GRANT APPLICATION SUMMARY SHEET

Grant Name:	Stage 2 Strengthening Mobility and Revolutionizing Transportation 25-28
Department:	NDOT
Grantor:	U.S. DEPARTMENT OF TRANSPORTATION
Pass-Through Grantor (If applicable):	
Total Applied For	$10,000,000.00
Metro Cash Match:	$0.00
Department Contact:	Casey Hopkins 880-1676
Status:	CONTINUATION

Program Description:

Building on Stage 1, this project will use LiDAR technologies to address gaps in traditional safety evaluation methods through collecting and evaluating "near-miss" data on Nolensville Pike and North Nashville.

Plan for continuation of services upon grant expiration:

Incorporate operating/ asset management costs in NDOT budget.

APPROVED AS TO AVAILABILITY OF FUNDS:

Kevin Crumbo/mjw 8/12/2024 | 9:23 AM CDT

Director of Finance **Date**

APPROVED AS TO FORM AND LEGALITY:

Courtney Moloan 8/12/2024 | 2:56 PM CDT

Metropolitan Attorney **Date**

AP GAM

APPROVED AS TO RISK AND INSURANCE:

Balogun Cobb 8/12/2024 | 9:24 AM CDT

Director of Risk Management Services **Date**

Freddie O'Connell 8/12/2024 | 4:38 PM CDT

Metropolitan Mayor Date

(This application is contingent upon approval of the application by the Metropolitan Council.)

LH

Grants Tracking Form

Part One

Pre-Application ○ **Application** ◉ **Award Acceptance** ○ **Contract Amendment** ○

Department	Dept. No.	Contact	Phone	Fax
NDOT		Casey Hopkins	880-1676	

Grant Name:	Stage 2 Strengthening Mobility and Revolutionizing Transportation 25-28		
Grantor:	U.S. DEPARTMENT OF TRANSPORTATION	**Other:**	
Grant Period From:	03/01/25	(applications only) **Anticipated Application Date:**	07/12/24
Grant Period To:	03/01/28	(applications only) **Application Deadline:**	08/14/24
Funding Type:	FED DIRECT	**Multi-Department Grant** ☐ → **If yes, list below.**	
Pass-Thru:		**Outside Consultant Project:** ☐	
Award Type:	COMPETITIVE	**Total Award:**	$10,000,000.00
Status:	CONTINUATION	**Metro Cash Match:**	$0.00
Metro Category:	Est. Prior.	**Metro In-Kind Match:**	$0.00
CFDA #	20.941	**Is Council approval required?** ☑	
Project Description:		**Applic. Submitted Electronically?** ☑	

Building on Stage 1, this project will use LiDAR technologies to address gaps in traditional safety evaluation methods through collecting and evaluating "near-miss" data on Nolensville Pike and North Nashville.

Plan for continuation of service after expiration of grant/Budgetary Impact:

Incorporate operating/ asset management costs in NDOT budget.

How is Match Determined?

Fixed Amount of $	$0.00	**or**		**% of Grant**	**Other:** ☐

Explanation for "Other" means of determining match:

For this Metro FY, how much of the required local Metro cash match:

Is already in department budget?	N/A		**Fund** N/A	**Business Unit**	N/A
Is not budgeted?	$0.00		**Proposed Source of Match:**		N/A
(Indicate Match Amount & Source for Remaining Grant Years in Budget Below)					

Other:

Number of FTEs the grant will fund:	0.00	**Actual number of positions added:**	0.00	
Departmental Indirect Cost Rate	18.83%	**Indirect Cost of Grant to Metro:**	$1,883,000.00	
***Indirect Costs allowed?** ○ Yes ◉ No **% Allow.**	0.00%	**Ind. Cost Requested from Grantor:**	$0.00	**in budget**

***(If "No", please attach documentation from the grantor that indirect costs are not allowable. See Instructions)**

Draw down allowable? ☐

Metro or Community-based Partners:

Tennessee State University, Vanderbilt University, University of Tennessee (Chattanooga), Ouster, Stansell Electric Company, Nabco Electric Company, Nashville Electric Service, Metro Nashville ITS, Tennessee Department of Transportation

Part Two

Grant Budget

Budget Year	Metro Fiscal Year	Federal Grantor	State Grantor	Other Grantor	Local Match Cash	Match Source (Fund, BU)	Local Match In-Kind	Total Grant Each Year	Indirect Cost to Metro	Ind. Cost Neg. from Grantor
Yr 1	**FY25**	**$50,000.00**	$0.00	$0.00	$0.00	N/A	$0.00	$50,000.00	$9,415.00	$0.00
Yr 2	**FY26**	**$2,050,000.00**	$0.00	$0.00	$0.00	N/A	$0.00	$2,050,000.00	$386,015.00	$0.00
Yr 3	**FY27**	**$7,000,000.00**	$0.00	$0.00	$0.00	N/A	$0.00	$7,000,000.00	$1,318,100.00	$0.00
Yr 4	**FY28**	**$900,000.00**	$0.00	$0.00	$0.00	N/A	$0.00	$900,000.00	$169,470.00	$0.00
Yr 5	**FY__**									
Total		**$10,000,000.00**	$0.00	$0.00	$0.00	N/A	$0.00	$10,000,000.00	$1,883,000.00	$0.00

Date Awarded:		**Tot. Awarded:**		**Contract#:**	
(or) **Date Denied:**		**Reason:**			
(or) **Date Withdrawn:**		**Reason:**			

Contact: juanita.paulsen@nashville.gov
vaughn.wilson@nashville.gov

JP

Rev. 5/13/13
5887

GCP Received 8/8/2024

GCP Approved 8/8/2024

SMART Grants Stage Two Notice of Funding Opportunity

AGENCY: Office of the Assistant Secretary for Research and Technology (OST-R), U.S. Department of Transportation (USDOT or the Department)

ACTION: Notice of Funding Opportunity (NOFO), Assistance Listing (CFDA) #20.941

SUMMARY: The purpose of this notice is to solicit applications for Stage Two Strengthening Mobility and Revolutionizing Transportation (SMART) grants. Funds for the fiscal year (FY) 2024 SMART Grants Program are to be awarded on a competitive basis to prior 2022 Stage One recipients in order to implement the plans and prototypes previously developed in Stage One that will advance smart city or community technologies and systems to improve transportation efficiency and safety.

Only recipients of SMART Stage One Planning and Prototyping Grants, or eligible entities designated by Stage One SMART recipients, awarded under the FY22 SMART Stage One NOFO, may apply for this Stage Two Implementation Grants.

For this Notice of Funding Opportunity, the Draft Implementation Report completed by each Stage One Recipient will be assessed. Any applicant that is not required to submit a Draft Implementation Report between July-September 2024, as their period of performance began after October 1, 2023, will not be eligible to respond to this Notice of Funding Opportunity. US DOT anticipates multiple additional Stage Two NOFOs will be released in 2025 and 2026 which other SMART Stage One recipient will be eligible to apply for.

SUMMARY OVERVIEW OF KEY INFORMATION: Strengthening Mobility and Revolutionizing Transportation (SMART) Stage Two Implementation Grant Opportunity	
Program Overview	The purpose of this notice is to solicit applications for Stage Two Strengthening Mobility and Revolutionizing Transportation (SMART) grants. Funds for the fiscal year (FY) 2024 SMART Grants Program are to be awarded on a competitive basis to Stage Two awardees in order to implement the plans and prototypes previously developed in Stage One that will advance smart city or community technologies and systems to improve transportation efficiency and safety.
Goals and Objectives	• As established in Sec. 25005 of the Bipartisan Infrastructure Law (BIL; P.L. 117-58), projects funded by the SMART Grants Program use advanced data, technology, and applications to provide significant benefits to a local area, a State, a region, or the United States. These benefits are identified in BIL and align to the following categories: • **Safety and reliability:** Improve the safety of systems for pedestrians, bicyclists, and the broader traveling public. Improve emergency response.

	• **Resiliency:** Increase the reliability and resiliency of the transportation system, including cybersecurity and adaptation to climate change effects. • **Equity and access:** Connect or expand access for underserved or disadvantaged populations. Improve access to jobs, education, and essential services. • **Climate:** Reduce pollution, including greenhouse gas emissions. Improve energy efficiency. • **Partnerships:** Contribute to economic competitiveness and incentivize private sector investments or partnerships, including technical and financial commitments on the proposed solution. Demonstrate committed leadership and capacity from the applicant, partners, and community. • **Integration:** Improve integration of systems and promote connectivity of infrastructure, connected vehicles, pedestrians, bicyclists, and the broader traveling public. The Department will prioritize SMART Grant funding applications that demonstrate the following characteristics, as identified in BIL: • **Fit, scale, and adoption:** Right-size the proposed solution to population density and demographics, the physical attributes of the community and transportation system, and the transportation needs of the community. Confirm technologies are capable of being integrated with existing transportation systems, including transit. Leverage technologies in repeatable ways that can be scaled and adopted by communities. • **Data sharing, cybersecurity, and privacy:** Promote public and private sharing of data and best practices and the use of open platforms, open data formats, technology-neutral requirements, and interoperability. Promote industry best practices regarding cybersecurity and technology standards. Safeguard individual privacy. • **Workforce development:** Promote a skilled and inclusive workforce. Support the creation of good-paying jobs with the free and fair choice to join a union and the incorporation of strong labor standards and training and placement programs, especially registered apprenticeships, in project planning stages. • **Measurement and validation:** Allow for the measurement and validation of the cost savings and performance improvements associated with the installation and use of smart city or community technologies and practices. Note that the SMART Grants Program is a demonstration program. Proposals seeking funding for systems and technologies that are already well-established and broadly adopted will be less competitive.
Eligible Applicants	Eligible applicants for the SMART Grants Program include: A. a State;

	B. a political subdivision of a State; C. a federally recognized Tribal government; D. a public transit agency or authority; E. a public toll authority; F. a metropolitan planning organization; or G. a group of two or more eligible entities applying through a single lead applicant (Group Application). Only recipients of SMART Stage One Planning and Prototyping Grants, or eligible entities designated by Stage One SMART recipients, are eligible for Stage Two Implementation Grants. Stage One recipients that began their period of performance after October 1, 2023, are not eligible to respond to this NOFO, but are eligible for future Stage Two NOFOs. Section C.1 provides additional applicant eligibility information.
Eligible Projects	The SMART Grants Program funds multiple technology areas, as listed below. Projects must demonstrate at least one technology area and may demonstrate more than one technology area. USDOT will assess each application on its merits, and there is no expectation that applications demonstrate more than one technology area. • Coordinated Automation • Connected Vehicles • Intelligent, Sensor-Based Infrastructure • Systems Integration • Commerce Delivery and Logistics • Leveraging Use of Innovative Aviation Technology • Smart Grid • Smart Technology Traffic Signals Section C.3 provides additional project eligibility information.
Funding Amount	This Notice makes available approximately $50,000,000 for Stage Two grants under the SMART Grants Program. USDOT expects to award approximately 3-5 Stage Two grants of up to $15,000,000 per award. There is an anticipated minimum award size of $2,000,000.
Cost Share	Not applicable.
Deadlines	• Monday, July 29, 2024, at 5:00 PM ET: Deadline to submit technical questions to smart@dot.gov • Wednesday August 14, 2024, at 5:00 PM ET: Application due

DUE DATES: Applications must be submitted by 5:00 PM ET during the submission window dates below. Late applications will not be accepted.

- Submission Window: July 15, 2024 – August 14, 2024

ADDRESSES: Applications must be submitted via Valid Eval, an online submission proposal system used by USDOT, at https://usg.valideval.com/teams/usdot_smart_stage_2/signup. USDOT will not accept or review application materials submitted via Grants.gov.

FOR FURTHER INFORMATION: Please contact SMART Grants Program staff via email at smart@dot.gov or call Madeline Zhu (202-961-9598). A telecommunications device for the deaf (TDD) is available at 202-366-3993. In addition, USDOT may post answers to questions and requests for clarifications, as well as schedule information regarding webinars providing additional guidance, on the SMART Grants website at https://www.transportation.gov/smart.

The deadline to submit technical questions is 5:00PM ET on Monday, July 29, 2024.

A webinar describing how to apply will be held at 1:00pm ET on Thursday, July 18, 2024. Register for the webinar here: https://usdot.zoomgov.com/webinar/register/WN_N2I3NM78Qsy7wEKuraruFQ#/registration

SUPPLEMENTARY INFORMATION: Each section of this notice contains information and instructions relevant to the application process for SMART grants.

Office of the Assistant Secretary for Research and Technology (OST-R), USDOT. Notice of Funding Opportunity for the Strengthening Mobility and Revolutionizing Transportation (SMART) Grants Program

A. Program Description

1. Overview

Section 25005 of the Infrastructure Investment and Jobs Act (Pub. L. 117–58, November 15, 2021; also referred to as the "Bipartisan Infrastructure Law" or "BIL") authorized and appropriated $100 million to the Department of Transportation (USDOT) each year for FY2022-FY2026 for the SMART Grants Program. This NOFO solicits applications for activities to be funded under the SMART Grants Program. The funding will be implemented, as appropriate and consistent with law, in alignment with the priorities in Executive Order 14052, Implementation of the Infrastructure Investment and Jobs Act (86 FR 64355)[1].

The purpose of the SMART Grants Program is to conduct demonstration projects focused on advanced smart city or community technologies and systems in a variety of communities to improve transportation efficiency and safety. The program funds projects that are focused on using technology interventions to solve real-world challenges and build data and technology capacity and expertise in the public sector[2].

2. Program Structure

The SMART Grants Program includes two stages: Stage One Planning and Prototyping Grants (Stage One grants) and Stage Two Implementation Grants (Stage Two grants). The program structure is based on a belief that planning, prototyping, and partnership are critical to advancing the state of the practice for data and technology projects in the public sector. **Only recipients of SMART Stage One Planning and Prototyping Grants, or their designee, are eligible for Stage Two Implementation Grants. For this NOFO, only recipients of FY22 Stage One Grants, whose periods of performance began prior to October 1, 2023, are eligible. Proposers must have received a SMART Stage One Award, or have been designated by a Stage One recipient, to be eligible to submit a SMART Stage Two proposal.**

Other SMART Stage One Recipients will be eligible for future Stage Two NOFOs in 2025 and 2026.

The Stage Two Applicant must have been either the lead applicant of a Stage One grant or a partner on the Stage One project team. In order for a Stage One partner to apply for a Stage Two grant as the lead applicant, the partner must be an eligible applicant listed in C.1 and provide a written designation from the Stage One lead. Each original Stage One project may submit only one Stage Two application for each Stage Two NOFO. Further details about Letters of Designation may be found in Section D.

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[1] The priorities of Executive Order 14052, "Implementation of the Infrastructure Investments and Jobs Act" are as follows: to invest efficiently and equitably, promote the competitiveness of the U.S. economy, improve job opportunities by focusing on high labor standards and equal employment opportunity, strengthen infrastructure resilience to hazards including climate change, and to effectively coordinate with State, local, Tribal, and territorial government partners. https://www.federalregister.gov/documents/2021/11/18/2021-25286/implementation-of-the-infrastructure-investment-and-jobs-act

[2] For more information and illustrative use cases, please see www.transportation.gov/SMART.

USDOT anticipates awarding up to $15,000,000 per project for Stage Two. The anticipated minimum award size is $2,000,000 though USDOT reserves the right to alter the award amount depending on the quantity and quality of applications.

Stage Two implementation projects should result in an at-scale deployment of the Stage One concept, integrating it with the existing transportation system and refining the concept such that it could be replicated by others.

3. Departmental Priorities

The Department seeks to fund projects that advance the Departmental priorities of safety, equity, transformation, climate and sustainability, and workforce development, job quality, and wealth creation as described in the USDOT Strategic Plan, Research, Development and Technology Strategic Plan, and in executive orders.[4] The USDOT Innovation Principles guide Departmental actions related to innovation generally as well as the transformation strategic goal.[5] Applicants are encouraged to review the Innovation Principles, along with other resources accessible on the SMART Grants website[6] and to incorporate them into the design of applications for the SMART Grants Program.

4. SMART Grants Program Priorities:

As established in BIL, projects funded by the SMART Grants Program use advanced data, technology, and applications to provide significant benefits to a local area, a State, a region, or the United States. These benefits are identified in BIL and align to the following categories:

- **Safety and reliability:** Improve the safety of systems for pedestrians, bicyclists, and the broader traveling public. Improve emergency response.
- **Resiliency:** Increase the reliability and resiliency of the transportation system, including cybersecurity and adaptation to climate change effects.
- **Equity and access:** Connect or expand access for underserved or disadvantaged populations. Improve access to jobs, education, and essential services.
- **Climate:** Reduce air pollution, including greenhouse gas emissions. Improve energy efficiency.
- **Partnerships:** Contribute to economic competitiveness and incentivize private sector investments or partnerships, including technical and financial commitments on the proposed solution. Demonstrate committed leadership and capacity from the applicant, partners, and community.
- **Integration:** Improve integration of systems and promote connectivity of infrastructure, connected vehicles, pedestrians, bicyclists, and the broader traveling public.

The Department will prioritize SMART Grant funding applications that demonstrate the following characteristics, as identified in BIL:

- **Fit, scale, and adoption:** Right-size the proposed solution to population density and demographics, the physical attributes of the community and transportation system, and the transportation needs of the community. Confirm technologies are capable of being integrated with existing transportation systems, including transit. Leverage technologies in repeatable ways that can be scaled and adopted by communities.
- **Data sharing, cybersecurity, and privacy:** Promote public and private sharing of data and best practices and the use of open platforms, open data formats, technology-neutral

requirements, and interoperability. Promote industry best practices regarding cybersecurity and technology standards. Safeguard individual privacy.

- **Workforce development:** Promote a skilled and inclusive workforce. Support the creation of good-paying jobs with the free and fair choice to join a union and the incorporation of strong labor standards and training and placement programs, especially registered apprenticeships.
- **Measurement and validation:** Allow for the measurement and validation of the cost savings and performance improvements associated with the installation and use of smart city or community technologies and practices.

To accomplish these objectives, the SMART Grants Program will fund projects that focus on using technology interventions to solve real-world challenges facing communities.
The SMART Grants Program focuses on building data and technology capacity and expertise for State, local, and Tribal governments. Technology investment is most beneficial when tailored to the needs of the community. SMART recognizes that many public sector agencies are challenged to find the resources and personnel to engage with new technologies; this is reflected in the program design, which builds in the time and support needed for projects to succeed. SMART will support and grow a strong, diverse, and local workforce.

Note that the SMART Grants Program is a demonstration program. Proposals seeking funding for systems and technologies that are already well-established and broadly adopted will be less competitive. Successful Stage Two projects will build sustainable partnerships across sectors and levels of government identified in Stage One as well as collaborate with industry, academia, nonprofits, and other traditional and non-traditional partners. Successful projects will also support the creation of good-paying jobs with the free and fair choice to join a union. They will be real word deployments based on the concepts, plans and prototypes that were developed in Stage One.

For more information about Departmental priorities, technical resources, and FAQs for Stage Two, please refer to the SMART Grants Stage Two page:
www.transportation.gov/gov/grants/smart/smart-grants-stage-2.

See Section E.1.i for more detail on merit criteria that implement the priorities outlined above.

B. Federal Award Information

1. Total Funding Available

The BIL established the SMART Grants Program with $500,000,000 in advanced appropriations, including $100,000,000 each for FY22, FY23 and FY24. Therefore, this Notice makes available approximately $50,000,000 (reserved from FY23 appropriations) in grants under the SMART Grants Program. USDOT anticipates using up to 2 percent of this funding for administrative costs. Refer to Section D for greater detail on additional funding considerations and Section D.5 for funding restrictions.

2. Availability of Funds

Grant funding obligation occurs when a selected applicant and USDOT enter into a written grant agreement after the applicant has satisfied applicable administrative requirements. SMART funding is provided via reimbursement. Any costs incurred prior to USDOT's obligation of funds for activities ("pre-award costs") are ineligible for reimbursement. SMART Grant funds are available during the period of performance of the project (36 months).

3. Award Size and Anticipated Quantity

USDOT expects to award between three and five Stage Two grants of up to $15,000,000 per award. There is an anticipated minimum award size of $2,000,000. The Department reserves the right to make more, or fewer, awards. USDOT also reserves the discretion to alter minimum and maximum award sizes upon receiving the full pool of applications and assessing the needs of the program in relation to the priorities in Section A.3 and A.4. Moreover, USDOT reserves the right not to award the full funding amount requested by an applicant.

4. Start Dates and Period of Performance

USDOT expects to obligate SMART award funding via a signed grant agreement between the Department and the recipient as flexibly and expeditiously as possible. USDOT expects that recipients will be ready for a signed grant agreement no later than six (6) months after the announcement of awards, and recipients must fully liquidate grant funds by the end of the project's Period of Performance. If a recipient is unable to meet either of these deadlines, USDOT may de-obligate and/or reallocate any such funds. The expected period of performance for Stage 2 SMART grant agreements is up to 36 months.

5. Data Collection Requirements

i. Data Management

To fulfill the reporting requirements and in accordance with the Public Access Plan (https://doi.org/10.21949/1520559), award recipients must consider, budget for, and implement appropriate data management for data and corresponding outputs acquired or generated during the grant. Applicants are expected to account for data and performance reporting in their budget submission. Requirements include a project:

- Providing at a minimum the data and corresponding outputs to: (1) reproduce significant results (whether positive or negative); (2) measure the outcomes or objectives of the project, as well as the NOFO; and, (3) add potential value to future deployments or research and to support evidence-based policy or actions;

- Defaulting to open access when appropriate (exceptions include protecting personally identifiable information [PII], Indigenous data sovereignty (https://www.gida-global.org/care), or confidential business information [CBI]);
- Protecting PII, intellectual property rights, and CBI;
- Utilizing, when possible, open licenses and protecting USDOT's non-exclusive copyright to data and corresponding outputs (https://doi.org/10.21949/1520564);
- Making the source code or tools necessary to analyze the data available to the public, if relevant;
- Developing an expanded data management plan, providing relevant metadata (in a DCAT-US https://resources.data.gov/resources/dcat-us/ file, and, optionally, a discipline-appropriate metadata standard file), and data documentation (README.txt files, data dictionaries, code books, supporting files, imputation tables, etc.); and
- Where applicable, considering contributing data to voluntary resources such as NHTSA's AV TEST Initiative.

