



**FY 2022 Strengthening Mobility and Revolutionizing
Transportation (SMART) Grants Program**
November 18, 2022

Submitted To

Office of the Secretary of Transportation, US DOT

Submitted By

City of Los Angeles, CA

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a. Overview/Project Description

The Code the Curb (project) will create a digital inventory of physical curb lane assets in Downtown Los Angeles (DTLA), one of the densest urban environments in the nation. This project aims to improve management of the curb lane by dynamically pricing and managing the curb's availability in real time. These assets include some 34,000 single-space parking meters, 220 multi-space pay stations, 1 million street signs and curb paint as a regulatory tool that covers 7,500 centerline miles of streets in the City of Los Angeles. This project will meet key climate action goals by reducing greenhouse gas (GHG) emissions from vehicles and improving safety for all users of the roadway.

Demands for the curb lane are increasing due to the proliferation of freight, transit, and passenger vehicles, shared mobility, active transportation, outdoor dining, and more. Uncertainty around the availability of on-street curbside parking or loading spaces exacerbates driver confusion, congestion, and related GHG emissions, and can create less safe walking and bicycling environments. These impacts often disproportionately affect communities that are already overburdened. With more reliable and real time information on curb availability, City staff can more precisely and nimbly manage this high-demand public space and reduce related negative externalities.

The DTLA community is the proposed curb management pilot area for numerous reasons. DTLA is the birthplace of Los Angeles and is the center of urban activity in the region as the commercial, entertainment, cultural, and civic heart of Los Angeles. DTLA is home to a diverse range of industries and distinctive neighborhoods, and is an international center for art, culture, business, sports, and entertainment, as well as a governmental, commercial, manufacturing, and jobs-oriented center for the City and the region. DTLA is home to a growing residential population that's expected to grow by 125,000 residents, over 70,000 new housing units, and over 55,000 jobs by 2040. The City is currently working on a DTLA Mobility Investment Plan to support the growing population with transportation options. Curb management needs have been identified as a need to improve reliability and safety for residents, employees, and visitors. DTLA is also home to the City's intelligent parking management program, LA Express Park, that incorporates time of day demand based parking pricing at metered spaces, limited parking guidance, and captures parking occupancy in several areas of the commercial and civic centers. This project would build upon this work.

The City is working on leveraging existing partnerships with organizations to create a more comprehensive approach to transportation. In collaboration with the Open Mobility Foundation (OMF) and several other cities that share a similar goal, Los Angeles will work towards developing a shared open-source Curb Data Specification (CDS). The CDS is a data standard that will leverage data gathered from this project and those in other cities, so that the curb can be managed dynamically. Currently, CDS has not yet been integrated into LADOT systems. This project will pilot the integration of CDS into existing systems and build upon CDS version 1.0 expanding upon the data specification alongside other cities. Boston, Los Angeles, Miami-Dade, Minneapolis, Philadelphia, Portland, San Francisco, San José, and Seattle have agreed to submit collaborative applications addressing a similar problem with similar technologies. Participants in this collaborative will share lessons learned and best practices with one another to advance projects collectively. What uniquely distinguishes the Los Angeles pilot is the complex ecosystem in DTLA that includes every type of land use and transportation context from which lessons learned

can apply to the majority of other cities. Additionally, the upcoming 2028 Olympics provides an opportunity to showcase this work on a global stage.

This pilot will inform a number of future projects in the curb space in Los Angeles and as a result of lessons shared with partner cities. Target outcomes of this project are to create a standardized method for inventorying curb space and curb assets, understanding curb space utilization through data collection and analysis, developing a curb management plan that allows City staff to dynamically change curb use policies to better accommodate multi-modal usage, and to share these products with partner cities and regions to advance the practice. Dynamic demand management benefits all roadway users with improved accessibility and roadway safety, while simultaneously improving reliability for businesses, freight deliveries and access to commercial loading zones, and multi-modal users of the curb lane.

Delivery vehicle drivers are experiencing increasing challenges in finding available curb space to park in urban areas, which increases instances of cruising for parking and parking in unauthorized spaces. Policies traditionally used to reduce cruising for parking for passenger vehicles, such as parking fees and congestion pricing, are not effective at changing delivery drivers' travel and parking behaviors. Intelligent parking systems that use real-time curb availability information to better route and park vehicles can reduce cruising for parking as documented in a curb parking information system deployed in a study area in Seattle. Real-time curb availability was made available on a mobile app called OpenPark. A controlled experiment assigned drivers' deliveries in the study area with and without access to OpenPark. The data collected showed that when curb availability information was provided to drivers, their cruising for parking time significantly decreased by 27.9 percent, and their cruising distance decreased by 12.4 percent. These results demonstrate the potential for implementing intelligent parking systems to improve the efficiency of urban logistics systems.

