

**NOTICE OF FUNDING OPPORTUNITY FOR FISCAL YEAR 2023 DEVELOPMENT AND DEPLOYMENT OF INNOVATIVE ASPHALT PAVEMENT TECHNOLOGIES**

**AGENCY:** U.S. Department of Transportation (DOT), Federal Highway Administration (FHWA).

**ACTION:** Notice of Funding Opportunity for the Innovative Asphalt Pavement Technologies.

**FUNDING OPPORTUNITY NUMBER:** 693JJ323NF00012

**ASSISTANCE LISTING NUMBER:** 20.200, Highway Research and Development Program

**TOTAL AMOUNT AVAILABLE:** This NOFO is anticipated to result in the distribution of up to \$5,000,000 in Federal funds. The actual amount awarded under this notice will be subject to the availability of funds. This NOFO is anticipated to result in the award of one (1) cost-reimbursable cooperative agreement.

**DEADLINE FOR APPLICATIONS:** June 28, 2023, at 11:59 PM (Eastern).

**QUESTIONS DUE DATE:** Any questions regarding this NOFO are due to FHWA Point of Contact, Angela A. Jones, Agreement Specialist at [Angela.Jones@dot.gov](mailto:Angela.Jones@dot.gov), no later than June 16, 2023, at 4:00 PM (Eastern).

**SUBMIT APPLICATIONS TO:** The FHWA uses [www.grants.gov](http://www.grants.gov) for receipt of all applications. Applicants must register and use the system to submit applications electronically. Applicants are encouraged to register in advance of the submission deadline and to register to receive notifications of updates/amendments to this Notice. Approval of user registrations for the site may take multiple weeks. It is the Applicant's responsibility to monitor for any updates to this Notice.

**FHWA POINT OF CONTACT:**

Angela A. Jones, Agreement Specialist  
Federal Highway Administration  
Office of Acquisition and Grants Management  
1200 New Jersey Avenue, SE.  
Washington, DC 20590  
Email: [Angela.Jones@dot.gov](mailto:Angela.Jones@dot.gov)

**Alternate:**

Hector Santamaria, Agreement Officer  
Federal Highway Administration  
Office of Acquisition and Grants Management  
1200 New Jersey Avenue, SE.  
Washington, DC 20590  
Email: [Hector.Santamaria@dot.gov](mailto:Hector.Santamaria@dot.gov)

Each section of this notice contains information and instructions relevant to the application process. The applicant should read this notice in its entirety so that they have the information they need to submit eligible and competitive applications.

The FHWA will not review applications in advance, but FHWA staff are available for technical questions and assistance. In addition, FHWA will post answers to questions and requests for clarifications at [Grants.gov](https://www.grants.gov) under this NOFO's page.

**TABLE OF CONTENTS**

| <b>SECTION</b> | <b>TITLE</b>                                    | <b>PAGE</b> |
|----------------|-------------------------------------------------|-------------|
| <b>A</b>       | <b>PROGRAM DESCRIPTION</b>                      | <b>4</b>    |
| <b>B</b>       | <b>FEDERAL AWARD INFORMATION</b>                | <b>11</b>   |
| <b>C</b>       | <b>ELIGIBILITY INFORMATION</b>                  | <b>13</b>   |
| <b>D</b>       | <b>APPLICATION SUBMISSION INFORMATION</b>       | <b>14</b>   |
| <b>E</b>       | <b>APPLICATION REVIEW INFORMATION</b>           | <b>21</b>   |
| <b>F</b>       | <b>FEDERAL AWARD ADMINISTRATION INFORMATION</b> | <b>28</b>   |
| <b>G</b>       | <b>FEDERAL AWARDED AGENCY CONTACT(S)</b>        | <b>36</b>   |
| <b>H</b>       | <b>OTHER INFORMATION</b>                        | <b>37</b>   |

**NOTE:** This notice contains collection-of-information requirements subject to the Paperwork Reduction Act. The collection of information through the use of Standard Forms 424, 424A, 424B, 424C, 424D, and SF-LLL has been approved by OMB under 2105-0520. Notwithstanding any other provision of law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the Paperwork Reduction Act, unless that collection displays a currently valid OMB control number.

## SECTION A – PROGRAM DESCRIPTION

### 1. STATEMENT OF PURPOSE

The purpose of this NOFO is to solicit applications to result in the award of a new **Cooperative Agreement** to support the Accelerated Implementation and Deployment of Pavement Technologies (AIDPT) Program.

The Federal Highway Administration (FHWA) has an ongoing Accelerated Implementation and Deployment of Pavement Technologies (AIDPT) Program, which includes the deployment of innovative technologies to improve pavement performance and reduce agency risk. A constant challenge in the transportation community is timely and efficient deployment of these new and innovative technologies. This is particularly true in the area of asphalt pavements. It often takes years, and sometimes decades, to change business practices, revise specifications, or refine production and construction practices.

The purpose of this cooperative agreement (Agreement) is to stimulate, facilitate, and expedite the deployment and rapid adoption of new and innovative technology relating to the design, production, testing, control, construction, and investigation of asphalt pavements. The proposed project is a cooperative effort between the FHWA and the Recipient to improve the quality and performance of asphalt pavements. In advancing 21<sup>st</sup> century solutions, we can improve performance and safety, and keep America moving forward.

### 2. LEGISLATIVE AUTHORITY

The AIDPT Program is established under 23 U.S.C. 503(c)(3), which instructs the Secretary to “establish and implement a program under the technology and innovation deployment program to promote, implement, deploy, demonstrate, showcase, support, and document the application of innovative pavement technologies, practices, performance and benefits.”

As amended by Section 13006 of the Bipartisan Infrastructure Law (BIL), enacted as the Infrastructure Investment and Jobs Act (P.L. 117-58), 23 U.S.C. 503(c)(3)(D) provides \$12,000,000 per fiscal year from FY 2022 to 2026 to carry out this program.

The authority to enter into a cooperative agreement for this effort is found under 23 U.S.C. 502(b)(3), which states:

(3) Cooperation, grants, and contracts. — The Secretary may carry out research, development, and technology transfer activities related to transportation—...

(C) by making grants to or entering into contracts and cooperative agreements with one or more of the following: the National Academy of Sciences, the American Association of State Highway and Transportation Officials, any Federal laboratory, Federal agency, State agency, authority, association, institution, for-profit or nonprofit corporation, organization, foreign country, or any other person.

### **3. BACKGROUND**

The Agreement will focus on deployment of innovative technologies and strategies to advance asphalt pavements. A primary goal of the FHWA AIDPT Program is the advancement of new and innovative technologies to design, specify, construct, and preserve pavements, which are supported by the advancement of superior practices for testing and evaluating materials. As such, the FHWA supports deployment of advanced research findings in pavements and materials through the National Cooperative Highway Research Program (NCHRP) and the Strategic Highway Research Programs (SHRP and SHRP2).

Once these research projects are completed, the FHWA requires assistance in the deployment of the technology, which often includes items such as, but not limited to: marketing, material testing, product demonstration showcases, support of field trials, conference presentations, webinars, workshops, peer exchanges, videos, and technical assistance to State DOTs. As part of this innovation deployment program, FHWA engages and works collaboratively with subject matter experts and stakeholders through Technical Feedback Groups (TFGs) and Technical Working Groups (TWGs) related to asphalt pavements comprised of industry, various asphalt associations, researchers/academia, and Federal and State government representatives.

The TFGs and TWGs often require assistance in characterization, data analysis, and evaluation of asphalt materials and pavements in the advancement of specifications involving new technologies. To this end, the FHWA requires industry participation in the form of a preeminent asphalt testing laboratory with extensive test equipment and knowledge of asphalt pavement materials, asphalt binders, and mixtures to perform testing in support of the TFGs, TWGs, NCHRP, and SHRP projects. In addition, the FHWA requires the assistance of an entity with access to a network of engineers, technical experts, and subject matter experts across the United States to successfully carry out tasks, field projects, and demonstration projects that will provide valuable information to improve performance of asphalt pavements for the betterment of the asphalt pavement community (e.g., owner agencies, industry, and academia) and the traveling public.