Projects should implement data management best practices including, but not limited to, implementation of published data specifications and standards (formal and informal); increasing data discoverability and data sharing; posting data in a timely fashion on publicly accessible resources; and enabling interaction of systems, interoperability, and integration of data systems. Award recipients can use the data management plans developed in Stage One as the basis for the expanded Stage Two plan, which should include robust performance metrics and targets for the at-scale implementation and an overview of data sharing opportunities. The updated plan must also provide more detailed information on the types of data being collected and how that data will be managed and stored (e.g., cybersecurity practices, how privacy is protected, entities that have access to the data).

C. Eligibility Information

1. Eligible Applicants

Eligible applicants for the SMART Grants Program include:

A. a State[3];
B. a political subdivision of a State[4];
C. a federally recognized Tribal government;
D. a public transit agency or authority;
E. a public toll authority;
F. a metropolitan planning organization; or
G. a group of two or more eligible entities listed above in Section C.1 applying through a single lead applicant (Group Application).

Only Eligible applicants that have either received a Stage One SMART Grant Award, or been designated as the lead applicant by a Stage One SMART recipient, are eligible to apply for the Stage Two SMART Grants through this NOFO.
For this NOFO, only recipients of FY22 Stage One Grants, whose periods of performance began prior to October 1, 2023, are eligible.

Other SMART Stage One Recipients will be eligible for future Stage Two NOFOs in 2025 and 2026.

Designating a Lead Applicant
Every Stage One SMART recipient is eligible to apply for a Stage Two SMART Grant. In the event that a project has evolved and a different, eligible entity is a better fit to be the lead applicant for the Stage Two grant, the Stage One SMART recipient must designate the new lead applicant. Designated lead applicants must still be eligible based on the eligibility criteria above. The Stage One SMART recipient must provide a Letter of Designation, endorsing the new lead applicant as the appropriate party to take over the project in Stage Two, and stating the Stage One lead's continued support and involvement in the project as it is deployed. More details on Letters of Designation are provided in Section D and at www.transportation.gov/gov/grants/smart/smart-grants-stage-2.

Only one Stage Two application may be submitted per Stage Two NOFO to expand and deploy a solution prototyped or planned in Stage One. The Stage Two SMART application must demonstrate that it continues the work of the designated Stage One project. Stage One projects not awarded in this or future Stage Two SMART NOFOs may reapply to another Stage Two SMART NOFO.

For this Notice of Funding Opportunity, the Draft Implementation Report completed by each Stage One Recipient will be assessed. Any applicant that is not required to submit a Draft Implementation Report between July-September 2024, as their period of performance began after

[3] U.S. territories are eligible applicants.
[4] For the purposes of the SMART Grants Program Notice of Funding Opportunity, a political subdivision of a State is defined as a unit of government created under the authority of State law. This includes cities, towns, counties, special districts, and similar units of local government, such as public port or airport authorities, if created under State law.

October 1, 2023, will not be eligible to respond to this Notice of Funding Opportunity but may apply to another Stage Two SMART NOFO.

1. Cost Sharing or Matching

Cost sharing or matching is not required for Stage Two Grants.

2. Eligible Activities

The SMART Grants Program funds multiple technology areas, as listed below. Projects must demonstrate at least one technology area and may demonstrate more than one technology area. USDOT will assess each application on its merits, and there is no expectation that applications demonstrate more than one technology area.

As stated in BIL Section 25005 (e)(1), the following technology areas are eligible projects under SMART.

Technology Area	Definition
Coordinated Automation	Use of automated transportation and autonomous vehicles while working to minimize the impact on the accessibility of any other user group or mode of travel.
Connected Vehicles	Vehicles that send and receive information regarding vehicle movements in the network and use vehicle-to-vehicle and vehicle-to-everything communications to provide advanced and reliable connectivity.
Intelligent, Sensor-Based Infrastructure	Deployment and use of a collective intelligent infrastructure that allows sensors to collect and report real-time data to inform everyday transportation-related operations and performance.
Systems Integration	Integration of intelligent transportation systems with other existing systems and other advanced transportation technologies.
Commerce Delivery and Logistics	Innovative data and technological solutions supporting efficient goods movement, such as connected vehicle probe data, road weather data, or global positioning data to improve on-time pickup and delivery, improved travel time reliability, reduced fuel consumption and emissions, and reduced labor and vehicle maintenance costs.
Leveraging Use of Innovative Aviation Technology	Leveraging the use of innovative aviation technologies, such as unmanned aircraft systems, to support transportation safety and efficiencies, including traffic monitoring and infrastructure inspection.
Smart Grid	Developing a programmable and efficient energy transmission and distribution system to support the adoption or expansion of energy capture, electric vehicle deployment, or freight or commercial fleet fuel efficiency.
Smart Technology Traffic Signals	Improving the active management and functioning of traffic signals, including through: • Use of automated traffic signal performance measures; • Implementing strategies, activities, and projects that support active management of traffic signal operations, including through optimization of corridor timing; improved vehicle,

	pedestrian, and bicycle detection at traffic signals; or the use of connected vehicle technologies; • Replacement of outdated traffic signals; or • For an eligible applicant serving a population of less than 500,000, paying the costs of temporary staffing hours dedicated to updating traffic signal technology.

Projects must comply with relevant Federal, state, and local laws and regulations to be eligible. These vary by technology area, and it is the responsibility of the applicant to understand the requirements for their application. This section briefly discusses a few notable examples and is not comprehensive.

Innovative aviation projects must show understanding and awareness of, and comply with, all FAA and other Federal, state, and local regulations relevant to the technologies and usages thereof. For instance, in the case of innovative aviation projects involving small, unmanned aircraft systems (UAS), applicants are responsible for complying with regulations which may include, and are not limited to the following, as necessary to achieve desired outcomes:[5]

- 14 CFR Part 91 General Operating and Flight Rules[6]
- 14 CFR Part 107 small UAS rule; Small UAS[7]
- UAS Operations over People rule; Operations Over People General Overview [8]
- UAS Remote identification rule; UAS Remote Identification Overview[9]

Proponents of innovative aviation projects are also responsible for using U.S. government tools and resources which may include, and are not limited to the following, as necessary to fulfill requirements to operate technologies and achieve desired outcomes:

- FAA DroneZone, used to register UAS[10]
- FAA Low Altitude Authorization and Notification Capability (LAANC), used to obtain airspace authorization to fly in controlled airspace[11]
- Part 107 Waiver Resources,[12] used to enable more complex UAS operations[13]

Projects that use communications technologies must either 1) use Vehicle-to-Everything (V2X) services that utilize Cellular Vehicle-to-Everything (C-V2X) based technology designed to operate within the 30 MHz of spectrum (5.895-5.925 GHz) that are consistent with the rules established in waivers associated with Federal Communications Commission (FCC) ET Docket No. 19-138 and future Report and Orders effective at the time when the Department selects

[5] Other terminologies exist, using the FAA terminology "unmanned aircraft systems" for simplicity;
[6] 14 CFR Part 91 https://www.ecfr.gov/current/title-14/chapter-I/subchapter-F/part-91.
[7] 14 CFR Part 107 https://www.ecfr.gov/current/title-14/chapter-I/subchapter-F/part-107
[8] FAA Operations Over People General Overview
https://www.faa.gov/uas/commercial_operators/operations_over_people. Last updated November 10, 2022.
[9] FAA Final Rule on Remote ID https://www.faa.gov/newsroom/remoteid-final-rule. Last updated April 21, 2021.
[10] FAA DroneZone; https://faadronezone.faa.gov/.
[11] FAA UAS Data Exchange (LAANC); https://www.faa.gov/uas/programs_partnerships/data_exchange.
[12] Part 107 Waiver resources; https://www.faa.gov/uas/commercial_operators/part_107_waivers.
[13] For additional questions or information, please contact the FAA UAS Support Center at
https://www.faa.gov/uas/contact_us.

projects for funding under the FY 2024 SMART Grants Program, or 2) leverage other communications technologies that can support V2X services and operate in spectrum outside of the 5.895-5.925 GHz range. USDOT will assess FY 2024 Stage Two proposals according to this language.

Projects that involve equipping or retrofitting motor vehicles with additional technologies are only eligible if the vehicles are publicly owned, leased or used in a contracted service; equipping privately owned and operated vehicles outside of a leased or contracted service is not an eligible activity. Projects involving motor vehicles must involve only vehicles and operations that comply with all applicable Federal Motor Vehicle Safety Standards (FMVSSs) and Federal Motor Carrier Safety Regulations (FMCSRs), or vehicles that are exempt from the requirements in a manner that allows for the legal acquisition and operation of the vehicles in the proposed project.

Stage Two applicants are required to identify all necessary exemptions, waivers, permits, or special permissions in their Stage Two application. Applications will be assessed on the readiness and feasibility of the project with regard to legal, policy, and regulatory requirements (e.g., environmental permits and reviews; public outreach; State and local approvals; equity and accessibility requirements). It will strengthen a Stage Two application if the applicant can affirm that it has already received such permissions. See section E for detailed assessment criteria. Selection for NOFO funds does not guarantee that an exemption or waiver will be granted or otherwise impact the exemption or waiver review processes.

2. Costs

USDOT reserves the right to make cost eligibility determinations on a case-by-case basis. Eligible development and construction activities for grant funding are the following:

- planning;
- feasibility analyses;
- revenue forecasting;
- environmental review;
- permitting;
- preliminary engineering and design work;
- systems development or information technology work;
- acquisition of real property (including land and improvements to land relating to an eligible project);
- construction;
- reconstruction;
- rehabilitation;
- replacement;
- environmental mitigation;
- construction contingencies; and
- acquisition of equipment, including vehicles.

The following are <u>not</u> eligible costs for SMART Grants Program funding:

- reimbursement of any pre-award costs or application preparation costs of the SMART grant application;
- traffic or parking enforcement activity; or
- purchase or lease of a license plate reader.

If a component of the project is explicitly intended to support current or future traffic or enforcement activities, it is not an eligible cost for the SMART Grants Program and cannot be included in an eligible proposal.

Federal funds may not be used to support or oppose union organizing, whether directly or as an offset for other funds.

For grant recipients receiving an award, project assessment costs are allowable costs (either as direct or indirect), and such costs may include the personnel and equipment needed for data infrastructure and expertise in data analysis, performance, and assessment (2 CFR Part 200). For more information on required reporting, see Section F.3. Recipients may not use more than 3 percent of the amount of a SMART grant for each fiscal year to achieve compliance with applicable planning and reporting requirements.

Broadly, allowable activity costs must comply with the cost principles set forth in 2 CFR Part 200, Subpart E (i.e., 2 CFR § 200.403 and § 200.405).

D. Application and Submission Information

1. Address to Request Application Package

All grant application materials can be accessed at grants.gov under the Notice of Funding Opportunity Number DOT-SMART-FY24-02. However, applications should not be submitted on Grants.gov, and USDOT will not review any applications submitted via Grants.gov. Applicants must submit their applications via Valid Eval at https://usg.valideval.com/teams/usdot_smart_stage_2/signup.

Potential applicants may also request paper copies of materials at:

Telephone: 202-774-8003
Mail: U.S. Department of Transportation
1200 New Jersey Avenue SE
E37-303
Washington, DC 20590

2. Content and Form of Application Submission

The application must include the following: Standard Forms (SF); Key Information Questions; and Project Narrative, including the required Appendices. This information must be submitted via Valid Eval at https://usg.valideval.com/teams/usdot_smart_stage_2/signup. More detailed information about each application material is provided below. Nothing should be submitted on Grants.gov, and USDOT will not review any applications submitted via Grants.gov.

i. **Standard Forms**: All applicants must submit the following Standard Forms: Application for Federal Assistance (SF-424), Budget Information for Non-Construction Programs (SF-424A) or, if applicable, Budget Information for Construction Programs (SF-424C), and the Certification Regarding Lobbying form. If applicable, applicants should also complete the Disclosure of Lobbying Activities (SF-LLL). These forms can be found on the Valid Eval application page.

   Regarding signatures, we ask that authorized representatives either:

   1. Print the appropriate documents, physically sign the documents in ink, and re-upload the documents to Valid Eval OR
   2. Download the appropriate documents, provide a digital signature/digital certificate, and re-upload the documents to Valid Eval.

ii. **Key Information Questions:** This is a preview list of the questions that are asked on USDOT's automated proposal website at https://usg.valideval.com/teams/usdot_smart_stage_2/signup. After registering in the system, the applicant will be prompted to answer the following questions on the website:

Title	Instructions
1. Stage Two Project Name	Enter a concise, descriptive title for the project. This should be the same title used in the Grants.gov SF-424 submission and the application narrative. The SMART Grants Program recommends a unique title of 100 characters or less. Do not title your project 'SMART Grant' or similar.
2. Lead Applicant Name	This should be consistent with Q. 8.a. of the SF-424.
3. Lead Applicant Unique Entity Identifier (UEI)	See Section D.3 for more information about obtaining a UEI from SAM.gov. The UEI must be current and not expired. The UEI must be in an "active" status, not "assigned."
4. Eligible Applicant Type	Indicate the eligible applicant type for your application: A. a State; B. a political subdivision of a State; C. a federally recognized Tribal government; D. a public transit agency or authority; E. a public toll authority; F. a metropolitan planning organization. If this is a group application, please identify the eligible applicant type of the lead applicant.
5. Is this the same lead applicant as the corresponding Stage One Application?	If No, list the new name of the lead applicant of the corresponding Stage One project.
6. Was a similar application submitted in the past two years, or do you anticipate a similar application will be submitted for funding in the coming year for this project under **any other USDOT discretionary grant programs** (not including the SMART Grants Program)?	If yes, please include the name of the discretionary grant program, the project title of the similar grant application, and the name of the lead applicant. Please also indicate the application status (Planned, Submitted, Selected, or Not Selected).
7. Other than the SMART Grants Stage One award, was any other Federal funding previously received for this project? This may include funding received from USDOT as well as other Federal agencies.	If yes, indicate the amount of Federal funding received and the relevant grant number.
8. What organizations will be considered partners on this project?	List all critical project partners. This could include other eligible applicant types (e.g., States, a political subdivision of a State, etc.) as well as those in

	industry, academia, nonprofits, and other traditional and non-traditional partners).[14]
9. One Sentence Description of Stage Two project	Describe your Stage Two project in one sentence using the following format: "This project will use X (technology(ies) to address Y (problem(s) to be solved) in Z (context or project area)." The sentence should describe the full implementation of the project as described in the Stage Two application. The One Sentence Description of successful applicants may be published by USDOT and, therefore, must not contain classified, proprietary, or confidential information.
10. Brief Project Description	Describe the project in plain language, using no more than 200 words. It is recommended that applicants use the following format: • One sentence on the problem to be solved. • One sentence on the anticipated or known impact of the Stage One project that received SMART funding. • One sentence describing the anticipated Stage Two activities and how these activities will build on success from Stage One. • One sentence describing the anticipated impacts of the Stage Two project. Please do not describe the project's benefits, background, or alignment with the selection criteria in this description field. A longer, narrative description will be provided in the Project Narrative. The Brief Project Description of successful applicants may be published by USDOT and, therefore, must not contain classified, proprietary or confidential information.
11. Primary Project Location	Identify the primary location where the project will take place. If more than one location, please list additional locations in the next question. 1. If your project will be conducted in a specific city, cities, or town(s), indicate the primary location at which the project will take place using [City, State] as the format. 2. If your project will be conducted at the county, regional, or MPO-level, please note the closest or most relevant [City, State] location for the project

[14] Letters of Commitment should be written for critical partners only. For a Letter of Commitment template, see www.transportation.gov/SMART.

	and indicate if this location represents a "county," "region," or "MPO." This information will be used for mapping purposes. 3. If your project will be conducted Statewide, please indicate the name of the State. 4. If your project will be conducted in a tribal community, please note the closest or most relevant [City, State] location for the project. This information will be used for mapping purposes.
12. Other Project Locations	Identify additional project locations, if applicable, using the same instructions as the previous question. All additional locations should be in [City, State] format.
13. What congressional district(s) is your project located in?	Use the following format: StateAbbrv.-DistrictNumber (e.g., CA-1 , CA-ALL)
14. Size of Community Receiving Benefits	Indicate the size of the community (large community; midsized community; regional partnership; or rural community) that will primarily benefit from the project. • Large Community: A community with a population of not less than 400,000 individuals, as determined under the most recent annual estimate of the Bureau of the Census. • Midsized Community: Any community that is not a large community or a rural community. • Rural Community: The term "rural community" means a community that is located in an area that is outside of an urbanized area (as defined in section 5302 of title 49, United States Code, which defines "urbanized area" as an area encompassing a population of not less than 50,000 people that has been defined and designated in the most recent decennial census as an "urbanized area" by the Secretary of Commerce. Please use 87 FR 80114 to confirm that your project location is not delineated by the Census Bureau as a 2020 urbanized area based on 2020 Census of Population and Housing counts and density calculations. • Regional Partnership: A partnership composed of two or more eligible applicants located in jurisdictions with a combined population that is equal to or greater than the population of any midsized community.

15. Is the project located (entirely or partially) in a Disadvantaged Community based on its location in a census tract identified as "disadvantaged" in the Climate and Economic Justice Screening Tool (CEJST)?	Indicate Yes, No, or Statewide Project. Only select "Statewide Project" if the project will not have specific project sites within a State.
16. If you responded "Yes" to Question 15, please identify the relevant census tract(s) that contribute to this designation. Be sure to use the full census tract number identified in the CEJST tool.	
17. Project Cost: Amount Requested	Total dollar amount requested (rounded to the nearest dollar).
18. Project Cost: Total Project Cost	Total project cost requested for Stage Two, including dollar amount requested and other funding contributions (rounded to the nearest dollar).
19. Proposed Duration of Stage Two Project (in months)	May be up to 36 months.
20. Primary Technology Area	Select the primary technology area with which your project aligns: A. coordinated automation; B. connected vehicles; C. intelligent, sensor-based infrastructure; D. systems integration; E. commerce delivery and logistics; F. leveraging use of innovative aviation technology; G. smart grid; or H. smart technology traffic signals
21. Secondary Technology Area(s) (if applicable)	Select the secondary technology area(s) with which your project aligns: A. coordinated automation; B. connected vehicles; C. intelligent, sensor-based infrastructure; D. systems integration; E. commerce delivery and logistics; F. leveraging use of innovative aviation technology; G. smart grid; or H. smart technology traffic signals I. N/A Note that applications are not rated on the number of technology areas indicated, so it is important to only select the area(s) with which your project aligns.

22. Does this project relate to traffic or parking enforcement; or license plate reader activities?	Indicate "Yes" or "No." Note that SMART grants shall not be used for any current or future traffic or parking enforcement activity, or to purchase or lease a license plate reader.
23. Is an exemption, waiver, permit, or special permission required to conduct the proposed project?	If yes, indicate the exemption, waiver, permit, or special permission obtained. If a waiver has not been obtained, please indicate the plan or process for obtaining it in your Project Narrative.
24. Jobs / Workforce Assessment	Do you anticipate that the technologies introduced in your project will affect the number and quality of jobs in your agency or organization or in industries impacted by your project? If yes, please provide a thorough response of how technology may impact the quantity and quality of jobs and your plans to address potential changes. These plans may include collective bargaining agreements, restructuring of jobs, and additional training for the workforce. If no, please explain why it would not affect the number and quality of jobs. The SMART Grants Program recommends that this section be 200 words or less.
25. Were workforce representatives consulted on the information provided on job impacts of the project?	Indicate "Yes" or "No."
26. Are workforce representatives supportive of this project?	The SMART Grants Program recommends that this section be 200 words or less.
27. Anticipated Stage Two NEPA Class of Action and Requirements	Referencing the SMART NEPA Readiness Guidance https://www.transportation.gov/grants/smart/smart-environmental-review-readiness-guidance, state the anticipated National Environmental Policy Act (NEPA) class of action for your Stage Two project as well as any anticipated environmental approvals and permits you have already acquired, or which will be needed for the proposed project. If you are unsure, please explain your expected coordination to determine this. The SMART Grants Program recommends that this section be 200 words or less.
28. What environmental risks or concerns (e.g. historical structures, environmental justice, local traffic / work zone impacts, floodplain encroachment) do you expect during project implementation? How are you	Refer to the SMART NEPA Readiness Guidance (https://www.transportation.gov/grants/smart/smart-environmental-review-readiness-guidance) to complete this answer.

planning to mitigate the risks / concerns?	The SMART Grants Program recommends that this section be 300 words or less.

iii. **Project Narrative:** The primary purpose of the Narrative is for the applicant to state their case for meeting the merit criteria laid out in Section E. The Narrative should not exceed ten pages; this does not include the required appendices. A cover page and table of contents are not required but would not count toward the ten- page narrative if included. Figures are considered part of the ten- page narrative.

The Narrative and Appendices I-III should be in PDF format, with a font size of no less than 12-point Times New Roman, single-spaced, minimum 1-inch margins on all sides, and page numbers. Appendix IV should be uploaded to the application in Valid Eval as a Shapefile, GEOJSON, or KML/KMZ file. Suggested approximate lengths for each subsection of the Narrative are noted in parentheses.

