

## Overview/Project Description

San José has ambitious transportation and climate goals and has pledged to achieve net zero carbon emissions by 2030 with at least half of trips made by transit, biking, or on foot by 2040. San José's Downtown Transportation Plan, adopted in November 2022, identified curb management and demand-based parking pricing as strategies needed to reach these climate goals. Today, parking-dominated curbs in Downtown San José face growing demand for reliable bus service, safe bikeways, efficient on-demand package and food deliveries, and enjoyable public places like parklets, outdoor dining, and green infrastructure. Without adequate spaces for all these uses, delivery workers often double park and obstruct traffic, transit riders are delayed, pedestrians and bicyclists are put in danger by blocked bike lanes, people with disabilities are dropped off far away from their destinations, and business activities are stymied. The result: inefficiency across all modes of transportation. Downtown's limited curb space needs to be more flexible, dynamic, and responsive to its diverse users. Proactively managing the curb is essential to meeting our climate goals as well as creating safer and more equitable public spaces for all of San José's residents, particularly those in Historically Disadvantaged Communities (HDC).

The proposed project will use technology to develop a strategic and equitable approach to managing Downtown's limited curb spaces in order to meet the competing and growing demands for various curb uses. The project will include two components. First, the project will collect *curb inventory data* using a combination of professional services and a software platform. Second, the project will collect *curb utilization data* using cameras and/or sensors. These two components will help the City pilot and prototype approaches to reallocate curb spaces, monitor curb uses, and provide real-time broadcasting of curb use information to the general public.

In the *curb inventory* component, the project will use the Curb Data Specification (CDS) standards co-created by cities and the Open Mobility Foundation (OMF) and develop an application programming interface (API) for vendors and service providers which will allow the City to digitally publish and publicly share curb locations and regulations and transmit real-time and historic events happening at the curb. The project will then develop a platform and tools to visualize and modify curb inventory data in a graphical user interface environment.

In the *curb utilization* component, the project will procure the necessary hardware to monitor and measure utilization of curb space and to pilot and prototype various curb space management policy initiatives to advance the City's goals of reducing greenhouse gas (GHG) emissions and increasing transportation safety and equity. For example, sensors will be installed to monitor curb space utilization in real time, allowing the data to be shared across multiple platforms and accessible to the general public. The real-time availability of the data will help bicyclists and automobile, motorcycle, truck, and transit drivers efficiently navigate the streets to find their destination more quickly, reducing idling, conflicts, and double parking. In addition, curb utilization data will be used to determine appropriate reallocation of different types of curb spaces on each street and pursue demand-based parking pricing.

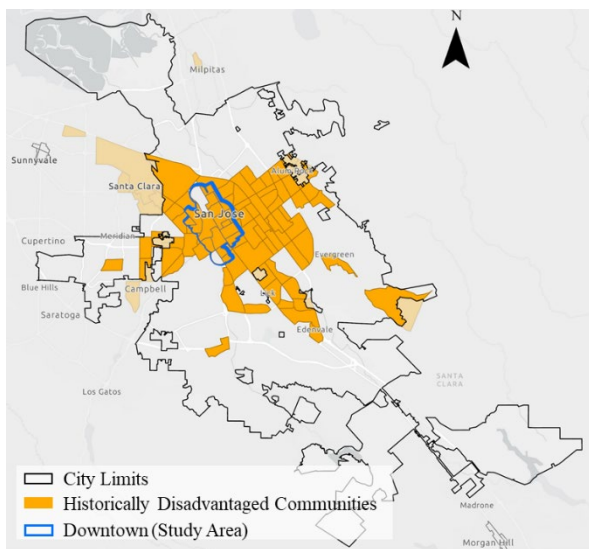
San José is committed to our vision of reducing GHG emissions in the city and is prepared to immediately implement the work outlined in this application to address our goals. The project is a continuation of work into which San José parking management and planning staff have already

put significant resources. We are committed to workforce training and will explore opportunities to leverage the local “work2future” federally funded job center as we hire additional staff and interns to help implement this project. As part of a collaborative grant application, we look forward to the opportunity to work with the OMF and their partner cities, to implement, test, and iterate upon curb inventory and curb utilization technology. We hope to take the learnings from our project and share them with other cities, both large and small, across the country.