### **4. PROGRAM GOALS**

The goals of the program under 23 U.S.C. 503(c)(3)(B) are:

- (i) the deployment of new, cost-effective designs, materials, recycled materials, and practices to extend pavement life and performance and to improve user satisfaction;
- (ii) the reduction of initial costs and lifecycle costs of pavements, including the costs of new construction, replacement, maintenance, and rehabilitation;
- (iii) the deployment of accelerated construction techniques to increase safety and reduce construction time and traffic disruption and congestion;

- (iv) the deployment of engineering design criteria and specifications for innovative practices, products and materials for use in highway pavements;
- (v) the deployment of new nondestructive and real-time pavement evaluation technologies and techniques; and
- (vi) effective technology transfer and information dissemination to accelerate implementation of innovative technologies and to improve life, performance, cost effectiveness, safety, and user satisfaction.

## **5. STATEMENT OF WORK**

The Recipient shall support the deployment and rapid adoption throughout the United States of innovative asphalt pavement technologies with presentations, workshops, conferences, innovation demonstrations, peer-to-peer Exchanges, technical briefs, and other tools. The subject of these items will include but not be limited to those shown below and in Table A:

- New and innovative asphalt pavement materials;
- New and innovative resource-responsible (RR) use of materials for asphalt pavement systems;
- New and innovative design, specifications, and practices;
- New and innovative sustainable pavement specifications and practices;
- New and innovative workforce development practices; and
- New and innovative real-time pavement production and construction controls.

The Recipient shall work in cooperation with the FHWA TFGs and TWGs associated with the defined Tasks.

During the period of performance, the FHWA and the Recipient shall meet, at a minimum, quarterly to discuss project activities. The location of the meeting shall be established in coordination with the Agreement Officer's Representative (AOR) and the Recipient. Quarterly meetings will be held in Washington, DC, the Recipient's primary office location, a mutually attended industry conference or meeting (e.g., an TFG meeting), or via web conference.

### **Delineation of Tasks**

## **TASKS**

### **1 Agreement Work Plan Process**

- 1.1 The Recipient shall schedule and facilitate a project kick-off meeting (either virtually or in-person) with FHWA within four (4) weeks of this agreement's effective date. The location of the kick-off meeting will be determined by FHWA within one week of the agreement effective date. The Recipient shall be responsible for providing a final approved meeting agenda no later than three (3) business days prior to the kickoff meeting as well as providing full meeting minutes within ten (10) business days after the kick-off meeting.

NOTE: The kick-off meeting may be a virtual (e.g., teleconference, webinar), in-person, or hybrid format.

- 1.2 The Recipient shall submit proposed annual work plans to support subtasks 1.3 and 1.4 for innovations identified in Table A below. The AOR will review the proposed work plans in order to determine and prioritize which needs shall be addressed each year. The entirety of innovations in Table A does not need to be addressed each year. The Recipient shall revise the work plan(s) according to AOR comments and submit the final version of the work plans to the AOR. Upon notification from the AOR, the Recipient shall proceed with the agreed upon tasks.
- 1.3 The Recipient shall develop, maintain, and execute an implementation/marketing plan for identified innovations, which may include, but is not limited to, any or all of the following elements:
  - 1.3.1 Gap Analysis – Identify critical limitations, gaps, and needs in the current technology.
  - 1.3.2 Risk/Benefit Analysis – What is the risk or loss of not deploying the innovation? What are the benefits and gains to be had by deploying the innovation? This information shall be an integral part of the marketing effort.
  - 1.3.3 Target Audience – Clearly define the target audience. Who are the decision makers in advancing the innovation? Who is the target audience for technical training? Who are the end users?
  - 1.3.4 Market Summary – Within Federal, State, and local agencies, what are the segments mostly likely to influence the adoption of the innovation?
  - 1.3.5 Key Message – Develop a clear vision, memorable message, and/or tag-line(s) that clearly capture the goal(s) of the deployment effort.
  - 1.3.6 Market Analysis – Benchmark and track current national product/material/process usage and estimate market potential.
  - 1.3.7 Barrier Analysis – Identify potential/perceived barriers with deployment.
  - 1.3.8 S.W.O.T. Analysis – Alternatively to the Barrier Analysis a Strengths-Weaknesses-Opportunities-Threats Analysis can be conducted.
  - 1.3.9 Performance Measures & Outcomes – Working with FHWA, establish agreed upon performance measures and outcomes for the deployment effort.
  - 1.3.10 Tools for Marketing & Communication – Develop and execute tools to market and communicate the deployment of the innovation effectively. Examples of tools include, but are not limited to: presentations, workshops, conferences, innovation demonstrations, peer-to-peer exchanges, technical briefs, practice guides, articles, Q&A webinars, partnerships, videos, and case studies. These tools shall be made publicly available, either through Recipient or FHWA avenues of communication.
  - 1.3.11 Training – Identify and address training needs for deployment in cooperation with FHWA. Develop curriculum and recommended training approaches: face-to-face Instructor-Led Training (ILT), distance ILT (webinar), web-based training tools, or a blended approach. The Recipient shall develop all training materials and supporting documentation.
  - 1.3.12 Refinement of Standards and Specifications – Identify, participate in, and/or lead efforts to enhance design, production, and materials testing standards and specifications. Efforts may include: ruggedness testing, inter-laboratory studies to establish precision and bias statements, as well as technical assistance as part of a FHWA-supported task force in the form of knowledge sharing, data exchange, etc.

- 1.4 Reporting – The Recipient shall submit an interim report on an annual basis, summarizing the activities, actions, and findings of the subtasks associated with Task 1. The interim report shall be submitted to the AOR for technical review and shall be submitted by FHWA to the TFGs and TWG for individuals on those advisory groups to provide input.

## 2 Support Deployment and Rapid Adoption of Innovations

- 2.1 The Recipient shall conduct the agreed-upon annual work plan(s) according to Task 1 for innovations identified and prioritized from Table A.

Table A: Innovations of Interest to FHWA. Reference number is intended for tracking purposes only. They are not chronological in nature.

| Reference Number | Innovation Area / Innovation                                                                                                                             | 508 Compliant? |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <b>A</b>         | <b>Materials</b>                                                                                                                                         |                |
| A.1              | Advancement of Innovative Binders for Asphalt Pavement Systems                                                                                           | Yes            |
| A.2              | Asphalt Additives                                                                                                                                        | Yes            |
| A.3              | Other New & Innovative Materials as Agreed Upon                                                                                                          | Yes            |
| <b>B</b>         | <b>Resource Responsible (RR) use of Materials for Flexible Pavement Systems</b>                                                                          |                |
| B.1              | High Reclaimed Asphalt Pavement (RAP) Mixtures                                                                                                           | Yes            |
| B.2              | Reclaimed Asphalt Shingle- (RAS) modified Binders and Mixtures                                                                                           | Yes            |
| B.3              | Asphalt Pavement In-place Recycling Technologies                                                                                                         | Yes            |
| B.4              | Data Gathering of Recycled Materials and Warm-Mix Asphalt Usage                                                                                          | Yes            |
| B.5              | Asphalt Rubber-modified Binders                                                                                                                          | Yes            |
| B.6              | Recycled Plastics in Asphalt Mixtures and Binders                                                                                                        | Yes            |
| B.7              | Other New & Innovative RR Systems as Agreed Upon                                                                                                         | Yes            |
| <b>C</b>         | <b>Design, Specifications, and Practices (DS&amp;P)</b>                                                                                                  |                |
| C.1              | Asphalt Mixture Balanced Mix Design Technical Refinement and Deployment Support with Peer Exchanges, Workshops, Technical Assistance to State DOTs, etc. | Yes            |

|          |                                                                                  |     |
|----------|----------------------------------------------------------------------------------|-----|
| C.2      | Deployment and Technical Support of Refined Superpave Binder Specification       | Yes |
| C.3      | Technical Support of Refined Superpave Volumetric Mixture Design & Specification | Yes |
| C.4      | Asphalt Materials Quality Assurance Practices                                    | Yes |
| C.5      | Other New & Innovative DS&P as Agreed Upon                                       | Yes |
| <b>D</b> | <b>Sustainable Pavements</b>                                                     |     |
| D.1      | Environmental Product Documents (EPDs) Creation, Evaluation, and Benchmarking    | Yes |
| D.2      | Asphalt Carbon Footprint Reduction Strategies                                    | Yes |
| D.3      | Other New & Innovative Sustainable Pavement Topics as Agreed Upon                | Yes |
| <b>E</b> | <b>Workforce Development</b>                                                     |     |
| E.1      | New & Innovative Workforce Development Practices as Agreed Upon                  | Yes |
| <b>F</b> | <b>Real-time Pavement Production and Construction Controls</b>                   |     |
| F.1      | New & Innovative Real-time Production and Construction Controls as Agreed Upon   | Yes |

