

***Federal Grant Opportunity
Request for Applications (RFA)
Executive Summary***

Federal Agency Name: U.S. Department of Transportation
Federal Highway Administration
Office of Acquisition Management
1200 New Jersey Avenue SE
Mail Drop: E65-101
Washington DC 20590

Funding Opportunity Title: Attn: Eric Robinson, HAAM-20D
“Deployment of Detection-Control System (D-CS)
Algorithm into Different Signal Controller
Platforms – Signal Controller Manufacturers”

Announcement Type: This is the initial announcement of this funding
opportunity.

Funding Opportunity Number: RFA Number: DTFH61-12-RA-00017

**Catalog of Federal Domestic Assistance
(CFDA) Number:** 20.200

Dates: RFA Issue Date is July 31, 2012
RFA Questions end date is August 15, 2012
Application Due Date/Time is August 28, 2012
at 4:00PM Eastern Time (ET)

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NOTE: FHWA uses www.Grants.gov for receipt of all applications. Applicants must register with www.Grants.gov and use the system to submit applications electronically. **Applicants are encouraged to register with www.Grants.gov in advance of the submission deadline and to register to receive notifications of updates/amendments to the RFA. It is the Applicant’s responsibility to monitor www.Grants.gov for any updates to the RFA.**

SECTION I - FUNDING OPPORTUNITY DESCRIPTION

A. STATEMENT OF PURPOSE

The Federal Highway Administration (FHWA) is accepting applications for an estimated five cooperative agreements to awardees (“Recipients”) to develop and produce qualified Detection-Control System (D-CS) Algorithm into different signal controller platforms. The purpose of this effort is to build upon previous work in the areas of interest to FHWA and to strive to reduce traffic fatalities.

This effort will include partnering with FHWA, State Departments of Transportation, industry, and academia. This effort will also include the development of D-CS implementation specification, verification procedure, and training course.

B. LEGISLATIVE AUTHORITY

The authority to award a cooperative agreement for this effort is found in 23 USC 502(b):

(b) General Authority.—

(1) Research, development, and technology transfer activities.—The Secretary may carry out research, development, and technology transfer activities with respect to—

(A) motor carrier transportation;

(B) all phases of transportation planning and development (including construction, operation, transportation system management and operations, modernization, development, design, maintenance, safety, financing, and traffic conditions); and

(C) the effect of State laws on the activities described in subparagraphs (A) and (B).

(2) Tests and development.—The Secretary may test, develop, or assist in testing and developing any material, invention, patented article, or process.

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

(A) independently;

(B) in cooperation with other Federal departments, agencies, and instrumentalities and Federal laboratories; or

(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.

C. BACKGROUND

Between 2005 and 2009, intersection-related crashes were responsible for approximately 21 percent of total traffic fatalities. In 2009, 61 percent of intersection-related fatalities occurred at arterial or expressway intersections, 32 percent occurred at signalized intersections, and 44

percent were right angle crashes. The vast majority of the crashes happened under clear weather and good visibility, indicating traffic control violations such as running a red light or a stop sign were probable contributors.

The Detection-Control System (D-CS) is a dilemma zone protection technology developed by the Texas Transportation Institute (TTI) for isolated, rural, high speed signalized intersections. The D-CS design requires a speed trap on each lane located 800-1000 ft upstream of the intersection stop bar. The system monitors the approaching vehicles on a lane-by-lane basis and assigns different weights to trucks and cars based on vehicle length. After receiving a service call from the minor approach, it uses the vehicle speed and length information detected by the speed traps to predict the best time to terminate the major approach green phase. D-CS employs a 2-stage gap out strategy. In Stage 1 mode, it predicts a future time when there will be no vehicles in the dilemma zone. If traffic volume is high and Stage 1 criteria cannot be satisfied within the pre-set phase 1 duration, the system enters Stage 2 mode, in which it predicts a future time that allows at most one passenger car on each lane in the dilemma zone as a gap out condition, but no trucks. Here trucks are defined as any vehicle longer than 25 ft. If no safe gap out condition can be found during the pre-set Stage 2 period (the maximum allowable green duration has been reached), then the signal control will abruptly terminate the major approach green phase regardless of whether there are vehicles in the dilemma zone in order to serve vehicles from the minor approach. This phenomenon is called max-out.

The FHWA partnered with four States to deploy and evaluate the D-CS technology at eight sites. Before and after field data analyses showed that after activation of the D-CS algorithm there were an average 82 percent fewer red light violations, 73 percent fewer vehicles caught in the dilemma zone, and 51 percent fewer max-outs during major approach through phases as compared to the “before” periods. These results were derived from analyzing 3-5 hours each of before and after data from the eight evaluation sites. Earlier field evaluations conducted by TTI showed similarly promising results.

In this solicitation, FHWA seeks applications from signal controller manufacturers to implement the D-CS algorithm into their signal controller products and to make this technology available to all States in the United States of America at an affordable cost. FHWA will provide the D-CS design specifications and verification plans (the verification plans will be developed under a separate contract).

D. Objectives

The objectives of this agreement are as follows:

- Implement D-CS design specifications into signal controller platforms that represent the future trends in signal controller technologies, and support the latest industry and communication standards.
- Develop low cost approaches to retrofit in-service signal controllers that have a large installation base and at least 5-year remaining service life.

- Make this technology available to all agencies at an affordable cost*.

*: It is anticipated that newer controllers can be enabled to run the D-CS algorithm through firmware upgrade, while legacy platforms may not support firmware upgrades. Since the Government is funding the development cost for firmware and/or hardware upgrades, it is desired to keep the retrofitting unit cost under \$300.00 for end users. The recipient may suggest different prices and explain the reasons.

E. STATEMENT OF WORK

The recipient will conduct the following tasks to achieve the objective of the cooperative agreement.

Task 1 – Help Prioritize Signal Controller Platforms for D-CS Implementation

FHWA will select a third party independent contractor (through a separate contract) with expertise in dilemma zone protection, signal controller standards and firmware design and testing to develop D-CS implementation design specifications and verification plans. The recipient will participate in facilitated discussions hosted by FHWA to provide inputs about the installations and sales trends of their signal controller products, and in what ways their controllers may be retrofitted to possess the D-CS functionalities. Representatives from State and local transportation agencies will also be invited to attend the facilitated discussions. The purpose of these discussions is to gather inputs from the signal controller manufacturers and end users on:

- What types of signal controller platforms should be retrofitted.
- How they might be retrofitted.
- What might be the cost ranges of different retrofitting approaches.

