

Metro Transit Coalition to Reduce Climate Pollution for the 2028 Olympics and Beyond

FY24 Environmental Protection Agency's Climate Pollution Reduction Grants (CPRG) Program:
Implementation Grants General Competition

April 1, 2024



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Section 1: Overall Project Summary and Approach

1.a. DESCRIPTION OF THE GHG REDUCTION MEASURES

Regional transportation and regional rail joint powers authorities and units of local governments from Los Angeles and Orange counties (LA/OC) are partnering to implement greenhouse gases (GHG) emission measures to help address the worst air quality in the United States as designated and classified by the United States Environmental Protection Agency (EPA) for National Ambient Air Quality Standards (NAAQS). The Los Angeles- South Coast Air Basin, which comprises most of these 2 counties, is currently nonattainment “extreme” for the 8-hour (2015) ozone and nonattainment “serious” for the PM-2.5 (2012) criteria pollutants. LA/OC counties are currently home for over 13 million people, with their population expected to reach about 15 million in 2050. The Coalition is a partnership led by the Los Angeles County Metropolitan Transportation Authority (LA Metro) along with the Orange County Transportation Authority (OCTA), Southern California Regional Rail Authority (SCRRA or Metrolink), Los Angeles County Public Works (LACPW), and the City of Anaheim. For this application, the Coalition requests \$495.3M in Climate Pollution Reduction Grants (CPRG) Program funding for 16 transportation projects. Each project was selected because it aligns with three GHG reduction measures identified by the Los Angeles-Long Beach-Anaheim, CA Metropolitan Statistical Area’s Priority Climate Action Plan (PCAP): Measure T2, Measure T5, and Measure T6 (Measures). **These Measures will have a transformational impact on the region and tackle the climate crisis by reducing approximately 1,020,000 metric tons of CO₂ equivalent (CO₂e) emissions by 2050.**

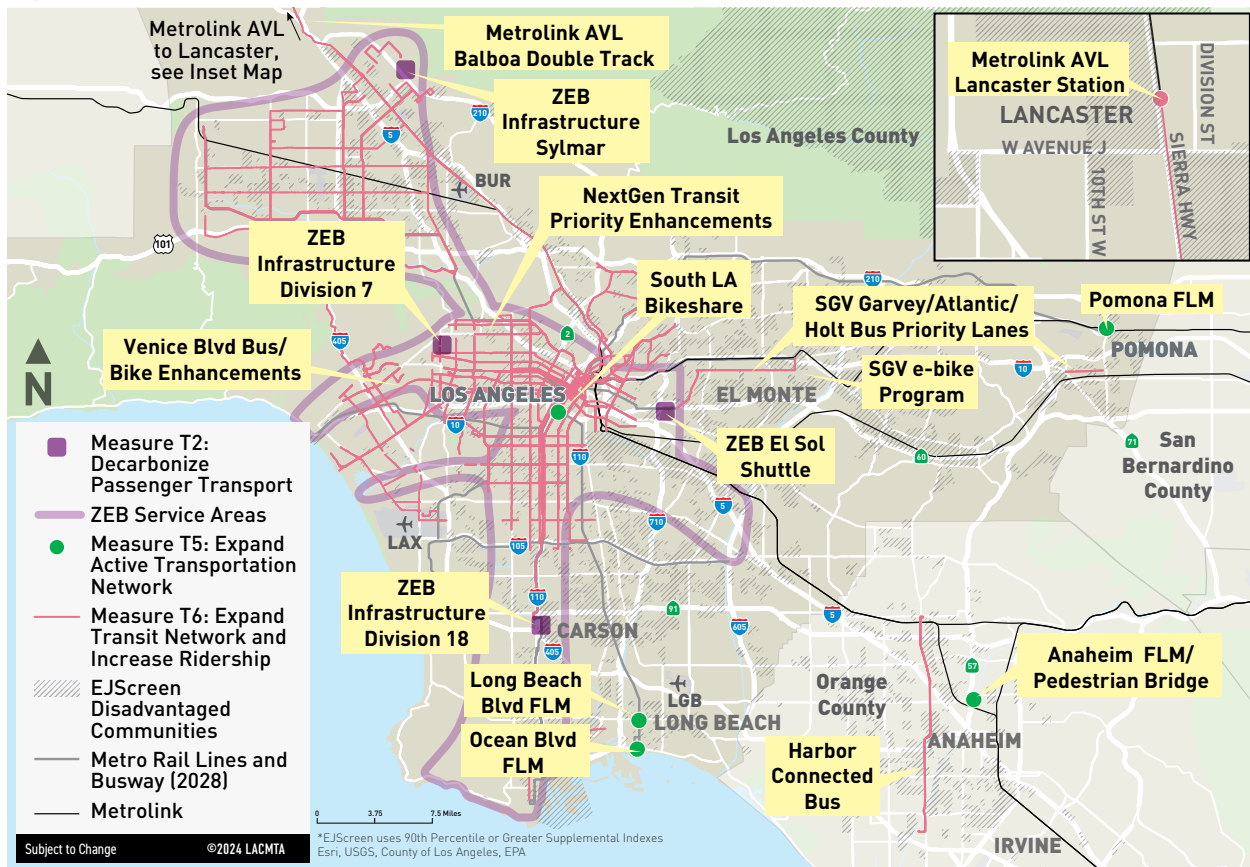
The Measures will reduce GHGs and toxic air pollution including ozone and black carbon by encouraging access to public transportation, walking, biking, rolling, and other alternatives to driving. Consistent with EPA’s Fiscal Year (FY) 2022-2026 Strategic Plan¹, this funding application focuses on passenger rail, bus, and bicycle and pedestrian infrastructure projects that will significantly reduce regional vehicle miles travel (VMTs), and directly respond to Goal 1 “**Tackle the Climate Crisis**” and Goal 2 “**Take Decisive Action to Advance Environmental Justice and Civil Rights**,” as outlined in [Section 4](#). The 16 projects will lead to considerable, quantifiable GHG pollutant reductions at a regional level with substantial health-related benefits to local communities. Supporting EPA’s Objective 1.1, “Reducing Emissions that Cause Climate Change,” the Measures and the supporting projects, outlined in detail in the following pages and shown in Figure 1, specifically target decarbonization of passenger transport (Measure T2), expansion of the innovative and growing active transportation network (Measure T5), and expansion of the regional transit network to increase ridership (Measure T6).

The LA/OC region is sprawling, dynamic, and complex. An effort to reduce VMTs is critical to tackle on-road vehicle emissions, which accounts for 96.2% of the GHG transportation emissions in the region. Each project was carefully selected by the Coalition to integrate with existing infrastructure, planned improvements, and, crucially, each other, such that the overall impact of the Measures will directly reduce VMTs by offering competitive transit and other mobility options. New transit riders will be gained with speedier buses, reliable rail, and safer pedestrian and bicycle infrastructure and will require first/last mile (FLM) connections to completely remove the need for a vehicle trip. In this way, by providing projects that support the full removal of on-road vehicle trips, the investments proposed by this application create holistic benefits greater than the sum of their parts. By bolstering an integrated, competitive, and reliable transit network that does not rely on on-road vehicles, combined, the projects will achieve lasting and resilient GHG emission reductions improving the health condition and access to economic and other opportunities for disadvantaged communities.

¹ FY 2022-2026 EPA Strategic Plan. <https://www.epa.gov/planandbudget/strategicplan>. March 2022.



Figure 1. CPRG Coalition Projects



With the upcoming 2028 Olympic and Paralympic Games (2028 Games) to be held in the LA/OC region, the Coalition has a unique opportunity to support CPRG Goal 4: pursue innovative policies and programs that will create legacy mode shift improvements can be “scaled up” across multiple jurisdictions. The 2028 Games will be an historic opportunity to prove how public transportation and zero-emission alternative modes of transportation can be successfully implemented within a 5-year timeframe. The Coalition selected these 16 projects to showcase sustainable transportation solutions that could be implemented before the 2028 Games. In 2028, the LA/OC region will demonstrate to the U.S. and the world that environmentally friendly transportation systems are attainable while leaving a legacy of sustainable alternative transportation infrastructure.

Measure T2: Decarbonize Passenger Transport – Zero-Emission Bus Conversion Projects

To ensure direct emission reduction benefits for disadvantaged communities that have experienced disproportionate exposure to pollution, the Coalition has prioritized four projects under Measure T2: LA Metro’s Division 7 and Division 18 zero-emission bus (ZEB) charging infrastructure, Sylmar Bus Yard ZEB charging infrastructure, and LACPW’s El Sol Shuttle Service ZEB conversion.

Project Features

LA Metro will purchase and install charging infrastructure for two of the agency’s largest bus depots to help



meet the goal of converting 100% of the LA Metro bus fleet to ZEBs. In total, around 400 ZEBs will be supported by this new infrastructure. LA Metro is also coordinating the ZEB transition of its fleet with the Southern California Edison (SCE) Ready Program, which plans to install electric vehicle (EV) charging stations throughout the LA/OC region. Installation of bus charging infrastructure will also occur at the Sylmar Bus Yard in the San Fernando Valley (in coordination with the City of Los Angeles Department of Transportation [LADOT]), supporting the zero-emission conversion of 90 buses. LACPW will acquire seven ZEBs to replace the aging fossil fuel-powered bus fleet for the El Sol Shuttle, which operates three local bus lines within unincorporated East Los Angeles County (LA County), where communities have been redlined and historically burdened by freeway pollution since the 1960s. The ZEB service areas, as shown in a purple outline in Figure 1, will result in emission reductions and improved air quality on bus routes throughout LA County, including historically disadvantaged communities within the San Fernando Valley, Central, East, and South Los Angeles.