2.2 Examples of documents, webinars, and videos from previous cooperative agreements can be found at:

2.2.1 <https://www.fhwa.dot.gov/pavement/asphalt/>,

2.2.2 <https://www.unr.edu/wrsc/tools/asphalt/>, and

2.2.3 <https://www.asphaltpavement.org/expertise/sustainability/sustainability-resources/recycling>

### 3 Gathering Input and Information from FHWA Technical Stakeholder Groups

3.1 The Recipient shall work in cooperation with stakeholder groups identified in Table B, below, to vet and collaborate in ongoing deployment activities and findings. Activities may include: preparing and delivering presentations on project activities, and obtaining and refining reports and other documents based on input from stakeholder groups identified in Table B.

Table B: FHWA Sponsored Stakeholder Groups

| Reference Number | Group                                                          |
|------------------|----------------------------------------------------------------|
| B.1              | Asphalt TFG                                                    |
| B.2              | Other Groups as Agreed Upon to Support Work Plan(s) Objectives |

#### 4. SECTION 508 REQUIREMENTS AND INTENT TO SHARE PUBLICLY

To support knowledge and information sharing, all Final Deliverables developed by the Recipient shall be developed with the intent to share publicly and be formatted for Section 508 compliance.

**Note:** Section 508 requirements are included in this agreement's General Terms and Conditions available online at: <http://www.fhwa.dot.gov/aaa/generaltermsconditions.cfm>.

<end of section>

## SECTION B – FEDERAL AWARD INFORMATION

### 1. FUNDING

The FHWA anticipates Federal funding up to a total amount of \$1,000,000 per year may be made available for this Agreement, subject to the availability of funds, for a total potential Federal share of \$5,000,000.

**\*Please note that this NOFO is subject to availability of funding. The Government's obligation under any resulting award is contingent upon the availability of funding. No legal liability on the part of the Government for any payment may arise until funds are available and obligated to an award. The Government reserves the right to make no awards under this NOFO.**

### 2. ANTICIPATED NUMBER OF AWARDS

The Government anticipates awarding up to one (1) cooperative agreement as a result of this NOFO.

### 3. TYPE OF AWARD

The planned award type is a cost reimbursement cooperative agreement with a cost sharing.

### 4. PERIOD OF PERFORMANCE

The period of performance will consist of one 24-month (2 year) base period and up to three (3) 12-month option periods. The total potential period of performance, if all option periods are exercised, is 60 months (5 years). The period of performance will begin on the effective date of the award, as stated in the resulting cooperative agreement.

### 5. DEGREE OF FEDERAL INVOLVEMENT

FHWA anticipates substantial Federal involvement between FHWA and the Recipient during the course of this project. The FHWA anticipates the Federal involvement will include:

- Technical assistance and guidance to the Recipient;
- Close monitoring of performance;
- Involvement in technical decisions;
- Review, comment, and approval of work plan (including outreach and dissemination plan), and training course materials;
- Performance reporting and financial reporting to ensure that the objectives and terms and conditions of the Agreement are met;
- Ability to redirect project activities;

- Participation in status meetings including kick-off meeting and annual technical and budget reviews; and
- Review and comment on draft documents as appropriate.

<end of section>

## **SECTION C – ELIGIBILITY INFORMATION**

### **1. ELIGIBLE APPLICANTS**

This notice is open to all entities.

### **2. COST SHARING OR MATCHING**

Cost sharing or matching is required under this award. In accordance with BIL Section 11101(c)(3)(A), the Federal share of the cost of this project shall be 80 percent. The Applicant shall provide a minimum 20 percent cost share of total project cost. Program Income must be handled in accordance with Section F.2.G.

Cost sharing or matching means the portion of project costs not paid by Federal funds (unless otherwise authorized by Federal statute). See 2 CFR Part 200.306 on Cost Sharing or matching. Other Federal funds using their appropriate matching share may be leveraged for the deployment but cannot be considered as part of the recipient's matching funds, unless otherwise supported by statute. Applicants should refer to section D.2 of this opportunity for more information about submission requirements concerning cost sharing under this program.

FHWA will not consider previously incurred costs or previously expended or encumbered funds towards the matching requirement for any project. Matching funds are subject to the same Federal requirements as awarded funds.

The matching requirements will be monitored by FHWA over the life of this effort. At the conclusion of the Agreement, FHWA will determine whether the 20 percent cost share requirement has been achieved in accordance with closeout and post closeout requirements in 2 CFR 200.344 and 200.345.

<end of section>

## SECTION D - APPLICATION AND SUBMISSION INFORMATION

### 1. ADDRESS TO REQUEST APPLICATION PACKAGE

Applicants may obtain application forms at [grants.gov](http://www.grants.gov) under the Notice of Funding Opportunity Number cited herein. All application materials may be found on *Grants.gov* at <http://www.grants.gov>.

If potential applicants are unable to download the application package from the internet, they may send a written request for a paper copy to the below address. Requests should be sent to: [angela.jones@dot.gov](mailto:angela.jones@dot.gov).

### 2. CONTENT AND FORM OF APPLICATION SUBMISSION

#### A. Application Format

- Applications must be prepared on 8½ x 11- inch paper. Pages that exceed this size, such as foldouts, are not allowable.
- Narrative text must be printed using a font size no less than 12-point font.
- Tables are permitted. Text in tables may be smaller than 12-point font but must be legible.
- Page margins must be a minimum of 1-inch top, bottom, and each side.
- Page numbers may be located within the 1-inch margin.
- A Header or Footer identifying the Applicant/Team and the Volume or Part, may be located within the 1-inch margins.
- Resumes are limited to 2 pages each.
- PAGE LIMITS: Application volumes shall adhere to the page count limitations listed below. The page limit includes all narratives, figures, tables, appendices, and all other ancillary materials with the exception of the following.
- EXCEPTIONS TO THE PAGE LIMITS: The following items do NOT count against the page limitation.
  - Document cover page;
  - Cover letters (max one page);
  - Title pages;
  - Blank divider pages;
  - Table of contents;
  - Lists of acronyms;
  - Letters of intent to participate from proposed subrecipients/contractors, consultants, partners, and proposed new hires; and
  - Resumes. (**NOTE:** resumes shall not exceed 2 pages each.)

## **B. Application Content Overview**

### **1. Standard Form (SF)-424 Application for Federal Assistance**

Note: Applicants may leave fields 5a, 5b, 6, 7, and 13 blank on the form.

Note: A number of separate PDF flat files must be attached in Item 15, Attachments, to provide required project information that is not included in the body of the SF-424.

**Required attachments:** the following files, as described below, must be added as Attachments to Item 15 of the SF-424:

- **Volume 1: Project Narrative**
- **Volume 2: Budget Application**

### **2. SF-424A Budget Information for Non-Construction Programs**

Note: Section A:

- Block 1(a): fill-in opportunity title listed on page 1;
- Block 1(b): fill-in CFDA number listed on page 1;
- Block 1(c): fill-in Total Federal Funds Requested in dollars; and,
- Block 1(d): fill-in Total Cost Share in dollars, and leave columns (e), (f), and (g) and rows 2, 3, and 4 blank.

### **3. SF-424B Assurances for Non-Construction Programs**

### **4. SF-LLL Disclosure of Lobbying Activities**

Note: The form must be completed and submitted even if no lobbying to report. If no lobbying to report insert none or n/a in the relevant blocks.