The project will use new intelligent sensors, the existing intelligent parking management system, and smart single-space parking meters and pay stations to collect existing curb use data. The integration of such solutions will harness the power of sophisticated edge computing, artificial intelligence, and deep machine learning to accurately identify parking and curb space occupancy and behavior. The integration of these solutions will optimize curb space management by providing the ability to: 1) Effectively monitor real-time space occupancy; 2) Use historical data to predict parking and curb space demand; 3) Visualize motorist parking habits and behaviors; 4) Support smart decision-making regarding infrastructure changes, on-street policies, and more; 5) Accurately monitor the size and position of parked vehicles; 6) Protect the privacy of users by ensuring that only anonymized data leaves the sensor; 7) Ensure drivers enjoy a smooth, stress-free parking experience.

These outcomes promote a better organized public realm with improved air quality and safety outcomes. The Code the Curb effort is critical ahead of the 2028 Olympics, which will bring over 15,000 athletes to compete in over 800 sporting events in Southern California. Dynamically managing curb space will be necessary to facilitate safe and accessible modes of transportation throughout the events. The Crypto.com arena (formerly Staples Center) and neighboring sports venues in and around DTLA will be on the global center stage, creating an opportunity to showcase

this effort.

The project also serves as an opportunity to improve economic growth and sustainability for businesses that rely on fluctuating demands for curb uses through optimization of dynamic pricing models. The dynamic nature of the curb management program allows for a more resilient system that will adjust in real-time as curb use trends change. This same system can be integrated with existing systems that the City currently operates and will help inform newer transportation initiatives such as micromobility and personal delivery devices (PDDs) which operate in the public realm. Lastly, a key goal of this project is to reduce vehicle miles traveled (VMT) and related GHG emissions by improving information and the efficient management of the curbspace. Each of these target outcomes aligns closely with both USDOT's strategic goals and the priorities for the SMART Grants program.

While Downtown Los Angeles has been selected for Stage 1 of this grant application, the City sees opportunities to scale up this project to include nearby neighborhoods that share similar characteristics to DTLA in terms of high demands for curb use and historically disadvantaged neighborhoods. Through the data collection and analysis phase of the project, the City also aims to refine metrics for curbside utilization. These utilization metrics will also serve to guide where curb management is needed and where to prioritize scaled up operations for Stage 2 deployment of the project.

b. Project Location

The proposed project location is focused on Downtown Los Angeles, a mid-sized community of 25 Census tracts covering 5.9 square miles and with a total population of 60,000 according to the 2020 Census. This area was selected as a priority area using the criteria in Table 1.

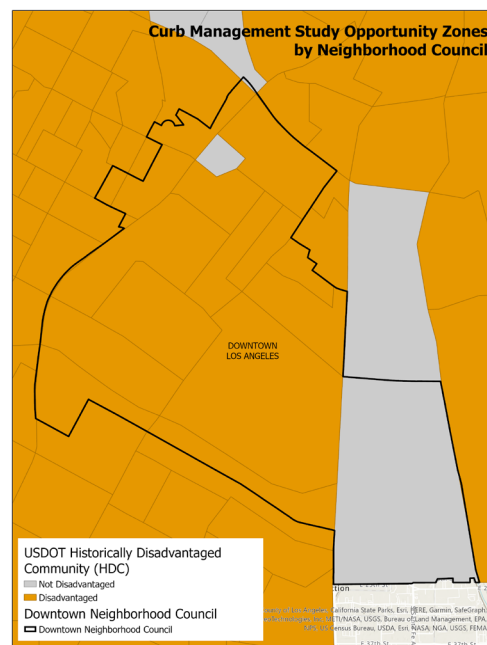
Table 1 - Priority Area Selection Criteria

	Land Use				Transportation			Parking	Public Amenities/Services	
Dataset	Zoning Designation	Access to Employment	Population Density	Household Access to Vehicle	Existing Bike Facilities	Transit Stop Density	Bike share stations	Parking Meters	Schools	Hospitals

The area coincides with the pilot area for the City's Zero Emission Delivery Zones (ZEDZ) initiative, which also heavily focuses on better organizing the curb space to incentivize zero emission deliveries. DTLA is proposed for Stage 1 of the Code the Curb project; however, the City recognizes that additional factors may help further refine this selection, such as curbside utilization, oversized vehicle routes, traffic volumes, existing street signage, and commercial and passenger loading zones. We would propose to take on this analysis during initial project development steps.

c. Community Impact

Over 90 percent of the 25 Census tracts within the proposed area are Historically Disadvantaged Communities (HDC), which suffer from exacerbated levels of vehicle related GHG emissions and related health disparities. This project will meet the goals of California’s Senate Bill 743 and the LA’s Green New Deal to reduce GHGs related to driving as a result of idling and circulating vehicles in search of parking spaces. Specifically, the project will reduce traffic congestion, improve air quality, promote equity and accessibility for curb space, increase economic sustainability for businesses that rely on curb uses, improve safety and predictability for all users of the curb space, and expand workforce development opportunities. The project will also increase ADA accessibility of the curbspace. Negative externalities that may arise from this project have to do with an adjustment period related to understanding how to use this dynamic curb space, which our team will work to address by engaging community stakeholders throughout the project process. This will affect all users; however, this will be mitigated through effective communication and outreach with affected stakeholders.