Project Tasks and Milestones

Electrification of Divisions 7 and 18 project tasks will include general project planning, design, engineering, charging equipment and management systems procurement, utility coordination, preconstruction services, cost estimating and scheduling, civil construction, charging equipment and management systems installation and commissioning, and other activities. In July 2024, LA Metro expects to release a competitive solicitation to select a contractor to electrify Divisions 7 and 18. Design, utility coordination, and preconstruction activities (e.g., plans, specifications, and estimates [PS&E]) will occur between 2025 and 2026, with final design, construction, and commissioning to be completed in 2028. Given LA Metro's upcoming May 2024 ZEB procurement, electrification of the divisions will align with deliveries scheduled to begin in April 2028.

The Sylmar Bus Yard charging infrastructure project will be implemented over a 5-year timeframe, with planning and procurement occurring in 2025-2026, and implementation and construction in 2027-2028. LACPW will use an existing agreement with the California Association for Coordinated Transportation (CalAct) to procure the El Sol Shuttle ZEB buses in 2024-2025. Vehicle purchase and inspections will commence in 2026, and by 2027, LACPW expects vehicles to be placed in service and charging stations completed.

Project Risks

Supply chain issues and an evolving technology marketplace may affect the timelines to deliver ZEBs and their supporting infrastructure. Utility capacity upgrades are expected to take 2 to 3 years in SCE territory; however, LA Metro is mitigating these risks through early coordination, which has already begun. LA Metro, and LACPW have been leaders in operating ZEB service, and through lessons learned on supply chain challenges, technology advancements, and early purchasing agreements, these agencies understand where efficiencies and cost/benefits can be best achieved. It is also critical to secure funding for charging infrastructure to avoid scenarios where buses have arrived but do not have a place to charge. In support of potential lack of workforce, the Coalition has support from the Los Angeles Cleantech Incubator (LACI) workforce development program focused on closing the training gap in EV maintenance technicians needed to install and maintain new ZEB charging stations.

Roles and Responsibilities

LA Metro is the owner and operator of the Division 7 and 18 charging infrastructure project and has secured local, state, and other federal dollars to purchase ZEBs and associated charging infrastructure. As the Lead Applicant, LA Metro will submit a Memorandum of Agreement (MOA) signed by all Coalition members by July 1, 2024.

LADOT is the owner and operator of the DASH, Commuter Express, and Cityride buses that will be charged at the Sylmar Bus Yard, and therefore, will be a project partner responsible for the design and implementation of this project. LA Metro will facilitate a subrecipient agreement with the City of Los Angeles (LA) for the implementation of the Sylmar Bus Yard conversion. Refer to the attached Letter of Commitments as the City of LA will directly assist in the project's implementation and performance.

LACPW is the owner and operator of the El Sol Shuttle service ZEB conversion, so it will be responsible for the design and implementation of this project. As a member of the Coalition, LACPW will be a CPRG subrecipient that will sign the MOA with LA Metro and other members of the Coalition by July 1, 2024.

Meeting CPRG Goals

Goal 1: Shifting to electric passenger buses will dramatically reduce GHG emissions. These projects will lead to a reduction of more than 210,000 metric tons in CO₂e emissions through 2050.

Goal 2: The ZEB conversions will enhance air quality along major transportation corridors, improving public health outcomes, especially in low-income and disadvantaged communities (LIDACs).

Goal 3: LA Metro has advanced the purchase of ZEBs and commits additional local, regional, and state dollars to the EV upgrades for Divisions 7 and 18, from funding sources described in Section 1.b.

Goal 4: LA Metro's ZEB conversion is the largest in the U.S. and can serve as a roadmap for other agencies. LACPW's conversion will be an important case study for smaller-scale shuttle services.

Relevancy to PCAP and Why the Measure Was Selected

These projects support PCAP Measure T2: Decarbonize Passenger Transport: increase the zero-emission vehicle (ZEV) market share for on-road passenger vehicles and passenger buses, including school buses. The projects are part of PCAP Strategy T2.2 – Replace fossil fuel-powered buses with ZEVs and install necessary EV infrastructure. The projects were selected because of their potential to support PCAP goals and reduce emissions in LIDACs.

Measure T5: Expand Active Transportation Network – Active Transportation Projects

The Coalition has identified active transportation projects that will substantially reduce emissions while providing opportunities for affordable, sustainable transportation for LA/OC's disadvantaged communities.

Project Features

Through LA Metro, the cities of Anaheim, Long Beach, Los Angeles, Pomona, and communities within San Gabriel Valley (SGV) will be project partners to assist in the implementation of active transportation infrastructure, providing improved access to transit throughout the region prior to the 2028 Games. Collectively, the projects will include FLM infrastructure that will encourage mode shifts away from cars. Within the City of Long Beach, FLM improvements will be implemented in two corridors along Long Beach Boulevard and Ocean Boulevard, consisting of approximately four miles of pedestrian and streetscape improvements and protected bikeways connecting to the LA Metro A Line Station in downtown Long Beach to major employment and tourist destinations. Similarly, the 2.1-mile Garey Avenue FLM project in the City of Pomona will include pedestrian improvements, street trees, and a protected cycle track to connecting the LA Metro A Line light rail station, the North Metrolink commuter rail station, and the Downtown Pomona Transit Center. Additionally, Coalition partner, City of Anaheim will construct a pedestrian bridge



that will provide direct connections from a multimodal hub in northern Orange County to existing job and entertainment centers as well as an under-construction mixed-use development. The bridge will allow pedestrians to safely cross a high-traffic roadway (Katella Avenue) separated from vehicles to access transit, Greyhound, Amtrak, Metrolink, and taxis.

To address a significant bike share service gaps in South LA, LA Metro is seeking funding for 480 e-bikes and 40 bike share stations to ensure continuous FLM connectivity between the LA Metro E Line in Downtown LA and the LA Metro C Line in South LA. To support the growth and safe use of zero-emission e-bikes, Active San Gabriel Valley (ActiveSGV) be a project partner in the purchase e-bikes to expand an e-bike lending library, create a program to educate community members on e-bike safety, and support program graduates in purchasing their own e-bike.

Project Tasks and Milestones

In general, tasks identified for implementation for the FLM projects would include planning, community outreach and engagement, costing and scoping, site work, procurement, construction, installation, and other activities. Anticipated timelines include the following milestone dates to ensure their completion before the 2028 Games: FLM projects in the cities of Long Beach (Long Beach Boulevard and Ocean Boulevard) and Pomona (Geary Avenue) – planning/scoping 2025-2026, construction 2027-2028, completion 2028 and the city of Anaheim's FLM Pedestrian Bridge – planning/scoping 2025, construction 2026-2028, completion 2028. Key project tasks and milestones for the LA Metro Bike Share include planning/scoping 2025, e-bike procurement 2026, completion 2027. LA Metro's partnership with ActiveSGV e-bike lending library will develop program materials and procure e-bikes, including e-cargo/family bikes in 2025; host e-bike demo events and safety education programming and coordinate e-bikes for program graduates in 2026 and 2027; and program completion in 2027.

Project Risks

The bicycle and pedestrian infrastructure projects are low-risk initiatives. The public right-of-way (ROW) needed for construction is owned by each of the respective cities/jurisdictions (refer to Letter of Intent from City of Anaheim and Commitment Letter Attachments). As such, no other regional or state permitting is required. LA Metro has set a precedent with the State's Active Transportation Program (ATP Grants)² by distributing funds through a regional competition. As such, LA Metro has extensive experience completing projects of this size on time and within budget and is confident in the schedule and cost estimates provided. Labor and local hiring agreements are in place to support high-paying jobs and local hiring, increasing the likelihood of available labor for on-time construction. The Metro Bike Share and ActiveSGV e-bike lending library are both expansions of an existing operational, proven model, and no significant project risks are anticipated.

Roles and Responsibilities

LA Metro will be the lead Coalition member responsible for overseeing expenditure of the CPRG funds. In this role, LA Metro will facilitate project partnerships with the cities of Long Beach, Pomona, as well as ActiveSGV through subaward agreements (refer to the Letters of Commitment attachment). The existing Bike Share system is a partnership between LA Metro and the City of LA. LA Metro is the owner and operator of the bike share system, and the City of LA owns the public ROW where the stations are located. The City of Anaheim is the owner of the ROW needed for construction of the Katella FLM/Pedestrian Bridge project, and therefore will be responsible. As a member of the Coalition, the City of Anaheim will sign the MOA with LA Metro and other members of the Coalition by July 1, 2024.

² LA Metro. Active Transportation Program (ATP). <https://www.metro.net/about/atp/>.