## **C. Application Content – Detailed Instructions**

### **1. Volume 1 Technical Application / Project Narrative**

NOTE: The Volume 1 Technical Application/Project Narrative must not exceed 30 pages. Resumes, Letters of Intent, and the other items included in the bulleted list above are excluded from the page count.

- a. Project Abstract: Summarize the scope of work that would be completed under the award, including project goals and outcomes anticipated.
- b. Project Description: Include a detailed description and scope of work including specific milestones. Provide a technical and management plan describing in detail how the Applicant proposes to carry out the work. Describe how the Applicant proposes to meet program goals listed in NOFO Section A. Identify project risks and how the Applicant proposes to address these risks. Identify proposed project performance measures and how they will be evaluated.

- c. Project Team Information: Include detailed information about the proposed Applicant team, including any partnerships or collaborations with other entities to deliver the project. The information should specifically describe the role of each entity in delivering the project. Provide a staffing plan to perform the work, including names and positions of key personnel. Provide an organizational chart identifying proposed staff members assigned to this effort. The chart must be supported with narrative text to include the title and a brief description of each position's responsibilities, as well as the proposed level of effort and allocation of time (percent in relation to their other duties) for each position on a yearly basis and in summary format. The level of effort may be displayed (single spaced) in a table format. One table can be presented if the level of effort will be constant across all years, and the table is annotated as such. The hours in this table must be consistent with the information presented in the Budget Volume.
- d. Project Schedule: Include detailed information about the project schedule that identifies all major project milestones and, if applicable, required submittals.
- e. Resumes: Provide resumes of key personnel and staff with significant roles, for both the prime Applicant and team members/subrecipients/contractors as necessary.
- f. Letters of Intent to Participate: Provide a letter of intent or commitment from each proposed subrecipient/contractor. This includes any subrecipient/contractor that will be included in the Federal share, the non-Federal share, or in a non-paid (volunteer) capacity. Provide a letter of intent to participate from significant team members as the Applicant deems necessary.

## 2. Volume 2 Budget Application

NOTE: There is no page limit to Volume 2. If needed, the FHWA may request additional budget information to clarify an application. FHWA encourages Applicants to submit the most relevant and complete information they can provide.

- a. Budget Tables: Provide a separate detailed budget table for each year and summarize the information for all years for all activities. Spreadsheets can be formatted similarly to the format in DOT Form 4220.44, located at: [4220\\_44.xls \(dot.gov\)](https://www.dhs.gov/sites/default/files/4220_44.xls). **NOTE: Profit/fee is not allowable for the prime Recipient.**
- b. Budget tables must include the following cost elements as applicable to the project:
  - i. Labor Rates: Direct labor-by-labor categories to include hours, rates and escalation. The labor rates and annual direct labor escalations rate and its basis must be in accordance with 2 CFR 200.430
  - ii. Indirect Rates: Provide your organization's signed current approved indirect cost rate from the cognizant Federal agency or letter of request to cognizant agency for rate establishment or adjustment. Indirect costs rates must be established according to 2 CFR 200.414. Note: Per 2 CFR 200.414(f), Indirect (F&A) Costs,

an Applicant may elect to propose a de minimis indirect rate of 10% of modified total direct costs.

- iii. Other Direct Costs: Applicants must provide a breakout and justification of Other Direct Costs by Category (travel, equipment, etc.). Direct costs must be in accordance with 2 CFR Part 200 Subpart E (Cost Principals).
  - iv. Subcontractors/sub-recipients: If subcontractors/sub-recipients (lower-tiered organizations and/or individual consultants) will be used in carrying out this project, the following minimum information concerning such, must be furnished:
    - Name and address of the organization or consultant.
    - Description of the portion of work to be conducted by the organization or consultant.
    - Cost details for that portion of work.
    - Applicant's cost/price analysis of each subcontractor(s)/sub-recipient(s) showing how their price is fair and reasonable.
- c. Other Business Information: Provide the following information relative to the PRIME APPLICANT.
- i. Identify any exceptions to the anticipated award terms and conditions as contained in Section F, Federal Award Administration Information.
  - ii. Identify any preexisting intellectual property that the Applicant anticipates using during award performance, and your position on its data rights during and after the award period of performance.
  - iii. Applicant SAM Unique Entity Identifier (UEI).
  - iv. A statement to indicate whether the Applicant has previously completed an A-133 Single Audit and, if so, the date that the last A-133 Single Audit was completed.
  - v. A statement regarding Conflicts of Interest. The Applicant must disclose in writing any actual or potential personal or organizational conflict of interest in its application that describes in a concise manner all past, present, or planned organizational, contractual, or other interest(s), which may affect the Applicants' ability to perform the proposed contract in an impartial and objective manner. Actual or potential conflicts of interest may include but are not limited to any past, present, or planned contractual, financial, or other relationships, obligations, commitments or responsibilities, which may bias the Applicant or affect the Applicant's ability to perform the project in an impartial and objective manner. The FHWA will review the statement(s) and may require additional relevant information from the Applicant. All such information, and any other relevant information known to FHWA, will be used to determine whether an award to the Applicant may create an actual or potential conflict of interest. If any such

conflict of interest is found to exist, the FHWA may (a) disqualify the Applicant, or (b) determine that it is otherwise in the best interest of the Government to contract with the Applicant and include appropriate provisions to mitigate or avoid such conflict in the award pursuant to 2 CFR 200.112.

- vi. A statement to indicate whether a Federal or State organization has audited or reviewed the Applicant's accounting system, purchasing system, and/or property control system. If such systems have been reviewed, provide summary information of the audit/review results to include as applicable summary letter or agreement, date of audit/review, Federal or State point of contact for such review.
- vii. Terminated Contracts. List any contract/agreement that was awarded to the prime Applicant then later terminated for convenience of the Government within the past 3 years, and any contract/agreement that was terminated for default within the past 5 years. Briefly explain the circumstances in each instance.
- viii. Describe how the Applicant will obtain the necessary resources to fund and fulfill the proposed cost share, as applicable.
- ix. The Applicant is directed to review Title 2 CFR Part 170 ([http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&tpl=/ecfrbrowse/Title02/2cfr170\\_main\\_02.tpl](http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&tpl=/ecfrbrowse/Title02/2cfr170_main_02.tpl)) dated November 12, 2020, and Appendix A thereto, and acknowledge in its application that it understands the requirement, has the necessary processes and systems in place, and is prepared to fully comply with the reporting described in the term if it receives funding resulting from this NOFO. The text of Appendix A will be incorporated in the award document as a General Term and Condition as referenced under this NOFO's Section F, Federal Award Administration Information.
- x. Disclose any violations of Federal criminal law involving fraud, bribery, or gratuity violations. Failure to make required disclosures can result in any of the remedies described in 2 CFR 200.339 entitled Remedies for Noncompliance, including suspension or debarment. (See also 2 CFR Part 180 and 31 U.S.C. 3321).
- xi. If a nonprofit or not-for-profit status, please provide evidence of this status preferably from the Internal Revenue Service.
- xii. Acknowledgement of acceptance of the NOFO terms and acknowledgement and acceptance of any Amendments issued to this NOFO. List Amendment numbers and issue dates, if any.

### 3. UNIQUE ENTITY IDENTIFIER AND SYSTEM FOR AWARD (SAM)

Each Applicant is required to:

- a. Have an active registration in SAM.gov at the time the Applicant submits an application;
- b. Provide a valid UEI in their application; and
- c. Continue to maintain an active SAM registration with current information at all times during which the Applicant has an active Federal award or an application or plan under consideration by a Federal awarding agency.

FHWA may not make a Federal award to an Applicant until the Applicant has complied with all applicable UEI and SAM requirements. If an Applicant has not fully complied with the requirements by the time the Federal awarding agency is ready to make a Federal award, the Federal awarding agency may determine that the Applicant is not eligible to receive a Federal award and use that determination as a basis for making a Federal award to another Applicant.

### 4. SUBMISSION DATES AND TIMES

The application must be received electronically through [www.grants.gov](http://www.grants.gov) by the application due date/time listed on page 1 of this Notice of Funding Opportunity.

The due date/time is the date and time by which FHWA must receive the full and completed application, including all required sections.