d. Technical Merit Overview

1. Identification and Understanding of the Problem

The curb space is where drivers, cyclists, pedestrians, transit users, outdoor dining patrons, freight services, micro-mobility service users, and Transportation Network Company (TNCs) all intersect. These users all must compete with one another for use of this limited public space. Currently, unmanaged conditions create chaos where delivery, TNC, or personal drivers that cannot find parking or loading spaces will lose time and money looking for an available space. This problem leads to increases in VMT and GHGs and can create unsafe conditions as a result of distracted and frustrated drivers. In a small study area in Westwood Village, a commercial neighborhood in Los Angeles adjacent to a major university, it was estimated that cruising creates an additional 950,000 VMT annually and 730 tons of CO2 emissions¹. These effects are amplified in higher density neighborhoods such as DTLA. Many vehicles, particularly delivery vehicles, may block crosswalks, bicycle lanes, priority bus lanes, bus stops, travel lanes, and more to complete their delivery, which impedes people’s access to the public realm and creates unsafe conditions.

A well managed curb alleviates uncertainty, and confusion at the curb, improves public safety and air quality, reduces delays and dynamically manages the curb space throughout the day. “A well-designed curbside is critical in achieving goals related to active transportation, transit, road user safety, transportation demand management, place-making, community building, and the

¹ Donald C. Shoup, “Cruising for Parking,” *Transport Policy* 13, no. 6 (2006): pp. 479-486, <https://doi.org/10.1016/j.tranpol.2006.05.005>

economy.”² To achieve these goals, the City must first create a digital inventory of existing physical infrastructure in Los Angeles. Currently, the City does not have a complete and detailed inventory of its curb space, nor does it have a standardized method for inventorying these curb assets so that they may be expressed digitally and updated in real-time. The proposed solution to these problems is the digitizing of physical infrastructure and development of a curb data specification that defines a standard for translating current static regulations into dynamic digital rules.

Curb management plans have been studied and developed in several other cities. A June 2022 report from the Southern California Association of Governments (SCAG) indicated several net benefits to the study cities who had implemented the curb management plan as well as recommendations, such as reallocating unused parking for other multimodal uses, developing flex curb zones, and initiating curb improvements for safer pickup and drop off zones. This project aims to take it one step further by implementing the CDS technology which will be beneficial to both curb users and to city officials by standardizing and leveraging data gathered from this project and those in other cities.

2. Appropriateness of proposed solution

The DTLA neighborhood is the perfect candidate for this project due to its size, scale, and diversity. DTLA is the ideal testing ground given its vast diversity of curb users and needs. DTLA is comprised of nine unique districts, including the Fashion District, the Flower District, the Toy District, which are home to the large scale wholesale operations in the country and rely heavily on the curb space for deliveries, customer parking and loading, sidewalk and street vending, bike share and micro-mobility, and other formal and informal uses. Lessons learned from this collaboration with OMF will yield a beneficial partnership that will help LADOT streamline the data collection process and allow for scaling up of the project to neighboring communities with similar demands on the curb space and needs. This project builds upon a SCAG study “Last Mile Freight Delivery Study” which selected Downtown LA as a hotspot and collected data on over 1,100 curbsides. This project builds upon previous programmatic efforts for which stakeholders are already engaged, including: Zero Emission Delivery Zones (launched 2021), Metro Bike Share (launched 2017), DTLA Mobility Investment Plan (in progress), and LA Express ParkTM (launched 2012).

3. Expected Benefits

CDS benefits cities, curb users, and the environment. New tools drive change through data-informed decision making. Creating digital maps of curb regulations and capturing data of how the curb is utilized enables cities to adopt policies that benefit the public the most. Tools to support public spaces must prioritize safety, sustainability, equity, and economic development. Existing work suggests that reallocation of curb spaces for other uses can result in increased revenues for cities and businesses. In the City of Toronto, existing parking spaces were seasonally converted to curbside dining during warm months.³ The result was a minor loss in parking revenue; however, as a result over \$206 million (CAD) in economic benefits were delivered to the city, resulting in a net positive benefit for city revenue, which can be reinvested into programs and projects. The dynamic nature of these tools will allow for a more resilient and sustainable system to meet future curb use trends and associated technological innovations. These data specifications are scalable and will be

² IBI Group, et al. “Curb Space Management Study” Southern California Association of Governments, June 2022 <https://scag.ca.gov/sites/main/files/file-attachments/scag-curb-space-management-study-final.pdf?1663907789>

³ CafeTO Economic Benefits Study (2021) Toronto, ON

a part of a larger ecosystem of tools available to other cities to help them manage the curb.