Based on the above inputs and other assessments, the Government will approve up to three signal controller platforms from each manufacturer for D-CS implementation.

The Government plans to bring representatives from all selected recipients as well as State and local transportation agencies together to the facilitated discussions. Facilitated discussions are estimated to occur within 4-8 weeks after effective date. The recipient may suggest alternative ways to participate in the need identification process.

Task 2 - Develop Work Plan

After determining the signal controller platforms to be selected for D-CS implementation, the recipient will develop a work plan outlining the following:

1. Staffing resources and budget to be devoted to each of the remaining tasks.
2. Anticipated locations for deploying D-CS enabled signal controllers as part of this cooperative agreement.

The plan will identify possible risks that might prevent the timely completion of the planned tasks, and describe management approaches for addressing the risks.

The draft work plan will be submitted within 12 weeks after award of the agreement. The Government reserves two weeks to provide comments. The recipient will submit a final plan within 2 weeks after receipt of comments from the Government.

DELIVERABLES: Draft work plan and final work plan.

Task 3 – Assist In Developing Design Specifications for D-CS Implementation

The Government desires to have developed unified D-CS implementation design specifications that can be used by all manufacturers. The design specifications will include the following:

1. **Minimum Level of Vehicle Detection:** The design will clearly define the minimum level of vehicle detection on major and minor approaches for D-CS application.
2. **Controller Processing Power:** The design will specify the minimum required processing power a signal controller must possess for consideration of D-CS implementation, considering the number of detectors required for D-CS.
3. **No Discrimination of Vehicle Detection Technologies:** The design will specify only the latency and accuracy requirements of vehicle detection, and allow for the interchange and mixed use of different vehicle detection technologies at the same intersection.
4. **Unified Signal Phase To Speed Trap Mappings:** The design will present a unified signal phase to speed trap mapping using an intersection layout diagram. This mapping assigns a unique ID to each speed trap located on designated lanes for D-CS application. It is intended to:
 - simplify the firmware coding process
 - simplify lab validation
 - simplify future algorithm update
 - simplify the field configuration process when deploying D-CS

The Government desires to have one unified speed trap mapping for all platforms. However, if this is not feasible, one unified mapping for each platform is acceptable.

5. **Unified Data Structure Of Vehicle Information:** The design will define a unified data structure for conveying the vehicle detection results to the signal controller. The intent is to facilitate the switching of vehicle detection technologies in the future. When a new vehicle detection technology achieves required accuracy, correct configuration to output allows the vehicle detection results in the unified data structure format, without visible switching or requiring change to the D-CS codes. If this requirement is un-realistic for certain types of (legacy) signal controllers, the recipient will provide the Government the reason, and suggest alternative approaches to this requirement.
6. **D-CS MODULE:** The design will provide a flow chart showing the D-CS computation and decision making processes, the sequence of phase termination, and the recommended approach to handle max-out if no suitable gap could be found within the maximum green

period. The design will provide the option for users to define different sets of D-CS parameters for different traffic demand patterns, and automatically select the proper set of D-CS parameters based on the actual traffic condition. This requirement is mandatory for newer (firmware upgradable) controllers, and desirable for legacy controllers. If the current state of knowledge warrants it, it is desirable to develop a D-CS parameter setting algorithm that will automatically adjust the values of minimum green and maximum green, and the durations of Stage 1 and Stage 2 modes based on the previous 15 minutes traffic demand data collected from the field (dynamic setting of D-CS parameters).

7. Diagnose and failure handling: The design will specify a module that periodically detects the status of each speed trap. When the failure of one or more speed traps is detected, the D-CS module will communicate the detection results to dedicated recipients, and activate pre-defined signal timing plans.

The recipient will collaborate with other recipients and with the third party independent contractor to help formulate realistic design specifications that streamline the coding and validation of D-CS implementation (especially future enhancements) into different signal controller platforms.

Task 3 will be completed within 6 months after the award of the agreement.

Deliverables: Review and comment on the draft D-CS design specifications, agreement on the final unified design specifications (or exceptions thereto).

Task 3 deliverable will be completed by a third party independent contractor. However, each selected signal controller manufacturer must review, and confirm the specifications are implementable in their line of products. It may take the technical panel 1 month to review and comment on it. Final due date may be 1 month after receiving Government feedback

Task 4 – Assist In Developing the Verification Plans

The verification plan will be developed by the third party independent contractor. However, objective inputs from the recipient is crucial in developing complete yet practical verification plans that can be used by all recipients to perform in-house validation before sending out the product for official verification testing.

The recipient will:

- attend the verification plan meeting made by the independent contractor at a date and location to be determined;
- critically assess the practicality of each unit verification step and the completeness of the overall verification plan;
- offer inputs for improvements and whether the prescribed verification procedures can be carried out by the recipient.

Task 4 is to be completed within 9 months after the effective date of the agreement.

Deliverables: Participation in the presentation meeting(s), comments and inputs regarding the

practicality and completeness of the verification plans.

Task 5 – Implement D-CS Design Specifications

The recipient will implement the D-CS design specifications into the approved signal controller platforms. The implementation team will include dedicated developer(s) and tester(s).

After implementing the D-CS design specifications into an approved signal controller platform, the recipient will conduct in-house testing to verify if all design specifications are implemented correctly, and document the internal testing procedures and the scenario data used. If satisfied with the internal validation results, the recipient will arrange with the Government for third party independent contractor verification testing. For each completed product, please allow 4 weeks for the third party independent contractor to complete the verification testing. The recipient is responsible for providing the necessary equipment (including the cabinet) to allow proper access to their signal controller products by the third party independent contractor. If the tests show non-compliance to the design specifications, the product will be returned to the recipient for correction. For each approved type of signal controller, the Government will cover the cost of one complete verification test, and the recipient will be responsible for additional verification tests.

The Government estimates it may take, on average, 3 months to implement the D-CS design specifications for each selected type of signal controller, and up to 9 months to implement the D-CS design specifications into 3 different types of signal controllers if the work will be done in sequence. The recipient may choose to implement the D-CS design specifications into multiple platforms simultaneously if sufficient staff is available.

Task 5 will be completed within 18 months after the effective date of the agreement.

DELIVERABLES: D-CS enabled signal controllers, and test inputs/outputs for each completed product.