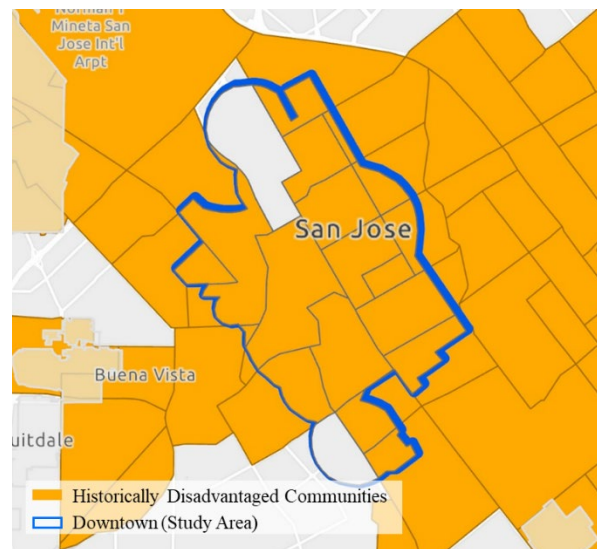
### Project Location

Our proposed project location is San José’s Greater Downtown Area (Downtown), comprised of the core and adjacent neighborhoods, 87% of which is designated by USDOT as an HDC. San José is the 10th largest city in the U.S., with approximately one million residents, 75% of whom belong to the Black Indigenous People of Color (BIPOC) community and 25% of whom have limited English proficiency. Historic inequities remain prevalent in San José, with 37% of the population residing within an HDC.

Downtown has 66,000 residents, 60,000 workers, and 35,000 students. By 2040, Downtown is expected to more than double its population to 120,000 residents, 160,000 workers, 50,000 students, and many more visitors. This busy area is the focal point of regional investment in transportation: fully electrified Caltrain service is almost ready, BART extension to Downtown is set to begin construction soon, and California High Speed Rail is expected in the next 20 years. In addition, more than 100 new development projects are being planned in Downtown. San José is the ideal area to pilot curb management technology as there is a growing need for active management of this city asset due to the diversity of the population and its rapid growth in density. The benefits of the Stage 1 project will directly impact underserved communities living in the Downtown core, as well as the hundreds of others who work, study, visit, and pass through Downtown San José daily.



Map 1: City of San José



Map 2: Downtown San José (Study Area)

## **Community Impact**

Current use of the curb is inherently inequitable because it prioritizes people who can afford single-occupancy vehicles (i.e. private vehicles) and creates competition for a limited number of public spaces, a problem directly addressed by this project. This project will reduce GHG emissions caused by the transportation sector, as well as promote equity and safety on our public streets, curbs, and sidewalks. Climate change and GHG emissions impact all residents of the city; however, many studies have shown that lower-income and disadvantaged communities are more impacted by climate change than higher-income communities.

Curb space Downtown is currently dominated by parking spots, most of which are free. There are 2,600 metered parking spaces in Downtown charged at below-market rates. However, there is a growing demand for curb space for a variety of other uses, that have wider benefits than private vehicles, such as drop-off and pick-ups, on-demand package and food deliveries, loading and unloading, bike share services, electric vehicle charging, bus lanes, bicycle and micro-mobility uses, and parklets, among others – all of which benefit all residents, workers, and visitors to Downtown, not just those driving single occupancy vehicles. The growing demand from other uses has led to competition and conflict at the curb. Making parking a priority comes at the expense of safety for people walking, bicycling, and using public transit. On average in the five-year period between 2014 and 2019 there were 47 collisions involving pedestrians and 43 collisions involving bicyclists each year in Downtown. Improving the safety and availability of walking, biking and public transport will help San José promote equity, as these modes grant underserved and disadvantaged populations improved access to jobs, education and essential services. Active curb management will directly benefit those residing in HDCs by creating safer and more transportation options for Downtown residents.