Note: Each Stage Two proposal will also be assessed on the quality and content of the associated Stage One Draft Implementation Report which is submitted separately from this NOFO. The Draft Implementation Report must be submitted to the SMART Grants Inbox (smart@dot.gov) by the designated deadline of one year from the execution of the SMART Grant Agreement of the Stage One project associated with each Stage Two proposal. In addition to information provided by the applicant in response to this NOFO, reviewers will take into consideration findings and lessons learned from Stage One, as described in the Draft Implementation Report, to determine feasibility and applicability of the technology solution proposed at-scale for Stage Two.

a. Overview/Project Description (suggested 2-3 pages)

This section should provide a clear, concise description of the project, the real-world issues and challenges to be addressed, and the proposed technology(ies) to be used. This should include a discussion of the activities and outcomes of Stage One, but focus on the anticipated outcomes for a potential Stage Two grant. Applicants should also briefly discuss how the proposed project addresses the goals of the SMART Grants Program and how the project plans to improve upon the status quo of the transportation system. This section should address the Technical Merit Criteria: Identification and Understanding of the Problem to Be Solved (see Section E).

b. Project Location (suggested 1-2 paragraphs)

This section should provide a description of the geographic area or jurisdiction that the project will serve, including the community size (large, midsized, rural, or a regional partnership). The project location description should also narratively identify the following:

(a); whether the project is located (entirely or partially) in a disadvantaged community[15] based on the Climate and Economic Justice Screening Tool (CEJST). Applicants are also encouraged to use the USDOT Equitable Transportation Community (ETC) Explorer to understand how transportation disadvantage is affecting the project location(s).

[15] In support of Executive Order 14008, USDOT has been developing a geographic definition of Disadvantaged Communities as part of its implementation of the Justice40 Initiative. Consistent with OMB's Interim Guidance for the Justice40 Initiative, Disadvantaged Communities include (a) certain qualifying Census tracts, (b) any Tribal land, or (c) any territory or possession of the United States.

If applicable, the narrative must identify the relevant census tract(s) that contribute to this designation, as stated in Key Information Question #16. If the proposed project is Statewide and will not have specific sites within a State, please note this instead of listing all of the State's disadvantaged Census tracts.
(b) the 2020 Census-designated urban area(s) where the project is located, if relevant. Please refer to 87 FR 80114 for a list of Census-designated urban areas.

Note that applicants are asked to provide precise locations for each project in the Key Information Questions Table. It is expected that by the time the applicant submits the Stage Two proposal precise location(s) for the demonstration will be known. However, if this is not the case, this section should explain and identify which geographic locations are under consideration for project to be implemented and what analysis will be used in a final determination.

c. Technical Merit Overview (suggested 2-3 pages)

This section should provide an overview of the technical merit of the proposed project, responding to the criteria for assessment and selection in Section E.1.i of this Notice and including a compelling narrative to highlight how the application addresses the following Technical Merit criteria:

- Appropriateness of Proposed Solution
- Expected Benefits

Applicants should describe the assessed benefits of the Stage One activities, and learnings from Stage One as to whether the planned or prototyped solution(s) proved appropriate. Applicants are encouraged to expand on lessons learned that are described in their Draft Implementation Reports.

d. Project Readiness Overview (suggested 3 pages)

This section should provide an overview of the project readiness, responding to the criteria for assessment and selection in Section E.1.ii of this Notice and including a compelling narrative to highlight how the application addresses the following Project Readiness criteria:

- Feasibility of Workplan
    - Applicants should include reflection on learnings from the Stage One activities and how they inform the workplan for Stage Two, including awareness of relevant legal, policy, and regulatory requirements associated with the project activities; their Stage One timeline feasibility learnings; and the feasibility of completing the Stage Two activities within the anticipated timeline, including and potential impacts due to supply chain and purchasing delays. This section should also cover the applicant's plans for cybersecurity and protecting the privacy and physical safety of the public.
- Workforce Assessment
    - Applicants should describe how the project will create good-paying, safe jobs with free and fair choice to join a union including through the use of a project labor agreement, as applicable.
    - Applicants should describe how the project will promote investments in high-quality workforce development programs with supportive services to help train, place, and retain people in good-paying jobs or registered apprenticeships. These programs should have a focus on women, people of color, and others that are

underrepresented in infrastructure jobs (people with disabilities, people with convictions, etc.), as applicable.
    - Applicants should describe how the project will adopt local and economic hiring preferences for the project workforce or include other changes to hiring policies and workplace cultures to promote the entry and retention of underrepresented populations, as applicable.
    - Applicants should describe how the project will promote local inclusive economic development and entrepreneurship, such as the utilization of Disadvantaged Business Enterprises, Minority-owned Businesses, Women-owned Businesses, or 8(a) firms, as applicable.
    - Applicants should discuss whether the proposed activities will affect the number and quality of jobs in the applicant agency or organization and impacted industries, and describe how the results of their consultation with directly impacted workers were incorporated into the proposed activities, as applicable.
- Community Engagement and Partnerships
- Leadership and Qualifications.
    - In the event that a Stage Two application is submitted by a designated lead applicant that is not the Stage One recipient, the Stage One recipient should remain involved in the Stage Two project. Stage Two project leadership should include at least 1 representative of the Stage One recipient organization.

iv. Appendices

a. Appendix I: Resumes – maximum 3 pages or less

Applicants shall submit the abbreviated resumes of the key individuals involved in the project. This appendix should be no more than three pages.

b. Appendix II: Summary Budget Narrative – maximum 3 pages or less

Applicants shall provide a summary budget narrative that corresponds to and describes information contained in the applicant's SF-424A and/or SF-424C. The narrative should describe all planned project costs for Stage Two (e.g.., personnel, fringe benefits, travel, equipment, supplies, contractual, construction, and other) and how these planned costs relate to the project scope. Note that the SF-424A and the budget narrative should include travel costs that assumes three in-person meetings in Washington, D.C. or Cambridge MA (one annually for the period of the grant).

The information needed in the budget narrative is as follows and directly corresponds with the format of the SF-424A or SF-424C. Applicants shall use the below categories as headings in their budget narrative but are encouraged to explain in detail how funds will be used in support of the project goals:

1. **Personnel** – Provide the cost breakdown of how this figure was calculated (e.g., hours/position/rate).
2. **Fringe Benefits** – Provide the fringe benefits rate.
3. **Travel** – Provide a cost breakdown of the number of trips, location, number of personnel, etc., if applicable. Please include travel costs which assume three in-person meetings in Washington, D.C. or Cambridge MA for up to four people.

4. **Equipment** – Provide a detailed estimate of tangible personal property costs as described in 2 CFR § 200.33. This should include items with a per-unit acquisition cost of $5,000 or more (including information technology systems). If your agency has a different threshold for equipment purchases, please provide information about your agency's equipment threshold policy.
5. **Supplies** – Please provide an estimate of tangible personal property costs that have a unit cost of less than $5,000.
6. **Contractual** – Provide the cost of any contractual support, if applicable.
7. **Construction** – Describe construction activities as listed on an SF-424C, if applicable.
8. **Other** – Provide a description of any costs listed as "other." This could include training or other expenses that the applicant wishes to include separately.
9. **Indirect Charges** – Provide the indirect cost calculations, including a description of the base (i.e., Personnel & Fringe or Modified Total Direct Cost).

The summary budget narrative must be sufficiently clear, concise, and detailed to describe how funds will be spent on the project. Applicants are expected to account for data and performance reporting in their budget submission, consistent with section B.5.i of this NOFO. Additionally, project budgets should show how different funding sources will share in each activity and present those data in dollars and percentages. The budget should identify other Federal funds the applicant is applying for or has been awarded, if any, that the applicant intends to use. Funding sources should be grouped into three categories: non-Federal, SMART Grants Program, and other Federal with specific amounts from each funding source. The Department may share application information within the Department or with other Federal agencies if the Department determines that sharing is relevant to the respective program's objectives.

c. Appendix III: Letter of Designation– no more than two pages per letter; no more than one letter per application

If a Stage One recipient determines a partner organization is better positioned to be the lead applicant for a Stage Two application, the Stage One recipient must provide a Letter of Designation as part of the Stage Two application. The Letter of Designation must identify the Stage One project and recipient that is designating the new lead applicant, should describe why the designated entity is the correct lead applicant for Stage Two, and how the Stage One recipient will remain involved in the Stage Two activities. No Stage Two applicant that is not either 1) a Stage One recipient OR 2) includes a Letter of Designation in their Stage Two application, will be considered eligible for a Stage Two SMART Grant.

All applicants must be eligible entities per section C1 of this NOFO. A template for Letters of Designation is available on the SMART Grants website at www.transportation.gov/gov/grants/smart/smart-grants-stage-2.

d. Appendix IV: Letters of Commitment – no more than two pages per letter; no more than 10 pages for the complete Appendix IV.

Applicants should submit letters of commitment for **critical partners involved in the project.** This appendix should be no more than 10 pages, and each letter should be no more than 2 pages. For the purposes of the SMART Grants Program, critical partners are organizations that will not

directly apply to the program as an eligible applicant but are committed to supporting a SMART Grants proposal in a meaningful way.

Letters of Commitment that are attached to a SMART Grants application will be reviewed for the quality of their commitments, not necessarily the quantity. A template for Letters of Commitment is available on the SMART Grants website at https://www.transportation.gov/grants/smart/smart-letters-commitment-template.

Letters of Support include letters from members of Congress. To reduce the burden for applicants, the Stage Two: Implementation Grants application does not request Letters of Support. However, a member of Congress may email a Letter of Support to **USDOT's Office of Government Affairs at OSTGovAffairs@dot.gov. The sender should copy smart@dot.gov on the email.** The letter should be addressed to the U.S. Secretary of Transportation. Please note that Letters of Support are not required by the SMART Grants Program.

e. Appendix V: Project Location File

Applicants should submit one of the following file types with project location identification: Shapefile, GEOJSON, or KML/KMZ. This file will be uploaded to Valid Eval along with the other required application components.

The project location file is designed to help the SMART Grants Program review the location(s) of the proposed project as well as understand the disadvantaged community designations described in the Key Information Questions and Project Narrative. The project area(s) identified in the project location file should be as specific as is possible at the time of application submittal. The SMART Grants Program recognizes that not all projects will be able to identify exact project sites. The project location file should represent all geographic locations under consideration for the project.

In order to prepare one of these files, these are the suggested instructions:

1. Use GIS software, or open a publicly available online mapping tool, for example, Google Earth or GEOJSON. USDOT does not endorse any particular software or online mapping tool.
2. Identify the project location(s). Use the tools to add a polygon to represent the project area(s).
3. Export, save, and upload the attachment to the application on Valid Eval in one of the acceptable formats (zipped shapefile, GEOJSON, KML/KMZ).

Please refer to the job aid(s) on the SMART Grants Website for additional guidance on how to develop a project location file.

Additional appendices will not be reviewed.

v. Identifying Private Vendors

Applicants are welcome to identify private sector vendors in the application but are not required to select vendors in advance. The SMART Grants Program does not require any particular procurement process beyond compliance with the requirements of 2 CFR Part 200.

When procuring property and services under a Federal award, a State must follow the same policies and procedures it uses for procurements from its non-Federal funds. The State will comply and ensure that every purchase order or other contract includes any clauses required. All other non-Federal entities, including subrecipients of a State, must follow the procurement standards in 2 CFR Part 200 Subpart D. The non-Federal entity must have and use documented procurement procedures, consistent with State, local, and tribal laws and regulations and the standards of this section, for the acquisition of property or services required under a Federal award or subaward. The non-Federal entity's documented procurement procedures must conform to the procurement standards identified in 2 CFR Part 200.

vi. Sharing of Application Information

The Department may share application information within the Department or with other Federal agencies if the Department determines that sharing is relevant to the respective program's objectives.

3. Unique Entity Identifier and System for Award Management (SAM)

Each applicant is required to: (i) be registered in SAM (https://sam.gov/content/home) before submitting its application; (ii) provide a valid unique entity identifier in its application; and (iii) continue to maintain an active SAM registration with current information at all times during which it has an active Federal award or an application or plan under consideration by a Federal awarding agency. The UEI must be current and not expired. The UEI must also be in an "active" status, not "assigned." To request a UEI, please visit SAM.gov. Note that this may take up to thirty days.

USDOT may not make a Federal award to an applicant until the applicant has complied with all applicable unique entity identifier and SAM requirements. If an applicant has not fully complied with the requirements by the time USDOT is ready to make an award, USDOT may determine that the applicant is not qualified to receive an award and use that determination as a basis for making an award to another applicant.

4. Submission Date and Time

Applications must be submitted by 5:00 PM ET on Wednesday, August 14th, 2024.

5. Funding Restrictions

Per BIL requirements, of the funds awarded each fiscal year for the SMART Grants Program, not more than forty percent shall be used to provide SMART grants for eligible projects that primarily benefit large communities; not more than thirty percent shall be provided for eligible projects that primarily benefit midsized communities; and not more than thirty percent shall be used to provide SMART grants for eligible projects that primarily benefit rural communities or regional partnerships.

In addition, an eligible applicant may not use more than three percent of the amount of a SMART grant for each fiscal year to achieve compliance with applicable planning and reporting requirements.

6. Other Submission Requirements

The complete application must be submitted via Valid Eval, an online submission proposal system used by USDOT at https://usg.valideval.com/teams/usdot_smart_stage_2/signup.

E. Application Review Information

1. Criteria

This section specifies the criteria USDOT will use to assess and select applications for Stage Two SMART grant awards. These include Technical Merit Criteria, Project Readiness and Other Considerations.

i. Technical Merit Selection Criteria

Stage Two Grants will be assessed against three technical merit criteria:

- **Technical Merit Criterion #1: Identification and Understanding of the Problem to Be Solved**
  - The applicant demonstrates a thorough understanding of existing conditions, which includes baseline data collected in Stage One to illustrate the need for an at-scale implementation. This could include the current or historic levels of performance for key goal areas (e.g. safety goals, mobility goals, etc).
  - The proposed solution addresses a documented and critical problem or need.
  - The applicant describes the Stage One activities and the preliminary evidence around how those activities affected the problem(s), making the case that expanding the project as described will continue to impact the problem(s) positively.
- **Technical Merit Criterion #2: Appropriateness of Proposed Solution**
  - Technologies proposed are sufficiently developed such that there is good reason to anticipate public benefits from their use, and that they can be repeated and scaled.
  - The applicant describes lessons learned from the Stage One activities that illustrate the appropriateness of the proposed solution (e.g. selecting a specific equipment model after testing several in local conditions).
  - The proposed solution represents a demonstrable improvement over the status quo, and evidence is provided from Stage One to support this claim.
  - The proposed solution is appropriate for the location's population density and existing transportation system, including public transportation.
- **Technical Merit Criterion #3: Expected Benefits**
  - The application clearly explains the rationale for expecting that the proposed project will use advanced data, technology, and applications to provide significant benefits in alignment with Departmental Priorities and Program Priorities in Section A.3 and A.4.
  - The rationale is accompanied by preliminary findings from the assessment of the Stage One activities and material presented in the Draft Implementation Report, as applicable.
  - The application identifies several robust performance metrics that align with the project's expected benefits and community impacts (as well as performance improvements and cost savings) and could be used to assess whether full scale implementation of the project would advance Departmental and Program Priorities.
    - The application includes reflection on the performance metrics proposed and used for Stage One assessment, including whether they are

appropriate for monitoring and evaluating the Stage Two activities, or if other metrics are identified as more appropriate.

ii. Project Readiness Selection Criteria

Project Readiness focuses on the extent to which the applicant will be able to substantially execute and complete the full scope of work in the Stage Two Grant application within 36 months of when the grant is executed.

- **Project Readiness Criterion #1: Feasibility of Workplan**
  - The application clearly describes a thorough and realistic workplan and timeline. The application should also demonstrate the ability to complete the project in the proposed period of performance, and includes learnings from the Stage One activities that may inform or impact the feasibility of the Stage Two timeline.
  - The application identifies and understands the legal, policy, and regulatory requirements and identifies and accounts for any relevant exemptions, waivers, permits, or special permissions required to conduct the proposed project. The applicant provides a clear plan to acquire any necessary exemptions, waivers, permits, or special permissions if they have not already been acquired in the course of the Stage One activities, and presents a realistic approach to overcoming any such challenges as identified in the Draft Implementation Plan, part 5.
  - The application adequately accounts for relevant cybersecurity and privacy concerns, particularly as pertains to personal privacy and data of members of the public.
- **Project Readiness Criterion #2: Workforce Development, Job Quality, and Wealth Creation:**
  - The application describes how the project will create good-paying, safe jobs with free and fair choice to join a union including through the use of a project labor agreement;
  - The application describes how the project will promote investments in high-quality workforce development programs with supportive services to help train, place, and retain people in good-paying jobs or registered apprenticeships. These programs should have a focus on women, people of color, and others that are underrepresented in infrastructure jobs (people with disabilities, people with convictions, etc.)
  - The application describes how the project will adopt local and economic hiring preferences for the project workforce or include other changes to hiring policies and workplace cultures to promote the entry and retention of underrepresented populations; and
  - The application describes how the project will promote local inclusive economic development and entrepreneurship, such as the utilization of Disadvantaged Business Enterprises, Minority-owned Businesses, Women-owned Businesses, or 8(a) firms.
- **Project Readiness Criterion #3: Community Engagement and Partnerships**
  - The application provides a description of how the project will provide and measure benefits to the communities detailed in the Project Location Section (if applicable), with special attention to the communities designated as

disadvantaged. The application cites examples, learnings, and data from Stage One activities. The application also discusses potential negative externalities of the proposed projects, who would experience them, and how they might be measured over time.
    - The application demonstrates a community-centered approach that includes meaningful, continuous, accessible engagement with a diverse group of public and private stakeholders. The application articulates strategies to provide access to persons with disabilities and limited English proficient individuals. The applicants will conduct meaningful public involvement, inclusive of underserved communities throughout the project lifecycle[16].
    - The application shows plans to build sustainable partnerships across sectors and governmental jurisdictions and collaborate with industry, academia, and nonprofits, such as community, workforce development, and labor organizations.
    - The applicant engages relevant private sector stakeholders and technical experts and elicits their perspective on the implementation of the proposed solution.
    - The application establishes commitment partner(s), if relevant, as identified in the project narrative. This should be demonstrated by a Letter of Commitment submitted as an attachment to the proposal. A key partner may be a public agency, utility company, private sector company, or some other entity that is central, and critical to the project.
- **Project Readiness Criterion #4: Leadership and Qualifications**
    - The application demonstrates relevant and necessary technical expertise of the project team.
    - The application details relevant experience of leadership in managing multi-stakeholder projects.
    - The application shows continuity of committed leadership and the applicant's functional capacity to carry out the proposed project and, where applicable, to maintain and operate the project after the conclusion of Stage Two.
    - If the lead applicant is not a Stage One recipient, the application establishes clear reasoning and line of succession for the designation of the Stage Two Applicant organization through the Letter of Designation as described in Section D. If lead applicant is the Stage One recipient, this criterion does not apply.

iii. Selection Considerations

Among projects of similar merit, DOT will prioritize projects that have strong benefits in the following areas:

(a) **Safety:** Applicants will be rated higher on this consideration if they can clearly demonstrate that the project:
- provides substantial safety benefits (to commuters, workers, etc.) compared to existing conditions;
- mitigate to the extent practicable any significant safety risks that could result after the project's completion;
- does not negatively impact the safety of the traveling public, and any relevant group applicable to the program.

[16] Applicants should refer to the Department of Transportation's Meaningful Public Involvement Guide: https://www.transportation.gov/public-involvement

(b) Equity and Justice40: Applicants will be rated higher on this consideration if they can clearly demonstrate that the project will:

- Create positive outcomes that will reduce, mitigate, or reverse how a community is experiencing disadvantage through increasing affordable transportation options, improving health or safety, reducing pollution, connecting Americans to good-paying jobs, fighting climate change, and/or improving access to nature, resources, transportation or mobility, and quality of life. Applicants are strongly encouraged to use the USDOT Equitable Transportation Community (ETC) Explorer to understand how their project area is experiencing disadvantage in any of five areas that transportation projects with a direct relationship.
- Identify and implement programs and policies that ensure the benefits of investments while mitigating economic displacement economically susceptible residents and businesses. Some examples include the preservation and/or production of affordable housing; expanding affordable, safe transportation and mobility options to areas where good jobs are concentrated; and supporting entrepreneurship, small business growth, tourism and access to capital through local hiring.
- Engage the public, including disadvantaged communities, during all phases of the project, including planning, design, construction, and implementation. Three Major Components of DOT's Justice40 Initiative | US Department of Transportation

In the Key Information Questions Table (Section D.2.ii) and the Project Narrative (D.2.iii), applicants must use the Climate & Economic Justice Screening Tool (CEJST). CEJST is a new tool by the White House Council on Environmental Quality (CEQ) that aims to help Federal agencies identify disadvantaged communities as part of the Justice40 initiative to accomplish the goal that forty percent of benefits from certain federal investments reach disadvantaged communities. Applicants should use CEJST as the primary tool to identify disadvantaged communities (Justice40 communities) for their application. Applicants are also encouraged but not required to use the USDOT Equitable Transportation Community (ETC) Explorer to support their Project Narrative and understand how their community or project area is experiencing disadvantages related to lack of transportation investments or opportunities. By understanding how a community or project area is experiencing transportation-related disadvantage, applicants can address how the benefits of a project will reverse or mitigate the burdens of disadvantage and demonstrate how the project will address challenges and accrued benefits.

