Transit (LBT) fleet conversion projects have reduced the agency's carbon footprint and improved the region's air quality by lowering energy consumption and emissions.

Ten diesel transit buses that had exceeded their useful life were replaced with 30-foot all-electric transit buses on the Passport, a free bus circulator that serves Long Beach's major tourist attractions. The buses are powered by an entirely zero emission (ZE) system. The project included fast-charging station deployment and vehicle manufacture, delivery, and introduction.

To further reduce emissions in its CNG fleet, LBT incorporated Cummins Westport ISL G near-zero emissions (NZE) natural gas engine upgrades with the purchase of 40 New Flyer 40-foot buses. The engines are certified by the California Air Resource Board (CARB) to be below the Optimal NO_x emissions standard of 0.02 grams per brake-horsepower-hour (g/bhp-hr). The scope of work included contract modification to add ISL G engines, pilot bus delivery, and complete delivery.

The program started in 2015, and all buses were replaced by 2017.

Location

Long Beach

Lead Agency

Long Beach Transit

Total Cost

ZE $10 million including bus and charging infrastructure

NZE $600,000 for engine upgrade to existing bus procurement

Dates

2013-2018

Project Type

Bus Fleet Conversion

Funding Type

Federal Discretionary Grant and Local Match

Funding Sources

ZE - Federal with local match:

- FTA Discretionary Sustainability Funding Opportunity through Transit Investments for Greenhouse Gas and Energy Reduction (TIGGER) Program
- CA Prop 1B Bonds
- Port of Long Beach GHG Emission Reduction Mitigation Program

NZE - Region/Local:

- South Coast Air Quality Management District (SCAQMD) through Mobile Source Air Pollution Reduction Review Committee (MSRC) Funding Program

Long Beach Transit Clean Bus Fleet Conversion

Awards and Recognition

> BYD and Long Beach Transit Receive Inaugural CleanTech Award 2016

Project Benefits

The procurement of ZE battery-electric buses was expected to generate annual energy savings of 12,040 million BTUs and elimination of 1,273 metric tons of carbon dioxide equivalent, along with decreased maintenance and operational costs compared to conventional diesel transit buses.

The NZE buses are equipped with the Cummins Westport 8.9-liter engine that is certified by CARB and the U.S. Environmental Protection Agency to meet or exceed voluntary and more stringent near-zero emission standards, improve fuel efficiency, and lower NO_x emissions. The new commercialized, heavy-duty natural gas engines offer near-zero emission levels for ozone precursors and particulate matter air pollutants—90% lower than the current EPA heavy-duty engine standards. The reductions are of critical air quality importance to the SCAQMD region.

These innovative technologies are reducing both air and noise pollution in the region, particularly in areas with low-income and disadvantaged communities. The project offers long-term cost reductions for maintenance, operation, and fuel.

Metro Sustainability Program Metrics

This section covers two aspects of the program metrics that are outlined in the Countywide Sustainability Planning Policy (CSPP):

- Actions completed to implement the policy.
- Projects and activities advancing sustainability policies.

To track the actions completed to implement the policy an updated version of the 2012 CSPP Implementation Plan is included. The Implementation Plan was included in the 2012 Countywide Sustainability Planning Policy and continues to be updated annually. The second aspect of the program metrics covered in this section is an overview of the Metro policies, programs, plans and projects that demonstrate how Metro has taken the sustainability policy and turned it into action. These are broader activities that are not specifically called for in the CSPP Implementation Plan.

Implementation Plan and Status

An Implementation Plan from Metro's 2012 Countywide Sustainability Planning Policy specified next steps to integrate sustainability into Metro actions. The implementation Plan focuses on Metro actions and aims to integrate sustainability throughout the agency's planning functions and foster collaboration and partnerships for sustainability. It includes 22 discrete actions steps for Metro such as developing this sustainability annual report.