For the submitted application package, FHWA suggests that pictures, graphics, and other large files be reduced in number and quality to keep the size of the files of the application manageable and in line with the Grants.gov maximum size of 200 megabytes for the entire grant application package.

**GRANTS.GOV:** Applicants must follow the instructions on Grants.gov to successfully use the website to submit an application. Use of Grants.gov may entail the following steps for those setting up new accounts or first-time users.

- a. Register with SAM at [www.SAM.gov](http://www.SAM.gov)
- b. Obtain a valid UEI;
- c. Create a *Grants.gov* account; and
- d. Respond to the registration email sent to the E-Business Point of Contact from *Grants.gov*, and login at *Grants.gov* to authorize the Applicant as the Authorized Organization Representative (AOR). Please note that there can be more than one AOR for an organization.

**\*\*Please note that the *Grants.gov* registration process may take two to four weeks.**

**GRANTS.GOV HELP:** For Grants.gov training resources, including video tutorials, refer to: [Home | GRANTS.GOV](#). For assistance with Grants.gov registration and application submittal, refer to the Grants.gov Support Center: [Support | GRANTS.GOV](#).

## **5. INTERGOVERNMENTAL REVIEW**

An application under this Notice of Funding Opportunity is not subject to the State review under E.O. 12372.

## **6. FUNDING RESTRICTIONS**

The FHWA will not reimburse any pre-award costs or application preparation costs under this proposed Agreement.

<end of section>

## SECTION E - APPLICATION REVIEW INFORMATION

### 1. EVALUATION CRITERIA

FHWA will evaluate applications on the following criteria: Technical Merit and Cost.

**TECHICAL MERIT:** FHWA will evaluate and rate the Technical Applications against the following three criteria, which are of approximately equal importance.

#### 1. Demonstration of Technical Competence and Understanding of Requirements.

- a. Demonstrated experience such as published technical articles, Government-funded research projects, reports and/or direct field experience with innovations. Applicant should also demonstrate complete familiarity with asphalt testing standards and referenced documents, as well as have a working knowledge of the fundamental asphalt and materials testing that are covered by ASTM, AASHTO, Superpave mixture design, and those listed in Table E.1. The Applicant should also describe current capabilities to address tests and practices in Table E.2, if applicable.

Table E.1. Required Asphalt Binder, Mixture, and Aggregate Tests and Practices

| ASTM Designation | AASHTO Designation | Title                                                                                                                                      |
|------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| D 95             | T 55               | Water in Petroleum Products and Bituminous Materials by Distillation                                                                       |
| D 36             | T 53               | Softening Point of Bitumen (Ring and Ball Apparatus)                                                                                       |
| D 92             | T 48               | Flash and Fire Points by Cleveland Open Cup                                                                                                |
| D 2042           | T 44               | Solubility of Bituminous Materials                                                                                                         |
| D 5404           | T 319              | Quantitative Extraction and Recovery of Asphalt Binder from Asphalt Mixtures                                                               |
| D 4402           | T 316              | Viscosity Determination of Asphalt Binder using Rotational Viscometer                                                                      |
| D 7175           | T 315              | Determining Rheological Properties of Asphalt Binder using a Dynamic Shear Rheometer (via parallel plate and concentric cylinder geometry) |
| D 6648           | T 313              | Determining Flexural Creep Stiffness of Asphalt Binder Using Bending Beam Rheometer                                                        |
|                  | T 308              | Determining the Asphalt Binder Content of Hot-Mix Asphalt by the Ignition Method                                                           |
| D 2872           | T 240              | Effect of Heat and Air on a Moving Film of Asphalt (Rolling Thin Film Oven Test)                                                           |
| D 2171           | T 202              | Viscosity of Asphalts by Vacuum Capillary Viscometer                                                                                       |
| D 2170           | T 201              | Kinematic Viscosity of Asphalts (Bitumens)                                                                                                 |

|        |       |                                                                                                                          |
|--------|-------|--------------------------------------------------------------------------------------------------------------------------|
| D 1754 | T 179 | Effect of Heat and Air on Asphalt Materials (Thin Film Oven Test)                                                        |
| D 2172 | T 164 | Quantitative Extraction of Bitumen from Bituminous Paving Mixtures                                                       |
| D 1461 | T 110 | Moisture or Volatile Distillates in Bituminous Paving Mixtures                                                           |
| D 6521 | R 28  | Accelerated Aging of Asphalt Binder Using a Pressure Aging Vessel                                                        |
| D 7405 | T 350 | Multiple Stress Creep Recovery Test of Asphalt Binder Using a Dynamic Shear Rheometer                                    |
|        | T 378 | Determining the Dynamic Modulus and Flow Number for Asphalt Mixtures Using the Asphalt Mixture Performance Tester (AMPT) |
|        | T 400 | Determining the Damage Characteristic Curve of Asphalt Mixtures from Direct Tension Cyclic Fatigue Tests                 |
| D 3497 |       | Dynamic Modulus of Asphalt Mixtures                                                                                      |
| C 136  | T 27  | Sieve Analysis of Fine and Coarse Aggregate                                                                              |
| C 117  | T 11  | Materials Finer Than 75-mm (No. 200) Sieve in Mineral Aggregates by Washing                                              |
| D 5821 |       | Determining Percentage of Fractured Particles in Coarse Aggregate                                                        |
|        | T 304 | Uncompacted Void Content of Fine Aggregate                                                                               |
| D 4791 |       | Flat Particles, Elongated Particles, or Flat & Elongated Particles in Coarse Aggregate                                   |
|        | T 176 | Plastic Fines in Graded Aggregates and Soils by Use of Sand Equivalent Test                                              |
| D 6925 | T 312 | Preparing and Determining the Density of HMA Specimens by Means of the Superpave Gyratory Compactor                      |
|        | R 30  | Mixture Conditioning of Hot-Mix Asphalt (HMA)                                                                            |
| D 140  | T 168 | Sampling Bituminous Paving Mixtures                                                                                      |
|        | T 329 | Moisture Content of Hot-Mix Asphalt (HMA) by Oven Method                                                                 |
| D 3549 |       | Standard Test Method for Thickness or Height of Compacted Bituminous Paving Mixture Specimens                            |
|        | T 166 | Bulk Specific Gravity of Compacted Bituminous Mixtures Using Saturated Surface Dry Method                                |
| D 2726 |       | Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures                                        |

|        |        |                                                                                                                                                               |
|--------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| D 2041 | T 209  | Theoretical Maximum Specific Gravity and Density of Hot-Mix Asphalt Paving Mixtures                                                                           |
| D 3203 | T 269  | Percent Air Voids in Compacted Dense and Open Asphalt Mixtures                                                                                                |
| D 6857 |        | Maximum Specific Gravity and Density of Bituminous Paving Mixtures Using Automatic Vacuum Sealing Method                                                      |
|        | T 283  | Resistance of Compacted Bituminous Mixtures to Moisture Induced Damage                                                                                        |
|        | T 324  | Hamburg Wheel-Tracking Testing of Compacted Asphalt Mixtures                                                                                                  |
|        | T 340  | Determining Rutting Susceptibility of Hot Mix Asphalt (HMA) Using the Asphalt Pavement Analyzer (APA)                                                         |
|        | T 393  | Determining the Fracture Potential of Asphalt Mixtures Using the Illinois Flexibility Index Test (I-FIT)                                                      |
| D 8044 | T 394  | Determining the Fracture Energy of Asphalt Mixtures Using the Semicircular Bend Geometry (SCB)                                                                |
|        | T 401  | Cantabro Abrasion Loss of Asphalt Mixture Specimens                                                                                                           |
|        | TP 133 | Determining the Damage Characteristic Curve and Failure Criterion Using Small Specimens in the Asphalt Mixtures Performance Tester (AMPT) Cyclic Fatigue Test |
|        | TP 134 | Stress Sweep Rutting (SSR) Test Using the Asphalt Mixture Performance Tester (AMPT)                                                                           |
|        | TP 141 | Determining the Indirect Tensile $N_{flex}$ Factor to Assess the Cracking Resistance of Asphalt Mixtures                                                      |
| D 8225 |        | Standard Test Method for Determination of Cracking Tolerance Index of Asphalt Mixture Using the Indirect Tensile Cracking Test at Intermediate Temperature    |