Meeting CPRG Goals

Goal 1: Mode shift from private vehicles to walking, biking, and public transportation will reduce VMTs and GHG emissions by more than 19,000 metric tons of CO₂e by 2050.

Goal 2: The expanded pedestrian and bicycle infrastructure is expected to result in air pollution reduction, including in the disadvantaged communities the projects will serve. The FLM projects also provide opportunities to reduce the urban heat island effect through integration of green infrastructure in the street design.

Goal 4: The active transportation projects proposed will be replicable examples for municipalities across the LA/OC region and U.S. to connect and expand their active transportation networks.

Relevancy to PCAP and Why the Measure was Selected

The active transportation projects will enhance pedestrian infrastructure in high-density areas by expanding sidewalks and multi-use trails (PCAP Strategy T5.1) and will improve the connectivity of the bicycle network by expanding bicycle facilities and infrastructure (PCAP Strategy T5.2), supporting PCAP Measure T5. The Coalition selected these projects for their strong potential to encourage LA/OC residents and visitors to shift to emissions-free active transportation options.

Measure T6: Expand Transit Network and Increase Ridership – Transit Expansion, Speed, and Reliability Projects

The Coalition will implement transit expansion projects that will increase rail and bus service, speed, and reliability in the LA/OC region. Taken together, these projects have the potential to significantly increase transit ridership and encourage residents and visitors to the LA/OC region to switch from cars to transit.

Project Features

The Coalition will implement four bus-focused transit projects to improve bus speeds for riders and ensure that transit by bus offers a viable alternative to cars. LA Metro will partner with LADOT to deploy transit signal priority (TSP) improvements along approximately 1,350 miles of LA Metro's NextGen Tier 1 Transit Corridors. To further encourage transit use, bus speed and reliability upgrades and bicycle safety enhancements will be implemented along 4.4 miles of Venice Boulevard within the City of LA and 10.5 miles of bus priority lanes will be installed on Atlantic Boulevard, Garvey Boulevard, and Holt Avenue within San Gabriel Valley in LA County. These bus priority projects will ensure faster travel times and improved bus reliability for a dramatically improved rider experience. Coalition member OCTA will deploy TSP improvements along 12 miles of the agency's highest ridership route through the Harbor Boulevard Connected Bus Project. This project will enhance on-time arrivals of the Harbor Boulevard Bravo! rapid bus route, which spans five cities, allowing for faster bus speeds and better reliability for the 24 LIDACs that intersect the route. Collectively, these bus enhancement projects will create region-wide reliability in bus speeds and congestion reduction, making transit service an attractive alternative to personal vehicle use, avoiding approximately 790,000 metric tons of CO₂e emissions by 2050.

Coalition member Metrolink will implement a regional rail project to improve operation and user experience on the Metrolink Antelope Valley Line (AVL), a 76-mile line to North LA County. The Balboa Double Track Extension and Lancaster Terminal Improvement Projects allow Metrolink to offer hourly service on the full length of the AVL, which connects a mix of disadvantaged, rural, and suburban communities in North LA County's High Desert to the rail and bus hub of Union Station in downtown



LA. In 2019, Metrolink's AVL service was responsible for removing approximately **one million weekday automobile trips** from the LA/OC region's roadways. The AVL projects will allow for operational flexibility and increased rail service, resulting in faster and more reliable trains for riders, while supporting the operation of zero- or low-emission locomotives Measures.

Project Tasks and Milestones

The TSP improvements related to the NextGen Tier 1 bus routes will involve the installation of signal communications devices and upgrading hardware connections between the LADOT Automated Traffic Surveillance and Control (ATSAC) System and roughly 1,000 traffic signals along the various bus corridors operating within the City of LA. Project tasks for bus improvements projects Venice Boulevard, Atlantic/Garvey/Holt Transit Corridor in San Gabriel Valley, and OCTA's Harbor Boulevard Connected Bus include the completion of program design (PS&E) in 2025-2026, construction and signal system testing and evaluation from 2026 to 2028, and completion by 2028. Performance measurement is also planned using before-and-after studies and crowdsourced data analysis.

Funding for the Metrolink AVL project's 1.1-mile double track extension (from Balboa Boulevard to Sierra Highway) will allow AVL trains to operate in both directions on an hourly cadence. The Lancaster Terminal Improvements project is an expansion of an existing train layover facility with new storage tracks that could accommodate up to four 5-car trains and a new island rail platform. The project schedule anticipates design, engineering, and ROW phases to be complete by 2026 with construction complete by May 2028, in time for the 2028 Games.

Project Risks

Identified risks in the implementation of TSP and other bus improvements projects include coordination with municipal agencies (e.g., cities) in LA and Orange Counties, who would be the owners and operators of TSP in their respective portions of the project corridors. Although the list of jurisdictional owners will require extensive coordination and agreement, all of these bus corridors are implementation-ready, with extensive participation with all cities/municipalities through upfront feasibility planning and advisory committees. As regional sponsors, and Coalition members, LA Metro and OCTA also have an extensive history of working and building partnerships with each city on the bus corridors. Through completed outreach and planning activities, all cities along these bus corridors intend to cooperate and assist as needed with the successful implementation of these projects (refer to Letters of Commitment).

Various risks for the Metrolink AVL project that may affect timely implementation include the anticipated coordination, permitting, and approvals required for construction. Although the project received an exemption from California Environmental Quality Act (CEQA) under Public Resources Code Section 21080(b)(10) and CEQA Guidelines Section 15275(b), and a Final Environmental Impact (FEIR) was approved by the LA Metro Board of Supervisors in November 2021, additional permits and approvals will need to be completed. This includes permitting for construction activities, encroachment, operating within rail ROW, mitigation plans, and other requirements.

Roles and Responsibilities

LA Metro will be the lead Coalition member responsible for overseeing expenditure of the CPRG funds for the TSP and bus priority lane projects. In this role, LA Metro will facilitate the partnership with and subaward agreements to the City of LA and San Gabriel Valley Council of Governments (SGVCOG) who will be directly assisting in the design and performance of the respected projects. Refer to the Letters of Commitment attachment.

OCTA will lead the Harbor Boulevard Connected Bus project's design and implementation. OCTA will be responsible for the project development, engineering, construction, contracting, and risk management of the project. The Letters of Commitment attachment includes support from the partner cities of Anaheim,

Fountain Valley, Fullerton, Garden Grove, and Santa Ana. These agencies will be the owners and operators of their respective portions of the project corridor. As a member of the Coalition, OCTA will sign the MOA with LA Metro and other members of the Coalition by July 1, 2024.

Metrolink will lead the AVL project including design, construction, and implementation as well as implement rail service with upgraded Tier 4 locomotives. As a member of the Coalition, Metrolink will sign the MOA with LA Metro and other members of the Coalition by July 1, 2024.

Meeting the Goals of the CPRG

Goal 1: The proposed improvements to increase ridership on a comprehensive network of bus corridors and expand Metrolink rail capacity will result in significant GHG reductions of nearly 790,000 metric tons of CO₂e by 2050.

Goal 2: The transit expansion projects will reduce emissions in disadvantaged communities throughout the LA/OC region.

Goal 3: The Coalition will leverage CPRG funds to fill the funding gap with previously secured federal and local funding sources, as described in Section 1.b under Measure T6.

Goal 4: This investment in transit infrastructure supports significant forecasted ridership growth and the anticipated needs of the 2028 Games.

Relevancy to PCAP

The Coalition's transit expansion projects support PCAP Measure 6: Expand transit services, infrastructure, and accessibility to reach the majority of residents and workers. The projects specifically support PCAP Strategy T6.1 – Expand transit coverage by increasing the service and frequency of bus and rail systems and Strategy T6.4 – Expand rail infrastructure and low- and zero-emissions locomotives to support the decarbonization of passenger rail. The Coalition selected the projects because they will support the Measure T6 performance goal of increasing transit ridership in the LA/OC region an estimated 10% by 2030 and 20% by 2045.³ [Section 2](#) outlines the GHG reduction benefits of this measure.

1.b. DEMONSTRATION OF FUNDING NEED

These Measures and their projects have been identified to make significant regional GHG reduction efforts and address EPA's designation of the South Coast Air Basin as an "extreme" nonattainment area, particularly before the 2028 Games. The following describes the funding need for timely implementation and how the CPRG is needed to address these funding gaps.

Measure T2: Zero-Emission Bus Conversion Projects

Under the California Innovative Clean Transit (ICT) regulation adopted in December 2018, upgrading all bus fleets in the state of California to ZEBs is a critical path for transit agencies to comply by 2040. For transit agencies this regulation sets forth a funding need to achieve 100% ZEB conversion for their bus fleets. The CPRG program is a well-paired funding opportunity that will complement other state and local funding sources to achieve the conversion goals before 2040. LA Metro has been actively working on funding their ZEB conversion program, securing around \$160M in funding from the following programs: Federal Highway Administration (FHWA) Surface Transportation Block Grant Program, California State Transportation Agency (CalSTA) Transit and Intercity Rail Capital Program (TIRCP), Federal Transit Administration (FTA) Low-or-No Emission Grant Program (Low-No), FHWA Carbon Reduction Program (CRP), and local Proposition C funds. The City of LA has received local sales tax monies through regional measures for ZEB conversion and intends to seek funding through state and federal grant opportunities (e.g., FTA Low-No Bus, Bus, and Bus Facility).