Task 6 – Develop User Manuals and Product-Specific Training Material

The third party contractor will be responsible for the development of a marketing video and Two training Modules 1 and 2. The marketing video and Training Module 1 both target decision makers. They each cover the following content:

1. The relevant safety problems occurring at the rural isolated signalized intersections.
2. The concept of D-CS and how D-CS can improve safety while not compromising mobility.
3. Suitable site conditions for D-CS deployment
4. Verified operational and safety benefits of D-CS
5. Public and private partners involved in this project
6. Contact information for requesting brochure, training, and participation of the deployment project.

The target audience for Training Module 2 is intended for practitioners who are expected to perform the field work. The audience of Training Module 2 can be assumed to have acquired knowledge covered in training Module 1. Training Module 2 will cover these key contents:

1. How to evaluate the site specific conditions (intersection geometrical layout, traffic demand pattern, traffic accident history, documented operational and safety issues, etc.) to determine if deploying D-CS will make a positive impacts.
2. How to specify accuracy and latency requirements when considering candidate vehicle detection technologies.
3. Explain the parts and material needed for retrofitting different types of signal controllers and the associated costs.
4. How to calibrate vehicle length and speed in the field.
5. How to determine proper D-CS parameters based on given traffic condition.
6. How to set up the signal controller in the field for D-CS mode.
7. Suggest approaches to monitor, record, and evaluate the field performance of D-CS.
8. Additional contents as necessary.

It is anticipated that different signal controller products may have slightly different interfaces/procedures for setting up the D-CS module in the field (it is desired that such differences are as little as possible). The recipient will develop a user manual for each type of D-CS enabled signal controller, using illustrations and text to describe the step-by-step procedures of entering the D-CS parameters through the controller panel. The recipient will also develop product specific training content for their products not covered in Training Module 2 to be developed by the third party independent contractor. The suggested duration of such product specific training content is 10-15 minutes per product.

Task 6 is expected to be completed within 20 months after the effective date of the award.

DELIVERABLES: Marketing Video and Training Module 1, Training Module 2 User Manual for each type of D-CS enabled signal controller.

Task 7 – Deploy D-CS Enabled Signal Controllers and Conduct Technical Training

For each type of D-CS enabled signal controller, the recipient will contact existing users to inform them of project objectives and seek cooperation to identify 5-10 sites for D-CS deployment. The participating transportation agencies will be responsible for the cost of installing vehicle detectors, and the recipient will be responsible for retrofitting the signal controllers using cooperative agreement funds. During the deployment phase, the recipient is required to conduct a minimum of three technical training sessions covering Training Modules 1 and 2, and its own product specific training content to State/local agencies.

As deployments of D-CS systems are completed, the recipient will provide the Government in tabular format a detailed list of the intersections where D-CS enabled controllers were deployed. For each site, the table should provide:

- Local contact information
- Date when D-CS was activated
- Type(s) of vehicle detector(s) used. Additionally,
- Sketch of each site showing the intersection geometric layouts,
- Locations of vehicle detectors,
- Post speeds,
- Traffic volumes,

- D-CS parameters used.

Task 7 will be completed within 24 months after the effective date of the agreement.

Task and Deliverables	DueTimes (from effective date of award)
Task 1: Facilitated Discussions	4-8 weeks
Task 2: Develop work plan	
Subtask 2A: draft work plan	12 weeks
Subtask 2B: submit final work plan	16 weeks
Task 3: Assist In Developing Design Specifications for D-CS Implementation	
Subtask 3A: Review and comment on draft D-CS design specs	20 weeks
Subtask 3B: agree on final unified design specs	24 weeks
Task 4: Assist In Developing the Verification Plans	
Subtask 4A: Attend Verification plan meeting	TBD
Subtask 4B: Comments and inputs of verification plans	36 weeks
Task 5: Implement D-CS Design Specifications	72 weeks
Task 6: Develop User Manuals & Product-Specific Training Material	80 weeks
Task 7: Deploy D-CS Enabled Signal Controllers and Conduct Technical Training	96 weeks

NOTE: The Paperwork Reduction Act of 1995 (PRA): Any activities involving information collection (i.e., paper or web-based surveys, questionnaires, etc) from 10 or more non-Federal entities, including States, are subject to PRA requirements and may require the USDOT to coordinate an OMB Information Collection Clearance, a process that generally takes eight months. The Contractor shall coordinate with the COTR on this process.

F. SECTION 508 OF THE REHABILITATION ACT OF 1973

While the requirements of Section 508 of the Rehabilitation Act of 1973, as amended, do not apply to assistance agreements, the FHWA is subject to the Act's requirements that all documents posted on an FHWA or FHWA-hosted website comply with the accessibility standards of the Act. Accordingly, final deliverable reports prepared under this agreement and submitted in electronic format must be submitted in a format whereby FHWA can easily meet the requirements of Section 508 of the Rehabilitation Act of 1973, as amended.

NOTE: Quarterly Progress Reports and financial reports are not considered final deliverables and therefore the following requirements do not apply.

All final reports prepared under this agreement and the website required under this agreement must meet the requirements of Section 508 of the Rehabilitation Act of 1973, as amended. The

Act requires that all electronic products prepared for the Federal Government be accessible to persons with disabilities, including those with vision, hearing, cognitive, and mobility impairments. View [Section 508 of the Rehabilitation Act \(http://www.access-board.gov/508/508standards.htm - PART 1194\)](http://www.access-board.gov/508/508standards.htm) and the [Federal IT Accessibility Initiative Home Page \(http://section508.gov\)](http://section508.gov) for detailed information. The following paragraphs summarize the requirements for preparing FHWA reports in conformance with Section 508 for eventual posting by FHWA to an FHWA-sponsored website.

Electronic documents with images

Provide a text equivalent for every non-text element (including photographs, charts and equations) in all publications prepared in electronic format. Use descriptions such as “alt” and “longdesc” for all non-text images or place them in element content. For all documents prepared, vendors must prepare one standard HTML format as described in this statement of work AND one text format that includes descriptions for all non-text images. “Text equivalent” means text sufficient to reasonably describe the image. Images that are merely decorative require only a very brief “text equivalent” description. However, images that convey information that is important to the content of the report require text sufficient to reasonably describe that image and its purpose within the context of the report.

Electronic documents with complex charts or data tables

When preparing tables that are heavily designed, prepare adequate alternate information, so that assistive technologies can read them out. Identify row and column headers for data tables. Provide the information in a non-linear form. Markups shall be used to associate data cells and header cells for data tables that have two or more logical levels of row and column headers.