(c) **Climate Change and Sustainability:** The applications that rate highest on this consideration will be those for which reducing greenhouse gas (GHG) emissions and improving climate resilience are a primary project purpose. Applicants are encouraged to use the **DOT Navigator Climate checklist** in developing their proposals Applications that are rated highly on this consideration will be those that use data-driven and evidence-based methods to demonstrate that the project will:

(1) Significantly reduce GHG emissions in the transportation sector; and
(2) Incorporate evidence-based climate resilience measures or features.

More details on each aspect of the consideration are provided below.

"Significantly reduce greenhouse gas emissions in the transportation sector":

Projects that typically reduce GHG emissions include:

- community design and land-use planning that make it convenient to take fewer or shorter trips;
- increasing the use of energy efficient modes of transportation like public transportation, rail, and active transportation, including walking, biking, and rolling;
- signal timing, traffic management, freight logistics, and other operational improvements the improve efficiency;
- transitioning to clean vehicles and fuels, including electrification;
- using project materials and construction methods that have lower embodied GHG emissions (especially if emissions benefits are documented in Environmental Product Declarations); and
- incorporating carbon-reducing uses of the rights-of-way, such as solar arrays, transmission of electricity from renewables, or vegetation management.

Projects that typically increase GHG emissions, such as roadway expansion, will not score highly on the GHG reduction aspect of this consideration, though they may rate highly on other aspects.

Applicants will rate more highly on this consideration if they can demonstrate that:

- they are making progress towards transportation GHG reduction targets;
- the project would significantly reduce transportation GHG emissions, as shown through analysis with USDOT tools or similar;
- the project is part of a State Carbon Reduction Strategy, State Electric Vehicle Infrastructure Deployment Plan, or other State, local, or tribal GHG reduction plan;
- the project aligns with the U.S. National Blueprint for Transportation Decarbonization; and
- the applicant has a plan to monitor the impact of the project on GHG emissions.

"Incorporate evidence-based climate resilience and adaptation measures or features:"

Applicants will rate more highly on this consideration if they can demonstrate that the project:

- uses best-available climate data sets, information resources, and decision-support tools (including USDOT and other federal resources) to assess the climate-related vulnerability and risk of the project;
- develops and deploys solutions that reduce climate change risks;
- Advances objectives in the National Climate Resilience Framework.
- incorporates nature-based solutions / natural infrastructure, including use of native plants, and, as applicable, avoids fragmenting lands with high conservation value, avoids barriers to fish and wildlife migration, and incorporate mitigation measures to address unavoidable impacts;
- is included in a Resilience Improvement Plan or similar plan;

- benefits communities most vulnerable to climate change impacts, such as FEMA-designated Community Disaster Resilience Zones;
- follows the Federal Flood Risk Management Standard, consistent with current law; and
- includes plans to monitor performance of climate resilience and adaptation measures.

2. Review and Selection Process

This section addresses the BIL requirement to include a full description in the NOFO of the method by which applicants will be assessed. The SMART grant program review and selection process consists of intake, draft implementation report review, merit criteria review, optional oral presentations, senior review, and selection and award. The Secretary, or their designee, makes the final selections.

i. Eligibility Review

For each application, an initial review will assess whether the applicant is eligible (based on eligibility information in Section C) and contains all the information requested in Section D for a complete application. Eligible and complete applications received by the deadline will be reviewed for their merit based on the selection criteria in Section E.1.i and E.1.ii.

ii. Draft Implementation Reports

When a Stage One recipient applies for a Stage Two award, the Draft Implementation Report that is required as part of Stage One reporting, along with the Subject Matter Expert (SME) assessment of the Draft Implementation Report, will be provided to the assessment team for inclusion in the Stage Two assessment.

SMART Draft Implementation Reports are due between July 15, 2024 – September 15, 2024, depending on when Stage One recipients began their period of performance. All recipients have twelve months to submit their Draft Implementation Reports. If the twelve month deadline for the Draft Implementation Report occurs after the deadline for applications to this NOFO, the Draft Implementation Report will be assessed and forwarded to the assessment team once it is received on its twelve month due date.

Draft Implementation Reports must be received by the SMART Program Office by their due date in order to be assessed and included in the assessment. If the Draft Implementation report is not received on time and therefore not reviewed by the assessment team, the application will be judged to be incomplete and ineligible for award. **The Draft Implementation Report is not required to be submitted through Valid Eval as part of the Stage Two application package, but to the SMART inbox at smartreports@dot.gov no later than one year after execution of the Stage One grant. SMART program staff will confirm receipt and include the assessment of the Draft Implementation Report by the SMEs in the materials provided to Stage Two reviewers.**

Any applicant that is not required to submit a Draft Implementation Report between July-September 2024, as their period of performance began after October 1, 2023, will not be eligible to respond to this Notice of Funding Opportunity.

iii. Technical Merit and Project Readiness Criteria Ratings

Teams comprising USDOT staff, Federal inter-agency partner staff, and contractor staff review all eligible and complete applications received by the deadline for a Technical Merit and Project Readiness Review and assign ratings as described in the table below. For each criterion, USDOT will consider whether the application narrative is responsive to the selection criterion focus areas which will result in a rating of 'superior,' 'satisfactory,' 'marginal,' or 'unsatisfactory.' Each of the six criteria (listed in E.1.i-ii) are weighted equally during the Technical Merit and Project Readiness Review.

Rating Scale	**Superior**	**Satisfactory**	**Marginal**	**Unsatisfactory**
Description	The application is substantively and comprehensively responsive to the criterion. It makes a strong case about advancing the program goals as described in the criterion descriptions.	The application is moderately responsive to the criterion. It makes a moderate case about advancing the program goals as described in the criterion descriptions.	The application is minimally responsive to the criterion. It makes a weak case about advancing the program goals as described in the criterion descriptions.	The application is counter to the criterion or does not contain sufficient information. It does not advance or may negatively impact criterion goals.

After the individual assessments are completed, the assessment team will come to an overall consensus rating of 'Highly Recommended,' 'Recommended,' 'Not Recommended,' or 'Ineligible' for each application. The overall consensus rating will be assigned based on the individual criteria ratings, and will include consideration of the SME assessment of the Draft Implementation Report,

Subject to application volume and assessment team capacity constraints, the assessment team may request oral presentations. In the event that there is sufficient capacity to request oral presentations, all applicants rated 'highly recommended' and 'recommended' will be invited to present. If there is not sufficient capacity and/or the volume of applicants is too high, no oral presentations will be given, and the assessment team will proceed to Senior Review Team List Preparation with the rankings determined in the consensus meetings.

Applications determined to be 'not recommended' will receive no further consideration for award.

a. Oral Presentations

If oral presentations are requested by the assessment team, a virtual call will be scheduled for a brief presentation by each applicant and Q&A by the reviewers. Applicants will be provided with additional guidance in preparing their presentations. Assessment teams will attend and assess the

oral presentations of the applicants for which they reviewed written proposals. Oral presentations will be organized and facilitated by DOT SMART Program staff.

After each oral presentation, reviewers will review their final ratings and each application will be assigned an overall recommendation of "Highly Recommended," "Recommended," or "Not Recommended."

iv. Senior Review Team (SRT) Phase

Once every eligible and complete application has been assigned an overall rating based on the methodology above, all "Highly Recommended" and selected "Recommended" applications will be included in a list of Applications for Consideration. The SRT will review whether the list of "Highly Recommended" applications is sufficient to ensure that of the funds awarded each fiscal year for the SMART Grants Program, not more than forty percent will be used to provide SMART grants for eligible projects that primarily benefit large communities; not more than thirty percent will be used to provide SMART grants for eligible projects that primarily benefit midsized communities; and not more than thirty percent will be used to provide SMART grants for eligible projects that primarily benefit rural communities or regional partnerships. "Recommended" applications may be added to the proposed list of Applications for Consideration until a sufficient number of applications are on the list to ensure that all legislative requirements as well as program objectives can be met. Among projects of similar merit, DOT will prioritize projects that have strong benefits in the Selection Consideration areas. To ensure the funding awards align, to the extent practical, to the departmental goals of equitable, safe investments that also lower greenhouse gas emissions, the SRT may review "Recommended" applications and prioritize applications that spend funds, and provide safety benefits to, locations within disadvantaged communities. The Department will also consider the diversity of technology areas across all applications when reviewing recommendations.

iv. Applications for USDOT Secretary's Review

The SRT will present the list of Applications for Consideration to the Secretary or their designee, as well as a list of all eligible applications, either collectively or through a representative of the SRT. The SRT may advise the Secretary on any application on the list of Applications for Consideration, including options for reduced award amounts, and the Secretary will make final selections. The Secretary's selections identify the applications that best address program requirements and are most worthy of funding. The Secretary will consider contributions to geographic diversity among grant recipients, including the need for balancing the needs of rural communities, midsized communities, and large communities. The Secretary also may consider benefits to disadvantaged communities, Federally Recognized Tribes, and geographic and organizational diversity when selecting SMART Grants Program awards.

3. Additional Information

Prior to entering into a grant agreement, each selected applicant will be subject to a risk assessment as required by 2 CFR § 200.206. The Department must review and consider any information about the applicant that is in the designated integrity and performance system accessible through SAM (currently the Federal Awardee Performance and Integrity Information System [FAPIIS]). An applicant may review information in FAPIIS and comment on any information about itself that a Federal awarding agency previously entered. The Department will

consider comments by the applicant, in addition to the other information in FAPIIS, in making a judgment about the applicant's integrity, business ethics, and record of performance under Federal awards when completing the review of risk posed by applicants. Because award recipients under this program may be first-time recipients of Federal funding, USDOT is committed to implementing the program as flexibly as permitted by statute and to providing assistance to help award recipients through the process of securing a grant agreement and delivering SMART Grant projects. Award recipients are encouraged to identify any needs for assistance in delivering the projects and strategies so that USDOT can provide directly, or through a third party, sufficient support and technical assistance to mitigate potential execution risks.

F. Federal Award Administration Information

1. Federal Award Notices

Following the assessment outlined in Section E, the Secretary will announce awarded applications by posting a list of selected recipients at www.transportation.gov/smart. The posting of the list of selected award recipients will not constitute an authorization to begin performance. Following the announcement, the Department will contact the point of contact listed in the applicant SF-424 to initiate the negotiation of a grant agreement.

2. Administrative and National Policy Requirements

i. Critical Infrastructure Security, Cybersecurity, and Resilience

It is the policy of the United States to strengthen the security and resilience of its critical infrastructure against all hazards, including physical and cyber risks, consistent with Presidential Policy Directive 21 - Critical Infrastructure Security and Resilience, and the National Security Memorandum on Improving Cybersecurity for Critical Infrastructure Control Systems. Each applicant selected for Federal funding must demonstrate, prior to the signing of the grant agreement, effort to consider and address physical and cyber security risks relevant to the transportation mode and type and scale of the project. Projects that have not appropriately considered and addressed physical and cyber security and resilience in their planning, design, and project oversight, as determined by the Department and the Department of Homeland Security, will be required to do so before receiving funds.

ii. Prohibited Telecommunications Equipment and Services

Federal award recipients and sub-recipients are prohibited from obligating or expending grant funds to procure or obtain; extend or renew a contract to procure or obtain; or enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that use "covered telecommunications equipment or services" as a substantial or essential component of any system, or as critical technology as part of any system. "Covered telecommunications equipment or services" means telecommunications and video surveillance equipment or services produced by Huawei Technologies Company, ZTE Corporation, Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities). "Covered telecommunications equipment or services" also includes telecommunications or video surveillance equipment or services provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity that is owned or controlled by the government of the People's Republic of China. Entities added to this list will be incorporated into the excluded parties list in the System for Award Management (SAM) (www.sam.gov). When a user conducts a search of the excluded parties list, a record will appear describing the nature of the exclusion for any entity identified as covered by this prohibition. See Section 889 of Public Law 115-232 (National Defense Authorization Act for Fiscal Year 2019) and 2 CFR 200.216 & 200.471.

iii. Domestic Preference Requirements

As expressed in Executive Order 14005, Ensuring the Future Is Made in All of America by All of America's Workers (86 FR 7475)[23], the Executive Branch should maximize, consistent with law, the use of goods, products, and materials produced in, and services offered in, the United States. SMART Grants projects that are considered "projects for infrastructure" will be subject to

the domestic preference requirements at § 70914(a) of the Build America, Buy America (BABA) Act, Pub. L. No. 117-58, div. G, tit. IX, subtit. A, 135 Stat. 429, 1294 (2021) and Office of Management and Budget (OMB) Memorandum M-22-11, "Initial Implementation Guidance on Application of Buy America Preference in Federal Financial Assistance Programs for Infrastructure."[24] Projects that are not considered "projects for infrastructure" will be subject to requirements of the Buy American Act, Pub. L. No. 72–428, as codified at 41 U.S.C. §§ 8301–8303. Note that when using SMART Grants funds, Buy America (49 U.S.C. 5323(j) (formerly sec. 165 of the Surface Transportation Assistance Act of 1982 (Pub. L. 97-424)) provisions do not apply. After funding decisions are made by the Department, the SMART Grants Program Office will coordinate with grant recipients on whether their projects are designated as "projects for infrastructure."

For additional information, please see the SMART Grant Recipient Domestic Preference Requirements Guidance. The Department expects all applicants to comply with these requirements.

iv. Civil Rights and Title VI

As a condition of a grant award, SMART award recipients should demonstrate that the recipient has a plan for compliance with civil rights obligations and nondiscrimination laws, including Title VI of the Civil Rights Act of 1964 and implementing regulations (49 CFR § 21), the Americans with Disabilities Act of 1990 (ADA), and Section 504 of the Rehabilitation Act, all other civil rights requirements, and accompanying regulations. This should include a current Title VI plan, completed Community Participation Plan, and a plan to address any legacy infrastructure or facilities that are not compliant with ADA standards. The Department's and the applicable Operating Administrations' Offices of Civil Rights may work with awarded grant recipients as appropriate to ensure full compliance with Federal civil rights requirements.

v. National Environmental Policy Act of 1969 (NEPA)

Funding recipients must comply with the National Environmental Policy Act (NEPA) under 42 U.S.C. §§ 4321 et seq. and the Council on Environmental Quality's NEPA implementing regulations at 40 CFR §§ 1500-1508, where applicable. In Valid Eval, applicants will be asked to describe the project's expected NEPA impacts as part of the Key Information Questions detailed in Section D.2.ii.

vi. Federal Contract Compliance

As a condition of grant award and consistent with EO 11246, Equal Employment Opportunity (30 FR 12319, and as amended), all Federally assisted contractors are required to make good faith efforts to meet the goals of 6.9 percent of construction project hours being performed by women, in addition to goals that vary based on geography for construction work hours and for work being performed by people of color. Under Section 503 of the Rehabilitation Act and its implementing regulations, affirmative action obligations for certain contractors include an aspirational employment goal of 7 percent workers with disabilities.

3. Reporting

This section discusses reporting requirements for SMART[17]. USDOT will provide additional information and detail regarding reporting requirements and formats to recipients. All final reports under this agreement will be made publicly available. All publications resulting from this program shall follow USDOT publication guidelines and comply with the current USDOT Public Access Plan. In addition, data from these efforts are expected to be made widely available where appropriate, also in accordance with the USDOT Public Access Plan[18].

i. Progress Reporting on Grant Activities

Each applicant selected for a Stage Two Grant must submit quarterly progress reports and Federal Financial Reports (SF-425) to monitor project progress and ensure accountability and financial transparency in the SMART Grants Program. A standard reporting format for the quarterly progress reports will be provided for recipients to summarize status updates including activities accomplished during the quarter, financial and schedule reporting, anticipated activities for the next quarter, and a description of project challenges and lessons learned.

ii. Assessment and Data Management Plans

To meaningfully document and measure their progress towards agency priority goals, recipients and subrecipients are required to incorporate program assessment from the outset of program design. This should include associated data collection activities[19]. Each applicant selected for a Stage Two Grant must submit an assessment plan and data management plan no later than three months after receiving the grant that provides an overview of how the project will be assessed, and how the data being collected will be managed and stored[20].

The assessment plan must describe the anticipated impact areas (i.e., goals) of the project as it is implemented at scale and the methods that will be used to estimate the anticipated benefits and costs associated with implementation. Based on these project goals, the plan must include robust performance metrics and measurable targets based on the project goals to provide continuous assessment of the deployment. These assessment plans should build on the assessment plans developed for Stage One.

Data management plans must describe the data to be collected, format and metadata standards to be employed, policies for access, (re)use and derivatives, and plan for archiving and preservation of the data generated by the project, and an overview of data sharing opportunities[21]. This plan should build off the data management plans developed for Stage One. The updated plans must also provide more detailed information on the types of data being collected and how that data will be managed and stored (e.g., cybersecurity practices, how privacy is protected, entities that have access to the data).

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[17] Title I of the Foundations for Evidence-Based Policymaking Act of 2018 (Evidence Act), Pub. L. No. 115-435 (2019) urges federal awarding agencies and federal assistance recipients and subrecipients to use program assessment as a critical tool to learn, to improve equitable delivery, and to elevate program service and delivery across the program lifecycle.

[18] https://www.transportation.gov/sites/dot.gov/files/docs/Official%20DOT%20Public%20Access%20Plan.pdf

[19] Assessment means "an assessment using systematic data collection and analysis of one or more programs, policies, and organizations intended to assess their effectiveness and efficiency." 5 U.S.C. § 311.

[20] Credible program assessment activities are implemented with relevance and utility, rigor, independence and objectivity, transparency, and ethics (OMB Circular A-11, Part 6 Section 290).

[21] Data sharing opportunities may include either interagency data sharing or open data sharing with the public.

iii. Implementation Report

Each applicant selected for a Stage Two Grant must submit an annual implementation report that assesses the anticipated costs and benefits of the project and demonstrates the feasibility of at-scale implementation. The first report must be submitted 12 months after the Stage Two grant begins and then annually thereafter. Per BIL requirements, grant recipients must submit implementation reports that describe the deployment and operational costs of each project as compared to the benefits and savings from the project. The reports must also describe:

1. The means by which the project has met the original expectation, as projected in the grant application, including data describing the means by which the project met the specific goals. Examples include:
    a. reducing traffic-related fatalities and injuries;
    b. reducing traffic congestion or improving travel-time reliability;
    c. the effectiveness of providing to the public real-time integrated traffic, transit, and multimodal transportation information to make informed travel decisions; and
    d. reducing barriers or improving access to jobs, education, or various essential services;
2. Lessons learned and recommendations for future deployment strategies to optimize transportation efficiency and multimodal system performance.

For the implementation reports during Stage Two, grant recipients will provide an analysis of the anticipated costs and benefits and address project expectations by providing:

1. Data on the performance metrics for the deployment, so progress can be regularly assessed ;
2. Baseline data for assessment of the deployment, which may have been generated during Stage One activities or be updated since Stage One;
3. Anticipated and/or estimated impact and effectiveness of the project based on the performance metrics;
4. Identification of challenges, opportunities, or best practices learned as the project progresses that related to the replicability of the project to other regions, including identifying additional partners or areas where the recipient would consider supporting further replication.

During Stage Two, grant recipients may uncover previously unknown institutional barriers or technical limitations. In the implementation reports, recipients will describe the requirements for successful deployment and assess impact on the at-scale implementation. The assessment will include identified strategies or demonstrated progress in addressing the following implementation feasibility and readiness factors for consideration by others seeking to replicate the project elsewhere:

a. Legal, Policy, and Regulatory Requirements (e.g., environmental permits and reviews; public outreach; State and local approvals; equity and accessibility requirements)
b. Procurement and Budget (e.g., availability of suppliers and equipment; an analysis of the cost differential to comply with Build America Buy America and/or Buy American Act; reliability of cost estimates; critical property acquisition)
c. Partnerships (e.g., MOUs for stakeholder coordination; private sector and user adoption and acceptance)

d. Technology Suitability (e.g., systems engineering including Concept of Operations [ConOps] and Detailed Design; reliability and maturity of technology; compatibility with existing infrastructure, procurement processes)
e. Data Governance (e.g., storage capability; database analytic capability; integration requirements; sharing agreements; cybersecurity and privacy protocols)
f. Workforce Capacity (e.g., availability of workers for development, installation, operations and maintenance; availability of workforce training; agency capacity for deployment, operation, and assessment); and an assessment of how full implementation at the conclusion of Stage Two will harness beneficial impacts and mitigate negative impacts of new technologies on the availability of good-paying jobs with a free and fair choice to join a union)
g. Internal Project Coordination (e.g., agency/institutional capacity for continued operations following the grant funded period; revenue needs for continued operations)
h. Community Impact (e.g., distribution of benefits and negative impacts across the community, including disadvantaged communities; meaningful community engagement efforts, including strategies to provide access to persons with disabilities and limited English proficient individuals)
i. Other Relevant Factors.

The final implementation report must also describe initial project goals, challenges, and lessons learned related to implementation. It should include an analysis of the success, challenges, and validity of the initial approach; any changes or improvements they would make to ensure successful continued maintenance and operations (i.e., after the Stage Two grant funds have been expended).

iv. Performance and Program Assessment

As a condition of grant award, grant recipients may be required to participate in an assessment undertaken by USDOT or another agency or partner. The assessment may take different forms such as an implementation assessment across grant recipients, an impact and/or outcomes analysis of all or selected sites within or across grant recipients, or a benefit/cost analysis or assessment of return on investment. USDOT may require applicants to collect data elements to aid the assessment and/or use information available through other reporting. As a part of the assessment, as a condition of award, grant recipients must agree to: (1) make records available to the assessment contractor or USDOT staff; (2) provide access to program records, and any other relevant documents to calculate costs and benefits; (3) in the case of an impact analysis, facilitate the access to relevant information as requested; and (4) follow assessment procedures as specified by the assessment contractor or USDOT staff.