Benefits to curb users include the use of real-time data to understand availability of curb space and related regulations for a more reliable system for delivery drivers and businesses, as well as a safer less polluted public realm for all users. In a recent Curbivore article that shared lessons learned from a curb management pilot in Seattle, the data showed that when curb availability information was provided to drivers, their cruising for parking time significantly decreased by 27.9%, and their cruising distance decreased by 12.4%. These results demonstrate the potential for implementing intelligent parking systems to improve the efficiency of urban logistics systems, reducing vehicle miles traveled (or congestion) and related GHG. Demand-responsive curb regulations expand access to curb space for current users, while also setting the stage for newer technologies and modes of transportation to equitably share the curb space, including micromobility, personal delivery devices, commerce, and autonomous and connected vehicles.

e. Project Readiness Overview

1. Feasibility of Workplan

Project timeline should begin within a month following the grant award and will effectively use the allotted 18-month period to execute the scope of Stage 1. The project requests \$2,000,000 in funding for the first stage of the project. The project will begin with a kickoff meeting with project partners to establish the expectations and necessary requirements for creating the CDS.

18-Month Schedule:

- 1 Month - Kickoff to overview expectations, roles and responsibilities, schedule, deliverables
- 3 Months - Preliminary data collection and community engagement to understand needs and pain points
- 6 Months - Digitization and core data collection
- 6 Months - Data analysis, evaluation (lessons learned from the data collection phase), and community engagement
- 2 Months - Project summary

The project will directly support the creation and retention of jobs within our partner teams, and indirectly will support existing and future jobs, particularly those in delivery services. These efforts will be supported through coordination with our partners and stakeholders to ensure that freight and delivery operators seeking to use the curb can do so more efficiently and reliably. It will also promote local businesses that rely on foot traffic and deliveries.

2. Community Engagement and Partnerships

This application will be a collaborative application between the City of Los Angeles and OMF. Approximately \$200,000, or 10% of requested total, will be allocated towards supporting the collaboration with OMF. The collaborative will include technical assistance, shared learning, and further development of CDS. These allocated funds will create jobs and allow OMF to hire and retain staff, consultants, and vendors to supplement CDS development work. This effort will support workforce development by enhancing technical literacy, support peer learning for City and partner agencies, and enhance information exchange ensuring that use of this technology is as streamlined as possible.

The project also will be supported by CALSTART, a national nonprofit whose focus is to accelerate clean transportation, and Urban Movement Labs (UML), a public-private partnership organization committed toward mobility innovations in Los Angeles. CALSTART will advise LADOT and provide expertise in data collection and stakeholder strategies. UML has previous experience supporting LADOT in implementing Zero Emission Delivery Zones and will assist in the development of CDS standards. UML will also work with other partners to facilitate workshops and engage with stakeholders in project scope areas. Both of these organizations will help guide the process and inform how the project can be improved upon through research of existing literature or studies. Finally, C40 Cities, an international climate leadership group, will advise LADOT on local issues through the lens of a global perspective. Sharing lessons learned from other cities that have faced similar issues and providing solutions.

LADOT with the assistance of Los Angeles Cleantech Incubator (LACI) will work together to engage with existing partners and stakeholders in DTLA. LACI is an organization that focuses on accelerating the commercialization of clean technology in Los Angeles. Together we will identify and engage with existing partnerships with stakeholders in DTLA, particularly in the neighborhoods of South Park and Little Tokyo, who participated in engagement efforts through the Business Improvement Districts for the Zero Emission Delivery Zones program and for the launch of the City's Bike Share program previously. LADOT is a member of the Los Angeles Zero Emission Freight Working Group which includes many of the large delivery operators. LADOT will leverage these partnerships to share information regarding the pilot project and solicit feedback through user-experience surveys. LADOT and partners will work with key stakeholders to identify those who will be most impacted by these changes, starting with the nine Business Improvement Districts, the two Neighborhood Councils, the Central City Association, and by reaching out to adjacent business owners and property managers. Staff would attend standing meetings of these organizations to present on the proposed pilot project.

3. Leadership and Qualifications

The project team includes several experts from both the public and private sector. Each has years of experience in the field and brings a unique set of skills to the team. The LADOT team consists of Tomas Carranza, Ken Husting, Jose D. Hernandez, Graham Rossmore, Rubina Ghazarian, and Zackary Campos. Together the team has decades of experience and individually each offers a great deal of skill to the team.

Our partners that will provide support throughout the project are Robyn Marquis, Rogelio Pardo, and Adrew Glass Hastings. Robyn is the Director of Innovative Mobility for CALSTART and has over 7 years of experience in the transportation industry. Rogelio Pardo is the program Director of UML and has over 10 years of experience in the field. Lastly, Andrew is the executive director of OMF and has over 14 years of experience in the industry. Each of these partners offers unique skills that will provide key support for this project.

LADOT has leadership that is committed towards the advancement of new technologies that support the department's policy goals as well as state and federal goals. We are steadfast in our efforts to reduce GHG emissions and VMT so that all Angelenos may benefit from healthier and less congested roads.

Appendix I - Resumes

Key Personnel

Tomas Carranza - LADOT

The Principal Transportation Engineer in charge of the LADOT Bureau of Transportation Planning and Land Use Review. Tomas has over 30 years of experience working on various facets of transportation planning and engineering, including capital investment planning, complete streets, parking management, goods movement, and curb space management. He and his team of 30+ engineers and urban planners lead efforts within the department on advancing equity, safety, & accessibility for all Angelenos through VMT reduction programs and travel demand management programs.