³ Priority Climate Action Plan – The Los Angeles-Long Beach-Anaheim, CA Metropolitan Statistical Area (March 2024).

LACPW does not receive formula funds for vehicle replacement, so there are no other federal or state funding sources secured for electrifying the El Sol service. LACPW intends to use Proposition A local return funding to also support the project.

Measure T5: Active Transportation Projects

Funding support is needed to timely implement key features of the proposed active transportation projects to ensure their completion before the 2028 Games. CPRG funding will accelerate the construction timeline of these critical active transportation/FLM projects under Measure T5. The active transportation projects have secured smaller funding amounts (e.g., City of Long Beach, LA County Measure M, Prop A, and Prop C). However, these funds are limited to fully fund the proposed network of active transportation projects. Also, larger programs such as EPA's Congestion Mitigation and Air Quality (CMAQ) are national in scale, requiring a more extensive application, which is difficult for individual bicycle and pedestrian projects. Being part of this Coalition enables a collective effort of active transportation projects to be funded. Around \$6M has been secured through local and state funds (e.g., 2024 California Active Transportation Program and City General Funds) for Measure T5 projects.

Measure T6: Transit Expansion, Speed, and Reliability Projects

For the transit expansion projects under Measure T6, current funding shortfalls are generally due to the high infrastructure cost of rail/bus projects and their related cost increases that accumulate over time due to inflation, market conditions, and competitive funding availability. For example, the Metrolink AVL Project, was able to secure \$77.9M of its costs through two non-federal sources, CalSTA's TIRCP (2020) and local funds (Measures M and R). However, as the project proceeded through design, more refined components were required. This, in addition to inflation in materials, utilities, labor, and contingencies were all contributing factors in the current project estimate. Once project shortfalls were identified, additional gap closure funding was sought through TIRCP 2022, but this pursuit was unsuccessful. For the Harbor Boulevard Connected Bus Project, funding was secured through the U.S. Department of Transportation's Strengthening Mobility and Revolutionizing Transportation (SMART 2022) Grant, State Transportation Improvement Program (STIP), as well as TIRCP in 2023. Other local funding opportunities were also pursued, including the Southern California Association of Governments (SCAG) Regional Early Action Planning (REAP), which were initially awarded. However, given recent state and local budget cuts in early 2024, available funding was reverted.

1.c. TRANSFORMATIVE IMPACT

Taken together, the projects can create transformative impacts in the South Coast Air Basin, which has some of the worst air quality in the nation, with high cumulative GHG emission reductions and local levels for individual cities and LIDACs. The impact will extend beyond the LA/OC Region, contributing to broader national progress toward a cleaner transportation sector. With the opportunity offered by the 2028 Games, the LA/OC region is in a unique position to showcase zero-emission bus conversions, high quality active transportation infrastructure, and transit operational improvements for the U.S. and the world.

The Coalition has embraced the prospects of a zero-emission future and have taken steps to provide cleaner and more sustainable transportation for the communities they serve. These pioneering projects will demonstrate a range of scalable ZEB conversions for a large-scale transit agency (LA Metro's regional fleet of 2,300 buses), medium scale service (350 DASH buses), and smaller scale service (LACPW's local El Sol service of seven buses). With the deployment of ZEBs and a focus on innovative charging solutions, and the unique opportunities and publicity offered by the 2028 Games, the projects will demonstrate the feasibility and economic viability of these technologies, encouraging wider adoption.

The Coalition's transit projects will create transformative impacts that will lead to substantial GHG emission reductions. The impact of transit expansion projects will be amplified through sharable performance

indicator studies conducted before and after these projects. Per the CPRG program’s intent to attain measurable GHG emission reductions over time, each of the Measures proposed will be monitored at key milestone points to determine the magnitude of successes (refer to [Section 3](#) for additional detail). This is particularly important for transit expansion projects. For example, open-source data sharing from OCTA’s Harbor Boulevard Connected Bus is anticipated to allow other agencies and researchers to utilize the connected bus travel efficiency findings and replicate successful strategies.

The Coalition will actively engage with other transit agencies and municipalities throughout project implementation, sharing best practices and lessons learned through workshops and conferences. This approach will foster collaboration and accelerate widespread implementation of successful approaches. By implementing these transformative measures, the Coalition will pave the way for significant long-term GHG reductions and accelerate the adoption of these emissions-reduction technologies.

Section 2: Impact of GHG Reduction Measures

To understand the magnitude of the GHG reduction described in this application, a cumulative calculation was developed based on the proposed projects and their applicable GHG Measures. The GHG reductions were projected for each of the three Measures under both near-term (2030) and long-term (2050) conditions in metric tons (MT) of CO₂e (shown in Table 1). Following the GHG reduction results (presented by overall percentage reduction and quality by type of emission), an overall cost-effectiveness is presented based on high-level cost and GHG reduction benefits (cost/benefit analysis) by Measure and for the entire suite of GHG reduction measures. A description of the assumptions and methodologies used in the calculations is also provided for each project in the Technical Appendix. Calculations represent only those emission reductions that will occur as a result of the CPRG implementation grant funding. Detailed results, assumptions, and methodology for each Measure can also be found in the Technical Appendix.

Table 1. Near (2030) and Long-Term (2050) GHG Reductions by Measure

Project	Project Features		CO ₂ e Reduction by 2030 (MT)	CO ₂ e Reduction by 2050 (MT)
Measure T2: Decarbonize Passenger Transport				
ZEB Charging Infrastructure	LA Metro Division 7, 18 Charging Infrastructure	155 chargers to service 400 ZEB buses	18,670	143,138
	Sylmar Bus Yard Charging Infrastructure	45 chargers to service 90 ZEB buses	8,299	63,623
ZEB Vehicles	El Sol Shuttle ZEB Conversion	Replacing seven compressed natural gas (CNG) buses with ZEBs	453	3,471
Measure T2 Total			27,422	210,232

Project	Project Features		CO ₂ e Reduction by 2030 (MT)	CO ₂ e Reduction by 2050 (MT)
Measure T5: Expand the Active Transportation Network				
Bicycle and Pedestrian FLM Improvements	Long Beach Blvd FLM Complete Streets	2.7 miles on new bus and bike infrastructure	616	3,736
	Ocean Blvd FLM Complete Streets: Rails to Sails	1.2 miles of pedestrian infrastructure	462	3,097
	Pomona FLM: Garey Ave Complete Streets	2.1 miles of pedestrian, bike, and green infrastructure	239	1,440
	Anaheim FLM/ Pedestrian Bridge	One new pedestrian bridge, sidewalk improvements	2,200	8,085
	South LA Bike Share and SGV e-Bike Lending Library	40 new bike share stations and 480 e-bikes, e-bike incentive program	441	2,891
Measure T5 Total			3,958	19,249
Measure T6: Expand the Transit Network and Increase Ridership				
Transit Priority Enhancements	NextGen Transit Priority Enhancements	TSP improvements along 1,350 miles of regional bus network	84,926	552,781
	Venice Blvd Bus/Bike Enhancements	4.4 miles of bus speed and reliability upgrades for transit riders, and safety and access improvements for cyclists	3,529	32,733
	SGV Garvey/Atlantic/Garvey/Holt Bus Priority Lanes	10.5 miles of bus priority lanes	8,420	78,113
	Harbor Blvd Connected Bus	12 miles of TSP improvements	10,329	95,824
Commuter Rail Enhancements	Metrolink AVL Expansion	1.1 miles of double track extension and station enhancements	4,039	30,400
Measure T6 TOTAL			111,243	789,851

2.a. MAGNITUDE OF GHG REDUCTIONS FROM 2025 THROUGH 2030

The Coalition's projects lead to significant cumulative GHG emission reductions from 2025 to 2030 (Table 2). Established methodologies and emission factors have been used to estimate the reductions for each Measure, ensuring transparency and credibility.

Table 2. Estimated Cumulative GHG Reductions 2025 through 2030

Measure	Project Theme	Baseline 2025 CO ₂ e Emissions (MT)	Cumulative CO ₂ e Reductions by 2030 (MT)
Measure T2	Decarbonize Passenger Transport	49,872	27,422
Measure T5	Expand the Active Transportation Network	10,219	3,958
Measure T6	Expand the Transit Network and Increase Ridership	405,790	111,243
TOTAL		465,881	142,623

Durability of GHG Reductions:

The projects under each of the three Measures are designed to deliver **durable and long-lasting GHG reductions** beyond the grant period:

- > **Decarbonize Passenger Transport with ZEBs:** Replacing CNG with ZEBs and their charging infrastructure creates a permanent shift toward a zero-emission fleet, resulting in ongoing reductions throughout the lifespan of the electric buses.
- > **Active Transportation Projects:** Encouraging a modal shift toward zero-emission short trips, which contributes to sustained reductions in car dependence and associated emissions.
- > **Transit Expansion Projects:** Increasing ridership by shifting commuters and midday travelers from private vehicles to convenient, fast, economical, and reliable bus and rail options.