Recipients and subrecipients are also encouraged to incorporate program assessment including associated data collection activities from the outset of their program design and implementation to meaningfully document and measure their progress towards meeting an agency priority goal(s). Title I of the Foundations for Evidence-Based Policymaking Act of 2018 (Evidence Act), Pub. L. No. 115-435 (2019) urges Federal awarding agencies and Federal assistance recipients and subrecipients to use program assessment as a critical tool to learn, to improve equitable delivery, and to elevate program service and delivery across the program lifecycle. Assessment means “an assessment using systematic data collection and analysis of one or more

programs, policies, and organizations intended to assess their effectiveness and efficiency" per 5 U.S.C. § 311. Credible program assessment activities are implemented with relevance and utility, rigor, independence and objectivity, transparency, and ethics (OMB Circular A-11, Part 6 Section 290).

v. Reporting of Matters Related to Recipient Integrity and Performance

If the total value of a selected applicant's currently active grants, cooperative agreements, and procurement contracts from all Federal awarding agencies exceeds $10,000,000 for any period of time during the period of performance of this Federal award, then the applicant during that period of time must maintain the currency of information reported to the SAM that is made available in the designated integrity and performance system (currently FAPIIS) about civil, criminal, or administrative proceedings described in paragraph 2 of this award term and condition. This is a statutory requirement under section 872 of Public Law 110-417, as amended (41 U.S.C. 2313). As required by section 3010 of Public Law 111-212, all information posted in the designated integrity and performance system on or after April 15, 2011, except past performance reviews required for Federal procurement contracts, will be publicly available.

4. Other Activities and Acknowledgements

vi. Knowledge Transfer Activities

In order to disseminate lessons learned to the public and to encourage collaboration between recipients, USDOT will coordinate various knowledge transfer activities which may include webinars, peer exchanges or attendance at conferences and meetings. The activities will be tailored to address the needs and interests of the recipients and serve as a resource for connecting recipients facing similar technical and institutional challenges. Recipients will share status updates and technical knowledge, and exchange information about their progress, challenges, and lessons learned.

vii. Project Signage and Public Acknowledgements

Recipients are encouraged for construction and non-construction projects to post project signage and to include public acknowledgments in published and other collateral materials (e.g., press releases, marketing materials, website, etc.) satisfactory in form and substance to DOT, that identifies the nature of the project and indicates that "the project is funded by the Bipartisan Infrastructure Law". In addition, recipients employing project signage are required to use the official Investing in America emblem in accordance with the Official Investing in America Emblem Style Guide. Costs associated with signage and public acknowledgments must be reasonable and limited. Signs or public acknowledgments should not be produced, displayed, or published if doing so results in unreasonable cost, expense, or recipient burden. The Recipient is encouraged to use recycled or recovered materials when procuring signs.

G. Federal Awarding Agency Contacts

For further information concerning this notice, please contact the Office of the Assistant Secretary for Research and Technology via email at smart@dot.gov no later than 05:00PM ET on Monday, July 29, 2024. In addition, up to the application deadline, the Department may post answers to common questions and requests for clarifications on the Department's website at www.transportation.gov/smart. To ensure applicants receive accurate information about eligibility or the program, the applicant is encouraged to contact the Department directly with questions, rather than through intermediaries or third parties. Department staff may also conduct briefings on the SMART grant selection and award process upon request. On request of an eligible applicant that submitted an application per Section D with respect to a project that is not selected for a SMART grant, Department staff will provide to the eligible applicant technical assistance and briefings relating to the project application.

H. Other Information

User-friendly information and resources regarding USDOT's discretionary grant programs relevant to applicants can be found on the DOT Navigator at https://www.transportation.gov/dot-navigator and the Rural Opportunities to Use Transportation for Economic Success (ROUTES) website at https://www.transportation.gov/rural.

1. Definitions

Term	Definition
Large community	A community with a population of not less than 400,000 individuals, as determined under the most recent annual estimate of the Bureau of the Census.
Midsized community	Any community that is not a large community or a rural community.
Political subdivision of a state	A unit of government created under the authority of State law. This includes cities, towns, counties, special districts, and similar units of local government, such as public port or airport authorities, if created under State law.
Regional partnership	A partnership composed of two or more eligible entities located in jurisdictions with a combined population that is equal to or greater than the population of any midsized community.
Rural community	The term "rural community" means a community that is located in an area that is outside of an urbanized area (as defined in section 5302 of title 49, United States Code, which defines "urbanized area" as an area encompassing a population of not less than 50,000 people that has been defined and designated in the most recent decennial census as an "urbanized area" by the Secretary of Commerce. Please use 87 FR 80114 to confirm that your project location is not delineated by the Census Bureau as a 2020 urbanized area based on 2020 Census of Population and Housing counts and density calculations.
Resiliency	The ability to prepare for and adapt to changing conditions and withstand, recover, and reorganize rapidly from disruptions to a community (e.g., population, economy, etc.). Resilience includes the ability to withstand and recover from manmade and naturally occurring threats or incidents, including widespread and long-term threats or incidents.

2. Protection of Confidential Business Information

All information submitted as part of or in support of any application shall use publicly available data or data that can be made public and methodologies that are accepted by industry practice and standards, to the extent possible. If the applicant submits information that the applicant considers to be a trade secret or confidential commercial or financial information, the applicant must provide that information in a separate document, which the applicant may cross-reference from the application narrative or other portions of the application. For the separate document containing confidential information, the applicant must do the following: (1) state on the cover of that document that it "Contains Confidential Business Information (CBI);" (2) mark each page that contains confidential information with "CBI;" (3) highlight or otherwise denote the confidential content on each page; and (4) at the end of the document, explain how disclosure of

the confidential information would cause substantial competitive harm. DOT will protect confidential information complying with these requirements to the extent required under 51 applicable law. If DOT receives a Freedom of Information Act (FOIA) request for the information that the applicant has marked in accordance with this section, DOT will follow the procedures described in its FOIA regulations at 49 CFR § 7.29. Only information that is in the separate document, marked in accordance with this section, and ultimately determined to be confidential under § 7.29 will be exempt from disclosure under FOIA.

USDOT Strengthening Mobility and Revolutionizing Transportation (SMART) Stage Two Implementation Grant Opportunity

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You are currently logged into Valid Eval, so this form has been auto-filled with your name and your account's primary email address and contact info. To sign up with a different account, please either log out of Valid Eval and then return to this form or open this form in an "Incognito" or "Private Browsing" window.

Primary Contact First Name

Casey

Primary Contact Last Name

Hopkins

Primary Contact Email

casey.hopkins@nashville.gov

Lead Applicant Name –If submitting more than one SMART application please number your applications (e.g. AnyState DOT 1; AnyState DOT 2)

Metropolitan Government of Nashville-Davidson County ✓

Details

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1. Stage Two Project Name

Enter a concise, descriptive title for the project. This should be the same title used in the Grants.gov SF-424 submission and the application narrative. The SMART Grants Program recommends a unique title of 100 characters or less. Do not title your project 'SMART Grant' or similar.

Leveraging Advanced Data to Deliver Multimodal Safety (LADDMS)

2. Lead Applicant Name

This should be consistent with Q. 8.a. of the SF-424.

Metropolitan Government of Nashville Davidson County

3. Lead Applicant City

This should be consistent with Q. 8.d. of the SF-424.

Nashville

4. Lead Applicant State

This should be consistent with Q. 8.d. of the SF-424.

TN

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5. Lead Applicant Zip Code

This should be consistent with Q. 8.d. of the SF-424.

37201

6. Lead Applicant County

This should be consistent with Q. 8.d. of the SF-424.

Davidson

7. Lead Applicant Unique Entity Identifier (UEI)

See Section D.3 for more information about obtaining a UEI from SAM.gov. The UEI must be current and not expired. The UEI must be in an "active" status, not "assigned."

LGZLHP6ZHM55

8. Eligible Applicant Type

Indicate the eligible applicant type for your application.
If this is a group application, please identify the eligible applicant type of the lead applicant.

a political subdivision of a State

9. Is this the same lead applicant as the corresponding Stage One Application?

- (●) Yes
- ( ) No

If No, list the name of the lead applicant, and project title, of the corresponding Stage One project.

10. Was a similar application submitted in the past two years, or do you anticipate a similar application will be submitted for funding in the coming year for this project under any other USDOT discretionary grant programs (not including the SMART Grants Program)?

Yes

(●) No

If Yes,

Please include:
- the name of the discretionary grant program
- the project title of the similar grant application
- the name of the lead applicant
- the application status (Planned, Submitted, Selected, or Not Selected)

11. Other than the SMART Grants Stage One award, was any other Federal funding previously received for this project? This may include funding received from USDOT as well as other Federal agencies.

Yes

(●) No

If Yes,

indicate the amount of Federal funding received and the relevant grant number.

12. What organizations will be considered partners on this project?

List all critical project partners. This could include other eligible applicant types (e.g., States, a political subdivision of a State, etc.) as well as those in industry, academia, nonprofits, and other traditional and non-traditional partners).

Tennessee State University, Vanderbilt University, University of Tennessee (Chattanooga), Ouster, Stansell Electric Company, Nabco Electric Company, Nashville Electric Service, Metro Nashville ITS, Tennessee Department of Transportation

Letters of Commitment should be included from critical partners only. For a Letter of Commitment template, see https://www.transportation.gov/grants/smart/smart-letters-commitment-template

13. One Sentence Description of Stage Two project

Describe your Stage Two project in one sentence using the following format:
"This project will use X (technology(ies) to address Y (problem(s) to be solved) in Z (context or project area)."
The sentence should describe the full implementation of the project as described in the Stage Two application. The One Sentence Description of successful applicants may be published by USDOT and, therefore, must not contain classified, proprietary, or confidential information.

This project will use LiDAR technologies to address gaps in traditional safety evaluation methods through collecting and evaluating "near-miss" data on Nolensville Pike and North Nashville.

14. Brief Project Description

Describe the project in plain language, using no more than 200 words. It is recommended that applicants use the following format:

- One sentence on the problem to be solved.
- One sentence on the anticipated or known impact of the Stage One project that received SMART funding.
- One sentence describing the anticipated Stage Two activities and how these activities will build on success from Stage One.
- One sentence describing the anticipated impacts of the Stage Two project.

Please do not describe the project's benefits, background, or alignment with the selection criteria in this description field. A longer, narrative description will be provided in the Project Narrative.
The Brief Project Description of successful applicants may be published by USDOT and, therefore, must not contain classified, proprietary or confidential information.

This project will use LiDAR technologies to address gaps in traditional safety evaluation methods through collecting and evaluating "near-miss" data on Nolensville Pike and North Nashville. Stage One achieved 30% decrease of high-speed driving and 75% reduction in out of crosswalk events while achieving 98% detection accuracy. Our Stage II lidar deployment will provide the needed evaluation data through sustained measurement and continuous analytics, to evaluate the initial effectiveness of an intervention. This will dramatically shorten the timeframe in which interventions can be evaluated, enabling Nashville to meet its Vision Zero goals.

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15. Primary Project Location

Identify the primary location where the project will take place. If more than one location, please list additional locations in the next question.

1. If your project will be conducted in a specific city, cities, or town(s), indicate the primary location at which the project will take place using [City, State] as the format

2. If your project will be conducted at the county, regional, or MPO-level, please note the closest or most relevant [City, State] location for the project and indicate if this location represents a "county", "region," or "MPO." This information will be used for mapping purposes.

3. If your project will be conducted Statewide, please indicate the name of the State.

4. If your project will be conducted in a tribal community, please note the closest or most relevant [City, State] location for the project. This information will be used for mapping purposes.

Nashville, Tennessee

16. Other Project Locations

Identify additional project locations, if applicable, using the same instructions as the previous question. All additional locations should be in [City, State] format.

17. What congressional district(s) is your project located in?

Please use the following format: State Abbreviation – District Number (e.g., CA-1 , CA-ALL)

TN-07 and TN-05

18. Size of Community Receiving Benefits

Indicate the size of the community (large community, midsized community, regional partnership, or rural community) that will primarily benefit from the project.

Consider where the BENEFITS of the prosed Stage 2 activities will accrue, rather than the location of the lead applicant. For example:

- a project with a single lead applicant, such as a State DOT, but taking place in the downtown region of a large community should be classified as a 'large community.'

- a project with a single lead applicant, such as a State DOT, but taking place at intersections in 5 midsized communities and 1 rural community, should be classified as a 'midsized community.'

- a project in which several neighboring transit authorities across several counties are heavily involved, should be classified as a 'regional partnership.'

- Large Community: A community with a population of not less than 400,000 individuals, as determined under the most recent annual estimate of the Bureau of the Census.

  Midsized Community: Any community that is not a large community or a rural community.

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Rural Community: The term "rural community" means a community that is located in an area that is outside of an urbanized area (as defined in section 5302 of title 49, United States Code, which defines "urbanized area" as an area encompassing a population of not less than 50,000 people that has been defined and designated in the most recent decennial census as an "urbanized area" by the Secretary of Commerce. Please use 87 FR 80114 to confirm that your project location is not delineated by the Census Bureau as a 2020 urbanized area based on 2020 Census of Population and Housing counts and density calculations.

Regional Partnership: A partnership composed of two or more eligible applicants located in jurisdictions with a combined population that is equal to or greater than the population of any midsized community.

19. Is the project located (entirely or partially) in a Disadvantaged Community based on its location in a census tract identified as "disadvantaged" in the Climate and Economic Justice Screening Tool (CEJST)?

Indicate "Yes," "No," or "Statewide Project." Only select "Statewide Project" if the project will not have specific project sites within a State.

- (●) Yes
- ( ) No
- ( ) Statewide Project

To review the Climate and Economic Justice Screening (CEJST) Tool, see https://screeningtool.geoplatform.gov/en/#3/33.47/-97.5

20. Relevant Census Tracts

If you responded "Yes" to the question above, please identify the relevant census tract(s) that contribute to this designation. Be sure to use the full census tract number identified in the CEJST tool

47037013701; 47037013702; 47037013900; 47037019401; 47037016000; 47037016100
47037017200; 47037017300; 47037017500; 47037017402; 47037018901; 47037019007
47037019004; 47037019008; 47037019003; 47037015613

21. Project Cost: Amount Requested

Total dollar amount requested (rounded to the nearest dollar).

10,000,000

22. Project Cost: Total Project Cost

Total project cost, including dollar amount requested and other funding contributions (rounded to the nearest dollar).

10,000,000

23. Project Duration

Proposed Duration of Stage 2 Project (in months). May be up to 36 months

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24. Primary Technology Area

Select the primary technology area with which your project aligns.

- A. Coordinated automation
- B. Connected vehicles
- (●) C. Intelligent, sensor-based infrastructure
- D. Systems integration
- E. Commerce delivery and logistics
- F. Leveraging use of innovative aviation technology
- G. Smart grid
- H. Smart technology traffic signals

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25. Secondary Technology Area(s) (if applicable)

Select the secondary technology area(s) with which your project aligns

- [ ] A. Coordinated automation
- [ ] B. Connected vehicles
- [ ] C. Intelligent, sensor-based infrastructure
- [x] D. Systems integration
- [ ] E. Commerce delivery and logistics
- [ ] F. Leveraging use of innovative aviation technology
- [ ] G. Smart grid
- [x] H. Smart technology traffic signals
- [ ] I. N/A

26. Does this project relate to traffic or parking enforcement; or license plate reader activities?

Note that SMART grants shall not be used for any current or future traffic or parking enforcement activity, or to purchase or lease a license plate reader.

- ( ) Yes
- (•) No

27. Is an exemption, waiver, permit, or special permission required to conduct the proposed project?

- ( ) Yes
- (•) No

If Yes,

indicate the exemption, waiver, permit, or special permission obtained. If waiver has not been obtained, please indicate the plan or process for obtaining it in your Project Narrative.

28. Jobs / Workforce Assessment

Do you anticipate that the technologies introduced in your project will affect the number and quality of jobs in your agency or organization or in industries impacted by your project? If yes, please provide a thorough response of how technology may impact the quantity and quality of jobs and your plans to address potential changes. These plans may include collective bargaining agreements, restructuring of jobs, and additional training for the workforce. If no, please explain why it would not affect the number and quality of jobs. The SMART Grants Program recommends that this section be 200 words or less.

Our stage II project will expand our training programs, partnering with new agencies outside of middle Tennessee that have not used lidar. Dissemination of software and results through organizations like ITE, ITS Tennessee, and ITS America will further support workforce development goals. Workforce development will focus on training electricians and increasing collaboration between university researchers and NDOT staff.

29. Were workforce representatives consulted on the information provided on job impacts of the project?

- (●) Yes
- ( ) No

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30. Are workforce representatives supportive of this project?

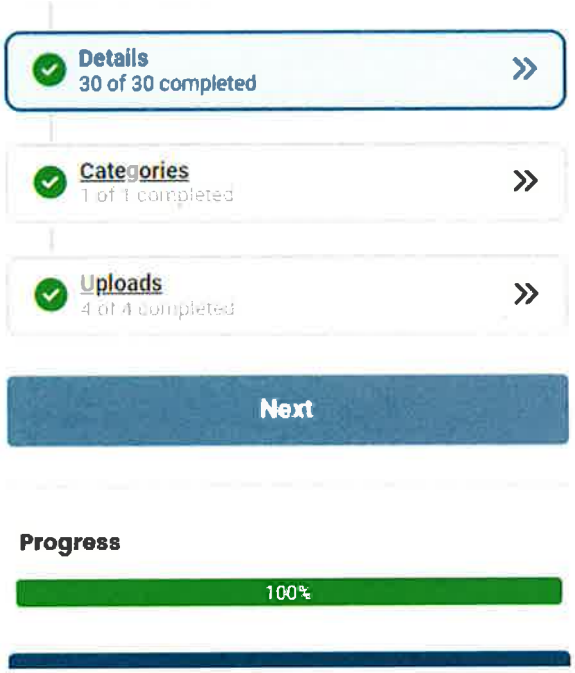
The SMART Grants Program recommends that this section be 200 words or less

Workforce representatives are supportive of our project and are documented in our letters of commitment. Our workforce partners will participate in the workforce development training programs throughout the Project. These sessions will be built upon previous training, providing advanced insights and reinforcing the skills necessary for effective LiDAR implementation.

31. Anticipated Stage Two NEPA Class of Action and Requirements

The SMART Grants Program recommends that this section be 200 words or less

We are familiar with the NEPA process and are committed to avoid right of way and environmental impacts to expedite NEPA review and ensure a Categorical Exclusion designation. We anticipate a similar process to SMART Grant Phase I.



Referencing the SMART NEPA Readiness Guidance, state the anticipated National Environmental Policy Act (NEPA) class of action for your Stage Two project as well as any anticipated environmental approvals and permits you have already acquired, or which will be needed for the proposed project. If you are unsure, please explain your expected coordination to determine this.

32. What environmental risks or concerns (e.g. historical structures, environmental justice, local traffic / work zone impacts, floodplain encroachment) do you expect during project implementation? How are you planning to mitigate the risks/ concerns?

The SMART Grants Program recommends that this section be 300 words or less

We do not anticipate any environmental risks or concerns during project implementation. To mitigate the risks and concerns, the project team will reference any previous NEPA Classification and supporting documentation for the project areas.

Refer to the SMART NEPA Readiness Guidance to complete this answer.

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The following category tags are used to match submissions to expert judges in their field of expertise. Please select the primary categories for your submission.

20. Primary Technology Area

C. intelligent, sensor-based infrastructure ✔

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Proposal

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SF-424

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SF-424A

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Certification Regarding Lobbying

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SF-LLL

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SF-424C

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Appendix V: Project Location File - Single KML File Upload

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Appendix V: Project Location File - Single GEOJSON File Upload

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Appendix V: Project Location File - Shapefile - KMZ - and Multiple File Zipped Upload:

Drop file here or click

PROJECT NARRATIVE

Figure 1. Overview of LADDMS Stage I results. (a) Community-centered engagement for vulnerable road users. (b) Emphasis on privacy and safety is disseminated through local media. (c) Automatic bus recognition within live viewing system for public transit integration. (d) Always-active live viewing system captures an impending near-miss (e) Mature data visualization tools operate in a browser as well as on mobile tech, such as a smart watch. (f) Live viewer deployment to the Nashville DOT Traffic Management Center (shown are 5 of the 7 sensor areas).

OVERVIEW / PROJECT DESCRIPTION

The *Leveraging Advanced Data to Deliver Multimodal Safety* (LADDMS) initiative is fundamentally changing how we look at transportation safety for vulnerable road users. The results from our Stage I project must be seen to be believed, visit http://ndot-laddms.mogi.io/ for a demonstration of the live status of the Stage I system.

LADDMS Stage I (*Figure 1*) provides a transformative vision that can be immediately grasped when viewing the live system. Through real-time visualization and data analysis, we can discover safety concerns that typically go unobserved. Using cutting-edge, privacy-preserving sensing, the system enhances safety for vulnerable users and assesses safety intervention 10x faster.

We successfully used community-centered engagement to deliver the following: 1) privacy-preserving sensors to generate high quality trajectories of vulnerable road users and vehicles, 2) real-time measurement of near-miss events, and 3) the quick response and evaluation of safety interventions. Our Stage I interventions showed a 30% decrease of high-speed driving and 75% reduction in out of crosswalk events in the target zone. Since our system continuously records data along the entire corridor, we can analyze whether interventions simply shift unsafe behaviors to another nearby intersection.