Ken Husting - LADOT

The Principal Transportation Engineer in charge of the LADOT Bureau of Parking Management. Ken has more than 25 years worth of project delivery and operations experience with LADOT and he and his team manages 110 parking facilities and over 34,000 street metered parking spaces. Ken is committed to serving Los Angeles promoting equitable programs, such as the Community Assistance Parking Program which received a national award in 2020 for assisting low-income motorists during the pandemic.



Rubina Ghazarian - LADOT

Rubina Ghazarian is a Supervising Transportation Planner II at the Los Angeles Department of Transportation with over a decade of experience in transportation planning. At LADOT, she oversees the Transportation Planning and Policy Division, which focuses on modernizing transportation analysis to account for proposed land use and transportation project impacts, updating the citywide transportation demand management (TDM) ordinance, developing tools for measuring connectivity and bicycle level of travel stress, and overseeing the advanced planning efforts of the Department. Previously, she worked at LA City Planning where she led the Mobility Policy division in implementing the Mobility Plan 2035, at LADOT as the City's Bicycle Coordinator where she planned and implemented complete streets projects and the Metro Bike Share Program, and at LA Metro, focusing on active transportation funding, planning, and programming.



Rubina is a native Angeleno with a Masters of Planning from the University of Southern California and a BA in Economics and Environmental Studies from UC San Diego.

Zackary Campos - LADOT

Zackary has over 5 years of experience in the transportation industry. He has experience with outreach and creating partnerships with local stakeholders during his time on the LADOT Transit team. He has worked extensively with micromobility programs and helped launch LADOT's Dockless Mobility program. In his current role as a Transportation Planning Associate II in LADOT's Transportation Planning and Policy Division, Zackary works on LADOT's Mobility Investment Program and oversees transportation investments, including through the Infrastructure Investment and Jobs Act funding.

**Jose D. Hernandez - LADOT**

Jose is a senior transportation engineer with over 30 years of experience. He is in charge of the LADOT Parking Meters Division and he and his team are responsible for the daily maintenance and operation of 34,000 meters citywide. He also oversees the management and expansion of the LA Express Park program, which focuses on the optimization of on-street parking experience for residents and visitors of Los Angeles by providing demand-based parking pricing. This work is focused on reducing traffic congestion and Greenhouse Gas emissions by reducing the time spent looking for parking.

**Graham Rossmore - LADOT**

Graham is a project assistant with the LADOT Parking Meters Division, providing support for Jose's team with the expansion of the LA Express Park program. Prior to joining LADOT, Graham worked for Los Angeles City Council President, Paul Krekorian, where he assisted with various transportation policy and planning projects in Council District 2. Graham also works on research with UCLA Professor Donald Shoup and will earn his Master's in Urban and Regional Planning in June 2023 from the UCLA Luskin School of Public Affairs.



Partners

Andrew Glass Hastings - Open Mobility Foundation

Andrew has over 14 years of experience in the Transportation industry. He is currently the Executive Director of the Open Mobility Foundation - an international public and private partnership led by cities to help digitize infrastructure with open-source mobility data standards and software tools. Andrew has managed local and regional funding campaigns, and has extensive experience working on public-private partnerships. He previously served as the Director of Transit & Mobility for the City of Seattle.



Robyn Marquis - CALSTART

Robyn has over 7 years of experience working in the Transportation industry. Robyn worked for the New York State Energy Research and Development Authority (NYSERDA) as the Program Lead for the New York Clean Transportation Prizes, an \$85 million initiative to improve mobility and accelerate electrification in underserved communities. Robyn is the Director of Innovative Mobility for CALSTART and leads the Clean Mobility Options Voucher Pilot Program, which administers this first-in-the-nation program to provide zero-emission mobility to underserved communities and improve their quality of life.



Rogelio Pardo - Urban Movement Labs

Rogelio has over 10 years of experience in the transportation industry. He is the Program Director for Urban Movement Labs, a first-of-its kind mobility-innovation organization that links government, businesses, and community members to modern technology solutions to help solve transportation challenges in the City of Los Angeles. In this role he has assisted with other efforts surrounding the Code the Curb project working with stakeholders and partners to identify Zero Emission Delivery Zones for Los Angeles.



Appendix II - Summary Budget Narrative

Cost estimates are outlined below in Table 2. The following are estimates for Funding that match Standard Form 424A. The following includes estimates for acquisition of equipment such as hardware sensors and parking meters. The OMF technical assistance item includes contracting out services for technical support regarding CDS. This includes technical workshops and trainings for staff and coordination with collaborative cities as part of this grant.