Furthermore, the projects' **transformative impact** (described in Section 1.c) contributes to the durability of reductions. By promoting the replication of successful strategies and accelerating the adoption of emerging technologies, the projects' influence extends beyond the immediate scope, fostering long-term systemic changes that contribute to sustained GHG reductions.

The Coalition is committed to transparent and accurate reporting of GHG reductions and will utilize established monitoring and verification protocols to track progress and ensure the durability of achieved reductions. By implementing these Measures, the Coalition aims to make a significant and lasting contribution to California's and the nation's GHG reduction goals.

2.b. MAGNITUDE OF GHG REDUCTIONS FROM 2025 THROUGH 2050

Building upon the previous analysis for the 2025-2030 timeframe, the Coalition projects will provide even greater **cumulative GHG emission reductions** gained through continuous benefits of the Measures from 2025 to 2050 (Table 3).

Estimated Long-Term Reductions:

While predicting specific emission reductions for such a long-term horizon presents inherent challenges, we can project **conservative estimates** based on the following considerations:

- > **Continued operation of implemented measures:** We assume the benefits from ZEB deployment, EV charging infrastructure, bus and rail expansions, and active transportation and program incentives will continue throughout the 25-year period.
- > **Gradual reduction impact increase:** As the clean technologies and infrastructure improvements mature and usage patterns evolve, we anticipate a gradual increase in the impact of these measures on reducing emissions.

Cumulative GHG reductions for each Measure, based on future ridership projections, assumed user mode-shift and changes in average vehicle fuel efficiency values by 2050, considering the extended timeframe and potential impact increase (Table 3).

Table 3. Estimated Cumulative GHG Reductions 2025 Through 2050

Measure	Project Theme	Baseline 2025 Emissions (MT)	Cumulative GHG Reductions by 2050 (MT)
Measure T2	Decarbonize Passenger Transport	39,037	210,232
Measure T5	Expand the Active Transportation Network	18,670	19,249
Measure T6	Expand the Transit Network and Increase Ridership	403,897	789,851
TOTAL		461,604	1,019,332

Durability of Long-Term Reductions:

The proposed measures are designed to deliver **highly durable GHG reductions** for the following reasons:

- > **Long-lasting infrastructure and technology investments:** ZEBs, EV charging infrastructure, and other improved low-emission vehicle options represent long-term investments with sustained emission reduction benefits.
- > **Behavioral change and market transformation:** Encouraging a shift toward healthier active transportation choices will create lasting behavioral changes and market transformations that contribute to long-term GHG reductions.
- > **Potential for future innovation and improvement:** Continuously monitoring and evaluating the Measures and their projects allows for potential future adjustments and improvements, ensuring continued effectiveness and adaptation to evolving technologies.

Furthermore, the **transformative impact** of the project (as described in Section 1.c) strengthens the durability of reductions by:

- > **Inspiring wider adoption:** As the projects become successful models, other regions and cities are more likely to replicate their strategies, leading to broader and long-lasting systemic changes.
- > **Accelerating technological advancements:** By demonstrating the feasibility and economic viability of clean technologies, the ZEB projects can contribute to faster development and wider adoption of future advancements in the transportation sector.

The Coalition recognizes the limitations of long-term projections. However, these estimates provide a reasonable indication of the Measures and their projects' potential to contribute significantly to California's and the nation's long-term GHG reduction goals. We remain committed to transparent monitoring and reporting, utilizing established protocols to ensure the accuracy and durability of achieved reductions. By implementing these Measures with a long-term vision, the Coalition aims to make a lasting contribution to combating climate change and creating a more sustainable future for generations to come.

2.c. COST EFFECTIVENESS OF GHG REDUCTIONS

Quantitative Analysis:

The Coalition is committed to implementing cost-effective GHG reduction measures. We have calculated the cost-effectiveness of our proposed measures using the following formula:

Cost-effectiveness = (Requested CPRG Funding) / (Sum of Quantified GHG Reductions from 2025-2030)

- > **Requested CPRG Funding:** \$495,287,236
- > **Sum of Quantified GHG Reductions (2025-2030):** (27,422 + 3,958 + 111,243)= 142,623 metric tons of CO₂e emissions
- > **Cost-effectiveness = (\$495,287,236) / (142,623) = \$3,473 per metric ton of CO₂e emissions**

The infrastructure projects in this application will be complete between 2027 and 2028 providing 2-3 years of GHG reduction benefits by 2030. The cost-effectiveness from 2025 to 2050 is \$486 per metric ton of CO₂e emissions. The detailed explanation of the input data and the analytical assumptions with citations for each calculation of the GHG reductions are provided in the Methodology in the Technical Appendix attachment.

Qualitative Narrative:

The Coalition acknowledges that several factors can affect the cost-effectiveness of our Measures:

- > **Sector Dynamics:** Transitioning a large transit fleet to ZEBs requires upfront investments in vehicles and EV charging infrastructure. However, long-term operational cost savings from EVs can offset these initial costs.
- > **Expected Beneficiaries:** The Measures benefit a broad range of stakeholders such as LIDACs, which include historically disadvantaged communities, high need equity groups, and transit-dependent residents, as detailed in Section 4. Reduced emissions improve public health, while infrastructure improvements and program incentives can create new economic opportunities.
- > **Prevailing Costs in the Implementation Areas:** Construction, labor, and equipment costs can vary depending on location. The Coalition will leverage its collective expertise to secure cost-effective solutions and explore potential cost-sharing opportunities with participating agencies.

The Coalition is committed to maximizing the impact of the requested CPRG funding. We will utilize efficient procurement practices, explore cost-saving alternatives, and leverage in-kind contributions from our Coalition members and project partners to achieve the greatest possible GHG reductions per dollar spent. There is also the potential for future cost reductions as technologies mature and economies of scale are achieved.

By presenting a clear calculation and a well-reasoned narrative, the Coalition demonstrates its commitment to cost-effective implementation of GHG reduction measures that deliver significant environmental and societal benefits.

2.d. DOCUMENTATION OF GHG REDUCTION ASSUMPTIONS

The Technical Appendix provides detailed documentation of the methodology, assumptions, and calculations used to estimate the GHG emission reductions for each Measure proposed in the Coalition's CPRG grant application. We strive for transparency and accuracy in quantifying the environmental benefits of our proposed Measures as they are based on reasonable/rationale assumptions and cite established references.










Section 3: Environmental Results – Outputs, Outcomes, and Performance Measures

The outputs, outcomes, and performance measures are described for the GHG Measures in the following sections.

3.a. EXPECTED OUTPUTS AND OUTCOMES

Figure 2 describes the expected outputs and outcomes for each Measure supported by the projects in this application.

Figure 2. Expected Outputs and Outcomes by GHG Reduction Measure

EXPECTED OUTPUTS		EXPECTED OUTCOMES: CO ₂ e EMISSIONS REDUCTIONS	
MEASURE T2: DECARBONIZE PASSENGER TRANSPORT			
200	charging stations will be installed	ZEBs and charging infrastructure will reduce CO ₂ e	
497	ZEBs will be served		27,422 <i>metric tons by 2030</i>
7	CNG buses will be replaced with ZEBs		
			210,232 <i>metric tons by 2050</i>
MEASURE T5: EXPAND THE ACTIVE TRANSPORTATION NETWORK			
7	miles of new pedestrian and bike infrastructure and pedestrian bridge	Active transportation will induce modal shift to active and transit modes, reducing CO ₂ e emissions by	
480	e-bikes for LA Metro bike share		3,958 <i>metric tons by 2030</i>
	New street trees and green infrastructure		
			19,249 <i>metric tons by 2050</i>
MEASURE T6: EXPAND THE TRANSIT NETWORK AND INCREASE RIDERSHIP			
1,377	miles of transit signal priority improvements	Bus priority treatments and rail enhancements will induce modal shift to transit, reducing CO ₂ e emissions by	
10.5	miles of new bus priority lanes		111,243 <i>metric tons by 2030</i>
	Metrolink AVL double-track and station improvements		
			789,851 <i>metric tons by 2050</i>
	Cost-effectiveness from 2025-2050 is \$486 per metric ton of CO ₂ e.		
	LA Metro has strong labor agreements with building trades, and union labor will be used to construct new infrastructure.		
	New staff will be hired to maintain and operate buses and zero-emission equipment.		
	Projects reduce harmful NOx, SOx, and particulate matter emissions, including in the disadvantaged communities identified in Section 4 .		

3.b. PERFORMANCE MEASURES AND PLANS

For each Measure, the Coalition has established a specific set of performance metrics/indexes tailored to each project's unique characteristics. These metrics encompass:

- > **Outputs:** Quantifiable results directly attributable to the Measures and projects, as shown in Figure 2.
- > **Outcomes:** Long-term environmental and community benefits resulting from each Measure and type of project (e.g., metric tons of CO₂e reduced, improvements in local air quality), as shown in Figure 2.
- > **GHG Reductions:** The Coalition will continuously quantify actual GHG emission reductions achieved by each Measure and their projects. This will involve collecting data on activity levels, emission factors, and other relevant parameters at benchmark milestones (e.g., 2030 and 2050).
- > **Criteria Air Pollutant (CAP) Changes:** The Coalition will track and report changes in CAPs, such as nitrogen oxides (NOx), particulate matter (PM_{2.5}), and sulfur oxides (SOx) associated with each Measure and their projects. This will involve monitoring relevant air quality indicators and using established emission modeling tools.