Summary of Stage II goals: Our goal is to improve the safety of vulnerable road users along the Nolensville Pike corridor (see *Figure 2*) and continue to improve safety along the Stage I corridor. The approach is to deploy sensing, analytics, and interventions

piloted in Stage I at scale. Locations are prioritized for pedestrian and cyclist safety along the *High Injury Network* (HIN) in Nashville's Vision Zero Action Plan (https://www.nashville.gov/departments/transportation/plans-and-programs/vision-zero/action-plan).

Figure 2. Nolensville Pike (from I-40 to Harding Pl.), a Stage II LADDMS location, shows pedestrian risks.

People who live along the proposed corridors are more likely to rent their homes, identify as people of color or Hispanic, and have income below 200% of the federal poverty line compared to Nashville as a whole. These communities rank in the 79th percentile nationwide for insecurity from transportation safety per the Climate & Economic Justice Screening Tool.

LADDMS is led by NDOT and supported by *Metro Information Technology Services* (Metro ITS), Tennessee State University (a Historically Black College and University), The University of Tennessee Chattanooga, Vanderbilt University, Ouster, and *Tennessee Department of Transportation* (TDOT).

Real-world issues and challenges

Currently, NDOT relies on crash reports from the Nashville Police Department to identify areas of safety concern, which often lack the detailed information necessary for thorough safety analysis. It is estimated that 44-75% of pedestrian crashes and 7-46% of bicyclist crashes are not reported to NDOT. Also, there is no established method for tracking "near-misses" involving pedestrians or cyclists. These significant gaps prevent widespread understanding of the links between pedestrian safety and effective interventions.

Improving the status quo

This project will also address injuries and near-misses at mid-blocks, which are often overlooked. It directly supports NDOT transportation goals to count vulnerable road users and near-misses, enhance community partnerships, and expand secure data access for smarter transportation networks.

> *LADDMS is a vital component of Nashville's broader Vision Zero strategy to eliminate all traffic-related deaths and severe injuries and at the same time, increasing safety, equity, and mobility for all users.*
>
> *~ Diana Alarcon, NDOT Director*

Adopted technology

LADDMS uses lidar sensors to detect vulnerable road users and vehicles ten times per second. The sensors are connected to an edge computer that automatically converts the raw detection data into trajectories of road users (*Figure 3*).

Trajectories are continuously processed to provide high quality counts, positions, and near-misses between vehicles and vulnerable road users in real-time.

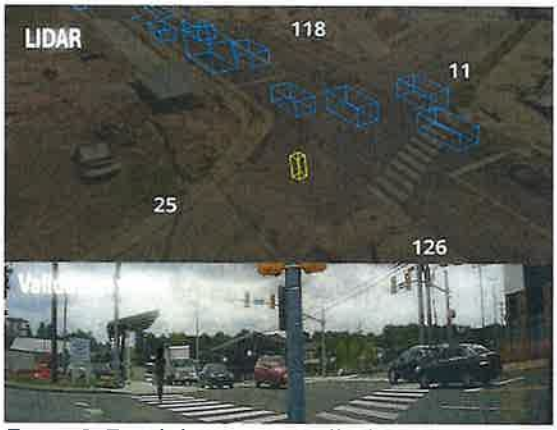


Figure 3. Top: lidar automatically detects bounding boxes of vehicles (blue) and pedestrians (yellow). Bottom: validation video used to verify count accuracy.

Table 1: Stage I activities and outcomes	
Activity: Community Engagement. We held community engagement events in North Nashville, including interviews with bus passengers and pedestrians. We received feedback on speeding and unsafe mid-block crossings. Community members raised the need for a camera-free solution, which motivated our pivot to lidar. We shared the project findings in keynote talks at academic and industry events, reaching an estimated 589 participants. **Activity: Workforce development.** We provided technical trainings on lidar ITS systems to 26 workers at the two largest traffic signal contractors in Central TN: Stansell Electric and NABCO Electric. TSU LADDMS students placed 3rd in the 46th Annual Research Symposium at TSU. **Activity: Installation and technology demonstration.** Our team installed 13 lidar sensors at 8 locations and created new and robust live visualization and continuous data analytics tools.	**Outcome: Near-miss detection.** We identified near-miss events that were previously impossible to capture through traditional NDOT sensing or crash reporting. On average, we observe 6.6 near-miss events between pedestrians and vehicles per day (quantified as a *post encroachment time* less than two seconds). **Outcome: High quality counts on all road users.** Following our 90-day burn-in period, counts of pedestrians and bicycles were found to be within 2% of the ground truth. This directly supports NDOT's Vision Zero Action plan to implement a robust active transportation user count program. **Outcome: Community impact.** We designed and deployed two safety interventions that reduced out of crosswalk events in the target zone by 75% and reduced the share of speeding vehicles by 30%.

Activities & outcomes of Stage I

Activities and outcomes of Stage I are shown above in Table 1.

Anticipated Stage II outcomes

Our Stage II goal is to set the standard for safe operation of corridors for all road users through targeted Vision Zero interventions.

- **Deployment and Community Impact.** Our Stage II lidar deployment will observe 45,000,000 vehicle miles of travel annually, implement safety interventions, and evaluate their effectiveness. The proposed project extents experienced at least 39 serious injury or fatality crashes involving pedestrians since Jan. 1, 2023.
- **Real-time Vulnerable Road User Counts.** Uncover usage patterns and trends through continuous observation, which will improve our ability to understand fundamental safety issues and the effectiveness of interventions.
- **Continuous Analysis/Safety Analytics:** Based on baseline data from Stage I, we may identify up to 180 near-miss events per day, which we will compare with comprehensive crash and injury data.
- **Community Engagement:** Building on valuable community feedback during Stage I, we will expand engagement activities into the Stage II project corridor.
- **Workforce Development:** We will expand our training programs, partnering with new agencies outside of middle Tennessee that have not used lidar. Dissemination of software and results through organizations such as ITE, ITS Tennessee, and ITS America will further support workforce development goals.

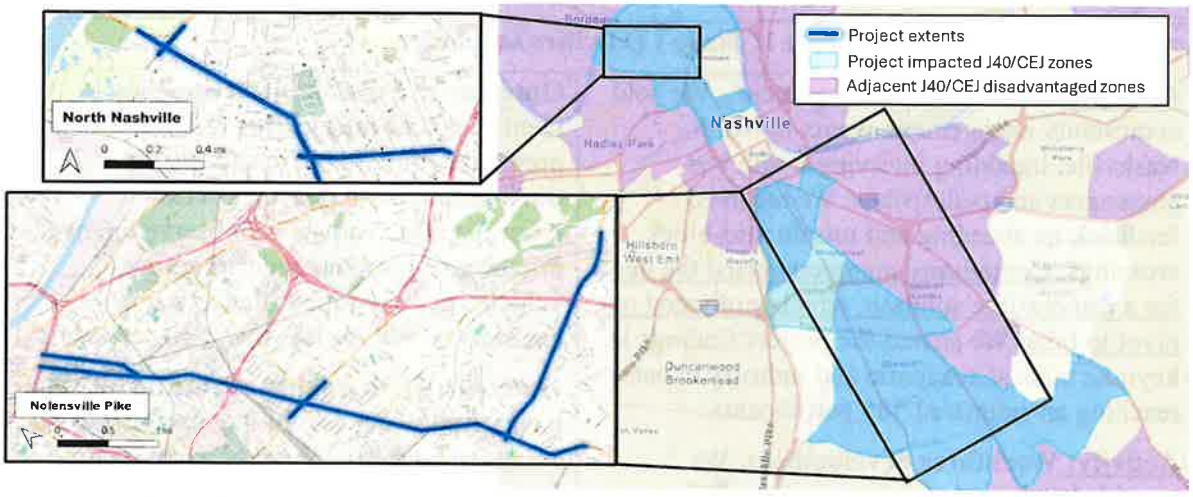


Figure 4. LADDMS lies entirely in disadvantaged areas per the Climate and Economic Justice Screening Tool.

Addressing SMART goals

Key goals include expanding advanced **safety** measures to new portions of the high injury network. The project aligns with NDOT's Vision Zero plan to reduce crashes and to improve crash data collection with a focus on vulnerable road users. **Equity goals** focus on improving access and safety for historically disadvantaged communities and promoting local **workforce development** through partnerships with TSU and other local organizations. **Community engagement** and partnerships will be fostered through public survey events and collaborations with the private sector. **Workforce development** will focus on training electricians and increasing collaboration between university researchers and NDOT staff. The project will **enhance the reliability and cybersecurity** of the transportation system through direct partnership with Metro ITS. **Climate goals** are supported through improved access to non-motorized travel modes and addressing inefficiency in corridor signal operations.

PROJECT LOCATION

The project is in the Nashville-Davidson urban area (*Figure 4*). Stage II builds upon the successful Stage I deployment in the North Nashville community and expands to the Nolensville Pike community, another area with a highly multimodal transportation landscape that is in significant need of safety study and improvement (See the 2022 Nolensville Pike Study available at: https://www.nashville.gov/sites/default/files/2022-08/Nolensville_Pike_Study.pdf).

The project-impacted Census tracts (2020 definitions) are situated entirely within disadvantaged areas according to the *Climate and Economic Justice Screening Tool*. Five HUD Opportunity Zones are covered by the project. Additionally, 97.7% of the population in the project-impacted tracts qualify as disadvantaged by the *USDOT Equitable Transportation Community (ETC) Explorer* criteria. The tracts qualify as disadvantaged in 21 of the 40-component metrics under climate, environmental, health, social, and transportation ETC categories.

TECHNICAL MERIT OVERVIEW

NDOT, through its Vision Zero Action Plan, is committed to eliminating roadway injuries and fatalities. To achieve this, several problems must be overcome.

Problems to be Solved

Problem 1. Limited count data on vulnerable road users. NDOT is in the early stages of implementing a pedestrian count program. Unfortunately, traditional approaches to collect vulnerable road user data are costly, labor intensive, and intermittent, which means the resulting data is limited and updated infrequently.

Problem 2. No method to collect near-miss data, which could enable pro-active safety. NDOT has already maximized the use of traditional crash reporting measures to define the High Injury Network. The HIN can be used for targeting corridors for safety interventions, but it is a reactive rather than pro-active approach to safety. Currently, NDOT does not have any mechanism to collect *surrogate safety measures* such as near-miss events (*Figure 5*), which can help identify safety issues for vulnerable road users before they result in crashes.

Problem 3. Long feedback loops to evaluate safety interventions. The traditional process to evaluate interventions can take years to determine if the desired outcomes are achieved. There are no existing approaches that allow early measurable insights into intervention performance.

Appropriateness of the Solution

By expanding our approach in Stage I with lidar sensors, we can address all problems mentioned above. The technology solution accurately counts pedestrians and other road users and detects near-misses. Our Stage I results show that the project allows Vision Zero interventions to be quantitatively assessed rapidly, with real-time views and early intervention impact analysis within just 24 hours.

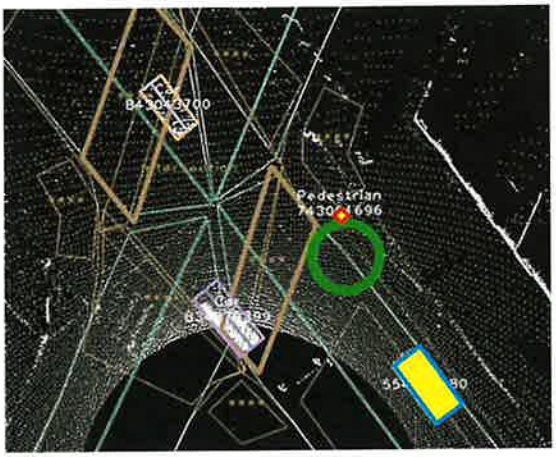


Figure 5. A near-miss is automatically detected on July 13, 2024. The vehicle (yellow rectangle with blue outline) and pedestrian (yellow square with red outline) are part of a near-miss event that occurs over subsequent frames in the green circle. Colors are enhanced for readability.

Scale and reproducibility. A key result of Stage I was demonstrating that existing network, power, mounting poles, and production software can allow the solution to scale quickly to new locations. New installations can be configured and integrated with existing data pipelines within 2-3 hours per location. This provides useful data that can be viewed live and recorded for baseline analysis.

Lessons learned in Stage I. A key takeaway from the meaningful engagement we carried out in Stage I is that communities want safer streets, but do not want cameras. Our Stage I tools allow continued community engagement by showing live views of the data, helping the public to understand how the technology is privacy preserving while advancing the goal of safer streets.

Improvements over the status quo. The lidar sensors are continuously monitoring road conditions and have been validated to within 2% accuracy for pedestrian counts. The system provides live information and records anonymous data for extended analysis. This is a demonstratable

improvement over the status quo, which does not count vulnerable road users. Additionally, individual object trajectories provide high-fidelity data for advanced analytics, while preserving privacy.

Appropriate for planned location: Nolensville Pike is an active corridor in an area primarily populated by members of historically marginalized groups. Community feedback cites the road as dangerous for pedestrians and cyclists. This is despite its high-volume, priority bus routes. Pedestrian, bike, and transit accessibility are important aspects of the corridor's public transportation system; thus, safety must be improved.

Expected Benefits

The department and program priorities within Nashville include safety as a key metric, with a Vision Zero action plan to eliminate all traffic injuries and fatalities, and a Safe Streets for All program that includes funding for safety interventions to improve safety on Nolensville Pike. Current approaches require planning processes to establish useful interventions for safety, and measurement of success is carried out through mainly human means.

Our proven system can provide the needed evaluation data through sustained measurement and continuous analytics, to evaluate the initial effectiveness of an intervention within 24 hours. This will dramatically shorten the timeframe in which interventions can be evaluated, enabling Nashville to meet its aggressive goals.

Preliminary Findings from Stage I: As described above, the baseline data and interventions show the ability to detect near-misses, and to accurately measure pedestrian and vehicle traffic. The system maintains persistent monitoring, which we have demonstrated an ability to data mine for continuous analytics.

Performance Metrics: The system met or exceeded expectations on 12 metrics that our team evaluated as part of Stage I. We propose to include all those performance metrics in Stage II. The metrics are grouped by thematic area below:

- Sensor Accuracy: Counts of objects were within 2% of ground truth for (1) pedestrians and (2) vehicles. (3) Distance accuracy is within the noise floor of GPS, and speed estimates are within 1 m/s accuracy. (4) Real-time detection of near-misses to within a 95% true positive rate. (5) Vulnerable Roadway Users detection (manually verified).
- Continuous Availability: (6) Low-latency detection of road users (works in real time), (7) environmentally robust (>99% uptime for each sensor), (8) persistent measurement of near-misses (6.6 per day over 84 days), and (9) continuous analytics for each intersection with archived data.
- Usefulness for Intervention Design: (10) Accurate measurements of near-misses, (11) rapid evaluation of safety for pedestrians (75% improvement in target area), (12) rapid evaluation of safety for vehicles (30-35% improvement).

Our system will enable preliminary insights in less than 24 hours, and sustained insights thanks to the uptime availability and continuous analytics.

Reflection on performance metrics: Existing metrics for accuracy and availability are deemed useful by the proposing team. Metrics for usefulness will be interpreted by partners from the Vision Zero team as well as the LADDMS team.

PROJECT READINESS OVERVIEW

Workplan Summary

Our Stage I project is ahead of schedule thanks to the complete buy-in of community members, project partners, and local government leadership. In a single week in Stage I, we installed eleven sensors, detected excessive speeding, deployed a successful intervention, and validated it. Our proposed schedule for Stage II is equally ambitious, but achievable by this project team.

Months 1-4
• Stakeholder outreach begins, notice of project to surrounding neighborhood organizations and businesses • Systems Engineering Analysis, site visits, preliminary plans • Continue Stage I workforce training
Months 5-8
• NEPA review & utility coordination • Plans, specifications, and estimates • Lidar procurement • Community engagement, workforce development activities, data infrastructure deployment
Months 9-18
• Unit bench testing and lidar installation • Subsystem/system testing & integration
Months 18-24
• Burn in testing, data collection • Community engagement
Months 24-36
• Intervention deployment, data analysis, dissemination

Feasibility of Workplan

We confirm our system will be integrated with existing transportation systems, including transit. Based on our team's extensive experience with ITS deployment, our schedule is ambitious but feasible.

Legal/regulatory. We are familiar with the NEPA process and are committed to avoid right of way and environmental impacts to expedite NEPA review and ensure a Categorical Exclusion designation. We will follow all applicable procurement policies and sole source requirements to procure Ouster Buy America and Buy American certified lidar units. We will proceed with the justification process for Stage II equipment while this grant is under review.

Local utilities. We have a close working relationship with local utility agencies and we effectively engaged with them during our SMART Grant Stage I project. With our existing relationships with the local utility agencies, we will ensure early and frequent communication and coordination to address any utility conflicts and ensure readiness, such as for power and communications, prior to installing devices in the field.

Partners. We will be working with the same contractors from the LADDMS Stage 1 project. We will ensure early and frequent coordination to guarantee equipment is procured, tested, and installed in a timely manner. Our project partners are critical to our ability to meet the Stage II schedule milestones. We will build on and strengthen the partnerships developed in Stage I to ensure the successful and timely completion of the Stage II project.

Supply chain. NDOT will directly procure lidar units from Ouster to reduce procurement delays. In Stage I, the project team identified a standard set of equipment needed for intersection and mid-block installations, including cabinets, networking, and other equipment. Two pre-configured equipment installation form factors (*Figure 6*) were developed to accelerate field work. We are procuring devices early to allow bench testing

and configuration while other preparation activities are completed.

Figure 6. Two styles of pre-fabricated lidar equipment installations developed during Stage I. Left: a drop-in rack mount with lidar equipment, for traffic cabinets with sufficient space. Right: an accessory cabinet affixed onto existing signal cabinets.

Stage I feasibility learnings

Our Stage I grant taught us several valuable lessons that have been accounted for in our schedule. First, community engagement is critical, and helped us avoid camera-based technologies that raised community privacy concerns. Second, direct collaboration with Ouster accelerated our staff and workforce trainings and allowed us to troubleshoot issues quickly. Third, we have established a direct collaboration with Metro ITS at the planning stage of this project to improve our ITS security posture on the at-scale implementation.

Plans for physical safety and cybersecurity

All project partners follow a safety-first culture. The project goal is to improve safety of all road users, and as a privacy preserving sensing project, it has minimal direct risks to public safety. NDOT is working with Metro ITS to deploy *intermediate distribution frames* to the Nolensville Pike fiber network by June 2025 for this project. The system will operate on NDOT's internal network in accordance with their cybersecurity protocols.

Workforce Assessment

To advance workforce development and technology transfer, our Stage I project successfully prototyped a hands-on training program tailored for skilled electricians. This program equips them with the necessary skills to navigate the increasing use of technology in the transportation sector. The LADDMS team collaborated with electrical contractors Stansell Electric Company and NABCO Electric Company (International Brotherhood of Electrical Workers) during this prototyping phase, see *Figure 7*. Additionally, we conducted training sessions with Ouster, NDOT staff, and University partners.

Figure 7. NABCO IBEW team member assembling a lidar unit on a test bench during a workforce training session in Chattanooga, TN.

As we move into Stage II, we are introducing a new plug-and-play lidar strategy for peer departments of transportation around the country. Our implementation plan outlines the acquisition of 10 additional lidar bundles by LADDMS staff, along with the required auxiliary equipment (including switches, modems, power supplies, etc.). We will provide this equipment to other municipal and state transportation agencies at no cost to them through an intergovernmental agreement. Furthermore, our team will travel to partnering agencies to train their staff and contractors on the equipment usage and data analysis. Our expectation is to significantly reduce the learning curve for new communities adopting lidar technology, thereby expanding the benefits of the SMART grant beyond Nashville's boundaries.

In support of workforce development, NDOT actively promotes good-paying jobs with free and fair choice for union membership. This commitment aligns with the Metro Charter (Chapter 3.56), which recognizes employees' right to organize. Through our work, NDOT frequently collaborates with the Fire Union, Fraternal Order of Police, and the Service Employee International Union.

Beyond our direct partnership with TSU, Metro also focuses on entry and retention through the POWER Youth Summer Employment Initiative. This program provides career exploration and work experience activities for youth aged 14 to 24, particularly those underrepresented in infrastructure jobs. This initiative is executed through high school internships, direct hire or other external postings and work programs.

Metro's commitment to diversity, equity, and inclusion is evident through hiring policies and the appointment of a Chief Diversity Equity & Inclusion Officer within the central Human Resources department. Our policies include regular diversity and inclusion training to increase awareness and understanding of equity in the workplace.

In addition to Metro's internal hiring policies, the dedication extends to creating opportunities for Minority and Women-Owned Business Enterprise

Through ongoing procurement regulation changes, Nashville is implementing a race and gender-neutral program. The program will increase the ability for firms to form joint ventures or teaming arrangements and to obtain any needed support services. Metro is developing an enhanced communications plan for how it will better assist the MWBE business community in understanding its programs, implementations, and how to prepare for future opportunities.

Community-centered approach

The LADDMS team is a growing consortium of partners including Vanderbilt University, Tennessee State University, Tennessee Department of Transportation, and other local stakeholders.

Figure 8. LADDMS team member Tupac Moseley (TSU MS student) interviews a North Nashville resident to get valuable feedback on the LADDMS project and the use of lidar to improve safety. See the video on the project website at https: ndot-laddms.org.

As demonstrated in Stage I, a community-centered approach cultivated on meaningful, continuous, accessible engagement with a diverse group of stakeholders (*Figure 8*). The continued plan for Stage II is to maintain connections built in Stage I as well as to expand to new communities that will benefit from the at-scale implementation.

A recent public survey gathered community feedback from 580 people along Nolensville Pike. Key findings are: 79% of people feel uncomfortable or very uncomfortable biking, and 66% feel uncomfortable or very uncomfortable walking.