Electronic documents with forms

When electronic forms are designed to be completed on-line, the form shall allow people using assistive technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.

SECTION II – AWARD INFORMATION

A. FUNDING

FHWA anticipates Federal funding up to total amount of \$500,000 may be made available for an estimated five cooperative agreement Awards subject of the availability of funds:

Application preparation costs are not an allowable charge under this agreement.

B. COST SHARING OR MATCHING

Federal Share of the cost of activities shall be 50 percent as stated in P.L. 109-59 sec 5101(a)(1) .

C. NUMBER OF AWARDS ANTICIPATED

FHWA anticipates making an estimated 5 awards from this RFA.

D. PERIOD OF PERFORMANCE

The period of performance for this cooperative agreement will be a twenty four (24) months commencing from the effective date of the agreement.

The U.S. DOT/FHWA anticipates the effective date of this agreement will be on or about September 21, 2012.

E. DEGREE OF FEDERAL INVOLVEMENT

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

- 1) Technical assistance and guidance;
- 2) Close monitoring during performance;
- 3) Participation in kick off and status meetings, and meetings identified in the Statement of Work
- 4) Facilitating annual budget review;
- 5) Testing for compliance with requirements
- 6) Provision of documents and other technology transfer materials;
- 7) Facilitate coordination with identified key partners.

F. TYPE OF AWARD

FHWA intends to award an estimated 5 cooperative agreements as the result of this RFA.

SECTION III - ELIGIBILITY INFORMATION

A. ELIGIBLE APPLICANTS

Competition is open to all qualified applicants.

SECTION IV – APPLICATION AND SUBMISSION INFORMATION

A. APPLICATION FORMS

Applicants will complete all forms included in the Application Package for this RFA as contained at www.grants.gov. Applicants will submit the Application Package online at www.grants.gov.

B. CONTENT AND FORM OF APPLICATION SUBMISSION

Note: Applications under this RFA are not subject to the State review under E.O. 12372.

The application package will consist of the following in this order:

- SF424 (**Note: Applicants may leave 5a, 5b, 6, 7, 13 and blank on the form.**)
 - SF424A (**Note: Section A: block 1(a) print opportunity title listed on page 1; block 1(b) print the CFDA number listed on page 1; block 1(c) print \$ Total Federal Funds Requested; block 1(d) print \$ Total Cost Share = \$0, and leave blank columns (e), (f), and (g) and rows 2, 3, and 4.**)
 - SF424B
 - SF-LLL (**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.**)
 - Grants.gov Lobbying Form
 - Attachments:
- 1) **Volume 1 – Technical Application** as described below: - 30 double spaced pages maximum
 - Part I Technical and Management Approach
 - Part II Staffing Approach
 - Part III Resources
 - Part IV Past Performance
 - 2) **Volume 2 – Budget Application** as described below - no page limit
 - Part I Cost/Price Information
 - Part II Other Financial Information
 - Submit your application in the following format. Volumes 1 and 2 shall be submitted in the following format. Applications will be prepared on 8½ x 11 inch paper except for foldouts used for charts, tables or figures, which will not exceed 11 x 17 inches. Foldouts will not be used for text, and will count as two pages.
 - A page is defined as one side of an 8 ½ by 11 inch paper. Therefore, a piece of paper with printing on both sides is considered two pages.
 - Text will be printed using the Times New Roman, and with no less than 12 cpi.
 - Page margins will be a minimum of 1 inch top, bottom and each side.
 - Pages shall be number consecutively starting with the first page.

- No cost/price data will be included in Part I.

Volume 1 - Technical Application

Technical applications must contain:

Part I - Technical and Management Approach

The application will include a program narrative statement that describes the technical and management approach.

- a. Describe how you would proceed if awarded this agreement and how you propose to meet the program objectives, activities, and the anticipated outcomes.
- b. Describe your signal controller products and their installation bases. Explain what signal controller products you would recommend for D-CS implementation, how they may be retrofitted, and your estimate of reasonable unit retrofitting cost to the end users based on perceived level of effort and investment
- c. Highlight the qualifications of the proposed team members relevant to their proposed tasks, and their experience in implementing third party algorithm and industry standards into signal controller products.
- d. Outline the technical approaches that you will use to bring the products to the customers at affordable cost.
- e. Describe back up plan to accommodate delays/problems to complete the required work within the proposed schedule and cost.
- f. Provide support letters from state/local transportation agencies indicating their willingness to support this project, and the potential number of sites that they may identify for D-CS deployment.
- g. Propose a travel plan commensurate with the technical proposal.
- h. Include a list of published and unpublished literature in preparation of the application.

Part II - Staffing Approach:

- a. Provide a program organizational chart identifying proposed staff members assigned to the project by activity. Include the title and a brief description of each position's responsibilities, as well as the proposed level of effort and allocation of time for each position. Provide the level of effort for each position for each activity for each year within the period of performance. Identify your Key Personnel.
- b. Provide brief tailored resumes for the proposed Program Manager and other Key Personnel to include name, relevant experience, relevant education, and proposed role in project. (**Note:** resumes **do** count against the designated page limitations.)

Part III – Resources:

- a. Facilities, equipment, software, information, etc. to meet the objectives of the RFA and are located to efficiently and effectively support the accomplishment of the work. The facilities, equipment, software, information, etc. are available to perform the work satisfactorily and on schedule.

Part IV - Past Performance:

- a. Provide a minimum of three current (within the last five years) or completed references from different customers (commercial and/or Government) for projects involving similar or related services. Provide customer name, point of contact, title, contact information (Email and phone number), project title, project duration, project value, and how it relates to the program objectives of this RFA. The Government may contact the customer point of contact for verification and to obtain past performance information. Contact information must be accurate and current.

Volume 2 - Budget Application

***Note:* There is no page limit on budget applications.**

Part I – Cost Information and Other Financial Information

Provide a separate detailed budget plan for each year, and then summarized for all years for all Activities. Spreadsheets can be formatted similarly to the format in DOT Form 4220.44 located at: http://www.fhwa.dot.gov/aaa/pdfs/frm4220_44.pdf.

The detailed budget plan will consist of addressing each of the following items/subitems:

1. Detailed spreadsheet and supporting information clearly delineating and supporting all estimated costs by Activity (per year and in summary form) as follows:
 - a. Provide labor categories, labor hours (or percentage of time), labor rates.
 - b. Provide indirect rates and bases, include any audit information to support rates (for example, a copy of signed Department of Health of Human Services rate agreement).
 - c. Provide supporting information to justify estimates that are different than those suggested in Attachment A, Estimated Level Of Effort costs such as Travel, Equipment/Material, Other Direct Costs (ODCs), etc.