There are some potential negative externalities that may come as a result of active curb management, including: fewer free or discounted parking spaces currently used by Downtown residents, businesses, and visitors; spillover parking in neighborhoods which currently experience overcrowding; and limited access to real time curb utilization by low-income residents without a smart phone. We plan to engage in proactive community engagement to address potential issues such as these and to monitor parking and car ownership trends in neighborhoods using data from this project, community meetings, intercept surveys, and additional datasets.

## **Technical Merit Overview**

Transportation is the largest contributor to air pollution and GHG emissions in San José and therefore the primary area of focus in reaching our climate goals. Our leaders are committed to leading San José to a sustainable future in which at least half of all trips in the city are made by transit, biking, or on foot by 2040 (compared with just less than a quarter of all trips in 2019).

Proactive curb management, which was identified in San José's Downtown Transportation Plan, is a critical step in decreasing the use of single occupancy vehicles and increasing the use of public transit, passenger loading and unloading, walking, and bicycling. A SMART award will advance this goal by piloting and prototyping policy options that incentivize these other modes

of travel and reallocate the curb for the appropriate use on specific corridors. Proactive curb management provides the platform needed for dynamic parking pricing, another one of the key long-term strategies highlighted in the Downtown Transportation Plan. Additionally, curb management will decrease unnecessary vehicle miles traveled (VMT) and GHG emissions caused by circling that takes place while single occupancy, freight, and construction vehicles look for available curbside space. When San Francisco piloted a demand-responsive parking pricing program, GHG emissions drop by 30% in study areas, compared to 6% in control areas.

In addition to addressing climate goals, proactively managing the curb will improve safety for pedestrians, bicyclists and those taking public transit, by ensuring the curb is designated for those uses in the appropriate areas, and curb space is available for vehicles in other areas, so that various modes are not competing for curb space at once. Proactive curb management will positively impact the environment, while simultaneously creating safer and more equitable public spaces for all residents, particularly those in HDCs.

The proposed project aims to pilot technology to create a complete understanding of the curb use inventory and utilization in Downtown San José and will include two components: *Curb Inventory* and *Curb Utilization*. Both components will pilot new technology to help the City monitor curb uses, measure curb utilization, provide real-time broadcasting of curb use information, and collect data to support decision-making such as reallocation of curb space for different uses.

#### *Curb Inventory Component*

First, the project will collect curb inventory data using a combination of professional services and a software platform. In the curb inventory component, the project will use the CDS standards issued by the OMF. The City of San José has been an active member of the CDS steering committee for the past year and has been working collaboratively with other cities and organizations to create a standard that will help cities and companies pilot and scale dynamic curb zones. CDS will allow the San José Department of Transportation (DOT) to digitally represent the curb space through a set of application programming interfaces (APIs) that can be made available for vendors and service providers. Three types of API's will be created:

1. A Curbs API to allow the City to digitally publish curb locations and regulations;
2. An Events API to allow the City to transmit real-time and historic events happening at the curb; and
3. A Metrics API to allow the City to track curb usage session details facilitating analytics related to curb utilization.

The project will then develop a platform and tools to visualize and modify curb inventory data in a graphical user interface. After a year of collaborating on the development of CDS, San José is eager and ready to begin piloting the use of these APIs, learning more about which features provide the most value for users, and continuing to work with the OMF and other cities to iterate and improve upon our learnings. The collaborative nature of this project lends itself to nationwide peer exchange of lessons learned along the way, and ultimately to the development of a roadmap that other cities can use as they adopt curb management strategies and technologies.

### *Curb Utilization Component*

Second, the project will pilot hardware tools, such as cameras and/or sensors to collect curb utilization data to monitor and measure utilization of curb space and introduce curb space management initiatives. For example, sensors will be installed to monitor curb space utilization in a real-time environment, allowing the data to be shared across multiple platforms and accessible by the general public. The real-time availability of the data, which will be available to the public, will help drivers efficiently navigate the streets to find curb access – whether it’s a parking spot or loading zone – which will cut down on vehicle circling and in turn reduce VMT and GHG emissions.