Our preliminary work validates this community concern. We performed a GIS analysis of all crash data from Metro Nashville police department. Hypothetically envisioning our project was constructed on Jan. 1, 2023, the sensors (80 m range) would have observed 1,935 reported property, injury and fatal crashes through July 17, 2024. This includes 630 injuries and 12 fatalities. Pedestrians were involved in 39 of the crashes of which 4 were fatalities, as is shown in

Figure 9. Map of injury and fatal pedestrian crashes within proposed Stage II extents. Fatal crashes are shown as orange stars and injury crashes as red circles. Specific roadways of project extents are outlined in blue.

Figure 9. These qualifications and risk factors have led to the designation in the Nashville High Injury Network for 100% of the project roadways.

Because of the magnitude of the need, a complementary investment in this corridor is underway with a Safe Streets for All (SS4A) grant, awarded to NDOT in 2023. The joint execution of the SS4A and SMART Grant will provide the opportunity to study pre- and post-intervention safety for pedestrians and other vulnerable road users in the highest possible fidelity. The high-quality data and near-miss metrics from lidar coverage of the corridor will provide location-specific results for interventions such as curb extensions, pedestrian hybrid beacons, pedestrian refuge islands, and signal timing adjustments. The data gained from full lidar coverage of the corridor will be invaluable for longitudinal studies of these interventions.

While we expect our interventions to be rapidly deployed, they may have unintended consequences. Our ability to rapidly measure the consequences allows us to make modifications before they have sustained negative consequences to the community.

NDOT has attracted support from community organizations through education and collaboration and we will continue to work within our community furthering our support through informative outreach. NDOT will continue outreach through the project website https://ndot-laddms.org/.

NDOT will continue our public information campaign from Stage I, including stakeholders and the public. As communities continue to diversify, we have placed emphasis on hiring multilingual staff who can more effectively communicate with our growing limited English proficiency populations. We anticipate the project benefits to effectively reach our low-income residents, transit riders, bicyclists, and pedestrians.

Leadership and Qualifications

NDOT, under Director Diana Alarcon, will lead this effort. Director Alarcon brings more than 30 years of experience in guiding cities through important periods of transportation and infrastructure growth. Robert White, *Transportation Systems Management and Operations* (TSMO) Manager for *Nashville Department of Transportation and Multimodal Infrastructure* (NDOT), will serve as project manager. Robert also oversees NDOT's, Intelligent Transportation Systems and Traffic Management Center operations. NDOT will be supported by Veda Nguyen, P.E. at AECOM. Previously at TDOT, Veda managed the Intelligent Transportation System Office, and the *Pedestrian Road Safety Initiative* (PRSI) program.

Resumes of our key university partners are available in Appendix I. Please see our website for a complete list of partners.

APPENDIX I – RESUMES

DIANA ALARCON
Director, NDOT

Years of Experience: 29
Education: Senior Executive Institute (SEI), ICMA, University of Virginia; Environmentally Sustainable Management System, IS) 14001. Virginia Tech; BS, Business Administration, University of Florida

Ms. Alarcon is NDOT's Director and has overseen the transformation from a public works department to a high achieving department of transportation with an emphasis on safety, complete streets, and modernization. She has launched Nashville's Vision Zero Implementation Plan, Parking Modernization, and Traffic Management Center. Ms. Alarcon previously served as the Director of Transportation & Mobility for the City of Tucson, AZ and Fort Lauderdale, FL.

Career Highlights:

- ☑ Responsible for a $221.4M budget and over 300 employees
- ☑ Developed the NDOT Vision Zero action plan and five-year implementation plan.
- ☑ Partnered with local nonprofits on education initiatives to benefit Metro Nashville Public Schools and region.
- ☑ Established the MoveTucson Multimodal Masterplan to weave all modes of transportation through a Complete Street lens.
- ☑ First city leader in Florida to adopt a Vision Zero program towards a goal of zero roadway fatalities during her time with the City of Fort Lauderdale.

BRAD FREEZE, PE
Deputy Director, NDOT

Years of Experience: 21
Education: MS, Civil Engineering, University of Tennessee; BS, Civil Engineering, Tennessee Technological University
Registrations: Professional Engineer: TN

Mr. Freeze has served as NDOT's Deputy Director for the past year following nearly a decade as the Tennessee Department of Transportation's Director of Traffic Operations. He has extensive experience in managing advanced Intelligent Transportation Projects and extensive ties to both the academic and private sector.

Career Highlights:

- ☑ Reorganized the NDOT engineering division to function as a safety-first data forward team.
- ☑ Stood up the TDOT Traffic Management Center (TMC) and Traffic Incident Management (TIM) programs.
- ☑ Extensive publication history of Intelligent Transportation Systems research.
- ☑ Speaks frequently at educational institutions to highlight and encourage careers in the transportation sector.
- ☑ Serves at the Technical Advisory Committee Chair for the National Operations Center of Excellence.

ROBERT T WHITE

TSMO Manager, NDOT

Years of Experience: 37

Education: MS, Managing Innovation & Information Technology, Champlain College; BS, Electrical Engineering, TSU.

Mr. White is the manager of the Transportation System Management & Operation section of NDOT following his previous program manager experience at AASHTO and State of Vermont. With extensive experience in managing state and federal traffic operation programs, he is also versatile in Intelligent Transportation System (ITS) deployment.

Career Highlights:

- ☑ Managed ITS Program of State of Vermont and traffic operation program of AASHTO.
- ☑ Managed multiple large-scale state and federal funded ITS projects.

DANIEL MCDONELL

Multimodal Planning Manager, TDOT

Years of Experience: 17

Education: MS, Environmental & Sustainable Development, University of Glasgow; BA, Religion, Geography, Environmental Policy & Culture, Northwestern University.

Mr. McDonell is the Multimodal Planning Manager at TDOT for last 5 years following by his previous role at Metro Nashville Planning as Transportation Demand Management coordinator. He has in-depth expertise in Environmental and Sustainable Development with a focus on environmental research, project planning, economics, and policy.

Career Highlights:

- ☑ Led the Pedestrian Road Safety Initiative, implementing Tennessee's first Pedestrian Hybrid Beacon and developing the Multimodal Priority Tool for TDOT.
- ☑ Developing statewide multimodal planning and policy while overseeing transit, pedestrian, and bicycle infrastructure improvements.

MINA SARTIPI, PhD

Director of the Center for Urban Informatics and Progress, UTC

Years of Experience: 22

Education: PhD, Electrical and Computer Engineering, Georgia Institute of Technology; MS, Electrical and Computer Engineering, Georgia Institute of Technology; BS, Electrical Engineering, Sharif University of Technology

Dr. Sartipi is the Guerry Professor of Computer Science and Engineering and Founding Director of the Center for Urban Informatics and Progress at UTC. She has conducted research on intelligent transportation, data analysis, and data acquisition and has expertise in smart city applications. She has participated in securing $14M funding from federal/state/regional government agencies and industries.

Career Highlights:

- ☑ Feasibility of Real-Time Infrastructure-Driven Intervention for Improving Pedestrian Safety, TDOT, Chattanooga, TN.
- ☑ Harnessing Emerging Transit Solutions for Underserved Communities, NSF, Nashville-Chattanooga, TN.

DANIEL WORK, PhD

Professor, Civil & Environmental Engineering, Vanderbilt University

Years of Experience: 14

Education: PhD/MS, Civil and Environmental Engineering, University of California Berkeley; BS, Civil and Environmental Engineering, Ohio State University.

Dr. Work is a Chancellor Faculty Fellow and professor at Vanderbilt University. He pioneered methods for monitoring and controlling road traffic using vehicles, rather than fixed infrastructure, to sense and control road congestion. He is a recognized transportation expert whose work has appeared in media outlets including Good Morning America, Reuters, Wired, and MIT Technology Review.

Career Highlights:

- ☑ USDOT, I-24 Motion Test Bed.
- ☑ USDOT, ATCMTD Project.
- ☑ US Department of Energy, Congestion Impact Reduction via CAV-in-the-loop Lagrangian Energy Smoothing CIRCLES.

KAMRUL HASAN, PhD

Assistant Professor, Electrical & Computer Engineering, TSU

Years of Experience: 8

Education: PhD, Computational Modeling & Simulation Engineering, Old Dominion University; MS, Computer Information & Systems Engineering, TSU; BS, Electrical & Computer Engineering, Bangladesh University of Engineering & Technology.

Dr. Hasan is the Assistant Electrical and Computer Engineering Professor at Tennessee State University. He is researching developing verified, transferrable, and trusted AI/ML-aided models for intelligent transportation systems. Recently, Dr. Hasan secured two grants to build predictive models for road capacity planning and safety-empowered railroad crossing design from the NSF and FHA, respectively.

Career Highlights:

- ☑ Prepared Minority Scholars for Railroad-Highway Safety Workforce (RH-SAW)
- ☑ Analytically based Frameworks for AI verification model for transportation traffic Mgmt. & cyber physical system.

DEREK HAGERTY, PE

Assistant Chief Engineer, NDOT

Years of Experience: 11

Education: MS, Civil Engineering, University of Tennessee; BS, Civil Engineering, Iowa State University

Registrations: Professional Engineer: TN

Mr. Hagerty leads NDOT's Transportation System Management section with a focus on safety and efficiency for all users primarily through the application of technology. He is the day-to-day lead on standing up Nashville's first Traffic Management Center to include detection and performance metrics for all transportation modes.

Career Highlights:

- ☑ Managed four ITS grant funded capital projects totaling$14M through the ATCMTD and CMAQ programs.
- ☑ Represented Metro Nashville on state DOT safety projects to protects the city's most vulnerable users.

APPENDIX II – SUMMARY BUDGET NARRATIVE

Architecture and Engineering Fees
$3,300,000

- Senior Personnel (including Dr. Hasan, Dr. Sartipi, and Dr. Work and co-faculty) to lead research, planning activities, expertise in smart infrastructure, data analytics, artificial intelligence applied to structural engineering, transportation analysis, intelligent transportation systems, and human factors and safety in transportation to assist the project team with the deployment of the project.
- Other personnel will be responsible for assisting with algorithm development and data integration, data infrastructure, and coordinating with project team in Nashville on technical aspects of sensor deployment and installation.
- Fringe benefits (salaries and health insurance) and travel expenses for our University Partners staff and students.
- NDOT TMC Integration – building in Lidar data reviewing and traffic reporting capabilities to the TMC and its workflow. Configuration of Lidar detection in signal controllers and make timing adjustments using data insights. Grant reporting, financial and partnership management
- System Design – Includes layout and engineering design at each intersection and mid-block location.
- Lidar and IT Integration – Includes network configuration, component configuration, and software setup.
- System Evaluation – Includes system health monitoring, automated data aggregation, and summary reporting.
- Data management – Includes data storage, processing, web services, visualization, and data security.
- Project management – Report preparation, team meetings, task tracing, and document review

Project Inspection Fees
$200,000

- Equipment Testing – Includes bench testing, site acceptance testing, and burn-in testing.

Construction
$2,100,000

- Construction includes scoping, building costs, materials, utilities, transportation signals infrastructure integration, and any rollover funds from Design. Construction includes the installation of sensors and supporting equipment at 100 intersections and midblock locations. Includes 10 installations in outreach partner cities, including training and integration.

Equipment
$4,000,000

- Sensors and sensor deployment, all technical equipment and supplies, coordination of utilities and all smart infrastructure

Miscellaneous

$400,000

- Workforce development – Includes travel to outreach intersection cities for training.
- Community Engagement – Public website administration and community engagement

APPENDIX IV – LETTERS OF COMMITTMENT

FREDDIE O'CONNELL
MAYOR

METROPOLITAN GOVERNMENT OF NASHVILLE AND DAVIDSON COUNTY

NASHVILLE DEPARTMENT OF TRANSPORTATION
AND MULTIMODAL INFRASTRUCTURE

July 23, 2024

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

Subject: Letter of Commitment for 2024 SMART Grant Application: Leveraging Advanced Data to Deliver Multimodal Safety (LADDMS)

Dear Secretary Buttigieg,

The Nashville Department of Transportation and Multimodal Infrastructure (NDOT) wishes to express its full commitment for the Leveraging Advanced Data to Deliver Multimodal Safety (LADDMS) project under the United States Department of Transportation's SMART Discretionary Grant Program. The LADDMS project is a research collaboration effort with NDOT, University of Tennessee (Chattanooga), Vanderbilt University, Tennessee State University, Tennessee Department of Transportation, Ouster, Stansell Electric and other local stakeholders. This project will identify safety incidents outside traditional crash reports, implementing targeted safety measures, and evaluating these measures in Nashville's complex multimodal environmental under the city's Vision Zero Plans. This project will benefit the Nolensville Pike area and North Nashville area by improving safety for all transportation network users with an emphasis on pedestrians and bicyclists who have been traditionally underrepresented in safety studies.

This project builds on the very successful Phase 1 project that has validated LiDAR as a new tool to improve roadway safety, while also demonstrating the team's commitment to community engagement, community impact, and workforce development. In Phase 2, we will scale this proof of concept, solidifying Nashville's, and Tennessee's leadership in transportation innovation. As demonstrated in Phase 1, our team is dedicated to delivering a successful project.

If awarded, the LADDMS project will install LiDAR technologies at key intersections and mid-block segments. NDOT plans to collect and evaluate "near-miss" data that would not be identified using traditional evaluation methods, enabling NDOT to further protect our transportation network's most vulnerable individuals. NDOT plans to expand and apply the successful practices to our other neighborhood segments along the High Injury Network (HIN), as NDOT executes the city's Vision Zero Plans.

This project aligns seamlessly with USDOT priorities and merit criteria, emphasizing innovation, data-driven solutions, and multimodal safety enhancements. The LADDMS initiative exemplifies our commitment to fostering safer and more efficient transportation systems.

Thank you for your consideration of the LADDMS project for the 2024 SMART Discretionary Grant Program. If NDOT can be of any further assistance, please do not hesitate to contact the NDOT Project Manager Robert White at (615) 862-8764 or via e-mail at Robert.White@nashville.gov.

Sincerely,

Diana W. Alarcon , Director

DocuSigned by:
Diana W Alarcon
AC74F1CC700F4DA...

Nashville Department of Transportation
and Multimodal Infrastructure

VANDERBILT UNIVERSITY

Padma Raghavan, Ph.D.
Vice Provost for Research and Innovation
Chief Research Officer
Senior Advisor to the Chancellor
Distinguished Professor of Computer Science

July 25, 2024

U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, D.C. 20590

Dear Secretary Buttigieg,

We are proud to partner with the *Nashville Department of Transportation and Multimodal Infrastructure* (NDOT) on their application for the USDOT SMART Grant Stage 2 proposal, *Leveraging Advanced Data to Deliver Multimodal Safety* (LADDMS). The project is a collaborative effort led by NDOT, and with support from University of Tennessee (Chattanooga), Tennessee State University, Vanderbilt University, the Tennessee Department of Transportation, and other local stakeholders.

The LADDMS project will enhance safety within the Nolensville Pike Corridor and in North Nashville by identifying safety incidents beyond traditional crash reports. By implementing cutting-edge technologies such as LiDAR at key intersections and mid-block segments, LADDMS will significantly improve safety for all transportation network users, with a particular focus on pedestrians and bicyclists. As part of the Stage 2 project, our team of faculty, professional research staff, and students commit to the following activities as described in the project narrative and implementation plan and as directed by NDOT.

- We will provide data infrastructure, data management services, and advanced data analytics work in collaboration with NDOT and other project partners.
- We will lead the system evaluation activities to validate the results of the at-scale deployment.
- We will lead lidar equipment configuration and testing activities in collaboration with NDOT and Ouster staff.
- We will lead workforce development activities with electricians and NDOT staff and publish our training materials for others to use free of charge.
- We will support technology transfer activities to scale the most innovative results beyond the geographic boundaries of the project.

We are fully committed to ensuring the stage 2 grant is a success, building safer roadways for all road users through advanced technology demonstration.

Sincerely,

Padma Raghavan, Ph.D.
Vice Provost for Research and Innovation, Chief Research Officer
Senior Advisor to the Chancellor
Distinguished Professor of Computer Science
Vanderbilt University

2201 West End Avenue
Suite 210G
Nashville, TN 37203

T 615-343-1339
research.vanderbilt.edu

OUSTER

July 18, 2024

The Honorable Pete Buttigieg
Secretary
U.S. Department of Transportation
1200 New Jersey Avenue SW
Washington, D.C. 20590

Dear Secretary Buttigieg,

I am writing on behalf of Ouster (NYSE:OUST), a leading supplier of Buy America(n) Certified, digital lidar sensors and software solutions for the automotive, industrial, robotics and smart infrastructure industries.
We commit our support as a partner on the Nashville Department of Transportation and Multimodal Infrastructure (NDOT) application for the USDOT SMART Grant Phase 2.
Specifically, we are pleased to support the project, Leveraging Advanced Data to Deliver Multimodal Safety (LADDMS), a collaborative effort led by NDOT with the University of Tennessee (Chattanooga), Tennessee State University, Vanderbilt University, Tennessee Department of Transportation, and other local stakeholders.
At Ouster, we believe that we can transform cities into safer environments for vulnerable road users through precise mobility and safety data on all road users, incidents, and near-miss detection statistics — regardless of the environment, time of day, or weather. Our Blue City software helps practitioners gain precise insights quickly and effectively. Blue City also includes an open API to integrate with custom data analysis pipelines, active traffic management software, and signal control systems. Our lidar sensors are manufactured in California and are Certified Buy America and Buy American compliant.
As a partner, we are pleased to commit to the following activities as discussed in the proposal/implementation plan:
We will participate in technology roadmap activities to define new features in our products, ensuring the findings from the Phase II demonstration are scalable and deployable nationwide.
We will provide engineering technical support for optimal lidar placement along the Nolensville Pike Corridor and North Nashville.
We will provide technical support for workforce development activities for electricians, signal technicians, and traffic operations staff, led by the LADDMS team.
We are also excited to assist with dissemination activities at industry events such as ITS America, ITS Tennessee and others. These activities are continuations of our growing collaboration with the LADDMS team during phase I grant activities, which included support for bench testing, university and NDOT training efforts, technical exchanges on data validation and system configuration, and demonstrations at industry events. We look forward to continuing our partnership with the LADDMS team to significantly improve safety for all transportation network users through the innovative deployment of lidar.
Sincerely,

Itai Dadon
Vice President, Smart Infrastructure

Itai Dadon

Ouster.com
350 Treat Ave
San Francisco, CA 94110

July 31, 2024

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

Subject: Letter of Commitment for 2024 SMART Grant Application: Leveraging Advanced Data to Deliver Multimodal Safety (LADDMS)

Dear Secretary Buttigieg,

Stansell Electric Company wishes to express its full commitment for the Leveraging Advanced Data to Deliver Multimodal Safety (LADDMS) project under the United States Department of Transportation's SMART Discretionary Grant Program.

The LADDMS project is a research collaboration effort with NDOT, University of Tennessee (Chattanooga), Vanderbilt University, Tennessee State University, Tennessee Department of Transportation, Ouster, Stansell Electric, NABCO and other local stakeholders. This project will identify safety incidents outside traditional crash reports, implement targeted safety measures, and evaluate these measures in Nashville's complex multimodal environment under the city's Vision Zero Plans. This project builds on the very successful Phase 1 project that has validated LiDAR as a new tool to improve roadway safety, while also demonstrating the team's commitment to community engagement, community impact, and workforce development.

As a Phase 1 collaborator we participated in the workforce development training programs through the project. This session is built upon previous training, providing advanced insights and reinforcing the skills necessary for effective LiDAR implementation. Workforce development initiatives are critical to the success of our projects. By continuously improving our training, we ensure that our technicians are equipped with the knowledge and skills needed to drive innovation and enhance road safety. We look forward to continuing to partner with the team to further the workforce development goals of USDOT and the LADDMS project.

Thank you for your consideration of the LADDMS project for the 2024 SMART Discretionary Grant Program.

Sincerely,

David P. Stansell
CEO

560 VISCO DRIVE, NASHVILLE TN 37210-2150
P: (615) 329-4944 F: (615) 320-5236
www.stanselelectric.com

NABCO ELECTRIC

July 31, 2024

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

Subject: Letter of Commitment for 2024 SMART Grant Application: Leveraging Advanced Data to Deliver Multimodal Safety (LADDMS)

Dear Secretary Buttigieg,

NABCO Electric Company wishes to express its full commitment for the Leveraging Advanced Data to Deliver Multimodal Safety (LADDMS) project under the United States Department of Transportation's SMART Discretionary Grant Program. NABCO is affiliated with the International Brotherhood of Electrical Workers (IBEW). The IBEW represents approximately 820,000 active members and retirees who work in a wide variety of fields, including utilities, construction, telecommunications, broadcasting, manufacturing, railroads and government. The IBEW has members in both the United States and Canada and stands out among the American unions in the AFL-CIO because it is among the largest and has members in so many skilled occupations.

The LADDMS project is a research collaboration effort with NDOT, University of Tennessee (Chattanooga), Vanderbilt University, Tennessee State University, Tennessee Department of Transportation, Ouster, Stansell Electric, NABCO and other local stakeholders. This project will identify safety incidents outside traditional crash reports, implementing targeted safety measures, and evaluating these measures in Nashville's complex multimodal environmental under the city's Vision Zero Plans. This project builds on the very successful Phase 1 project that has validated LiDAR as a new tool to improve roadway safety, while also demonstrating the team's commitment to community engagement, community impact, and workforce development.

As a Phase 1 collaborator we participated in the workforce development training programs through the project. This session built upon previous training, providing advanced insights and reinforcing the skills necessary for effective LiDAR implementation. Workforce development initiatives are critical to the success of our projects. By continuously improving our training, we ensure that our technicians are equipped with the knowledge and skills needed to drive innovation and enhance road safety. We look forward to continuing to partner with the team to further the workforce development goals of USDOT and the LADDMS project.