Note: Travel will be reimbursed at cost in accordance with the Federal Travel Regulations in effect at the time of travel.
2. Identify any exceptions to the anticipated award Administrative Information in Section VI. Identify any preexisting intellectual property that you anticipate using during award performance, and your position on its data rights during and after the award period of performance.
3. If sub-recipients (lower-tiered organizations and/or individual consultants) will be used in carrying out this project, the following minimum information concerning such, should be furnished:
 - a. Name and address of the organization or consultant.
 - b. Description of the portion of work to be conducted by the organization or consultant.
 - c. Cost details for that portion of work.
 - d. Letter of commitment from sub-recipient.
4. The use of a Dun and Bradstreet (D&B) Data Universal Numbering System (DUNS) number is required on all applications for Federal grants or cooperative agreements. Please provide your organization's DUNS number in your budget application.

5. A statement to indicate whether your organization has previously completed an A-133 Single Audit and, if so, the date that the last A-133 Single Audit was completed.
6. Include a statement to indicate whether a Federal or State organization has audited or reviewed the applicant's:
 - a. accounting system,
 - b. purchasing system, and/or
 - c. 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.

7. Terminated cooperative agreements or contracts - List any cooperative agreements or contracts that were terminated for convenience of the Government within the past 3 years, and any contract that was terminated for default within the past 5 years. Briefly explain the circumstances in each instance.
8. Describe how your organization will obtain the necessary resources to complete this agreement.
9. The applicant is directed to review Title [2 CFR §170](#) [located at http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=/ecfrbrowse/Title02/2cfr170_main_02.tp] dated September 14, 2010, and [Appendix A](#) thereto, [located at <http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=10ee5024047f849dcfc5c299ee2626af&rgn=div9&view=text&node=2:1.1.1.8.8.3.1.8.2&idno=2>] 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 Request for Applications. Appendix A will be incorporated in the award document.

C. SUBMISSION DATES AND TIMES

Applications must be received electronically through www.Grants.gov by the application due date/time listed on page 1 of this Request for Application package.

The deadline stated on page 1 is the date and time by which the agency must receive the application.

Late applications will not be reviewed or considered unless the Agreement Officer (AO) determines it is in the Government's best interest to consider the late application.

D. FUNDING RESTRICTIONS

This award will not allow reimbursement of pre-award costs or application preparation costs.

E. OTHER SUBMISSION REQUIREMENTS

FHWA uses www.Grants.gov for receipt of all applications. Applicants must register with www.Grants.gov and use the system to submit applications electronically. **Applicants are encouraged to register with www.Grants.gov in advance of the submission deadline and to register to receive notifications of any updates/amendments to the RFA. It is the Applicant's responsibility to monitor www.Grants.gov for any updates to the RFA.**

In the event of system problems or technical difficulties with the application submittal, applicants should contact the FHWA point of contact designated on page 1. If applicants are unable to use the www.Grants.gov system due to technical difficulties, applicants must e-mail applications to the FHWA point of contact listed on page 1 to arrive no later than the application deadline cited above.

SECTION V – APPLICATION REVIEW INFORMATION

A. EVALUATION FOR RESPONSIVENESS

FHWA will evaluate the applications for responsiveness to the request for applications. If an application is found to be nonresponsive at any time during evaluation, the FHWA will notify the applicant of the non-responsive determination, and the application will not receive further consideration, unless otherwise determined by the Agreement Officer (AO) that further consideration is in the best interest of the Government. The FHWA also will consider the application non-responsive for any of the following reasons:

1. The application is received after the specified receipt date;
2. The application is incomplete;
3. The application does not comply with the content and format requirements of the request for application;
4. The application does not comply with the requirements of the request for application; or
5. The material presented is insufficient to permit an adequate review.

B. EVALUATION CRITERIA

The Government will evaluate applications and select the applicants based on the criteria listed below.

TECHNICAL: The applicant's technical competence and understanding of the activities required to fulfill the objectives of this agreement. Technical applications will be evaluated based on the following criteria which are listed in descending order of importance:

1. Understanding and Approach.

The proposal demonstrates the qualifications and experience of the project team's technical experts in performing similar work.

- a. Understanding of the statement of work and innovative ideas expressed in the proposal
- b. Installation bases of applicant's signal controller products, and the practicality of proposed D-CS implementation approaches (technical merit, implementation cost, and potential customer cost).
- c. Level of support received from state/local transportation agencies.
- d. Team's strength in signal controller firmware (or similar products) development and testing; and experience in implementing third party algorithms and industry standards into signal controller products.

Note: Sub-factors a., b., c., and d. are of equal importance

2. Staffing Capabilities

The proposal demonstrates that the proposed staff possesses the technical skills, qualifications, and experience to complete the proposed effort.

- a. Qualifications of principal investigator and key members in firmware development, product testing, and technical training.
- b. Cost efficient utilization of staffing categories

Note: Sub-factor a. is of greater importance than sub-factor b.

3. Resources.

- a. The proposal demonstrates the project team has access to appropriate resources to complete the proposed effort. The facilities, equipment, software, information, etc. are available to perform the work satisfactorily and on schedule.

PAST PERFORMANCE: The Government will evaluate the relevant merits of each applicant's past performance based on its reputation and record with its current and/or former customers with respect to quality, timeliness and cost control. Past performance will be reviewed to assure that the applicant has relevant and successful experience and will be considered in the ultimate award decision, but will not be scored. In evaluating past 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. In the event an applicant does not have a record of relevant past performance, the applicant's past performance will not be evaluated favorably or unfavorably.

COST: In addition to the criteria listed above, the relative total project cost will be considered in the ultimate award decision. The budget application will be analyzed to assess cost reasonableness and conformance to applicable cost principles.

C. REVIEW AND SELECTION PROCESS

The Government will accept the application that is considered the most advantageous to the Government taking into account the best use of available funds to meet the objectives of the program legislation. The three evaluation factors are in descending order of importance: (1) Technical, (2) Past Performance, and (3) Cost, with Technical more important in the resultant award decision than Cost and Past Performance factors combined.

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

D. ANTICIPATED ANNOUNCEMENT AND AWARD DATES

FHWA anticipates making an award on or about September 21, 2012.