Curb utilization data will also be used to determine the appropriate reallocation of different types of curb spaces on each street. For example, parking space utilization will provide insight into what areas can be designated for other uses (e.g. loading zones), or where to implement demand-based parking pricing to accurately reflect the demand for space in that area. In addition, curb utilization data will enable the San José DOT to start testing, piloting and prototyping changes in order to achieve our vision of reducing GHG emissions while advancing safety and equity. This will help us prioritize different types of infrastructure for specific corridors (e.g., bike lanes vs. bus lanes vs. parking), with the objective of encouraging more walking, bicycling, and transit use to help achieve GHG emissions goals. It is imperative that we pilot utilization hardware, test various changes, and iterate on our testing before expanding this program throughout the rest of the city.

This Stage 1 grant will allow us to pilot new technology that helps us learn the best strategies for curb management and sets us up for Stage 2, where we will expand the program across the city in order to proactively manage the curb and meet our ambitious climate goals, ultimately making San José more equitable and safer along the way. If selected for this project, the City of San José will be working closely with the OMF and their partners, Harvard and Cityfi. We hope to take the learnings from our projects in San José during this pilot and share them with other cities, both large and small, across the country. As San José has been a leader in the OMF CDS development, we are thrilled about the opportunity to continue to spearhead the deployment of other new technologies in this industry.

### **Project Readiness Overview**

The City of San José is prepared to immediately implement the work outlined in this application if selected. The project is a continuation of work into which San José staff have already put significant resources and planning efforts. Current City staff have the subject matter expertise as well as the project management capability to successfully carry out this project.

San José’s Downtown Transportation plan identified curb management and demand-based parking pricing as essential to reaching our transportation climate vision and supporting our equity and safety goals. Additionally, the City of San José has been a member of the OMF CDS steering committee for the past year and has been working collaboratively with other cities and organizations to create a standard that will help cities and companies pilot and scale dynamic curb zones. As part of that effort, San José has been manually collecting curb inventory data.

### *Community Engagement and Partnerships for Downtown Transportation Plan*

Community engagement for this project will build on the success of outreach and engagement over the past three years for the San José's Downtown Transportation Plan, including over 150 hours of public engagement. The public engagement effort included five listening sessions, two community workshops, five speaker series, an online survey, ten plus focus groups, two open streets events (Viva Calle San José), and an online open house. The community-based organizations involved in the project helped draw participation from historically underrepresented stakeholders (such as those in HDCs) due to a variety of social, economic, and cultural barriers to participation. Curb management and demand-based parking pricing emerged as critical strategies with strong support from those sessions. Additionally, in September 2022, the City presented the curb management project to the Downtown Parking Board, an advisory body to the City for Downtown parking issues and received positive feedback and support. Both the Downtown Parking Board and the Downtown Association support our plans of piloting curb inventory and curb management technology.

### *Curb Inventory Work*

The City of San José has been a member of the OMF CDS steering committee for the past year and has been working collaboratively with other cities and organizations to create a standard that will help cities and companies pilot and scale dynamic curb zones. As part of that effort, San José has begun manually collecting curb inventory data (2,100 locations collected thus far) and related restrictions and regulations (1,900 collected thus far) in Downtown and throughout the City. With the CDS standards recently published, the City will be actively working to standardize the collected data and make it compliant with CDS. To date, the City has been using an internal GIS tool as a platform for viewing curb inventory data, but this solution does not comply with CDS standards, cannot be easily updated, and does not allow for easy publishing of the data to the public or other vendors or stakeholders. In this grant we propose piloting software that is CDS compliant and will allow the City to digitally publish curb locations and regulations, transmit real-time and historic events happening at the curb, and track curb usage session details through various APIs. While San José has been a contributing member in the development of CDS, we have not yet had the chance to test how well the CDS works with real-time data from our City's curbs. This grant will allow us to take the critical next step in evaluating its effectiveness in playing a role to manage our curb.