Table 2 - Project Cost Estimate

Activity	Cost	Cost Percentage
Contractual Services	\$1,500,000	75%
Data Quality Assurance & Maintenance	\$750,000	37.50%
Planning / Project Methodology Refinement	\$640,000	32%
Data Collection (170 curb miles)	\$60,000	3%
Stakeholder Outreach/Engagement	\$50,000	2.50%
Equipment	\$300,000	15%
Acquisition of Equipment	\$300,000	15%
Other	\$200,000	10%
OMF Technical Assistance	\$200,000	10%
Requested Funding	\$2,000,000	100%

Appendix III - Letters of Commitment



ERIC GARCETTI
MAYOR

November 18, 2022

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

RE: Los Angeles Department of Transportation's Code the Curb Project Application for Strengthening Mobility and Revolutionizing Transportation Grant Support from Los Angeles Mayor Eric Garcetti

Dear Secretary Buttigieg:

I write in support of the Los Angeles Department of Transportation's (LADOT) FY22 Strengthening Mobility and Revolutionizing Transportation (SMART) Grant application for the Code the Curb project, also referred to as Digitizing Infrastructure for Managing the Curb. Transportation efficiency efforts have propelled the City of Los Angeles (City or L.A.) forward and are helping to shed the City's reputation as the car capital of the world. There is a new focus on developing a healthy transportation system that delivers multiple options for Angelenos to get around. This includes using new technology to improve mobility, from upgrading citywide traffic control systems with real-time adaptive technologies to launching an electric vehicle carshare program in transit-dependent neighborhoods where on-demand mobility is most needed.

L.A.'s Green New Deal envisions an actively managed electric, shared, autonomous mobility future that is agile, focuses on people, tackles congestion, enables economic development, achieves racial and socioeconomic equity, and saves lives. LADOT's Code the Curb effort would realize this vision.

The project's goal is to establish a digital inventory of the City's physical curb space. Using this information, the project will provide pilot curb management solutions that support the enforcement of curb regulations, allow for dynamic pricing, and other potential solutions for varying demands for curb space. Such solutions would help with the determination of parking, loading, meters, bus stop lanes, and bike share stations to improve asset management. As the demand for curb space continues to increase, this project is crucial given its ability to support real-time management of the public realm and the City's assets. This project advances safety, equity, climate action, and economic sustainability.

Thank you for your consideration of this project and for your continued support to build a cleaner, safer, and more efficient transportation infrastructure.

Sincerely,

ERIC GARCETTI
Mayor



November 14, 2022

Dear Secretary Buttigieg:

The Open Mobility Foundation (OMF) is a committed partner in the City of Los Angeles's SMART grant application.

Los Angeles's proposal is part of a collaborative effort that includes the cities of Boston, Los Angeles, Minneapolis, Philadelphia, Portland, San Francisco, San José, and Seattle as well as Miami-Dade County. If awarded, the grant will both directly benefit these cities and also serve to build critical open source digital infrastructure that is used by more than 100 cities across the country. In addition to the open source tools the OMF stewards, this group will access shared learnings and peer support. To support the project, the OMF commits to:

Support the implementation and development of the Curb Data Specification (CDS)

- Technical implementation - Real-world implementation is key to developing future versions of CDS. The OMF supports implementation through working groups, documentation, and other resources, while also gathering feedback from public agencies and private companies
- Develop the next version of CDS - The next version of CDS will include features that make it more efficient and effective to implement and use to meet the City's curb management objectives
- Improve use - The OMF will create tools for cities, companies, and operators to validate their implementations of CDS to ensure accuracy, quality, and compliance

Support technical assistance, peer learning, and capacity building

- Resources and learning - The OMF will work to enhance technical literacy across the collaborative, support peer learning and information exchange to fully leverage OMF's open source tools. Learning and support will be facilitated in real-time through webinars and roundtable discussions, and through in-person and virtual convenings
- Expanded capacity - As a collaborative space for innovation, the OMF will convene public agencies, vendors, and operators to support the creation of integration tools that allow cities to fully leverage CDS within their existing software tools and information architecture

The SMART grant presents a unique opportunity not only to plan and prototype a solution in one city, but for a collaborative of cities with a common problem and solution set to prototype together using different technology partners while learning from each other and sharing their process and results with other cities and the USDOT.

The City of Los Angeles has been a leader in the OMF since our founding more than three years ago, and we look forward to helping their project – and the collaborative – succeed.

Sincerely,



Andrew Glass Hastings
Executive Director



**urban
movement
labs**

Justine Johnson
Board Chair
515 Flower Street, #1816
Los Angeles, CA 90071

urbanmovementlabs.org

November 15, 2022

Dear Secretary Buttigieg,

I am writing on behalf of Urban Movement Labs (UML) in support of advancing the Los Angeles Department of Transportation's Code the Curb project. We facilitate collaboration between communities, local government, and mobility innovators with the vision of piloting new transportation technologies that improve Angeleno's quality of life, connect communities, improve sustainability, and build an economy that promotes everyone.

To support the project and its partners, UML commits to the following:

- Assist in the advancement of public private partnerships. UML has previously worked with LADOT and IBI Group to pilot the development of digital inventory of curb regulations. As LADOT begins to pilot this program and prepare their digital inventory to be integrated into more systems, UML is prepared to continue to support LADOT's work. This will be realized by identifying key stakeholders and locations to prioritize data collection.
- Facilitate workshops and engage with stakeholders in project scope areas. UML has experience in facilitating workshops and will continue to do so to inform stakeholders of the Code the Curb pilot effort.