	IMPLEMENTATION ITEM	INITIATION TIMEFRAME	METRO PARTICIPANTS	STATUS
1. Performance Measurement and Monitoring				
1.1	Develop/Refine Sustainability Assessment Tools to evaluate the sustainability of projects and plans.	0-2 years	Countywide Planning	> The development of the assessment tools is on hold.
1.2	Include sustainability performance metrics in the Sustainability section of the Short Range Transportation Plan.	0-1 year	Countywide Planning	> The Short Range Transportation Plan is not being updated this year.
1.3	Evaluate and report on progress toward achieving sustainability policies and priorities by developing an annual report on the program and countywide performance metrics.	Annual	Countywide Planning	> Metro continues to produce the annual report. > Metro is developing a set of sustainability performance metrics. That work is being coordinated with the Metro Environmental Compliance and Sustainability Division and with the update of the Metro Long Range Transportation Plan.
1.4	Include sustainability performance metrics in the Sustainability section of the Long Range Transportation Plan.	Next Cycle	Countywide Planning	> New sustainability performance metrics were developed for Measure M projects. The metrics will be refined and applied to the upcoming LRTP update.
1.5	Conduct before and after studies of projects funded through the Call for Projects to quantify impact.	Current and Future Cycles	Countywide Planning; and the Highway Programs	> Projects with a sustainability focus are required to comply with sustainable Design Element Requirements and conduct bicycle and pedestrian counts when applicable. Any future Call for Projects will refine and include similar considerations.
2. Integration of Sustainability Principles into Metro's Planning Functions				
2.1	Strengthen Call for Projects link to Metro's sustainability commitments.	0-1 year	Countywide Planning; and the Highway Programs	> Criteria used to evaluate project applications for the 2015 Call included a "Complete Streets" integrated, multimodal transportation network, consistency with Senate Bill (SB) 375 goals of reducing Vehicle Miles Traveled (VMT) and Greenhouse Gas Emissions (GHGs), and First/Last Mile access to the transit system. Any future Call for Projects will refine and include similar considerations.

IMPLEMENTATION ITEM	INITIATION TIMEFRAME	METRO PARTICIPANTS	STATUS
2.2 Continue to offer the Transit Oriented Development Planning Grant Program and provide related technical support and resources to cities and the county, including a model TOD ordinance, to encourage local land use changes that provide transit and sustainability benefits.	0-2 years	Countywide Planning	> A total of 42 TOD Planning Grants totaling in $24.1 million have been allocated over 5 grant cycles. > For Cycle 5 a newly created Transit-Oriented Communities Tax Increment Financing Pilot (TOC TIF Pilot) Program was added to fund feasibility studies for eligible cities and LA County, to consider tax increment financing districts that have a TOD regulatory document in place or under development that are around transit stations. > Metro developed the Transit Supportive Planning Toolkit (Toolkit) to serve as a resource for local jurisdictions to develop and adopt transit-supportive land use regulations and achieve the broader greenhouse gas (GHG) emission reduction and transportation, water, and energy efficiency goals of Assembly Bill 32 and Senate Bill 375. The Toolkit includes 10 characteristics of transit supportive places, that together can support a reduction in vehicle miles traveled and greenhouse gas emissions and increase in transit ridership includes over 100 tools and case studies.
2.3 Per Board Direction, continue development of an Active Transportation and Design Policy that will advance the Context Sensitivity, Green Modes and Healthy Neighborhoods policy priorities.	0-2 years	Countywide Planning	> This plan is now referred to as the Metro Complete Streets Policy, which was adopted by the Metro Board in October 2014. As part of implementation of Metro's Complete Streets Policy, Metro developed an Active Transportation Strategic Plan (ATSP), which identifies needs, resources and strategies to improve and increase walking, bicycling and transit use in LA County. Portions of the ATSP such as First/Last Mile Planning are being implemented. Metro is now pursuing next steps to implement other elements of the ATSP.
2.4 Organize staff webinars and briefings, as needed, to highlight trends and promote continuous learning within Countywide Planning, as well as between departments, on sustainability issues.	Ongoing	Countywide Planning; and the Highway Programs	> Countywide Planning has established a monthly brown bag lunch and learn program led by staff and guest professionals that includes sustainability topics.
2.5 Per Board Direction, develop a Countywide Safe Routes to School initiative to promote active transportation among school-age children.	1-3 years	Countywide Planning	> Staff developed a Safe Routes to School Resource Manual that school administrators, cities and parents can use to promote safe walking and bicycling among children and their families to and from schools, and to improve mobility and health in communities throughout Los Angeles County.
2.6 Per Board Direction, develop safe routes to transit programs that target families as well as youth, senior, and low-income populations.	1-4 years	Countywide Planning	> Completed Blue Line first/last mile study that focused on community engagement and needs of historically underserved communities. > The Transit to Parks Strategic Plan presents a vision for coordinating strategies at the local and regional levels for increasing access to parks and open space countywide. The Plan will be presented to the Board in 2019. > The EPAMD report summarizes research on a range of personal mobility devices in the bigger picture of transportation in Los Angeles County, including research on the mobility needs of seniors. > Per Board Direction an Annual Accessibility report is being developed that includes an assessment of first/last mile accessibility for older adults and people with disabilities.