### *Leadership and Qualifications*

Staff are primed for quick project implementation if awarded the funds and have successfully implemented dozens of state and federal grant funded projects within the past decade. The project will be co-led by Elias Khoury on the Parking Management team and Sarah Abroff on the Planning team within San José DOT. Elias Khoury, the head of DOT's Parking Management team, is San José's DOT On-street Parking Manager and is the City's representative on the OMF's CDS steering committee. Sarah Abroff is a member of the DOT's Planning team, which leads the City's work on preparing for San José's transportation future and just adopted the Downtown Transportation Plan. The project will also be supported by Clay Garner, the Chief

Innovation Officer in the Mayor's Office of Technology and Innovation. He leads a team of experts who specialize in prioritizing high impact community-oriented work that leverages new tools, approaches, and skillsets. His team has developed tools and strategies for community engagement and data-driven equity analysis that were recently featured in a [Harvard case study](#).

This project is a high priority for the City and will be further supported by a variety of subject matter experts and senior level managers to ensure its success. With this team and support we are equipped to make Stage 1 of the SMART grant a successful 18 months where we will pilot, test, and iterate. Once we have completed Stage 1, we plan to use the information to decide how we proceed in creating an even more robust curb management program in the upcoming years.

#### *Workforce Development and Additional Staffing*

To make this project a success, we will need to hire one full-time employee who will be managing the day-to-day project implementation, along with interns and community members that will be supporting the project. The City of San José is deeply committed to local hiring, workforce training, and using union labor when applicable to Stage 1 and Stage 2 of this project. Union workforce and targeted hiring practices will be used during the full deployment of this project, as documented in the City's existing required "Project Labor Agreement" and federal standards. In San José, Project Labor Agreements are required for projects over \$3 million – including living wages as well as targeted hiring practices and priority for union workers. The City runs a "work2future" federally-funded job center as part of the America's Job Centers network to help prepare job seekers to compete for well-paying jobs in industries with growth potential and partner with employers to help them stay competitive, which we plan to explore for this project.

#### *Timeline*

We understand Stage 1 of this grant to be about planning and prototyping and we will have 18 months to pilot the two components – *curb inventory* and *curb utilization* – we are proposing in this grant application. As stated above, due to the existing work already undertaken on this project we are ready to begin work immediately if awarded funds. We anticipate curb inventory to take three months to collect and incorporate into a software platform. Simultaneously, we will be setting up the hardware to track curb utilization. We anticipate the setup to take six months to complete, giving us roughly 12 months to monitor and test different uses.

## Appendix I – Resumes

The San José SMART Curb Management team includes experienced leaders and policy innovators and will create space for youth from HDCs via internships, summer jobs and the like. The core team includes two co-leaders: Sarah Abroff who will be responsible for project management from a policy and budget standpoint and will be the liaison between the project team and all external partners, and Elias Khoury who will be responsible for all regulations and policy related aspects of the project in addition to the technical aspects of the project and for supervising all installation of sensors, hardware and software. Abroff and Khoury will be joined by a team of advisors and subject matter expert as shown in the project governance table below and in the bios that follow.

Executive Sponsorship	Core Project Team	Subject Matter Experts
<ul style="list-style-type: none"> <li>• John Ristow – Director of Transportation, and Project Senior Executive</li> <li>• Ramses Madou – Curb Data Specification Advisor</li> <li>• Heather Hoshii, Senior Strategy Advisor</li> </ul>	<ul style="list-style-type: none"> <li>• Sarah Abroff – Project Management Lead</li> <li>• Elias Khoury - Management, Policy, Regulations, and Technical Lead</li> <li>• Devin Gianchandani – Grants Administration Advisor</li> </ul>	<ul style="list-style-type: none"> <li>• Clay Garner – Innovation Advisor</li> <li>• Brian Nelson – Engineering Advisor</li> <li>• Liz Zhang – Data Analytics Advisor</li> <li>• Wilson Tam, Community Engagement Specialist</li> </ul>