This commitment is new, specific, and relevant in the following ways:

- This commitment is important in ensuring project success. Communicating pilot effort and expected outcomes to stakeholders and the public is critical for community support.
- The development of this project and identification of key stakeholders will help build a foundation for project areas identified for later stages of the project.

The project is an opportunity to advance work that has already been initiated between UML and LADOT via LA's Zero Emission Delivery Zones for clean freight deliveries in Downtown Los Angeles. It also presents a strong opportunity to strengthen existing partnerships and create new ones. We firmly believe that this program will yield solutions that will improve Angeleno's quality of life and promote a stronger and more sustainable economy. We look forward to continuing this work with LADOT.

Sincerely,

Justine Johnson, Board Chair, Urban Movement Labs



November 18, 2022

U.S. DEPARTMENT OF TRANSPORTATION
1200 New Jersey Avenue, SE
Washington, DC 20590
855-368-4200

Re: U.S. DOT SMART Grants Program – LA Code of Curb LOC

Dear Secretary Buttigieg,

**Clean Transportation
Technologies and Solutions**

www.calstart.org

Board of Directors

Mr. John Boesel
CALSTART

Ms. Dawn Fenton
Volvo Group North America

Mr. Yuri Freedman
Southern California Gas
Company

Mr. Andrei Greenawalt
Via

Ms. Karen Hamberg
Deloitte LLP
Chair Emeritus

Ms. Chelle Izzi
Walmart

Mr. Mark Patten
NextEra Energy

Ms. Katie Sloan
Southern California Edison

Mr. Chris Stoddart
New Flyer of America

Mr. Stephen Trichka
BAE Systems

Ms. Cynthia Williams
Ford Motor Company

Mr. Bob Wyman
Earthshot

I am writing on behalf of CALSTART, North America's leading consortium on advanced transportation technologies. I would like to express our commitment for the U.S. Department of Transportation's Strengthening Mobility and Revolutionizing Transportation (SMART) discretionary grant program and the efforts of the Los Angeles Department of Transportation (LADOT) in advancing its Code the Curb project. CALSTART brings the entire clean transportation technology industry together to accelerate innovation, grow the market, create jobs, and reduce pollution, boasting more than 300+ members, from start-ups to Fortune 100 firms.

To support the project and its partners, CALSTART commits to the following:

- Advise LADOT in the effort to create a digital inventory of curb regulations, including consulting in data collection and stakeholder engagement strategies.

This commitment is new, specific, and relevant in the following ways:

- This commitment is important in ensuring project success. Measuring and communicating pilot effort and expected outcomes to stakeholders and the public is critical for community support.
- The development of this project and identification of key stakeholders will help build a foundation for project areas identified for later stages of the project.

This project presents a strong opportunity to strengthen existing partnerships and create new ones. We firmly believe that this program will yield solutions that will improve Angeleno's quality of life and promote a stronger and more sustainable economy. We look forward to continuing this work with LADOT.

Sincerely,

Robyn Marquis, Ph.D.
Director, Innovative Mobility
CALSTART
rmarquis@calstart.org

OFFICES IN :

48 S. Chester Ave PASADENA, CA 91106 | 1607 Cole Blvd. LAKEWOOD, CO 80401 | 67 35th St. 5th floor Ste B508 BROOKLYN, NY 11232 |
2600 Tenth Street, Suite 407, BERKELEY, CA 94710 | 200 E. Big Beaver TROY, MI 48083 | 168 Smolian Circle, SANTA ROSA BEACH, FL 32459



November 17, 2022

Robert C. Hampshire, PhD
Deputy Assistant Secretary and Chief Science Officer
Office of the Assistant Secretary for Research and Technology
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Dr. Hampshire,

I am pleased to submit this letter of commitment on behalf of the Los Angeles Cleantech Incubator (LACI) for the Los Angeles Department of Transportation's (LADOT) application to the U.S. DOT FY22 Strengthening Mobility and Revolutionizing Transportation (SMART) Grants Program. LACI and LADOT are aligned in our commitment to deploy new solutions that further transportation efficiency and decarbonization in our region, and the proposal from LADOT and partners will create new partnerships and advance the promising Code the Curb demonstration project to benefit a range of stakeholders.

LACI is creating an inclusive green economy for the people of Los Angeles. We are unlocking innovation by working with startups to accelerate the commercialization of clean technologies, transforming markets through partnerships with policymakers, innovators, and market leaders in transportation, energy, and sustainable cities, and enhancing communities through workforce development, pilots, and other programs.

LACI and LADOT are long-time partners; current projects on which we are collaborating include: deploying electric bikes in a low-income area of South LA; studying curb management best practices in an effort funded by the U.S. Department of Energy Vehicle Technologies Office (Award #DE-EE0009659); and researching last-mile zero emission delivery options for Downtown Los Angeles. Additionally, the City of LA is a member of the Transportation Electrification Partnership, an unprecedented regional public-private collaboration to accelerate deep reductions in climate and air pollution in Los Angeles by the time of the 2028 Olympic and Paralympic Games.