LA Metro will develop a comprehensive data collection plan for each Measure in coordination with Coalition members. This plan will identify the specific data points needed, data collection methods (e.g., surveys, meter readings), and data collection frequency. A robust data management system will be used to ensure data quality, accessibility, and security.

A regular reporting schedule will be established to track progress toward achieving established performance measures. Reports will be clear, concise, and accessible, providing stakeholders with a transparent view of the Coalition's progress on each Measure. Regular evaluations will be conducted to assess the effectiveness of each Measure in achieving its intended outcomes. These evaluations will involve analyzing collected data, identifying areas for improvement, and adapting approaches as needed. Additionally, LA Metro and the Coalition members will publish the actual GHG reductions achieved by the Measures and projects in an annual update shown in a Sustainability Dashboard. The Coalition will also include this data in a formal *Sustainability Performance Report*, to be published every 2 years.

3.c. AUTHORITIES, IMPLEMENTATION TIMELINE, AND MILESTONES

Lead Agency: LA Metro serves as the lead applicant representing the Coalition for this CPRG application. In this role, LA Metro will be for overall management, coordination, and reporting of CPRG funding received. This includes overseeing grant funds and budget allocation, coordinating communication and collaboration among Coalition members, managing data collection and analysis for performance measurement, and preparing and submitting semiannual and final reports.

Coalition Members: Individual members of the Coalition will be responsible for implementing specific aspects of the Measures and projects, based on their expertise and resources. Roles and responsibilities will be outlined in the detailed MOA signed by each member. Anticipated responsibilities by Measure and project include:

- > **LA Metro and LACPW:** Measure T2- Implementing ZEB deployment and EV infrastructure upgrades
- > **LA Metro and City of Anaheim:** Measure T5- Implementing active transportation projects
- > **OCTA and Metrolink:** Measure T6- Implementing transit expansion projects

In addition to Coalition members, key project partners will be subawardees of the grant funding and participate and directly assist in the design and implementation of the projects. This includes

municipalities and jurisdictions where the projects are located: cities of LA, Long Beach, and Pomona; SGVCOG (representing Monterey Park, Rosemead, South El Monte, and El Monte); ActiveSGV; and OCTA (representing Anaheim, Fountain Valley, Fullerton, Garden Grove, and Santa Ana). Letters of Commitment from these municipalities and organizations can be found in the Letters of Commitment attachment. Support Letters from a range of elected officials, municipalities, and non-governmental organizations are also provided in the Letters of Support attachment to show broad and thorough support for this application. An implementation timeline is provided in Table 4.

Authority and Permissions/Existing Authority: The Coalition and its member agencies currently possess the legal authority to implement the Measures through existing legislative frameworks and regulatory powers. These authorities include:

- > **Public transit agencies:** Authority to purchase and operate EVs, procure and manage infrastructure projects, and set service plans. Per EPA requirements, LA Metro, Metrolink, and OCTA have provided legal opinions providing documentation that the State of California considers these entities to be a public body created by or pursuant to State law and are accountable to municipal or state units of government (see EligibilityLegalOpinion_LAMetroCoalition.pdf attachment).
- > **City and county governments:** Authority to enact local ordinances and regulations related to transportation and air quality. Authority to procure and construct infrastructure projects.

Table 4. Implementation Timeline and Milestones

Measure	Coalition Member	Project and Target Completion Date	Milestones
Measure T2	LA Metro	Division 7 and 18 ZEB Charging Infrastructure – 2028	ZEB Charging Infrastructure
	LA Metro	Sylmar Bus Yard ZEB Charging (City of LA*) – 2028	> 2024 – Solicitation
	LACPW	El Sol Shuttle ZEB – 2027	> 2025 to 2026 – Preconstruction (PS&E); Equipment Procurement > 2026 to 2028 – Final Design/ Construction and Commissioning
Measure T5	LA Metro	Long Beach Blvd FLM (City of Long Beach*) – 2028	Active Transportation Projects > 2025 to 2026 – Planning, Outreach, Scoping > 2026 to 2027 –Siting, Design, Equipment and Material Purchasing, and Construction > 2027 to 2028 – Installation and Program Implementation
		Ocean Blvd FLM (City of Long Beach*) – 2028	
	LA Metro	Pomona FLM (City of Pomona*) – 2028	
	Anaheim	Katella FLM/Ped. Bridge – 2028	
	LA Metro	South LA Bike Share – 2027	
	LA Metro	SGV e-Bikes (ActiveSGV*) – 2027	

Measure T6	LA Metro	NextGen Transit Priority Enhancements (City of LA*) – 2028	Transit Priority Projects > 2025 to 2026 – Program Design and Preconstruction (PS&E) > 2026 to 2028 – Construction and Testing Metrolink AVL
	LA Metro	Venice Bus/Bike Enhancements (City of LA*) – 2028	
	Metrolink	Antelope Valley Line Projects – 2028	
	LA Metro	SGV Garvey/Atlantic/Holt Bus Priority Lanes (SGVCOG*) – 2028	> 2024 – Preconstruction (PS&E) > 2024 to 2026 – Design and ROW
	OCTA	Harbor Blvd Connected Bus – 2028	> 2027 to 2028 – Construction

**Project partners are anticipated subawardees to LA Metro whose cooperation is necessary for implementation.*

Section 4: Low-Income and Disadvantaged Communities

4.a. COMMUNITY BENEFITS

Southern California is prone to natural hazards including drought, wildfires, and air pollution, which are expected to increase in frequency and severity because of climate change. Nearly half (1,285 of the total 2,929) of all census tracts in the LA/OC region are designated as disadvantaged, according to the Climate and Economic Justice Screening Tool (CEJST). Similarly, the EJSscreen shows that of the region's total number of block groups, 43% (3,762 of the total 8,640), are identified as disadvantaged using the EJSscreen criteria. These already overburdened communities are the least able to cope with climate hazards. Without intervention, climate change will worsen existing inequities. To that end, the Coalition is committed to delivering benefits to disadvantaged communities through the Measures and projects proposed by this application. Some of the key expected benefits that will be tracked include:

- > Improved public health resulting from reductions in co-pollutants
- > Reduced risk of climate impacts (e.g., drought, wildfire)
- > Creation of high-quality jobs and new workforce training opportunities in low-income and disadvantaged communities
- > Increased access to transportation alternatives
- > Reduced noise pollution (ZEBs are quieter than existing buses)
- > Enhanced community engagement and public awareness

These benefits will be measured for progress and performance with before- and after-reporting studies, which will track co-pollutant (CAP and HAP) emission reductions to ensure quantitative data on community benefits are collected and analyzed. Areas_LAMetroCoalition.xls attachment provides a list of all CEJST census tract IDs expected to be affected by the proposed GHG reduction measures. The anticipated direct and indirect benefits to LIDACs by GHG reduction measure are described in greater detail in the following subsections.

Measure T2: Decarbonize Passenger Transport

The ZEB transition projects will have a significant effect on **air quality**, as ZEBs will reduce health-harming and GHG pollution throughout the LA/OC region, including in disadvantaged communities that have historically suffered the worst impacts from air pollution and LA's car-centered transportation system. In addition, the ZEB projects will improve **environmental quality**, leading to a decreased dependence

on fossil fuels, which will reduce the risk of soil and groundwater contamination that can be caused by leaks throughout each phase in the supply chain. In addition, the Measure T2 projects support **economic development and job quality**, as installation of charging infrastructure will create new high-quality green jobs, supported by strong job workforce programs in place at LA Metro and through project partners as outlined in [Section 5](#). The Measure T2 projects will also support **community resilience and awareness**, as the ZEB transition projects will demonstrate clean energy savings, promote community resilience, and raise awareness of climate action and sustainability. Finally, the Measure T2 projects will support **environmental justice**, as they will reduce disproportionate exposure to tailpipe pollution faced by LIDACs. The replacement of the existing El Sol CNG bus fleet with ZEBs will eliminate more than 3,471 metric tons of CO₂e by 2050, along with the health-harming co-pollutants emitted by non-EVs. Additionally, Division 18 is LA Metro's largest division and serves disadvantaged areas in South LA, including Compton, Inglewood, and other communities that have long faced outsized burdens from diesel emissions in car-centric LA. The installation of bus charging stations in LA Metro Divisions 7 and 18 and the Sylmar Bus Yard will eliminate 206,700 metric tons of CO₂e by 2050.

Measure T5: Expand the Active Transportation Network

Measures that can improve public health have been prioritized for implementation in LIDACs where health vulnerabilities are most severe. The enhancements to bike and pedestrian infrastructure and bike share and e-bike programs will reduce VMTs, which will result in a reduction in more than 19,200 metric tons of CO₂e by 2050, supporting improved **air quality**. The FLM projects will also improve **access to local and regional transit** with infrastructure that provides far safer and more comfortable travel options. **The improved infrastructure will promote healthier lifestyles, decreasing the risk of obesity and cardiovascular disease**, while also leading to mode shifts that reduce air pollution, all of which will improve **public health**. The active transportation projects also have substantial traffic safety benefits, as Complete Streets and pedestrian bridge projects will reduce pedestrian fatalities. Finally, the FLM projects paired with outreach activities will improve **community awareness** of car-free mobility options and highlight the benefits of climate action.