	IMPLEMENTATION ITEM	INITIATION TIMEFRAME	METRO PARTICIPANTS	STATUS
3. Pilot Projects & Community Partnerships				
3.1	Subject to management and board approval, develop a Sustainable Transportation Demonstration Program to support city partners in implementing innovative capital or operations improvements that apply guidance from the policy. Seek funding from SCAG, SCAQMD, State Strategic Growth Council, and federal/state grants.	0-2 years	Countywide Planning	> Three demonstration projects have been identified, working with South Bay, San Gabriel Valley, and Gateway Cities COG. The South Bay, developing a Slow Speed Lane Network Strategic Plan was completed in 2017. The San Gabriel Valley Bicycle Friendly Business District pilot is ongoing. The Gateway Cities complete street pilot is in the procurement process.
3.2	Per Board Resolution, partner with the Department of Public Health and Tree People to develop a Systemwide Urban Greening Plan to improve placemaking, increase environmental stewardship, and create livable streets around transit stations with funds awarded by the State Strategic Growth Council.	0-2 years	Countywide Planning	> The Urban Greening Plan was completed, and the plan and accompanying Urban Greening Toolkit are available on the Metro Sustainability in Countywide Planning website. > Staff are seeking opportunities to incorporate urban greening elements into Metro funding programs.
4. Collaboration/Outreach/Education				
4.1	External: Disseminate information on the policy, associated strategies, and tools to regional stakeholders and the greater public.	0-2 years	Countywide Planning	> Staff conducted outreach to external stakeholders to advance the implementation of the following sustainability strategies and tools: > First/Last Mile initiatives > Transit Supportive Planning Toolkit
4.2	Internal: Disseminate information on the policy, associated strategies, and tools for inter- and intra-department coordination and collaboration.	0-2 years	Countywide Planning	> Staff disseminates information on the sustainability policy through our Planning Training program. > Countywide Planning and Program Management are collaborating on an update of the Metro Sustainability Implementation Plan (MSIP) to better coordinate sustainability efforts across the agency efforts across the agency.
4.3	Organize forums and workshops to promote and inform cities, industry professionals, and other stakeholders of best practices in the areas of active transportation, transportation demand management, and other sustainability topics.	0-2 years	Countywide Planning	> Metro developed curriculum and conducted Sustainable Design Trainings for successful Call for Projects funding recipients. The intent of the trainings is to assist cities in drafting a sustainable design plan for each call project starting with the 2013 Call for Projects.

	IMPLEMENTATION ITEM	INITIATION TIMEFRAME	METRO PARTICIPANTS	STATUS
5. Regional Planning & Policy Development				
5.1	Partner with SCAG to conduct a First/Last Mile Strategic Plan to explore opportunities to increase ridership through access improvements adjacent to transit stops.	0-2 years	Countywide Planning	> The partnership with SCAG is complete. In order to realize Board direction to implement various First/Last Mile activities, Countywide Planning and Development Department structure now includes a dedicated First/Last Mile Planning group which is organized as part of a larger Transit Oriented Communities (TOC) team.
5.2	Serve on advisory committees to develop regional policies and plans that seek to implement the 2012 Regional Transportation Plan/ Sustainable Communities Strategy.	0-4 years	Countywide Planning	> Metro participates on the Los Angeles Regional Collaborative for Climate Action and Sustainability (LARC) which is a network of local and regional decision-makers working to ensure a sustainable Los Angeles County. > Staff also participated in advisory efforts including but not limited to: Senate Bill 150 reporting, development of the Countywide Sustainability Plan and multiple Transformative Climate Communities grant initiatives.
5.3	Continue efforts to coordinate a Countywide Zero-Emissions Truck Collaborative to accelerate market adoption of zero and near-zero vehicles in Los Angeles County.	0-2 years	Highway Program, Countywide Planning	> In 2012, Metro formed a Countywide Zero-Emission Trucks Collaborative to promote consistency among public agencies working to catalyze the development and deployment of zero-emission trucks in Los Angeles County. This collaborative includes the ports of Long Beach and Los Angeles, Caltrans, Southern California Association of Governments (SCAG), and the Southern California Air Quality Management District (SCAQMD). These stakeholders meet on an ad-hoc basis and have shared information on upcoming (state and federal) funding opportunities, evaluated non-solicited proposals, continuously discussed ways to increase our regional competitiveness for grant funding, and pursued eligible funding for testing and demonstrating new zero and near-zero emission truck technologies.
5.4	Provide leadership for the development of the 2016 Regional Transportation Plan/ Sustainable Communities Strategy by working with SCAG and engaging other County Transportation Commissions to share best practices, advance innovation, and develop coalitions to advocate for greater federal and state funding.	0-4 years	CEO's Office, Countywide Planning	> Metro is coordinating closely with SCAG on the update of the 2020 RTP/SCS, which also coincides with the update of the Metro Long Range Transportation Plan.