E. AWARD NOTICES

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

Only the AO can commit the Government. The award document, signed by the AO, is the authorizing document.

Notice that an organization has been selected as a Recipient does not constitute approval of the application as submitted. Before the actual award, FHWA will enter into negotiations concerning such items as program components, staffing and funding levels, and administrative systems. If the negotiations do not result in an acceptable submittal, the FHWA reserves the right to terminate the negotiation and decline to fund the applicant.

SECTION VI – AWARD ADMINISTRATION INFORMATION

A. ADMINISTRATIVE AND NATIONAL POLICY REQUIREMENTS

1. GOVERNING REGULATIONS

Performance under this agreement will be governed by and in compliance with the following requirements as applicable to the type of organization of the Recipient and to the type of organization of any applicable sub-recipients:

For Indian Tribal Governments:

- 49 CFR Part 18, “Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments,” the DOT codification of OMB Circular A-102 [located at www.dot.gov/ost/m60/grant/49cfr18.htm];
- 2 CFR Part 225 (OMB Circular A-87), “Cost Principles for State, Local, and Indian Tribal Governments” [located at www.whitehouse.gov/omb/circulars_a087_2004];
- OMB Circular A-133, “Audits of States, Local Governments, and Non-Profits” [located at www.whitehouse.gov/sites/default/files/omb/circulars/a133/a133.pdf];

For State and Local Governments:

- 49 CFR Part 18, “Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments,” the DOT codification of OMB Circular A-102 [located at www.dot.gov/ost/m60/grant/49cfr18.htm];
- 2 CFR Part 225 (OMB Circular A-87), “Cost Principles for State, Local, and Indian Tribal Governments” [located at www.whitehouse.gov/omb/circulars_a087_2004];
- OMB Circular A-133, “Audits of States, Local Governments, and Non-Profits” [located at www.whitehouse.gov/sites/default/files/omb/circulars/a133/a133.pdf];

For Institutions of Higher Education:

- 49 CFR 19, “Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and other Non-Profit Organizations”, the

DOT codification of OMB Circular A110 [located at:

www.dot.gov/ost/m60/grant/49cfr19.htm];

- 2 CFR Part 220 (OMB Circular A-21), “Cost Principles for Educational Institutions” [located at <http://edocket.access.gpo.gov/2005/05-16648.htm>];
- OMB Circular A-133, “Audits of States, Local Governments, and Non-Profits” [located at www.whitehouse.gov/sites/default/files/omb/circulars/a133/a133.pdf];

For Non-Profit Organizations:

- 49 CFR 19, “Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and other Non-Profit Organizations”, the DOT codification of OMB Circular A110 [located at: www.dot.gov/ost/m60/grant/49cfr19.htm];
- 2 CFR Part 230 (OMB Circular A-122), “Cost Principles for Non-Profit Institutions” [located at edocket.access.gpo.gov/2005/05-16650.htm];
- OMB Circular A-133, “Audits of States, Local Governments, and Non-Profits” [located at www.whitehouse.gov/sites/default/files/omb/circulars/a133/a133.pdf];

For-profit Organizations:

- 49 CFR 19, “Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and other Non-Profit Organizations”, the DOT codification of OMB Circular A110 [located at: www.dot.gov/ost/m60/grant/49cfr19.htm];
- 48 CFR 31 (Federal Acquisition Regulations) Subpart 31.2 [located at <http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=0cf942e3e8ae91947f14fc14b35ee2fd&rgn=div6&view=text&node=48:1.0.1.5.30.2&idno=48>]

For all organizations:

- 49 CFR Part 20, “New Restrictions On Lobbying,” [located at www.dot.gov/ost/m60/grant/49cfr20.htm];
- 49 CFR Part 21, “Nondiscrimination in Federally-Assisted Programs of the Department of Transportation – Effectuation of Title VI of the Civil Rights Act of 1964” [located at <http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=a99a8496b34462b98f7cd8521c395837&rgn=div5&view=text&node=49:1.0.1.1.15&idno=49>]
- 49 CFR Part 26, “Nondiscrimination by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs” [located at <http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr;sid=5f45dc360bda3a664764634da75532a3;rgn=div5;view=text;node=49%3A1.0.1.1.20;idno=49;cc=ecfr>]
- 49 CFR Part 27, “Nondiscrimination on the Basis of Disability in Programs or Activities Receiving Federal Financial Assistance” [located at <http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr;sid=807a6b2d9f013f5d83a52e5de8e49450;rgn=div5;view=text;node=49%3A1.0.1.1.21;idno=49;cc=ecfr>]

- 49 CFR 32, “Governmentwide Requirements for Drug-Free Workplace (Financial Assistance) [located at <http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=9817ef9f832e74732ee322ffcb848d97&rgn=div5&view=text&node=49:1.0.1.1.25&idno=49>]
- Any other applicable Federal regulation or statute.

2. RESPONSIBILITIES OF THE RECIPIENT

The Recipient will provide overall program management. Specifically, the Recipient will be responsible for the following, as a minimum:

- a. Performing the Statement of Work as described in Section I, Funding Opportunity Description.
- b. Coordinating and managing work, including issuing and managing subcontracts/sub awards and consulting arrangements, as necessary.
- c. Submitting all required reports including Quarterly Progress Reports. (See Part B of this Section, entitled Reporting.)
- d. Meeting with the Agreement Officer’s Representative (AOR) as necessary.
- e. During the period of performance, the FHWA and the Recipient will meet, as needed, to discuss project activities. The location of the meeting will be established by the AOR. *Note:* for application process, assume the Task 1 meeting will be in Washington, DC and will last 1 full day.
- f. Participate in monthly meetings via teleconference or web conference with the AOR.
- g. Participating in a kick-off meeting with the AO and/or the AOR to discuss agreement expectations and procedures.

3. TRAVEL AND PER DIEM

Travel and per diem authorized under this agreement will be reimbursed in accordance with the travel costs section of 2 CFR Part 225 (OMB Circular A-122), “Cost Principles for State and Local Governments” or 2 CFR Part 220 (OMB Circular A-21), “Cost Principles for Educational Institutions,” and 2 CFR Part 230 (OMB Circular A-122), “Cost Principles for Non-Profit Institutions” as applicable based on recipient or subrecipient type. In the absence of an acceptable, written institution policy regarding travel costs, the rates and amounts established in the Federal Travel Regulations in effect at the time of travel will apply. In addition, all non-domestic travel will be approved in writing by the AO prior to incurring costs. Travel requirements under this agreement will be met using the most economical form of transportation available. If economy class transportation is not available, the request for payment vouchers must be submitted with justification for use of higher class travel indicating dates, times, and flight numbers.