Table E.2. Preferred (Not Required) Asphalt Binder, Mixture, and Aggregate Tests and Practices

| ASTM Designation | AASHTO Designation | Title                                                                            |
|------------------|--------------------|----------------------------------------------------------------------------------|
|                  | M 81/M 82          | Specification for Cutback Asphalt                                                |
|                  | M 140              | Specification for Emulsified Asphalt                                             |
|                  | M 226              | Specification for Viscosity-Graded Asphalt Cement                                |
| D 7460           | T 321              | Determining Fatigue Life of Compacted HMA Subjected to Repeated Flexural Bending |

|        |       |                                                                                                               |
|--------|-------|---------------------------------------------------------------------------------------------------------------|
| D 6931 | T 322 | Determining the Creep Compliance and Strength of Hot-Mix Asphalt (HMA) Using the Indirect Tensile Test Device |
| D 4123 |       | Standard Test Method for Indirect Tension Test for Resilient Modulus of Bituminous Mixtures                   |
| D 7313 |       | Determining Fracture Energy of Asphalt-Aggregate Mixtures Using the Disk-shaped Compact Tension Geometry      |

- b. Demonstrated experience and working knowledge of the following materials: neat and polymer-modified binders, emulsions, binders modified with polyphosphoric acid (PPA), reclaimed asphalt pavement (RAP) and reclaimed asphalt shingles (RAS) materials, re-refined engine oil bottom (REOB)-modified binders, and binders modified with oils or other recycling agents.
- c. Demonstrated experience and familiarity with performing all the necessary managerial and administrative aspects of conducting laboratory experiments, materials characterization projects, and field demonstration projects. This includes coordinating communication with prospective State highway agencies and industry groups, arrangement for dissemination of information in reports, articles, and refereed journals of a technical nature, as well as the ability to apply new technology.
- d. Demonstrated relationships with asphalt producers, manufacturers, and affiliated businesses. Demonstrated relationships with FHWA, State highway agencies, academia, and other Federal, State, and local government entities.
- e. Demonstrated experience developing and presenting national training on advanced asphalt design and testing systems, preferably with an adult learner focus.

## 2. Indication of Sufficient Resources to Complete Requirements Satisfactorily.

- a. Documented evidence of facilities including laboratory space for necessary testing equipment, specimen fabrication and conditioning, storage, testing, and analysis. Facilities and equipment shall be capable of conducting the procedures in Tables E.1 and, if applicable, Table E.2.
- b. Relevant education and experience of any proposed Program Manager (PM), Principal Investigator(s) (PI), and Senior Engineer(s) (SE) in the Agreement technical areas of asphalt testing. Documented availability and commitment of the PM and PI over the Agreement period is also required.
- c. Diverse network of engineers, technical experts, and subject matter experts throughout the United States, with documentation of which geographic and technical areas are represented by this network of experts. The staffing should include a diverse team with multiple levels of responsibility from management, technical engineering expertise, laboratory technicians, marketing experts, etc.

- d. Documented education, qualifications, and field experience of the proposed staff in the Agreement technical areas of asphalt testing (general/field engineers, and technicians). Documented qualifications and certifications of technicians that will be performing testing. Documented evidence of staff resources to coordinate and conduct laboratory experiments and demonstration field projects, including any proposed subcontractor/sub-recipient entities.
- e. Documented evidence of capabilities to produce technically and aesthetically robust reports, graphics, visual aids, brochures, and marketing tools for use in information dissemination at TFG and TWG meetings, industry conferences, and/or similar events.

### **3. Responsiveness to the Technical Requirements of the Notice of Funding Opportunity.**

- a. Demonstrated completeness of the application in concisely addressing the work to be performed in each task and an overall grasp of the Agreement goals and requirements.
- b. Demonstrated understanding of the necessity of meeting schedule requirements in a timely and professional manner.

**COST:** Relative cost will be considered in the award decision. The budget application will be analyzed to assess cost reasonableness and conformance to applicable cost principles. This evaluation factor will not be rated.

The degree of cost share and leveraging of non-Federal funds will be considered in the award decision. Applicants must provide the required matching funds and supporting detail for these funds. Additional cost sharing will be considered beneficial to break ties among applications with equivalent ratings after evaluation against all other factors.

Funding availability will also be considered in the award decision.

## **2. REVIEW AND SELECTION PROCESS**

FHWA will screen applications received to confirm completeness of the submittal and compliance with NOFO eligibility and application requirements. An application determined to be ineligible, incomplete, and/or non-compliant with the NOFO application requirements may be removed from the competition and from further consideration for award or continued evaluation.

FHWA will utilize the following merit review process to evaluate applications:

A panel of agency experts will evaluate all eligible technical applications using the merit criteria listed above. The panel will individually evaluate the technical applications. The panel will then collectively assign an adjectival rating to each eligible technical application.

Agency personnel from the FHWA Office of Acquisition and Grants Management will evaluate the cost criteria listed above, and conduct a risk assessment of the Applicant, in accordance with 2 CFR 200.206, prior to award as described below.

The Government will select the application that is considered the most advantageous to the Government using the criteria cited above, and subject to funding availability and the results of an Applicant risk assessment as described below. The Government reserves the right to not make an award to an Applicant based on the results of the risk assessment.

The AO is the official responsible for final award selection. The Government is not obligated to make any award as a result of this notice.

Risk Assessment: Prior to award, the selected Applicant will be subject to a risk assessment required by 2 CFR 200.206. If the Federal awarding Agency determines that an award will be made, special conditions that correspond to the degree of risk assessed may be applied to the Federal award in accordance with 2 CFR 200.206.

This Risk Assessment will include evaluation of some or all of the following items relative to the Applicant and sub-applicants as applicable:

- (1) Applicant's financial stability;
- (2) Applicant's quality of management systems and ability to meet the management standards prescribed in 2 CFR Part 200;
- (3) Applicant's history of performance;

Note: History of performance includes the Applicant's record in managing Federal awards, if it is a prior Recipient of Federal awards, including timeliness of compliance with applicable reporting requirements, conformance to the terms and conditions of previous Federal awards, and if applicable, the extent to which any previously awarded amounts will be expended prior to future awards. The Government will evaluate the relevant merits of the Applicant's history of performance based on its reputation and record with its current and former customers with respect to quality, timeliness, and cost control. The history of performance will be reviewed to assure that the Applicant has relevant and successful experience and will be considered in the risk assessment. In evaluating history of performance, the Government may consider both written information provided in the application, as well as any other information available to the Government through outside sources.

- (4) Applicant's audit reports and findings from audits performed on the Applicant pursuant to 2 CFR Part 200 Subpart F — Audit Requirements or the reports and findings of any other available audits;
- (5) Applicant's ability to effectively implement statutory, regulatory, or other requirements imposed on non-Federal entities;
- (6) Applicant's potential for conflict of interest if applicable; and

Note: FHWA will review information provided by the Applicant, and any other relevant information known to FHWA, to determine whether an award to the Applicant may create an actual or potential conflict of interest. If any such conflict of interest is found to exist, FHWA may (a) disqualify the Applicant, or (b) determine that it is otherwise in the best interest of the United States to award to the Applicant and include appropriate provisions to mitigate or avoid such conflict in the agreement pursuant to 2 CFR 200.112.

(7) Applicant's eligibility to receive Federal funding. Per the guidelines on governmentwide suspension and debarment in 2 CFR Part 180, the Government will confirm that the Applicant and any named sub-applicants are not debarred, suspended or otherwise excluded from or ineligible for participation in Federal programs or activities.

**NOTE:** If an Applicant is determined to be high-risk, additional reporting requirements and/or other special conditions may apply to the resulting award to mitigate risks.

### **3. ADDITIONAL INFORMATION**

Pursuant to 2 CFR Part 200.206, prior to making a Federal award, the Federal awarding Agency is required to review information available through any Office of Management and Budget (OMB) designated repositories of governmentwide eligibility qualification or financial integrity information such as Dun & Bradstreet (D&B) and SAM.gov. The Government's review of this information will occur as part of the risk assessment. An Applicant may review information in SAM.gov and comment on any information about itself. The FHWA will consider comments by the Applicant, in addition to other information in SAM.gov, in making a judgment about the Applicant's integrity, business ethics, and record of performance under Federal awards when completing the risk assessment. The FHWA reserves the right to deny an award based on the results of the risk assessment.