**Sarah Abroff, project co-lead** will be responsible for policy and budget management for the project and will be the liaison between the project team and all external partners. She has nearly two decades of experience as a detail-oriented researcher, planner, and community-based innovator. Sarah currently serves as the Local Policy Lead for the City’s Department of Transportation, where she manages innovative work on urban freight and goods movement, pilot testing various policies to improve efficiency, work that is tightly connected to this proposed project. She recently managed the City’s sidewalk robot delivery pilot, which included extensive community engagement involving local university students to engage the community through surveys and interviews. She previously worked on the City’s Emerging Mobility team where she led work on autonomous vehicle pilots. She has a background in urban planning, design, and social science research, having managed over 50 projects from start to finish across a variety of sectors, on time and on budget. Her ability to execute on the DOT Innovation Principles comes from experience working at design-thinking firms that specialize in prototyping, testing, and iterating to find increasingly responsive public responses to real-world problems. She holds a dual master's in City Planning and Landscape Architecture from the University of California Berkeley, an MA in Quantitative Methods in Social Sciences from Columbia University, and a BS in Biopsychology from the University of Michigan. The mother of small children, she is passionate about finding solutions that leverage technology to create a sustainable planet for future generations.

**Elias Khoury, project co-lead** will be the management, policy, regulations, and technical lead for the project. Elias will ensure that the project complies with local regulations and policies. He will also be responsible for all technical aspects of the project and for supervising all installation



of sensors, hardware, and software. Elias brings over 14 years of experience in transportation, and over 20 years of project management to the project. As the On-Street Parking Manager with the City of San José, Elias oversees all curb space operations, programs, and parking compliance. In the past few years, he worked on the implementation of several technology projects such as Automated License Plate Recognition (ALPR) technology, Residential Permit Parking (RPP) modernization, smart meters installations and upgrades, Parking Access and Revenue Control System (PARCS) procurement and implementation, IT infrastructure, and work-flow automation. Elias is also an expert in parking regulations and enforcement. He has a deep understanding of the challenges the residents and businesses of San José are facing related to curb space parking and utilization. Elias has been on the Steering Committee of OMF's Curb Data Specifications (CDS). He holds an MBA from National University and bachelor's degree in Business Economics from the Lebanese American University.

**Clay Garner** is the Innovation Advisor for the project. As the City's Chief Innovation Officer, Clay's mission is to leverage the ingenuity of Silicon Valley to improve San Joséans' livelihoods, access to opportunities, and city experience. As the top tech policy unit in the City, Clay's team has spearheaded San José's first digital privacy policy, developed a new data science capacity-building initiative to improve City services, accelerated the rollout of free community wi-fi for 300,000 residents, deployed transportation pilots in traffic safety and autonomous vehicles, and developed a data-driven community engagement approach to bring the voices of customers to City Hall. San José was named the nation's most innovative local government in 2020 and 2021. Prior to his time at San José City Hall, Clay worked for Google in product marketing and consulted on mobile health projects for the United Nations Population Fund. Clay holds a Master of Global Affairs from Tsinghua University in China, where he was a Schwarzman Scholar, and a BA from Stanford University. He speaks fluent Chinese and Spanish.

**Brian Nelson** will serve as the Engineering Advisor for the project. Brian has over 22 years of experience working in the transportation field and parking engineering. He managed the design and installation of the City's downtown parking guidance system. Brian has extensive experience in curbside design and management including on-street parking and parklet construction. He managed projects such as garage structural repair, elevator upgrades, lighting upgrades, and electric vehicle charging spaces installation. Brian is also experienced in managing traffic signal operations, and downtown operations including traffic control engineering for high profile sports and entertainment venues such as the San José Arena (SAP Center), and the Earthquakes Soccer Stadium (PayPal Park), and outdoor events. Brian has a Bachelor of Science Degree in Civil Engineering from San José State University and is a Licensed Professional Civil Engineer.

**Liz Zhang** will serve as the Data Analytics Advisor to the project. She will play a key role in identifying the data necessary to analyze and integrating data across sources to identify areas that can be targeted to reduce congestion, idling and to improve safety. Liz has extensive experience with data analytics with the City's Department of Transportation. Liz holds a BA from San José State University.

**Devin Gianchandani** will serve as the Grants Administration Advisor for the project. He will be responsible for all grant documentation and reporting and will collect data from both the City staff and the vendors involved in the project. Devin has over 25 years of experience as a transportation professional, with key expertise in grant and program management and traffic safety education. He holds a Master of Science in Transportation Management and a Bachelor's degree in Environmental Science, both from San José State University.