Measure T6: Expand the Transit Network and Increase Ridership

Bus priority treatments and rail enhancements will speed travel times for existing transit users and allow for more frequent and reliable service. These improvements in **transit access and reliability** may attract new riders, considering that nearly half of drivers in LA County face commutes greater than 30 minutes. Transit improvements will substantially reduce VMTs, leading to improvements in **air quality** and **GHG emissions reductions**. Large transit investments will create high-quality jobs and training opportunities, leading to strong benefits in **economic development and job quality**, which will be further amplified by the Coalition's strong workforce policies and plans described in [Section 5](#). Additionally, providing new services in disadvantaged communities that have historically had less access to rapid and express transit services will create equitable opportunities for sustainable and long-term benefits.

4.b. COMMUNITY ENGAGEMENT

The Coalition's community engagement practices align with the EPA's Strategic Plan and civil rights mission to prioritize outreach to low-income populations in overburdened communities. Specifically, all projects under Measures T2, T5, and T6 have been developed through a wide range of engagement efforts that provided opportunities for dialogue and involvement throughout the planning process. Multiple engagement activities, including meetings, workshops, surveys, mailers, walk audits, tabling at community events, and others, created opportunities to present information and collect feedback.

Through the community engagement process, the Coalition and the project partners have ensured that the projects' scopes underscore community priorities in areas that largely consist of disadvantaged residents.

This includes priorities identified in local and regional plans that focus on sustainability and climate action such as LA Metro's Climate Action Plan, OurCounty, and Sustainability Strategic Plan.

The Coalition consists of veteran and reputable community engagement teams, led by individuals with deep expertise and established relationships with local partners. This enables the Coalition to be in regular contact with the community and ensure its successful engagement throughout. Examples of outreach activities completed to date include:

- > Development of outreach and engagement strategy for early, frequent, and continuing opportunities for community engagement at key project milestones
- > Creation of a transparent planning process, providing an opportunity for early risk mitigation
- > Community/public input meetings, including workshops, surveys, townhalls, conducted both virtually and in-person
- > Tabling at community events
- > Distribution of a publicly available list of all upcoming community engagement activities, fact sheets, and open feedback channels in multiple languages (Spanish, Chinese, Korean, Vietnamese, Japanese, Russian, and Armenian)

Several formal partnerships have been secured by the Coalition as confirmed by the Letters of Commitment and Support attachments. All partners are dedicated to the Coalition's commitments as defined in LA Metro's Community Participation Plan, which outlines a comprehensive community engagement strategy to facilitate meaningful engagement in planning, design, construction, operations, and related land use decisions; in Metrolink's Public Participation Plan, which establishes a framework for achieving mutual understanding of project issues among stakeholders involved in and impacted by various projects and/or service changes; and as demonstrated by OCTA's ongoing community outreach events and programs.

Section 5: Job Quality

To ensure the Measures induce "high road" labor practices and are inclusive of diverse and equitable hiring practices, contractors and vendors who will work on the projects will be required to adhere to a Project Labor Agreement (PLA) and Construction Careers Policy (CCP). LA Metro's current PLA and CCP will be used as guide for project implementation. These guides are unique in that LA Metro is the first transit agency in the nation to adopt an agreement with targeted hiring goals for federally funded projects with FTA approval and has support from labor unions.

Key aspects of the PLA and CCP will include:

- > **Targeted Hiring Goals:** Mandates a commitment to employing 40% of construction workers from economically disadvantaged areas within LA/OC. This initiative aims to bring meaningful employment opportunities to regions that typically have fewer job prospects.
- > **Disadvantaged Worker Participation:** Sets an objective for 10% participation from "Disadvantaged Workers." This category will include individuals facing barriers to employment, thereby ensuring inclusivity and broadening workforce diversity.
- > **Apprenticeship Opportunities:** This policy will emphasize the importance of nurturing new talent in the construction industry, with a directive for 20% participation of apprentices. This approach not only addresses immediate labor needs but also invests in the future skilled workforce.

- > **Community Outreach:** Extensive outreach efforts will be conducted to inform the public about employment opportunities associated with the projects. This ensures that job openings are widely communicated, especially in targeted communities.
- > **Regulation of Working Conditions:** Provisions that govern the working conditions on projects covered by the agreement will ensure a fair and safe working environment for all laborers and staff involved.
- > **Role of Construction Trades:** Recognition that construction trade unions will be the primary source of all craft labor for construction work on the construction projects.

To create the necessary green job workforce and meet the PLA and CCP, the Coalition has support from the Los Angeles Area Chamber of Commerce (LA Chamber) and LACI. The LA Chamber supports local and small business and employs an innovative and progressive training model to prepare tomorrow's transportation leaders. The LA Chamber firmly believes that every small, micro, and disadvantaged business should have the chance to fully participate in the unprecedented infrastructure developments and will provide targeted technical assistance, training, and procurement fair programs, focusing on diversity, equity, and inclusion. The LA Chamber has proven effective in supporting small, micro, and disadvantaged businesses. These programs build workforce capacity and provide training and mentoring, particularly in navigating complex government procurement processes and securing contracts. LACI is creating an inclusive green economy for the people of the LA/OC region. LACI reduces barriers for historically underserved and underrepresented individuals (Black, Latino, women, LGBTQ+, justice-impacted, veterans) through workforce training programs. LACI will launch the first-in-the-nation multi-manufacturer EV maintenance facility to support hands-on learning in EV charging infrastructure diagnostics and maintenance in support of Measure T2 and T6 infrastructure improvements.

In addition, with nearly 4,000 workers to continually upskill, LA Metro is positioned to scale its workforce development efforts, not only within the near 11,000-person agency, but throughout the region. LA Metro will carry out this training in cooperation with its labor unions on high voltage safety, ZEB preventative and corrective maintenance, charging station operation, and other skills necessary for safe operation of ZEBs and TSP signal enhancements.

Project partners such as the City of LA also have workforce development initiatives, with the City of LA investing \$50M annually into such initiatives. Through workforce development programs with the LA Chamber, LACI, LA Metro programs, and LA Metro's PLA policy, project construction activities will support equitable hiring practices that will provide local residents with good-paying jobs and the opportunity for economic mobility.

Section 6: Programmatic Capability and Past Performance

6.a. PAST PERFORMANCE

LA Metro has a consistent record of managing and delivering major projects. The following is a list of federally funded or non-federally funded assistance agreements that LA Metro is performing or has performed within the last 3 years.

Regional Connector Transit Corridor

Funding Agency, Assistance Listing #: FTA 20.500, Assistance Agreement: CA-03-0825 and CA-2016-046

Agreement Description: LA Metro received \$669.9M in Section 5309 New Starts funds for the design and construction of a 1.9-mile double track light rail transit line in downtown LA, with three new underground stations and the procurement of four light rail vehicles. Revenue service and major construction activities were completed in June 2023.

Contact: Rusty Whisman, FTA, Region 9, Southern California Office, 213-202-3956, russell.whisman@dot.gov

Westside Purple Line Extension Section 1

Funding Agency and Assistance Listing #: FTA: CFDA 20500, CA-03-0824 and CA-2016-017

Agreement Description: The two FTA grants provided a total of \$1.25B of Section 5309 New Starts funds to fund the Westside Purple Line Extension Section 1 project. The project consists of the design and construction of approximately 3.92 miles of double track heavy rail underground transit system below Wilshire Boulevard in the cities of LA and Beverly Hills with three new stations and a new maintenance building, and non-revenue vehicle maintenance facility at the existing LA Metro Division 20 Yard.

Contact: Charlene Lee Lorenzo, FTA – LA Office, Sr. Director, charlene.leelorenzo@dot.gov

Battery-Electric Buses and Charging Equipment for the LA Metro G Line

Funding Agency, Assistance Listing #: FTA 20514, Assistance Agreement: CA-2017-089

Agreement Description: An FTA grant for \$4.275M in Low-No funds was received in 2017 to fund procurement of five buses and charging stations to support LA Metro's G Line in San Fernando Valley. In addition, 35 buses and EV chargers were funded with LA Metro's local and Mobile Source Air Pollution Reduction Review Committee / Air Quality Management District grant funds. The project was successfully completed in 2021.

Contact: Charlene Lee Lorenzo, FTA – LA Office, Sr. Director, charlene.leelorenzo@dot.gov; Pontip Alferez, SCAG, alferez@scag.ca.gov

Battery-Electric Buses and Charging Equipment for the LA Metro J Line

Funding Agency, Assistance Agreement: California Transportation Commission (CTC) STIP-Regional Improvement Program (STIP-RIP) and Low Carbon Transit Operations Program (LCTOP), 07A0267-24

Agreement Description: The State STIP-RIP of \$30.864M will fund 40 buses while LA Metro's local funds will support 60 buses. The State LCTOP of \$39M will be used to procure and install charging infrastructure and portable charging equipment.