4. AMENDMENTS

Amendments to this cooperative agreement may only be made in writing, signed by both parties for bilateral actions and by the AO for unilateral actions, and specifically referred to as an amendment to this cooperative agreement.

5. AGREEMENT OFFICER’S REPRESENTATIVE (AOR)

The AO has designated (to be filled in at award) , as the Agreement Officer’s Representative to assist in monitoring the work under this agreement. The AOR will oversee the technical administration of this agreement and act as technical liaison with the performing organization. The AOR is not authorized to change the scope of work or specifications as stated in the agreement, to make any commitments or otherwise obligate the Government or authorize any changes which affect the agreement funding, delivery schedule, period of performance or other terms or conditions.

The AO is the only individual who can legally commit or obligate the Government for the expenditure of public funds. The technical administration of this agreement will not be construed to authorize the revision of the terms and conditions of performance. The Agreement Officer will authorize any such revision in writing.

6. PUBLIC ACCESS TO DOCUMENTS

The Recipient 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. FHWA anticipates the documents cited herein may be posted on a FHWA website or other appropriate website.

7. INDIRECT COSTS

Indirect costs are allowable under this agreement as follows:

<i>Indirect Rate Type</i>	<i>Rate (%)</i>	<i>Base</i>
(Information	to be filled in at award)	

In the event the recipient determines the need to adjust the above listed rates, the Recipient will notify the U.S. DOT Agreement Officer 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 Agreement Officer.

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.

8. DATA RIGHTS

The Recipient will make available to the Government copies of all work developed in performance with this cooperative agreement, including but not limited to software and data. The Government and others acting on its behalf will have rights to obtain, reproduce, publish or otherwise use the data developed in the performance of this cooperative agreement pursuant to 49 CFR Part 18 or 19, and as applicable:

9. PAYMENT

The Recipient may request advances or reimbursement of costs incurred in the performance hereof as are allowable under the applicable cost provisions [see 49 CFR Part ____] not-to exceed the funds currently available as stated in herein. The Recipient will submit an electronic copy of the SF 270, Request for Advance or Reimbursement, no more frequently than monthly, to the finance office in Oklahoma City.

Advance Payments: Recipients may be paid in advance, provided they maintain or demonstrate the willingness to maintain the following in accordance with 49 CFR Part ____: (1) written procedures that minimize the time elapsing between the transfer of funds and disbursement by the Recipient, and (2) financial management systems that meet the standards for fund control and accountability. When these items are not met, reimbursement will be the method for payment.

Payments by Reimbursement: When requesting reimbursement of costs incurred, the Recipient will submit supporting cost detail with the SF 270 to clearly document costs incurred. Cost detail includes a detailed breakout of all costs incurred including direct labor, indirect costs, other direct costs, travel, etc.

The Agreement Specialist and the AO reserve the right to withhold processing requests for reimbursement until sufficient detail is received. In addition, reimbursement will not be made without AOR review and approval to ensure that progress on the Agreement is sufficient to substantiate payment. After AOR approval, the Agreement Specialist will certify and forward the advance or request for reimbursement to the payment office.

Note: Standard Forms may be located at <http://www.fhwa.dot.gov/aaa/forms2.htm> .

SUBMISSION INSTRUCTIONS

The Recipient will submit an electronic copy of the Standard Form (SF) 270, “Request for Advance or Reimbursement,” no more frequently than monthly, and no less than quarterly, to the FHWA finance office in Oklahoma City using the submission instructions below.

Instructions for Submission of SF 270, Requests for Advance or Reimbursement:

The Recipient will submit the SF 270 and required supporting documents via e-mail to the following e-mail address: 9-AMC-AMZ-FHWA-Invoices@faa.gov.

- a) Include the SF 270 and supporting documents as one attached PDF document.
- b) Include in the e-mail subject line the following:
 - i. Number of the Request (i.e. Invoice Number)

- ii. Agreement Number
- iii. Name of your Company/Organization
- iv. Attn: (insert name of FHWA Agreement Specialist)

Example: Invoice No. 1, DTFH61-12-H-000##, XYZ Company, Attn: John Doe

If the SF 270 and supporting documents exceed 8 MB, as an e-mail attachment, the Recipient must select one of two non-electronic submission options presented below:

1. Submit SF 270 and supporting documents via regular U.S. Postal Service to the following P.O. Box address:

Federal Highway Administration
Markview Processing
P.O. Box 268865
Oklahoma City, OK 73126-8865
Attention: Eric Robinson

2. SF 270's submitted via an overnight service must use the following physical address because delivery services other than the U.S. Postal Service will not deliver to the P.O. Box address noted above:

MMAC
FHWA/AMZ-150
6500 MacArthur Blvd.
Oklahoma City, OK 73169
Attention: (insert name of FHWA Agreement Specialist)

Express Delivery Point of Contact: April Grisham, 405-954-8269

NOTE: All three request for advance or reimbursement submission options described above (email, U.S. Postal Service or overnight service) result in the delivery of the request for advance or reimbursement to the same FHWA finance office in Oklahoma City, OK.

10. ACKNOWLEDGEMENT OF SUPPORT AND DISCLAIMER

An acknowledgment of U.S. DOT support and a disclaimer must appear in any publication of any material, whether copyrighted or not, based on or developed under the cooperative agreement, in the following terms:

“This material is based upon work supported by the U.S. Department of Transportation under Cooperative Agreement No. DTFH61-12-H-(to be filled in at award)”.

All materials must also contain the following:

"Any opinions, findings, and conclusions or recommendations expressed in this publication are those of the Author(s) and do not necessarily reflect the view of the U.S. Department of Transportation."

11. SITE VISITS

The Federal Government, through its authorized representatives, has the right, at all reasonable times, to make site visits to review project accomplishments and management control systems and to provide such technical assistance as may be required. If any site visit is made by the Federal Government on the premises of the performing organization or a subrecipient under this cooperative agreement, the Performing Organization will provide and will require their subrecipients to provide all reasonable facilities and assistance for the safety and convenience of the Government representative in the performance of their duties. All site visits and evaluations will be performed in such a manner as will not unduly delay work.

12. BUDGET REVISION/REALLOCATION OF AMOUNTS

The Recipient is required to report deviations from budget and program plans, and request prior approval for budget and program plan revisions in accordance with 49 CFR Part 18.30 or 49 CFR Part 19.25 as applicable.