**Heather Hoshii** currently serves as the San José Department of Transportation Division Manager. She will provide executive oversight and advice to the project based on over 17 years of experience. She has worked extensively in urban city service, with her work spanning a variety of operational specialties. She has strong strategic thinking and tactical planning skills necessary to manage complex operations. Heather has worked with the City of San José for 14 years. She holds an MBA from Colorado State University and a BS from Central Washington University.

**Wilson Tam** will serve as the Community Engagement Specialist for the project. Tam was the co-author of San José's Downtown Transportation Plan, which was developed with the community to support mobility needs and future downtown growth. With 10+ years in the transportation planning field, Tam specializes in community-based transportation planning, policy development, and land use and transportation studies. Tam strives to enhance community engagement, inter-agency collaboration, and public-private partnerships in bringing sustainable and affordable mobility solutions to people of all ages and abilities. Tam holds a Master of Science from the Massachusetts Institute of Technology and a Bachelor of Science from the University of California, Berkeley.

**Ramses Madou** will serve as the Curb Data Specification Advisor for the project. Madou is the Division Manager of Planning, Policy, and Sustainability for the Department of Transportation in the City of San José, and Chair of the Board of the Open Mobility Foundation, an open-source software foundation that governs a platform called the "Mobility Data Specification." He is the project manager for San José Access & Mobility Plan, which lays out a set of strategies to realize the City's goals to substantially increase walking, biking, and transit use and decrease auto dependence. He is passionate about developing the strategies, data, and analytics, and plans to create a people first transportation system. Before coming to the City, he was the Associate Director of Parking & Transportation Services for Stanford University. He holds a Master of Urban and Regional Planning from San José State University, a Master of Political Science from San Francisco State University, and a BA from the University of California, Santa Cruz.

**John Ristow** will serve as the Project Senior Executive. As the San José Director of Transportation, John brings over 20 years of experience in transportation to the project. Prior to working for the City of San José, John was the Director of Planning and Program Development at the Santa Clara Valley Transportation Authority. He holds a Master of Urban and Regional Planning from the University of Colorado and a BA from the University of Colorado.

## Appendix II – Summary Budget Narrative

Narrative for each of the Object Class Categories listed in SF-424A is provided below. All amounts are for the 18-month period of the Stage 1 grant with an assumed project start date in early calendar year 2024. Project start date is subject to change pending grant award timeline.

**Personnel.** This category of cost covers one new full-time position for a Project Manager for the duration of the implementation period of 18 months, along with funding to support opportunities for internships to support the needs of the project, leveraging the City’s existing internship and fellowship programs, and making specific outreach to youth in Historically Disadvantaged Communities so that they can gain the technology and smart city skills and expertise offered by the work of this grant. The City is including in-kind staff time costs for policy, budget, and technical management of the project.

**Fringe Benefits.** This category covers the fringe benefit cost of the personnel described above.

**Travel.** This line item includes the cost for our project team to travel to Washington, DC twice during the grant period for the in-person meetings described in section vi of the NOFO for Knowledge Transfer Activities.

**Equipment.** Equipment costs for the grant include: Software costs including platform for curb inventory and curb space management and analytics as well as data visualization; Hardware costs including the needed sensors to measure the utilization of curb space; and Telecommunication costs needed for the sensors to report activity to the main system.

**Supplies.** No office supplies are anticipated to be paid for with this grant funding.

**Contractual.** Contractual costs for this project include professional services to be hired by the City to assist in curb data collection and data standardization as well as system setup and installation of the sensors. Contractual costs also include partnership with the Open Mobility Foundation (OMF) to support the further development of the Curb Data Specification (CDS), provide technical assistance and shared learning capacity building, and CDS adoption and implementation. Finally, contractual costs include community outreach costs. To the extent feasible, professional services contracted for as part of this project will be conducted in a streamlined fashion in order to facilitate completion of the project within the 18-month timeframe. Initial discussions have begun with the requisite procurement officials to identify innovative means of procuring needed services.

**Construction.** No construction costs are anticipated to be paid for with this grant funding.

**Other.** The sole cost in the “other” category is our project contingency line item, which includes an allowance for additional funds to support the project considering inflation pressures and supply-chain challenges impacting the costs of goods and services in the current environment. It also includes an allowance to pay for community-based internships and training.