IMPLEMENTATION ITEM	INITIATION TIMEFRAME	METRO PARTICIPANTS	STATUS
6. Funding			
6.1 Seek federal, state, and local funds to implement planning guidance and strategies to advance both Metro's sustainability goals and those of the RTP/SCS.	0-4 years	Countywide Planning	> Metro continues to provide grant writing assistance to cities applying for state Active Transportation Program (ATP) funds. > Metro submitted two and provided assistance on nineteen ATP applications for first/last mile improvements in ATP Cycle 4. > Metro developed and applied an ATP point-assignment policy to advance key Metro sustainability initiatives for ATP Cycle 4.
7. Policy Updates			
7.1 Review and consider updates to the policy at least every five years.	Ongoing	Metro Board, Countywide Planning	> Countywide Planning and Program Management are collaborating on an update of the Metro Sustainability Implementation Plan (MSIP) to better coordinate sustainability efforts across the agency efforts across the agency. > Staff is considering updated/streamlined reporting mechanisms consistent with the aforementioned effort and the update of the Long Range Transportation Plan.

Universal Policies and Metro Planning Activities

In addition to the specific actions in the above Implementation Plan, there are additional Metro projects and activities that advance the Countywide Sustainability Planning Policy. The table on the next page provides a status update on these plans and projects.

The sustainability policies on the left side of the table encompass the universal policies that are relevant throughout LA County. The Universal policies originate in the 2012 CSPP. The right side of the table shows the Metro planning activities that are related to each sustainability policy. Some Metro activities fall under more than one policy; however, each Metro activity is listed only once as an example of the main policy that the activity supports.

Please note this overview is not intended to be an exhaustive list of all Metro sustainability activities.

SUSTAINABILITY POLICIES WITH COUNTYWIDE RELEVANCE	METRO COUNTYWIDE PLANNING AND DEVELOPMENT WITH COUNTYWIDE RELEVANCE	
RTP / SCS		
Green Design	Urban Greening Plan COMPLETE Sustainable Design Training, Call for Projects ONGOING	Urban Greening Implementation Action Plan IN PROGRESS
Vehicle Technology	Sustainability Demonstration Projects > South Bay Slow Speen Lane Study > San Gabriel Valley Bicycle Friendly Business District COMPLETE/ONGOING/IN PROGRESS	
Local Access	First/Last Mile Planning and Implementation COMPLETE Rail to River Active Transportation Corridor IN PROGRESS Connect US Action Plan ONGOING Blue Line First/Last Mile Study COMPLETE Active Transportation Strategic Plan IN PROGRESS LA River Bike Path Feasibility Study IN PROGRESS Open Streets Program ONGOING	Bicycling Outreach, Education and Encouragement ONGOING Electric Personal Assistive Mobility Devices (EPAMD) Study IN PROGRESS Transit to Parks Strategic Plan IN PROGRESS First/Last Mile Planning Activities > Purple Line Extension Sections 2 & 3 > Foothill Extension > Crenshaw Line > Airport Connector and Crenshaw Inglewood stations > East San Fernando Valley Transit Corridor > West Santa Ana Branch IN PROGRESS
Performance Measurement	Sustainability Performance Metrics IN PROGRESS	VMT Mitigation Measures Analysis COMPLETE
System Productivity	Car Share Program ONGOING Bike Share Program ONGOING Vanpool ONGOING	Bike Locker Program and Bike Hubs ONGOING Transfers Design Guide COMPLETE
Complete Streets	Complete Streets Policy COMPLETE Call for Projects ONGOING	Active Transportation Program Point Assignment ONGOING
Transit-Oriented Development	Union Station Master Plan COMPLETE TOD Toolkit COMPLETE	TOD Planning Grants ONGOING AHSC Policy Framework COMPLETE
TDM/Virtual Access (e.g., emerging technologies)	Regional Rideshare including: Ride-matching. Guaranteed Ride Home, Metro Rewards, Go Metro to Work Free, Bike Week, Rideshare Week ONGOING	

SEE APPENDIX FOR PROJECT DESCRIPTIONS

Next Steps

Future Sustainability Annual Reports will continue to document Metro Countywide Planning efforts to implement sustainability practices through its planning activities and programs. The CSPP Implementation Plan will evolve accordingly, as implementation action items are completed and new activities added to ensure that Metro advances its sustainability efforts.