### **4. ANTICIPATED ANNOUNCEMENT AND FEDERAL AWARD DATES**

The FHWA anticipates, but does not guarantee, making an award on or about September 22, 2023.

<end of section>

## **SECTION F – FEDERAL AWARD ADMINISTRATION INFORMATION**

### **1. FEDERAL AWARD NOTICES**

If your organization's application is selected for award, you will be notified and sent an award document for signature. Applicants not selected for award will be notified by FHWA.

Notice that an Applicant has been selected for award does not constitute approval of the application as submitted. Before the award, FHWA may initiate negotiations concerning such items as program components, staffing and funding levels, and administrative systems, if necessary. If the negotiations do not result in an acceptable submittal, FHWA reserves the right to terminate the negotiation and decline to fund the Applicant.

Only the AO can commit the FHWA and bind the Federal Government to the expenditure of funds. The award document, signed by the AO, is the authorizing document. Recipients of awards will not receive lump-sum cash disbursements at the time of award announcement or obligation of funds. Instead, FHWA will reimburse Recipients only after a project agreement or award has been executed, allowable expenses are incurred, and valid requests for reimbursement are submitted by the Recipient.

### **2. ADMINISTRATIVE AND NATIONAL POLICY REQUIREMENTS**

All awards will be administered pursuant to the Uniform Administrative Requirements, Cost Principles and Audit Requirements for Federal Awards found in 2 CFR Part 200, as adopted by DOT at 2 CFR Part 1201. Applicable Federal laws, rules and regulations set forth in 23 U.S.C. and 23 CFR and 49 CFR also apply.

#### **GENERAL CLAUSES**

The online clause entitled "General Terms and Conditions for Assistance Award" apply to the resulting award, and are available in full text online at:

<http://www.fhwa.dot.gov/aaa/generaltermsconditions.cfm>

#### **SPECIAL CLAUSES**

In addition to the General Clauses cited above, the following Special Clauses will apply to the resulting award.

##### **A. PUBLIC ACCESS TO DOCUMENTS**

The Applicant agrees that the resulting deliverables/documentation submitted to the FHWA under this Agreement may be posted online for public access and/or shared by FHWA with other interested parties. The FHWA anticipates the documents cited herein may be posted on an FHWA website or another appropriate website.

## B. INDIRECT COSTS

Indirect costs are allowable under this Agreement in accordance with the Recipient's Federally Negotiated Indirect Cost Rates as documented in writing and approved by the Recipient's cognizant Government agency. In the absence of such Government-approved indirect rates, the following rates are hereby approved for use under this Agreement as shown below:

| Type* | Indirect Rate | Period | Rate (%) | Base |
|-------|---------------|--------|----------|------|
|       |               |        |          |      |
|       |               |        |          |      |

\*Types of Rates: Pred - Predetermined; Fixed - Fixed; Final – Final; Prov: Provisional/billing; or De minimus.

In the event the Recipient determines the need to adjust the above listed rates, the Recipient will notify the AO of the planned adjustment and provide rationale for such adjustment. In the event such adjustment rates have not been audited by a Federal agency, the adjustment of rates must be pre-approved in writing by the AO.

This Indirect Cost provision does not operate to waive the limitations on Federal funding provided in this document. The Recipient's audited final indirect costs are allowable only insofar as they do not cause the Recipient to exceed the total obligated funding.

## C. DATA RIGHTS

The Recipient must make available to the FHWA copies of all work developed in performance with this Agreement, including but not limited to software and data. Data rights under this Agreement shall be in accordance with 2 CFR 200.315, Intangible property.

## D. PERSONALLY IDENTIFIABLE INFORMATION (PII)

Personally Identifiable Information (PII) as defined at CFR Part 200.1 at will not be requested unless necessary and only with prior written approval of the AO with concurrence from the Agreement Officer's Representative (AOR).

## E. AVAILABLE FUNDING

The total estimated amount of Federal funding that may be provided under this Agreement is \$\_\_\_\_\_ (to be filled in at award) for the entire period of performance, subject to the limitations shown below:

(1) Currently, Federal funds identified on page 1 of the award document, are obligated to this Agreement.

(2) Subject to availability of funds, and an executed document by the AO, the difference between the current funding and the total estimated amount of Federal funding may be obligated to this Agreement.

(3) The Government's liability to make payments to the Recipient is limited to those funds obligated under this Agreement as indicated above and any subsequent amendments.

#### **F. KEY PERSONNEL**

Pursuant to 2 CFR 200.308(c)(2), the Recipient must request prior written approval from the AO for any change in Key Personnel specified in the award. The following person(s) are/have been identified as Key Personnel:

| <b>Title/Position</b>                          | <b>Name</b>                |
|------------------------------------------------|----------------------------|
| Project Manager                                | [to be filled in at award] |
| Principal Investigator                         |                            |
| <i>[Other staff proposed by the applicant]</i> |                            |
|                                                |                            |
|                                                |                            |

#### **G. PROGRAM INCOME**

Pursuant to 2 CFR 200.307, Program income earned during the Agreement period must be added to the Federal award and used for the purposes and under the conditions of the Federal award, unless otherwise approved by the AO. Program income must not be used to offset the Federal or Recipient contribution to this project.

#### **H. SUBAWARDS**

Unless described in the application and funded in the approved award, the Recipient must obtain prior written approval from the AO for the subaward, transfer, or contracting out of any work under this award. This provision does not apply to the acquisition of supplies, material, equipment, or general support services.

The following subawards and/or subcontracts are currently approved under the Agreement:

(\*\*to be filled in at time of award\*\*)

Approval of a new subaward/subcontract is contingent on approval by the AO for each proposed sub-recipient/subcontractor. Consent to enter into a new subaward/subcontract will be issued through a formal amendment to the Agreement.

## **I. ORDER OF PRECEDENCE**

The Recipient's technical and budget applications are accepted, approved, and incorporated herein as Attachments A and B. In the event of any conflict between this Agreement document and the Recipient's proposal and/or application, this Agreement document shall prevail.

## **J. DESIGNATION AS RESEARCH OR NON-RESEARCH AGREEMENT**

This Agreement is designated as: NON-RESEARCH

## **K. CONFERENCE SUPPORT RESTRICTIONS**

The Recipient must obtain written approval from the AOR prior to incurring any costs for conference support. See the definition of conference as contained in 2 CFR 200.432.

Food and beverage costs are not allowable conference expenses for reimbursement under this Agreement.

Note: Costs of meals are allowable as a travel per diem expense for individuals on travel status and pursuant to the Travel clause of this Agreement.

## **L. DISPUTES**

The parties to this Agreement will communicate with one another in good faith and in a timely and cooperative manner when raising issues under this provision. Any dispute, which for the purposes of this provision includes any disagreement or claim, between the FHWA and the Recipient concerning questions of fact or law arising from or in connection with this Agreement and whether or not involving alleged breach of this Agreement, may be raised only under this Disputes provision.

Whenever a dispute arises, the parties will attempt to resolve the issues involved by discussion and mutual agreement as soon as practical. In no event will a dispute which arose more than three months prior to the notification made under the following paragraph of this provision constitute the basis for relief under this article unless FHWA waives this requirement.

Failing resolution by mutual agreement, the aggrieved party will document the dispute by notifying the other party in writing of the relevant facts, identify unresolved issues and specify the clarification or remedy sought. The AO will conduct a review of the matters in dispute and render a decision in writing within thirty calendar days of receipt of such written request. Any decision of the AO is final and binding unless a party will, within thirty calendar days, request further review as provided below.

Upon written request to the FHWA Director, Office of Acquisition and Grants Management or designee, made within thirty calendar days after the AO's written decision or upon unavailability of a decision within the stated time frame under the preceding paragraph, the dispute will be further

reviewed. This review will be conducted by the Director, Office of Acquisition and Grants Management or designee. Following the review, the Director, Office of Acquisition and Grants Management or designee, will resolve the issues and notify the parties in writing. Such resolution is not subject to further administrative review and to the extent permitted by law, will be final and binding. Nothing in this Agreement is intended to prevent the parties from pursuing disputes in a United States Federal Court of competent jurisdiction.