**Indirect.** No indirect cost is anticipated from this project.

**Program Income.** No program income is anticipated from this project.

**Total federal funds.** \$1,999,412

**Total non-federal funds.** \$707,127: City of San José funding committed to this project includes in-kind staff time for policy, budget, and technical management of the project.

**Total project costs.** \$2,706,539

## **Appendix III – Letters of Commitment**

1. Open Mobility Foundation
2. Cityfi
3. Harvard

November 14, 2022

Dear Secretary Buttigieg:

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

San Jose'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 San Jose 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

November 14, 2022

**RE: Letter of Commitment – City of San Jose SMART**

Dear Secretary Buttigieg,

Cityfi LLC is excited to provide this letter of commitment to the City of San Jose in their pursuit of SMART grant funding.

San Jose is part of a collaboration that includes Boston, Los Angeles, Minneapolis, Philadelphia, Portland, San Francisco, Seattle and Miami-Dade County. Each will prototype, demonstrate and, if effective, deploy emerging technology to manage public curbsides to improve street safety, promote equitable mobility, and reduce transportation related emissions.

Each city and place is bringing to this collaboration unique context, skills, and communities. These cities have committed to collaborate intensively with one another – sharing the evolution of their prototype, its performance and utility utilizing diverse technology partners, but a common approach, to effectively address a common problem.

Cityfi has committed to facilitate this collaboration, document the lessons learned along the way, and share back to each project manager and team. This cross-city information sharing will accelerate innovation and further continued technology evolution. The technical assistance to be provided will help cities crowd-source among the cohort to rapidly find innovative and effective solutions to common concerns such as contracting and procurement, system integration, innovative construction techniques, data governance practices, and more. The information sharing will facilitate faster prototype development, project delivery and comparison of outcomes. In partnership with the Harvard Kennedy School, a final synthesis of lessons learned will be documented and disseminated for all interested places.

We are enthusiastic about the many dimensions provided to this common problem via this collaborative effort and the strength of the solution proposed by San Jose and pleased to offer this commitment in service to the project.

Sincerely,

A handwritten signature in blue ink, appearing to be "K. Ricks", written in a cursive style.

Karina Ricks, Partner

November 18, 2022

Dear Secretary Buttigieg,

I am writing to support the City of San José SMART grant proposal. This city's spirit of innovation and entrepreneurship, along with a focus on using data to define and solve problems make this an ideal location for the piloting and prototyping envisioned by USDOT for the SMART grant.

This proposal is part of a collaborative that includes Boston, Detroit, Los Angeles, Miami-Dade, Minneapolis, Philadelphia, Portland, San Francisco, San José, and Seattle. If awarded, the grant will directly benefit these cities, and will indirectly benefit a wide policy audience across the nation via publication of learnings and insights from the network. To support the project, Harvard commits to:

- Convene a peer learning network of cities in the collaborative, and provide cities with access to a wide range of subject matter experts on the connection between equity and safety, as well as the latest curb management technology and data analytics.
- Support the collaborative with best practices on digital community involvement in the design, use and adaptation of curb and sidewalk issues that addresses the need for input from historically disadvantaged communities. Provide a menu of applications as well as helping write up and disseminate the intended uses of member cities (see recent relevant publication example [here](#)). This process will include texting, augmented reality and digital twinning.
- Support the cities with respect to curating and suggesting best practices on privacy and security as it relates to internal city decisions and with respect to the decisions that should be incorporated in third party contracts.
- Support the cities in the use of mapping and visualizations to enhance planning and community engagement of curb and sidewalk.
- Disseminate insights to a wide policy audience, and socialize the insights with existing Harvard networks of chiefs of staff of the largest cities, urban data leaders and the like.

Due to the unique opportunity for cross-site collaboration, learning, and acceleration of success, and the value of public sharing of insights and the potential for follow-on momentum, I encourage USDOT to fund this application. Finally, the City of San José has been an active participant in numerous Harvard peer learning networks over the years and I believe this team can deliver results USDOT will be proud of and that will enlighten and inspire other members of the collaborative.

Sincerely,



Stephen Goldsmith