Contact: Carlo Ramirez, California Department of Transportation (Caltrans) – District 7, carlo.ramirez@dot.ca.gov; (LCTOP) Tyris Le, Caltrans, tyris.le@dot.ca.gov

Rail to River Active Transportation Corridor

Funding Agency, Assistance Agreement: FTA, 20.507, CA-2022-206

Agreement Description: LA Metro received \$8.326M in Active Transportation Program funds to construct Segment A-1 of the Rail to Rail Active Transportation Corridor, which extends 3.6 miles from the Crenshaw/LAX Light Rail Line to the Silver Line Bus Rapid Transit. This investment in a multi-use corridor for pedestrians and cyclists will link together three regionally significant north-south transit lines in LA Metro's

system: the K Line Crenshaw/LAX Light Rail Transit system, the J (Silver) Line Bus Rapid Transit system, and the A (Blue) Line Light Rail Transit system.

Contact: Mervin Acebo, FTA, Region 9, Southern California Office, 213-202-3957, mervin.acebo@dot.gov

6.b. REPORTING REQUIREMENTS

For the assistance agreements listed under Section 6.a, the following describes their history of meeting the reporting requirements per that agreement.

- > **Regional Connector Transit Corridor:** LA Metro has successfully submitted milestone progress and federal financial reports on a quarterly basis. All the reports were submitted on time from inception (2013) through present, and reporting is still ongoing. There are monthly monitoring and monthly/quarterly project status reports, which are submitted by the Program Management group to FTA. Revenue service and major construction activities were completed in June 2023, and reporting on outputs and outcomes is not final. The Project Management team works closely with FTA staff and FTA's Project Management Oversight Contractor (PMOC) and meets monthly (with PMOC) and quarterly (both PMOC and FTA) to discuss key project updates, project cost status, schedule, risks and mitigations, safety and environmental status, and community outreach efforts. In coordination with FTA, LA Metro drafted and completed a project completion plan to reflect advances and developments in the project and worked with FTA to extend the grant end date as needed. LA Metro has been in regular communication with FTA regarding delays.
- > **Westside Purple Line Extension Section 1:** LA Metro's Grants Management and Oversight group submits quarterly milestone progress and federal financial reports, which are due a month after the quarter ends. The reports were always submitted on time. There are monthly monitoring and monthly/quarterly project status reports, which are submitted by the Program Management team to the FTA. The Project Management team works closely with FTA staff and FTA's PMOC and meets monthly (with PMOC) and quarterly (both PMOC and FTA) to discuss key project updates, project cost status, schedule, risks and mitigations, safety and environmental status, and community outreach efforts.
- > **Battery-Electric Buses and Charging Equipment for the LA Metro G Line:** This FTA grant was submitted by SCAG on behalf of LA Metro. LA Metro was responsible for implementing the project and providing reports for SCAG to submit to FTA. LA Metro's Grants Management and Oversight group submitted quarterly milestone progress and federal financial reports, which were due a month after the quarter ends. The reports were always submitted on time to SCAG. LA Metro worked closely with SCAG to ensure any schedule delays or other issues were communicated to FTA immediately. Grant revision was completed on time, and funds were fully expended.
- > **Battery-Electric Buses and Charging Equipment for the LA Metro J Line:** LA Metro's Grants Management and Oversight group submits state quarterly project progress reports due 15 days after the quarter ends for the STIP-RIP grant while LCTOP has an annual progress report due in October. LA Metro always submits the reports on time. LA Metro works closely with Caltrans so that extensions to schedule and cost can be done promptly. For LCTOP, if there are any changes to the project scope, cost, and schedule, a Correction Action Plan can be submitted to Caltrans. LA Metro is in regular communication with Caltrans CTC staff regarding changes (scope, schedule, and cost) to the project so that any requests from Caltrans and/or CTC could be completed immediately.

- > **Rail to River Active Transportation Corridor:** LA Metro submits milestone progress and federal financial reports on a quarterly basis to FTA and Caltrans. All reports were submitted on time from inception (2017) through present. Reporting is still ongoing. There are monthly monitoring and monthly/quarterly project status reports, which are submitted by the Program Management group to the FTA. The project is in construction, and reporting on outputs and outcomes is not final. The Project Management team works closely with FTA staff and FTA's PMOC and meets monthly (with PMOC) and quarterly (both PMOC and FTA) to discuss key project updates, project cost status, schedule, risks and mitigations, safety and environmental status, and community outreach efforts.

6.c. STAFF EXPERTISE

The Coalition anticipates little delay or obstacles in implementing the projects associated with the CPRG. This is due to the members' experience in implementing the components included in this funding request and project staffing with seasoned project managers who have successfully delivered these components in the past and will oversee the projects' implementation within the prescribed timeline. Key staff members (resumes in the Team Biographies attachment) will meet regularly to coordinate efforts and progress. Coalition members will regularly coordinate with facility owners in the project areas to ensure expectations are met and that work is compliant with regulations to deliver on the scope in the agreements.

Section 7: Programmatic Capability and Past Performance

7.a. BUDGET DETAIL

Table 5 depicts the consolidated SF-424A budget by expenditure year. The total project cost is \$495,287,236 with construction costs (including subaward projects) accounting for 95% of the total budget.

Table 5. Consolidated Project Budget

Project Budget						
Category	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Personnel	\$0.80M	\$0.83M	\$0.85M	\$0.88M	\$0.90M	\$4.26M
Fringe Benefits	\$0.32M	\$0.33M	\$0.34M	\$0.35M	\$0.36M	\$1.70M
Travel	\$0.001M	\$0.001M	\$0.001M	\$0.001M	\$0.001M	\$0.005M
Equipment	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M
Supplies	\$0M	\$2.4M	\$0M	\$0M	\$0M	\$2.40M
Contractual / Workforce Development	\$2.40M	\$4.30M	\$3.30M	\$3.30M	\$0.30M	\$13.60M
Construction	\$0M	\$40.53M	\$48.00M	101.95M	\$0M	\$190.48M
Subaward to Implementing Agencies	\$30.30M	\$49.15M	\$140.52M	\$55.79M	\$0M	\$275.76M
Total Direct	\$35.17M	\$99.04M	\$193.16M	\$162.27M	\$1.26M	\$490.90M
Indirect	\$0.83M	\$0.85M	\$0.88M	\$0.90M	\$0.93M	\$4.39M
Total	\$36.00M	\$99.89M	\$194.03M	\$163.17M	\$2.19M	\$495.29M

**Values have been rounded; detailed figures are available in the SF-424A and Budget Detail Attachment*



Measure T2 = \$237.95M or 48% of the total budget

Measure T5 = \$70.990M or 14% of the total budget

Measure T6 = \$186.35M or 38% of the total budget

A detailed budget spreadsheet and budget narrative have been provided as an attachment, breaking down costs by funding type included in the proper budget category for each activity requesting funds. The SF424A is also attached to this application package.

7.b. EXPENDITURE OF AWARDED FUNDS

The Coalition has prepared a detailed workplan for the Measures' funding expenditures to ensure the awarded grant funds are spent timely and efficiently within the grant period. The project investments will help prepare the region for the 2028 Games, so most anticipated construction activities must be complete before the summer of 2028.

As the Lead Applicant for the Coalition, LA Metro has an experienced grant funding and budget finance team to deliver all the Measures successfully. It is authorized under federal, state, and local laws and regulations to request, receive, and disburse federal, state, and local funds. LA Metro's procurement, accounting, and project management practices (in addition to its ability to meet all applicable federal, state, and local laws and regulations) support its technical capacity to administer allocation of funds for successful implementation and performance monitoring. LA Metro has not been excluded by the Federal Government from receiving contracts. LA Metro does not have any outstanding legal, technical, or financial issues that would impact the outcome of the CPRG program. LA Metro's bonds are rated by Standard & Poor's (AA+ and above), Moody's (Aa2 and above), and Fitch (AA+). LA Metro's FY2024 budget is approximately \$8.7 billion and currently has approximately \$8.8 billion in executed or pending grants and loans funding 189 unique projects. These funds come from a variety of sources, including 5.2% from federal sources and 17.4% from state grants and local sources, including Measure M and Toll Revenue Bonds (including the Transportation Infrastructure Finance and Innovation Act), contributing the final 77.7%.

LA Metro anticipates no issues in receiving, obligating, managing, or executing any of the CPRG funding award. LA Metro's finance team has procedures and controls in place for ensuring that awarded grant funds will be expended in compliance with all federal reporting regulations.

7.c. REASONABLENESS OF COSTS

The anticipated CPRG expenditures are reasonable for accomplishing the proposed goals, objectives, and measured environmental outcomes described in the application as this transformational LA/OC regional effort is composed of 16 projects across two counties with a population of 13 million people. The Measures will reduce **CO₂e by approximately 1,020,000 metric tons by 2050**, helping **LA/OC** tackle the climate crisis and take decisive action to advance environmental justice and civil rights, both EPA Strategic Plan goals. Due to the expansive region the Measures will serve, the proposed CPRG ask is significant, and will demonstrate a significant transformational impact to the nation. Table 5 itemizes the cost categories as listed in the SF-424A. Details about the reasonableness of cost can be found in the Budget Narrative attachment.