#### **M. CLOSEOUT OF AGREEMENT FILE**

The Government will initiate the administrative closeout of the Agreement after receiving evidence that all technical work and administrative requirements have been completed. The Recipient shall furnish all required documents in support of the closeout of the Agreement within the timeframes requested by the Government. The Government anticipates the timeframe to complete administrative close out of this Agreement will not exceed six (6) months.

#### **N. TRAVEL**

Travel and per diem authorized under the cooperative agreement will be reimbursed in accordance with the travel costs section of 2 CFR 200.475.

#### **O. PROGRAM REQUIREMENTS**

In connection with any program or activity conducted with or benefiting from funds awarded under this notice, recipients of funds must comply with all applicable requirements of Federal law, including, without limitation, the Constitution of the United States; the conditions of performance, nondiscrimination requirements, and other assurances made applicable to the award of funds in accordance with regulations of the Department of Transportation; and applicable Federal financial assistance and contracting principles promulgated by the Office of Management and Budget. In complying with these requirements, recipients, in particular, must ensure that no concession agreements are denied or other contracting decisions made on the basis of speech or other activities protected by the First Amendment. If the Department determines that a recipient has failed to comply with applicable Federal requirements, the Department may terminate the award of funds and disallow previously incurred costs, requiring the recipient to reimburse any expended award funds.

In particular, Executive Order 14005 directs the Executive Branch Departments and agencies to maximize the use of goods, products, and materials produced in, and services offered in, the United States through the terms and conditions of Federal financial assistance awards. If selected for an award, grant recipients must be prepared to demonstrate how they will maximize the use of domestic goods, products, and materials in constructing their project. Any grant projects involving vehicle acquisition must involve only vehicles that comply with applicable Federal Motor Vehicle Safety Standards and Federal Motor Carriers Safety Regulations, or vehicles that are exempt from Federal Motor Vehicle Safety Standards or Federal Motor Carrier Safety Regulations in a manner that allows for the legal acquisition and deployment of the vehicle or vehicles.

## 1. Critical Infrastructure Security and Resilience

It is the policy of the United States to strengthen the security and resilience of its critical infrastructure against both physical and cyber threats. Each applicant selected for funding under this notice 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 for construction, consistent with Presidential Policy Directive 21 - Critical Infrastructure Security and Resilience and the National Security Presidential Memorandum on Improving Cybersecurity for Critical Infrastructure Control Systems.

## 2. Civil Rights and Title VI

As a condition of a grant award, grant 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 Part 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. FHWA's Office of Civil Rights may work with awarded grant recipients to ensure full compliance with Federal civil rights requirements.

## 3. Performance and Program Evaluation

As a condition of grant award, grant recipients may be required to participate in an evaluation undertaken by DOT or another agency or partner. The evaluation 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. DOT may require applicants to collect data elements to aid the evaluation. As a part of the evaluation, as a condition of award, grant recipients must agree to: (1) make records available to the evaluation contractor or DOT 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 evaluation procedures as specified by the evaluation contractor or DOT staff.

Recipients and subrecipients are also encouraged to incorporate program evaluation 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 evaluation as a critical tool to learn, to improve equitable delivery, and to elevate program service and delivery across the program lifecycle. Evaluation 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. Credible program evaluation activities are implemented with relevance and utility, rigor, independence and objectivity, transparency, and ethics (OMB Circular A-11, Part 6 Section 290).

For grant recipients receiving an award, evaluation costs are allowable costs (either as direct or indirect), unless prohibited by statute or regulation, and such costs may include the personnel and equipment needed for data infrastructure and expertise in data analysis, performance, and evaluation, (2 CFR Part 200).

### 3. REPORTING REQUIREMENTS

NOTE: To ensure accountability and transparency in Government spending, FHWA wants to document implementation of technologies through performance measures. Applicants may propose performance measures specific to tasks in the Work Plan or for technologies within the Work Plan for FHWA approval. FHWA reserves the right to include performance metrics tailored to specific tasks in any Work Plans developed under the Agreement.

#### A. ADDRESSES FOR SUBMITTAL OF REPORTS AND DOCUMENTS

The Recipient shall submit all required reports and documents, under transmittal letter referencing the Cooperative Agreement number, as follows:

Submit an electronic copy to the Agreement Specialist at the following address:

[Angela.Jones@dot.gov](mailto:Angela.Jones@dot.gov)

Submit one electronic copy to the AOR at the following address: TBD, (**\*\*to be filled in at award\*\***).

#### B. QUARTERLY PROGRESS REPORT

The Recipient must submit a progress report to the AOR and the Agreement Specialist/AO on or before the 30th of the month following the calendar quarter being reported. Final progress reports are due 90 days after the end of the agreement period of performance.

|                                   |                           |
|-----------------------------------|---------------------------|
| Calendar quarters are defined as: | Reports due on or before: |
|-----------------------------------|---------------------------|

|                         |              |
|-------------------------|--------------|
| 1st: January – March    | April 30th   |
| 2nd: April – June       | July 30th    |
| 3rd: July – September   | October 30th |
| 4th: October – December | January 30th |

The quarterly progress report must include the required certification pursuant to 2 CFR 200.415.

Quarterly Progress Reports shall include the following:

- a. Work performed for the current quarter;
- b. Work planned for the upcoming quarter;
- c. Description of any problem encountered or anticipated that will affect the completion of the work within the time and fiscal constraints as set forth in the agreement, together

- with recommended solutions to such problems; or, a statement that no problems were encountered; and
- d. A tabulation, clearly delineated by Federal share, cost share and total, of the current and cumulative costs expended by cost element (labor, travel, indirect costs, sub-recipient/subcontractor, etc.) by quarter versus budgeted costs; and
  - e. Budget revisions.

With the progress report, include the following information as attached pages:

- SF-425, Federal Financial Report, and
- SF-425A, Federal Financial Report Attachment (if applicable).

### **C. RECIPIENT INTEGRITY AND PERFORMANCE MATTERS**

In accordance with 2 CFR 200.211 and 2 CFR Part 200, Appendix XII, if the total value of your 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 you as the recipient during that period of time must maintain the currency of information reported to the System for Award Management (SAM) that is made available in the designated integrity and performance system (currently the Federal Awardee Performance and Integrity Information System (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.

### **D. ANNUAL BUDGET REVIEW AND PROGRAM PLAN**

The Recipient will submit an electronic copy of the Annual Budget Review and Program Plan to the AOR and one electronic copy to the Agreement Specialist 60 days prior to the anniversary date of this agreement. The Annual Budget Review and Program Plan must include the required certification pursuant to 2 CFR 200.415. The Annual Budget Review and Program Plan will provide a detailed schedule of activities, an estimate of specific performance objectives, forecasted expenditures, and a schedule of milestones for the upcoming year. If there are no proposed deviations from the Approved Project Budget, the Annual Budget Review will contain a statement stating such. The Recipient will meet via teleconference or web conference with FHWA to discuss the Annual Budget Review and Program Plan. Work proposed under the Annual Budget Review and Program Plan will not commence until Agreement Officer's written approval is received.

<end of section>

## **SECTION G – FEDERAL AWARDING AGENCY CONTACTS**

Address any questions to: [Angela.Jones@dot.gov](mailto:Angela.Jones@dot.gov)

Secondary point of contact is: [Hector.Santamaria@dot.gov](mailto:Hector.Santamaria@dot.gov)

## **SECTION H – OTHER INFORMATION**

### **1. 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 application includes information you consider to be a trade secret or confidential commercial or financial information, the Applicant should do the following: (1) Note on the front cover that the submission "Contains Confidential Business Information (CBI)," (2) mark each affected page "CBI," and (3) highlight or otherwise denote the CBI portions.

### **2. PUBLICATION/SHARING OF APPLICATION INFORMATION.**

Following the completion of the selection process and announcement of awards, FHWA intends to publish a list of all applications received along with the names of the applicant organizations and funding amounts requested.