To support the project proposed by LADOT and its partners, LACI commits to the following:

- We will assist in the advancement of public-private partnerships by engaging stakeholders around curb-related issues including deliveries, loading and unloading, and customer accessibility to align on project goals, outcomes, and real-world benefits.
- We will serve as a project advisor. It is our hope that the Code the Curb effort will contribute to local and regional goals to support zero emission mobility. In particular, LACI will advise the project team on strategies to ensure that the proposed SMART project will further the Zero Emission Zone planning effort underway in Downtown Los Angeles.



Communication and community support will be key to the successful execution of this project; LACI aims to play an important role in this process. We will support LADOT and partners by sharing information and learnings from the pilot with a broad network of partners across government, industry, cleantech innovation, community based organizations and others.

Please don't hesitate to contact me with any questions at matt@lincubator.org.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Petersen", followed by a horizontal line.

Matt Petersen
President & CEO



SOUTHERN CALIFORNIA
ASSOCIATION OF GOVERNMENTS
900 Wilshire Blvd., Ste. 1700
Los Angeles, CA 90017
T: (213) 236-1800
www.scag.ca.gov

November 16, 2022

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

RE: SCAG Support of the Los Angeles Department of Transportation's Code the Curb Project for the SMART Application

I am writing on behalf of the Southern California Association of Governments (SCAG) in support of the Los Angeles Department of Transportation's (LADOT) Code the Curb Project for the SMART grant application. This project seeks to advance curb management efforts in Downtown Los Angeles and involves digitization of curb assets and development of prototype management solutions. It builds off of SCAG's leading work across the region to assess policies, strategies, and infrastructure investments supporting curb space activity while improving mobility, reducing congestion and vehicle miles traveled, and improving air quality and sustainability.

To support the project and its partners, SCAG intends to serve as an advisor and lend expertise to LADOT where necessary and appropriate. SCAG supports collaborating with its member cities, providing information and data, when possible, to promote innovative planning in the region. SCAG has previous experience conducting a curb management study that identified Downtown Los Angeles and the Central City subregion as a hotspot. SCAG can provide insights and best practices on where to further prioritize efforts and refine project data collection efforts.

SCAG's support of the LADOT project furthers SCAG's goal of creating a consistent regional methodology for developing curb management practices. The development of this curb management program will serve as a model for other cities in the SCAG region. This effort will be spotlighted during the 2028 Olympics summer games and is particularly important for smaller cities that may have interests in similar projects but do not have the resources to pilot a project such as this.

REGIONAL COUNCIL OFFICERS

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Jan C. Harnik, Riverside County
Transportation Commission

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Transportation
Ray Marquez, Chino Hills

The project provides an excellent opportunity for SCAG to collaborate with its largest member city, home to close to 4 million people, to develop a program that will serve as a framework for cities, both regional and national, in scale. Further, this application is consistent with the policies and goals set forth in our adopted Connect SoCal, the 2020-2045 RTP/SCS. Thus, we support these efforts and respectfully request full and fair consideration of this application. SCAG looks forward to assisting in this project and fostering strong collaborative partnerships. If you have any questions, please do not hesitate to contact Mr. Philip Law, Manager of Mobility Planning and Goods Movement, at (213) 236-1841 or email at law@scag.ca.gov.

Sincerely,

A handwritten signature in blue ink that reads "Kome Ajise". The signature is written in a cursive style with a large, looped "A" and a long, sweeping underline.

Kome Ajise
Executive Director

Catherine Ittner
Senior Program Manager, Zero Emission Freight
120 Park Avenue, 23rdFloor
New York, NY 10017



Dear Secretary Buttigieg,

I am writing on behalf of C40 Cities. C40 Cities is a global network of mayors from nearly 100 global cities collaborating to confront the climate crisis. Our goal is to support the creation of compact and connected cities that reduce emissions and air pollution from the transportation sector. We commit to supporting the efforts of the Los Angeles Department of Transportation (LADOT) in advancing its Code the Curb project with funding from the Strengthening Mobility and Revolutionizing Transportation (SMART) Program.

To support the project and its partners, C40 Cities commits to the following:

- Provide a global perspective and advise LADOT, where necessary and appropriate, on local issues and solutions with a global perspective in collaboration with our partner cities.
- Amplify lessons learned from Los Angeles' Code the Curb effort with partner cities ahead of the LA28 Olympics summer games

This commitment is new, specific, and relevant in the following ways:

- This commitment is important in the urgent fight against climate change. Our commitment will serve to guide these outcomes to help achieve overarching global goals of creating a more sustainable future.

This project presents a strong opportunity to strengthen existing partnerships and create new ones to advance climate action. We firmly believe that this program will yield solutions that will not only improve air quality in Los Angeles but also serve as a global model. We look forward to supporting LADOT and participating in this partnership.

Sincerely,

A handwritten signature in black ink, appearing to read "Catherine Ittner". The signature is stylized with a large initial "C" and a long horizontal stroke.

Catherine Ittner, Senior Programme Manager, Zero Emission Freight, C40 Cities