A set of quantitative Sustainability metrics are currently being developed and will be included in future Annual Reports. The purpose of the metrics is to develop specific quantitative indicators to track and compare transportation sustainability efforts across Los Angeles County. Close coordination with the update of Metro's Long Range Transportation Plan and the County of Los Angeles Sustainability Plan are part of this effort.

The CSPP was originally approved by the Metro Board in 2012. Since then, ambitious climate- and sustainability-related legislation has been enacted by the state of California that the CSPP should consider. Accordingly, Countywide Planning is pursuing an update to the sustainability program.

Appendix

Universal Policy and Metro Planning Activities: Brief Project Descriptions

TITLE	2018 UPDATE	STATUS
Active Transportation Program Point Assignment	Metro's Active Transportation Program (ATP) point-assignment policy provides an opportunity for Metro to influence the funding of millions dollars available through the state ATP program. Metro applied this policy in ATP Cycle 4 to advance important sustainability initiatives such as consistency with the First/Last Mile strategic Plan, the Active Transportation Strategic Plan and projects located in disadvantaged communities.	Ongoing
Active Transportation Strategic Plan	The Active Transportation Strategic Plan (ATSP), adopted in May 2016, identifies strategies to improve and expand the active transportation network in order to improve access to transit for all patrons. This plan provides guidance to Metro and partner organizations, such as local jurisdictions, regional government and other stakeholders, in setting regional active transportation policies and guidelines to meet transportation goals and targets in support of the Regional Transportation Plan/Sustainable Community Strategy and other future planning efforts. Metro is now pursuing next steps to implementing the Active Transportation Strategic Plan.	In Progress
AHSC Policy Framework	Metro developed a policy framework (adopted on January 16, 2016, revised February 23, 2017) for the Affordable Housing and Sustainable Communities (AHSC) program, a program in the California Cap-and-Trade portfolio that provides opportunities to fund affordable housing along with mobility and urban greening improvements intended to reduce greenhouse gas emissions. The purpose of the framework is to clearly communicate Metro's preferences for development and local transportation infrastructure in areas surrounding Metro transit stations, to prompt project applications with the greatest regional benefit, and to allow communities a clear way to position projects to compete for funding.	Complete
Bicycling Outreach, Education and Encouragement	Metro engages in several active transportation education and encouragement programs throughout the county. To support and implement the ATSP, Metro oversees a multi-year program that partners with local bicycle professionals and community groups to conduct bicycle skills classes, community rides, Bike Month events, and Safe Routes to Schools programming throughout LA County. The program educates the public about bicycle safety on roadways and in around Metro stations and bus facilities and encourages active lifestyles. The agency is also conducting a sustainable transportation pilot program in the cities of South Pasadena and Glendora that partners with local businesses to promote bicycling and active transportation.	Ongoing
Bike Locker Program and Bike Hubs	The Metro Bike Locker Program provides bicycle commuters with lockers that are available to rent on a six-month term. The rental requires a refundable security deposit and may be canceled at any time. Lockers are provided and available at many Metro Rail and Bus Rapid Transit stations, including the Blue, Expo, Gold, Green, and Red/Purple rail lines, and Orange and Silver bus lines, for a total of 844 bicycle lockers system-wide. Metro will introduce a new facility type similar to a scaled down version of a Metro Bike Hub that will allow controlled access to bicycle parking. A Metro Bike Hub offers bicycle parking in a 24/7 controlled access room for a nominal fee and may offer various services like bike repair/ retail, bike rental, and bike education workshops. Bike Hubs are available at El Monte, Hollywood/Vine, and Union Station. A Bike Hub is also planned in operations at Culver City (if not published before 3/19). Other locations currently in the works include Willowbrook/ Rosa Park and the Airport Metro Connector stations. North Hollywood will be included in a future location as part of larger joint development efforts.	Ongoing