Thank you for your consideration of the LADDMS project for the 2024 SMART Discretionary Grant Program.

Sincerely,

A TENNESSEE CORPORATION
P.O. Box 9397 • Chattanooga, Tennessee 37412 / 2800 2nd Avenue • Chattanooga, Tennessee 37407
(423) 622-8463 / 624-0073 • FAX (423) 624-8585 • nabco@nabcoelectric.com

OMB Number: 4040-0020
Expiration Date: 02/28/2026

APPLICATION FOR FEDERAL ASSISTANCE SF-424 - MANDATORY

1.a. Type of Submission:
- [x] Application
- [ ] Plan
- [ ] Funding Request
- [ ] Other

Other (specify):

1.b. Frequency:
- [x] Annual
- [ ] Quarterly
- [ ] Other

Other (specify):

1.c. Consolidated Application/Plan/Funding Request?
Yes [ ] No [x] Explanation

1.d. Version:
- [x] Initial
- [ ] Resubmission
- [ ] Revision
- [ ] Update

2. Date Received: 08/14/2024

STATE USE ONLY:

3. Applicant Identifier:

5. Date Received by State:

4a. Federal Entity Identifier:

6. State Application Identifier:

4b. Federal Award Identifier:

7. APPLICANT INFORMATION:

a. Legal Name: Metropolitan Government of Nashville-Davidson County

b. Employer/Taxpayer Identification Number (EIN/TIN): 62-0694743

c. UEI: LGZLHP6ZHM55

d. Address:

Street1: 1 Public Square

Street2:

City: Nashville

County / Parish:

State: TN: Tennessee

Province:

Country: USA: UNITED STATES

Zip / Postal Code: 37201-5007

e. Organizational Unit:

Department Name:

Division Name:

f. Name and contact information of person to be contacted on matters involving this submission:

Prefix:

First Name: Casey

Middle Name:

Last Name: Hopkins

Suffix:

Title:

Organizational Affiliation:

Telephone Number: 6158801676

Fax Number:

Email: casey.hopkins@nashville.gov

APPLICATION FOR FEDERAL ASSISTANCE SF-424 - MANDATORY

8a. TYPE OF APPLICANT:

X: Other (specify)

Other (specify):

Metropolitan Government

b. Additional Description:

9. Name of Federal Agency:

United State Department of Transportation

10. Catalog of Federal Domestic Assistance Number:

20.941

CFDA Title:

11. Descriptive Title of Applicant's Project:

Leveraging Advanced Data to Deliver Multimodal Saftey (LADDMS)

12. Areas Affected by Funding:

13. CONGRESSIONAL DISTRICTS OF:

a. Applicant: TN-007

b. Program/Project: TN-007

Attach an additional list of Program/Project Congressional Districts if needed.

Nashville Congessional Distr | Add Attachment | Delete Attachment | View Attachment

14. FUNDING PERIOD:

a. Start Date: 03/01/2025

b. End Date: 03/01/2028

15. ESTIMATED FUNDING:

a. Federal ($): 10,000,000.00

b. Match ($):

16. IS SUBMISSION SUBJECT TO REVIEW BY STATE UNDER EXECUTIVE ORDER 12372 PROCESS?

☐ a. This submission was made available to the State under the Executive Order 12372 Process for review on:

☐ b. Program is subject to E.O. 12372 but has not been selected by State for review.

☒ c. Program is not covered by E.O. 12372.

APPLICATION FOR FEDERAL ASSISTANCE SF-424 - MANDATORY

17. Is The Applicant Delinquent On Any Federal Debt?

Yes ☐ No ☒ Explanation

18. By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 18, Section 1001)**

** I Agree ☒

** This list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix:	First Name:
	Casey

Middle Name:

Last Name: Hopkins

Suffix:	Title:
	Policy Manager

Organizational Affiliation:

Telephone Number: 6158801676

Fax Number:

Email: casey.hopkins@nashville.gov

Signature of Authorized Representative:

Date Signed: 08/06/2024

Attach supporting documents as specified in agency instructions.

Add Attachments | Delete Attachments | View Attachments

APPLICATION FOR FEDERAL ASSISTANCE SF-424 - MANDATORY

Consolidated Application/Plan/Funding Request Explanation:

APPLICATION FOR FEDERAL ASSISTANCE SF-424 - MANDATORY

Applicant Federal Debt Delinquency Explanation:

Nashville-Davidson County Congressional Districts

Districts – TN-007, TN-005

BUDGET INFORMATION - Non-Construction Programs

OMB Number: 4040-0006
Expiration Date: 02/28/2025

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. FY24 SMART Grants Stage 2	20.941	$	$	$ 10,000,000.00	$	$ 10,000,000.00
2.						
3.						
4.						
5. Totals		$	$	$ 10,000,000.00	$	$ 10,000,000.00

SECTION B - BUDGET CATEGORIES

6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY (1)	(2)	(3)	(4)	Total (5)
	FY24 SMART Grants Stage 2				
a. Personnel	$	$	$	$	$
b. Fringe Benefits					
c. Travel					
d. Equipment					
e. Supplies					
f. Contractual					
g. Construction	10,000,000.00				10,000,000.00
h. Other					
i. Total Direct Charges (sum of 6a-6h)	10,000,000.00				$ 10,000,000.00
j. Indirect Charges					$
k. TOTALS (sum of 6i and 6j)	$ 10,000,000.00	$	$	$	$ 10,000,000.00
7. Program Income	$	$	$	$	$

SECTION C - NON-FEDERAL RESOURCES

(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e)TOTALS
8. FY24 SMART Grants Stage 2	$	$	$	$
9.				
10.				
11.				
12. TOTAL (sum of lines 8-11)	$	$	$	$

SECTION D - FORECASTED CASH NEEDS

	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
13. Federal	$	$	$	$	$
14. Non-Federal	$				
15. TOTAL (sum of lines 13 and 14)	$	$	$	$	$

SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT

(a) Grant Program	FUTURE FUNDING PERIODS (YEARS) (b)First	(c) Second	(d) Third	(e) Fourth
16. FY24 SMART Grants Stage 2	$	$	$	$
17.				
18.				
19.				
20. TOTAL (sum of lines 16 - 19)	$	$	$	$

SECTION F - OTHER BUDGET INFORMATION

21. Direct Charges:

22. Indirect Charges:

23. Remarks:

OMB Number: 4040-0013
Expiration Date: 02/28/2025

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Statement for Loan Guarantees and Loan Insurance

The undersigned states, to the best of his or her knowledge and belief, that:

If any funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions. Submission of this statement is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required statement shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

* APPLICANT'S ORGANIZATION

Metropolitan Government of Nashville-Davidson County

* PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

Prefix: | * First Name: Casey | Middle Name:

* Last Name: Hopkins | Suffix:

* Title: Policy Manager

* SIGNATURE: [signature] * DATE: 08/06/2024

DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C.1352

OMB Number: 4040-0013
Expiration Date: 02/28/2025

1. * Type of Federal Action:
- [ ] a. contract
- [x] b. grant
- [ ] c. cooperative agreement
- [ ] d. loan
- [ ] e. loan guarantee
- [ ] f. loan insurance

2. * Status of Federal Action:
- [x] a. bid/offer/application
- [ ] b. initial award
- [ ] c. post-award

3. * Report Type:
- [x] a. initial filing
- [ ] b. material change

4. Name and Address of Reporting Entity:

[x] Prime [ ] SubAwardee

*Name: Metropolitan Government of Nashville-Davidson County

*Street 1: 1 Public Square

Street 2:

*City: Nashville

State:

Zip:

Congressional District, if known:

5. If Reporting Entity in No.4 is Subawardee, Enter Name and Address of Prime:

6. * Federal Department/Agency:

USDOT

7. * Federal Program Name/Description:

Strengthening Mobility and Revolutionizing Transportation (SMART) Grants Program

CFDA Number, *if applicable:* 20.941

8. Federal Action Number, *if known:*

9. Award Amount, *if known:*

$

10. a. Name and Address of Lobbying Registrant:

Prefix: * First Name: Ana Middle Name:

* Last Name: Cruz Suffix:

* Street 1: 601 Thirteenth St NW Street 2: Suite #250s

* City: Washington State: DC: District of Columbia Zip:

b. Individual Performing Services (including address if different from No. 10a)

Prefix: * First Name: Ana Middle Name:

* Last Name: Cruz Suffix:

* Street 1: 601 Thirteenth St NW Street 2: Suite #250s

* City: Washington State: DC: District of Columbia Zip:

11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when the transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

* Signature: Casey Hopkins

*Name: Prefix: * First Name: Casey Middle Name:

* Last Name: Hopkins Suffix:

Title: Telephone No.: Date: 02/06/2024

Federal Use Only:

Authorized for Local Reproduction
Standard Form - LLL (Rev. 7-97)

OMB Number: 4040-0008
Expiration Date: 02/28/2025

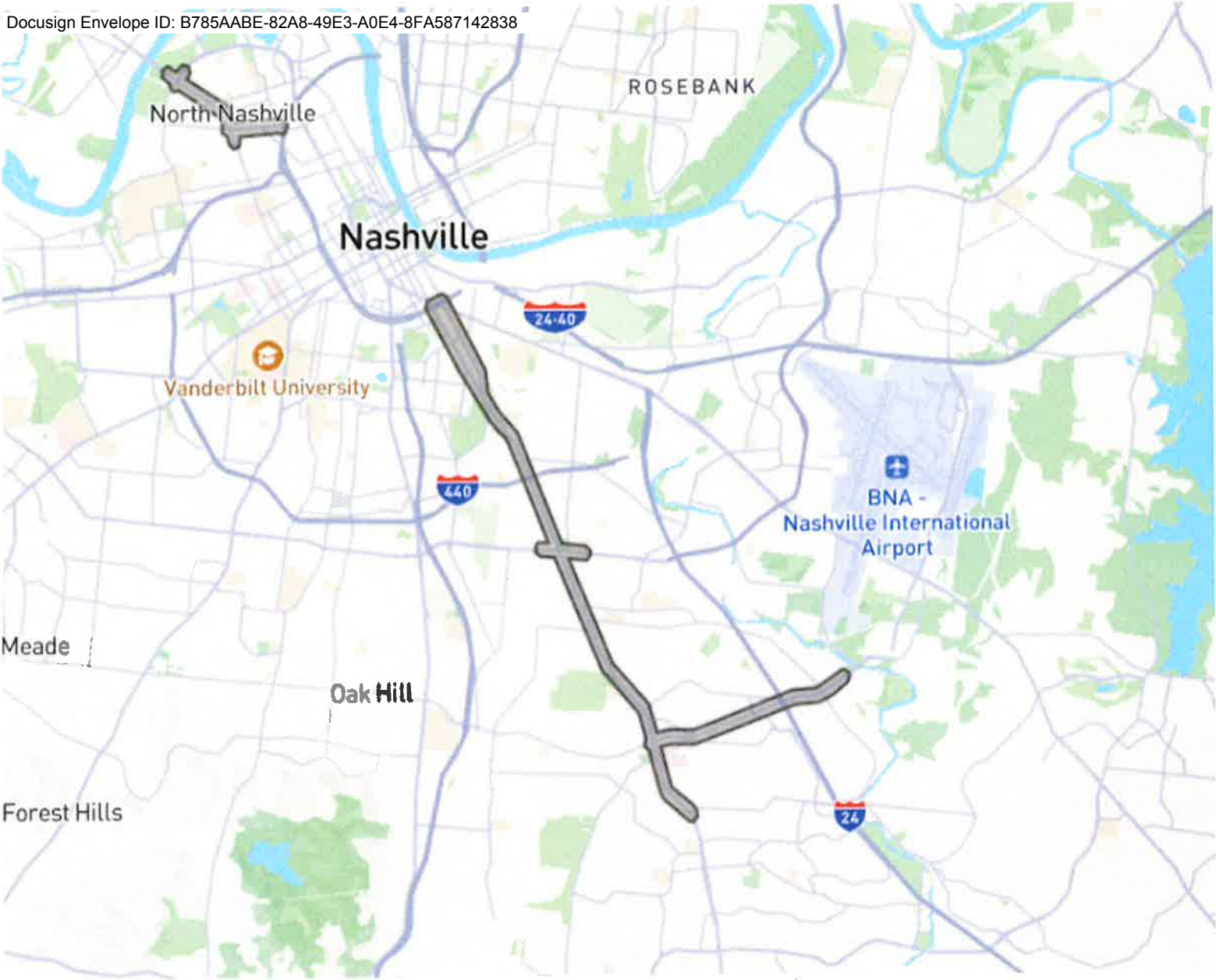
BUDGET INFORMATION - Construction Programs

NOTE: Certain Federal assistance programs require additional computations to arrive at the Federal share of project costs eligible for participation. If such is the case, you will be notified.

COST CLASSIFICATION	a. Total Cost	b. Costs Not Allowable for Participation	c. Total Allowable Costs (Columns a-b)
1. Administrative and legal expenses	$	$	$
2. Land, structures, rights-of-way, appraisals, etc.	$	$	$
3. Relocation expenses and payments	$	$	$
4. Architectural and engineering fees	$ 3,300,000.00	$	$ 3,300,000.00
5. Other architectural and engineering fees	$	$	$
6. Project inspection fees	$ 200,000.00	$	$ 200,000.00
7. Site work	$	$	$
8. Demolition and removal	$	$	$
9. Construction	$ 2,100,000.00	$	$ 2,100,000.00
10. Equipment	$ 4,000,000.00	$	$ 4,000,000.00
11. Miscellaneous	$ 400,000.00	$	$ 400,000.00
12. SUBTOTAL *(sum of lines 1-11)*	$ 10,000,000.00	$	$ 10,000,000.00
13. Contingencies	$	$	$
14. SUBTOTAL	$ 10,000,000.00	$	$ 10,000,000.00
15. Project (program) income	$	$	$
16. TOTAL PROJECT COSTS *(subtract #15 from #14)*	$ 10,000,000.00	$	$ 10,000,000.00

FEDERAL FUNDING

17. Federal assistance requested, calculate as follows: (Consult Federal agency for Federal percentage share.) Enter the resulting Federal share.	Enter eligible costs from line 16c Multiply X 100 %	$ 10,000,000.00



SMART

GRANTS PROGRAM

Letter of Designation

Purpose of this Job Aid

Every Stage One SMART grantee is eligible to apply for a subsequent Stage Two SMART Grant. In the event that a project has evolved, and a different, eligible entity is a better fit to be the lead applicant for the Stage Two grant, the Stage One SMART grantee must designate the new lead applicant. This job aid will provide an overview of the Letter of Designation requirements as well as a template. This template may not be suitable for all applicants. It is up to you and your partners to adapt the template to be relevant to your situation.

To be considered eligible for a Stage Two SMART, all Grant Stage Two applicants must either 1) be a Stage One grantee **OR** 2) include a Letter of Designation naming them as the lead applicant in their Stage Two application. If the Stage Two applicant is the same entity that received the Stage One grant, no Letter of Designation is required.

Requirements

- Who is eligible to apply for the Stage Two SMART Grants through the NOFO?
    - Designated lead applicants must be eligible based on the eligibility criteria below:
        - a State ;
        - a political subdivision of a State ;
        - a federally recognized Tribal government;
        - a public transit agency or authority;
        - a public toll authority;
        - a metropolitan planning organization; or
        - a group of two or more eligible entities listed above applying through a single lead applicant (Group Application).
- Who should provide the Letter of Designation?
    - The original Stage One SMART grantee must provide a Letter of Designation, endorsing the new lead applicant as the appropriate party to take over the project in Stage Two, and stating the nature of the Stage One lead's continued support and involvement in the project as it is deployed.
- How long should the Letter of Designation be?
    - The Letter of Designation should be no more than two pages.
- How many Letters of Designation are required?
    - No more than one letter per application is allowed.
- Where should the Letter of Designation be submitted?
    - The letter should be included in Appendix III of a SMART Grants application and submitted via ValidEval.com.

Letter of Designation Template

Name
Title
Address
City, State Zip Code

Dear Secretary Buttigieg,

I am writing on behalf of **[Stage One lead applicant organization name]**, which received a SMART grant in **[fiscal year]** for the **[SMART project name]** project. We are designating **[Stage Two applicant organization name]** as the new lead applicant for the Stage Two application for this project.

[Stage Two applicant organization name] is the correct lead applicant for Stage Two for the following reasons:

- *Describe the reasons why the Stage Two lead applicant is a better fit to apply for, and potentially receive, the Stage Two grant.*

[Stage One lead applicant organization name] commits to remaining involved in the Stage Two activities in the following ways:

- *Describe how the Stage One lead applicant will remain involved in Stage Two activities and their role.*

In conclusion, **[additional relevant details and closing statement]**.

Sincerely,

_____

[Name, title, organization]

APPLICATION FOR Stage 2 Strengthening Mobility and Revolutionizing Transportation (SMART) Grant Program

METROPOLITAN GOVERNMENT OF NASHVILLE AND DAVIDSON COUNTY

DocuSigned by:
Diana W Alarcon
AC74F1CC700F4DA...

Diana W. Alarcon, Director
Nashville Department of Transportation
and Multimodal Infrastructure (NDOT)

8/7/2024
Date

DocuSign

Certificate Of Completion

Envelope Id: B785AABE82A849E3A0E48FA587142838
Status: Completed
Subject: Complete with Docusign: NDOT-S~2.PDF
Source Envelope:
Document Pages: 105
Signatures: 3
Envelope Originator:
Certificate Pages: 15
Initials: 1
Juanita Paulson
AutoNav: Enabled
730 2nd Ave. South 1st Floor
EnvelopeId Stamping: Enabled
Nashville, TN 37219
Time Zone: (UTC-06:00) Central Time (US & Canada)
Juanita.Paulsen@nashville.gov
IP Address: 170.190.198.185

Record Tracking

Status: Original
8/27/2024 1:59:57 PM
Holder: Juanita Paulson
Juanita.Paulsen@nashville.gov
Location: DocuSign
Security Appliance Status: Connected
Pool: StateLocal
Storage Appliance Status: Connected
Pool: Metropolitan Government of Nashville and Davidson County
Location: DocuSign

Signer Events	Signature	Timestamp
Greg McClarin Greg.McClarin@nashville.gov Security Level: Email, Account Authentication (None)	GMc Signature Adoption: Pre-selected Style Using IP Address: 170.190.198.190	Sent: 8/27/2024 2:05:04 PM Viewed: 8/27/2024 3:00:00 PM Signed: 8/27/2024 3:00:30 PM
Electronic Record and Signature Disclosure: Accepted: 8/27/2024 2:59:59 PM ID: 0957299a-6249-40d2-9088-8bbaa38bdbbb		
Aaron Pratt Aaron.Pratt@nashville.gov Security Level: Email, Account Authentication (None)	Aaron Pratt Signature Adoption: Pre-selected Style Using IP Address: 170.190.198.185	Sent: 8/27/2024 3:00:32 PM Viewed: 8/27/2024 4:23:54 PM Signed: 8/27/2024 4:24:02 PM
Electronic Record and Signature Disclosure: Accepted: 8/27/2024 4:23:54 PM ID: 65cf2731-20eb-4307-982d-686aa5effd82		
Kevin Crumbo/mjw MaryJo.Wiggins@nashville.gov Security Level: Email, Account Authentication (None)	Kevin Crumbo/mjw Signature Adoption: Pre-selected Style Using IP Address: 170.190.198.100	Sent: 8/27/2024 4:24:05 PM Viewed: 8/28/2024 12:23:12 PM Signed: 8/28/2024 12:23:50 PM
Electronic Record and Signature Disclosure: Accepted: 8/28/2024 12:23:12 PM ID: 0083594d-1509-4d91-8083-8a0d92ee3ed2		
Courtney Mohan Courtney.Mohan@nashville.gov Security Level: Email, Account Authentication (None)	Courtney Mohan Signature Adoption: Pre-selected Style Using IP Address: 170.190.198.144	Sent: 8/28/2024 12:23:54 PM Viewed: 8/29/2024 10:19:05 AM Signed: 8/30/2024 8:50:45 AM

Signer Events	Signature	Timestamp
Electronic Record and Signature Disclosure: Accepted: 8/29/2024 10:19:05 AM ID: 08835da2-5a16-4b7c-b83a-c52ef69c0bdf		

In Person Signer Events	Signature	Timestamp

Editor Delivery Events	Status	Timestamp

Agent Delivery Events	Status	Timestamp

Intermediary Delivery Events	Status	Timestamp

Certified Delivery Events	Status	Timestamp

Carbon Copy Events	Status	Timestamp
Danielle Godin Danielle.Godin@nashville.gov Security Level: Email, Account Authentication (None) **Electronic Record and Signature Disclosure:** Not Offered via DocuSign	COPIED	Sent: 8/30/2024 8:50:47 AM Viewed: 8/30/2024 1:38:52 PM
Sally Palmer sally.palmer@nashville.gov Security Level: Email, Account Authentication (None) **Electronic Record and Signature Disclosure:** Accepted: 8/28/2024 9:26:27 AM ID: ddafa96a-17c9-4204-86ca-6e943eb26385	COPIED	Sent: 8/30/2024 8:50:48 AM

Witness Events	Signature	Timestamp

Notary Events	Signature	Timestamp

Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	8/27/2024 2:05:04 PM
Certified Delivered	Security Checked	8/29/2024 10:19:05 AM
Signing Complete	Security Checked	8/30/2024 8:50:45 AM
Completed	Security Checked	8/30/2024 8:50:49 AM

Payment Events	Status	Timestamps

Electronic Record and Signature Disclosure