TITLE	2018 UPDATE	STATUS
Blue Line First/Last Mile Study	The Blue Line First/Last Mile Plan was adopted by the Metro Board of Directors in April 2018. The Plan includes planning-level, community-identified pedestrian and bicycle improvements within walking (1/2-mile) and biking (3-mile) distance of all 22 Metro Blue Line stations. The Plan describes the collaborative approach and process for arriving at the improvements, which represent a range of walking and bicycling access improvements including new or improved crosswalks, curb ramps, and sidewalks; facilities to improve bicycle connections to stations; pedestrian-scale lighting; and wayfinding signage among others. Community engagement led by community-based organizations was instrumental in developing the Plan and represents new approaches consistent with direction outlined in Metro's Equity Platform.	Complete
Call for Projects	This program provides local agencies with funding through a competitive process for regional capital transportation projects within LA County. Federal, state and local funds are awarded to regionally significant projects in seven modal categories: Regional Surface Transportation Improvements; Goods Movement Improvements; Signal Synchronization & Bus Speed Improvements; Transportation Demand Management; Bicycle Improvements; Pedestrian Improvements; and Transit Capital.	Ongoing
Car Share Program	Metro's Car Share Program, launched in May 2015, provides transit patrons options to utilize short-term car rentals throughout the Metro system. The program has grown from 14 to 28 locations and from 51 to 123 parking spaces, making car share a viable first/last mile connection option. The continued growth of the program provides a flexible and convenient mobility option that helps with decreasing travel time around Los Angeles County.	Ongoing
Complete Streets Policy	Metro has developed a Complete Streets Policy (adopted October 2014) to help advance state, regional and local efforts to create a more "complete," safe and integrated transportation network for all users of all modes of travel in LA County.	Complete
Connect US Action Plan	The Connect US Action Plan (formerly Union Station and 1st/Central Station Linkages Study) is a community-driven public infrastructure plan that prioritizes pedestrian and bicyclist access and connectivity between LAUS, the 1st/Central Regional Connector Station and the surrounding historic and culturally significant communities. Since completion of the plan in 2015, Metro and the City of Los Angeles have secured approximately $60 million in grant funding to design and implement several projects and the Plan has been adopted by the City of Los Angeles in the Downtown Design Guide.	Ongoing
Metro Bike Share	Metro Bike Share first launched in July 2016 deploying a public fleet of shared-use bicycles at stations throughout downtown Los Angeles. Since, service areas also include Venice and Port of Los Angeles for a total of approximately 1,000 shared bikes and over 90 stations. As of September 2018, users rode Metro Bike Share bikes over 1.7 million miles. This is the equivalent in approximately 1.6 million pounds of reduced carbon dioxide emissions. In May 2018, the Metro Board approved a third expansion of Metro Bike Share into neighborhoods adjacent to the existing services areas in downtown and west Los Angeles. This expansion is planned to launch between early and mid-2019.	Ongoing
Electric Personal Assistive Mobility Devices (EPAMD) Study	The EPAMD report summarizes research on a range of personal mobility devices in the bigger picture of transportation in Los Angeles County. The report addresses policy, planning, operational, market, and infrastructural issues relevant to Los Angeles County's most common mobility devices. Optimizing conditions for people to use these devices supports sustainability and livability countywide.	In Progress
First/Last Mile Planning and Implementation	In order to realize Board direction to implement various First/Last Mile activities, Countywide Planning and Development Department structure now includes a dedicated First/Last Mile Planning group which is organized as part of a larger Transit Oriented Communities (TOC) team. This structure acknowledges that as the Metro system has expanded over the years, it is important to advance a holistic approach to transit planning that makes accessibility, equity and sustainability part of our transit corridor planning and delivery process. The First/Last Mile Planning group has a number of active projects underway, including but not limited to: Purple Line Extension sections 2 &3, Foothill extension, Crenshaw Line Airport Connector and Inglewood stations, East San Fernando Valley Transit Corridor and West Santa Ana Branch.	In Progress

TITLE	2018 UPDATE	STATUS
Sustainable Design Training, Call for Projects	The Sustainable Design training is required for recipients of Metro Call for Projects grants 2013 and beyond. The Curriculum assists project sponsors in developing and applying sustainable design strategies to their projects and provides a framework for identifying performance metrics and measuring outcomes	Ongoing
Los Angeles River Bike Path Gap Closure Project	The Los Angeles River Bike Path Gap Closure Project will design and construct a bicycle and pedestrian path along an 8-mile stretch of the Los Angeles River from Elysian Valley through downtown Los Angeles to the City of Vernon, closing the longest remaining continuous gap in the Los Angeles River Bike Path. The project is allocated $365 million in funding through Measure M and will be completed between 2025 and 2028.	In Progress
Open Streets Program	Open Streets are one-day events that close streets to automobile traffic and open them to people walking, riding a bike or using other non-motorized forms of mobility. The goals of the Open Streets Grant Program are to 1) provide opportunities to walk, ride a bike on a city street or take transit possibly for the first time; 2) to encourage future mode shift; and 3) to foster civic engagement at the local level that is supportive of walking and bicycling.	Ongoing
Rail to River Active Transportation Corridor (ATC) Project	Completed in October 2014, the Rail to River Intermediate Active Transportation Corridor Feasibility Study determined the technical feasibility of utilizing an 8.3-mile segment of the Harbor Subdivision, a Metro-owned rail right-of-way in South Los Angeles to facilitate a multi-modal, active transportation corridor. The report included project benefits, opportunities and constraints, costs and funding strategies, and project development recommendations for interim implementation of an active transportation corridor (bicycle/pedestrian transportation facility). The project is composed of two segments; Segment A of the corridor is currently undergoing final design to convert the rail right-of-way into a Class I bicycle & pedestrian path and Segment B is moving forward with environmental clearance and design to continue the corridor further eastward to the Los Angeles River.	In Progress
Regional Rideshare	Regional Rideshare/Shared Mobility is part of Metro's Long Range Plan and specifically supports Metro's Transportation Demand Management goals for LA County. The program provides support to AQMD-Rule 2202 regulated employers/worksites in LA County to help them meet their AVR targets as well as employers mandated by local city congestion reduction ordinances, thereby improving air quality and traffic mobility. Metro supports Employee Transportation Coordinators (ETCs) by assisting with their Average Vehicle Ridership (AVR) reports, providing workshops and training on implementing a rideshare program and outreach through the On the Go newsletter, a bi-monthly regional publication. Metro also provides information to commuters seeking rideshare information through Metro's call center, 511 and metro.net, and through general outreach events such as Bike Week LA and Rideshare Week LA. A number of rideshare programs are implemented and funded through a regional partnership or by Metro only: Ridematching Using Regional Database – This program connects commuters on ridematch.info who share a similar travel route and provides them with personalized information on carpooling, vanpooling, finding a bike buddy, and taking public transit through RideGuides. Guaranteed Ride Home (Regional) – This program offers commuters who carpool, vanpool, take transit, bicycle or walk to work two rides per year to get them home in case of an unexpected emergency for themselves or their carpool or vanpool. Metro Rewards – This is a MSRC-funded incentive program offered to participants who have shared the ride for at least eight work days a month for at least three consecutive months. Go Metro to Work Free – Metro offers employers in LA County who are implementing a rideshare program at their worksites, 7-Day TAP cards for newly-hired employees at no cost. Bike Week LA (May) and Rideshare Week LA (October) Annual Campaigns – These annual campaigns offer commuters an opportunity to learn more about the benefits of ridesharing and bicycling to work.	Ongoing
Sustainability Demonstration Projects	These projects stem from the Metro/SCAG Joint Work Program. Three projects have been identified, working with South Bay, San Gabriel Valley, and Gateway Cities COG. The South Bay, developing a Slow Speed Lane Network Strategic Plan, is complete. The San Gabriel Valley Bicycle Friendly Business District pilot is active. The Gateway Cities complete street pilot is in the procurement process.	Complete/ Ongoing/ In Progress

TITLE	2018 UPDATE	STATUS
Sustainability Metrics	Metro is developing a set of sustainability focused performance metrics to track countywide performance across a range of activities. The development of the metrics is being coordinated with the update of the Metro Long Range Transportation Plan and in consultation with the Metro Environmental Compliance & Sustainability Department.	In Progress
Transfers Design Guide	Metro completed a Transfers Design Guide, a best practices document with recommendations to improve connectivity for transit customers who transfer as part of their trip. The document builds off of the First/Last Mile Strategic Plan with recommendations to improve the customer experience for the "complete transit journey."	Complete
Transit Supportive Planning Toolkit	Funded by a Strategic Growth Council (SGC) Sustainable Communities Grant Program, Metro developed the Transit Supportive Planning Toolkit (Toolkit) to serve as a resource for local jurisdictions to develop and adopt transit-supportive land use regulations and achieve the broader greenhouse gas (GHG) emission reduction and transportation, water, and energy efficiency goals of Assembly Bill 32 (AB32) and Senate Bill 375 (SB375). The Toolkit includes 10 characteristics of transit supportive places, that together can support a reduction in vehicle miles traveled and greenhouse gas emissions and increase in transit ridership includes over 100 tools and case studies. Metro has integrated the Toolkit in its Transit Oriented Development (TOD) Planning Grant Program administration.	Complete
TOD Planning Grants	The TOD Planning Grant Program is designed to spur the adoption of local land use regulations that are supportive of Transit Oriented Development in LA County. Cycle 5 included a newly created Transit-Oriented Communities Tax Increment Financing Pilot (TOC TIF Pilot) Program to fund feasibility studies for eligible cities and LA County, to consider tax increment financing districts that have a TOD regulatory document in place or under development that are around transit stations. The TOC TIF program guidelines adhere to the State and County criteria. The Program goals include the following: Increase access to transit by assisting local governments to accelerate the adoption of TOD regulatory frameworks; Improve utilization of public transit by reducing the number of modes of transportation necessary to access regional and local transit; Further the reduction of greenhouse gases through encouraging in-fill development along transit corridors and transit use; and Support and implement sustainable development principles as well as increasing meaning full engagement with diverse stakeholders in diverse and underserved communities. Since the program first launched in 2012, Metro has awarded 42 grants for a total of $24.1 million in funds.	Ongoing
Transit to Parks Strategic Plan	The Transit to Parks Strategic Plan presents a vision for coordinating strategies at the local and regional levels for increasing access to parks and open space countywide. The Plan relies on a data-driven process to identify where and how resources can best be allocated to improve transit access to parks for the communities that need it the most. The final plan will include policies, initiatives, and pilot projects. It will be presented to the Board in March 2018.	In Progress
Union Station Master Plan	Metro purchased Los Angeles Union Station in 2011 and shortly thereafter initiated the preparation of a master plan that identified a series of short to long term recommendations including a series of perimeter improvements to improve safety and connectivity, transit optimization, and creating a great destination. Since 2015, Metro has secured over $17 million in funds through Caltrans Active Transportation Program (ATP) to advance the Los Angeles Union Station (LAUS) Forecourt and Esplanade Improvements project and $1.6 million in the Federal Transit Administration (FTA) for the Cesar E. Chavez Bus Stop Improvements Project both of which include innovative sustainability elements. Metro continues to advance transit infrastructure projects at LAUS, such as Link US and coordination with High Speed Rail. Going beyond the station, Metro coordinates with the City of Los Angeles, the County of Los Angeles and the California High Speed Rail Authority through the Union Station/Civic Center Exploratory Taskforce on improving interagency coordination and exploring strategies to advance equity and sustainability in the area.	Complete
Urban Greening Plan	Metro's urban greening plan is a website resource called Metro Green Places. Green Places is a greening and placemaking toolkit for areas around Metro's fixed-guideway stations to improve the experience of accessing transit. The greening and placemaking tools facilitate environmental and community-focused projects in these areas in conjunction with first/last mile improvements.	Complete

TITLE	2018 UPDATE	STATUS
Urban Greening Implementation Action Plan	The Urban Greening Implementation Action Plan was approved following the completion of the Metro Green Places website. The Implementation Action Plan includes next steps for implementing the tools in the Green Places website. These steps include developing a carbon calculator, training and outreach to cities, demonstration projects, inter-agency collaboration, internal training, consideration in Metro programs, an online mapping tool, and funding options research.	In Progress
Vanpool	The Metro Vanpool Program provides alternative transportation choices to commuters, improves air quality, and reduces traffic congestion in LA County. The Metro Vanpool Program offers up to a $500 monthly lease subsidy – not to exceed 50% of the lease costs – for commuter vanpools of 7-15 passengers that have a destination to a LA County worksite for which a completed program application and agreement has been submitted and approved by Metro. As of August 2018, three suppliers have been added to the vehicle bench including one who offers an all-electric vehicle option for our participants.	Ongoing
VMT Mitigation Measures Analysis	The purpose of the study was to explore how SB 743 affects Metro, the CEQA requirements of its plans and programs and how Metro programs and projects could be used as mitigation by other lead agencies. SB 743 has been transmitted to the Office of Administrative Law for final rulemaking. Staff continue to monitor procedures and policies regarding SB 743 implementation.	Complete

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