Note: The Recipient must obtain prior written approval from the Agreement Officer to transfer amounts budgeted for direct cost categories when the cumulative value of such transfers will exceed 10% of the value of Federal share of this agreement.

13. FINANCIAL MANAGEMENT SYSTEM

By signing this agreement, the Recipient verifies that it has, or will implement, a financial management system adequate for monitoring the accumulation of costs and that it complies with the financial management system requirements of 49 CFR Part 18 or 49 CFR Part 19, as applicable. The Recipient's failure to comply with these requirements may result in agreement termination.

14. ALLOWABILITY OF COSTS

Allowable costs will be determined in accordance with the applicable Federal cost principles, as applicable based on recipient or subrecipient type, e.g., For-profit organizations, FAR 31.2; Non-profit organizations, 2 CFR Part 230; Educational Institutions, 2 CFR Part 220, and 2 CFR Part 225; Cost Principles for State and Local Governments.

15. AVAILABLE FUNDING

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

(1) Currently, Federal funds in the amount of \$_____ (to be filled in at award), are obligated to this agreement.

(2) Subject to availability of funds, and an executed document by the Agreement Officer, \$_____ (to be filled in at award) 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.

16. CENTRAL CONTRACTOR REGISTRY (CCR)

The Recipient must be registered in the CCR in order to receive payments under this agreement. Use of the CCR is to provide one location for applicants and Recipients to change information about their organization and enter information on where government payments should be made. The registry will enable Recipients to make a change in one place and one time for all Federal agencies to use. Information for registering in the CCR and online documents can be found at <https://www.bpn.gov/ccr/>.

17. KEY PERSONNEL

The Recipient will 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:

(to be filled in at award)

18. PROGRAM INCOME

Program Income earned during the project period will be retained by the Recipient and added to funds committed to the project by the Federal awarding agency and the Recipient and used to further eligible project or program objectives, unless otherwise approved by the Agreement Officer. Program income will not be used to offset the Federal contribution to this project.

19. SUBAWARDS

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

20. PRINTING

The Recipient will obtain prior written approval from the AOR to print more than ten copies of any deliverable under this agreement. The Recipient will submit such requests in writing or by email to the AOR, to include specifics on the deliverable, requested printing quantity, and estimated costs for printing.

- Written materials intended for the general public, whether posted on a website, electronically, or in print, must comply with the standards of the U.S. Government Printing Office's Style Manual, available at <http://www.gpoaccess.gov/stylemanual/browse.html>.

21. DRUG FREE WORKPLACE

The Recipient will comply with Subpart B of 49 CFR Part 32, Governmentwide Requirements for a Drug-Free Workplace (Financial Assistance). See 49 CFR Part 32 for details of the requirement. (Note: 49 CFR Part 32 is available online at <http://www.dot.gov/ost/m60/grant/regs.htm>).

22. DEBARMENT AND SUSPENSION REQUIREMENTS

The Recipient will comply with the 2 CFR Part 180, OMB Guidelines to Agencies on Government Debarment and Suspension (Nonprocurement). Further, the Recipient will flow down this requirement to applicable subawards by including a similar terms or condition in lower-tier covered transactions. See Subpart C within 2 CFR Part 180.300 for details of the requirement.

23. TERMINATION AND SUSPENSION

FHWA may terminate or suspend this agreement, in whole or in part, at any time prior to its expiration date in accordance with 49 CFR Part 18 or Part 19, as applicable. The Recipient may appeal a decision by the U.S. DOT, to terminate or suspend this agreement, in writing to the next level above the Agreement Officer within 30 days after receipt of the decision letter.

24. 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 Disputes 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. Within five working days after providing written notice to the other party, the aggrieved party may, in writing, request a decision from the Agreement Officer. The other party will submit a written position on the matters in dispute within thirty calendar days after being notified that a decision has been requested. The Agreement Officer will conduct a review of the matters in dispute and render a decision in writing within thirty calendar days of receipt of such written position. Any decision of the Agreement Officer 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 Management or designee, made within thirty calendar days after the Agreement Officer'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 Management. Following the review, the Director, Office of Acquisition Management, 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.

25. FINANCIAL ASSISTANCE POLICY TO BAN TEXT MESSAGING WHILE DRIVING

a) Definitions. As used in this clause-

“Driving” - Means operating a motor vehicle on an active roadway with the motor running, including while temporarily stationary because of traffic, a traffic light, stop sign, or otherwise. Does not include operating a motor vehicle with or without the motor running when one has pulled over to the side of, or off, an active roadway and has halted in a location where one can safely remain stationary.

“Text messaging” - means reading from or entering data into any handheld or other electronic device, including for the purpose of short message service texting, e-mailing, instant messaging, obtaining navigational information, or engaging in any other form of electronic data retrieval or electronic data communication. The term does not include glancing at or listening to a navigational device that is secured in a commercially designed holder affixed to the vehicle, provided that the destination and route are programmed into the device either before driving or while stopped in a location off the roadway where it is safe and legal to park.

b) This clause implements Executive Order 13513, Federal Leadership on Reducing Text Messaging while Driving, dated October 1, 2009.

c) The Recipient should-

- a. Adopt and enforce policies that ban text messaging while driving- (i) Company-owned or -rented vehicles or Government-owned vehicles; or (ii) Privately-owned vehicles when on official Government business or when performing any work for or on behalf of the Government.
- b. Conduct initiatives in a manner commensurate with the size of the business, such as- (i) Establishment of new rules and programs or re-evaluation of existing programs to prohibit text messaging while driving; and (ii) Education, awareness, and other outreach to employees about the safety risks associated with texting while driving.

d) Subagreements/subcontracts. The Recipient shall insert the substance of this clause, including this paragraph (d), in all subagreement/subcontracts that exceed the micro-purchase threshold.

26. REPORTING EXECUTIVE COMPENSATION AND FIRST-TIER SUB-AWARDS (2 CFR Part 170, Appendix A)

I. Reporting Subawards and Executive Compensation.

a. Reporting of first-tier subawards.

1. *Applicability.* Unless you are exempt as provided in paragraph d. of this award term, you must report each action that obligates \$25,000 or more in Federal funds that does not include Recovery funds (as defined in section 1512(a)(2) of the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5) for a subaward to an entity (see definitions in paragraph e. of this award term).

2. *Where and when to report.*

- i. You must report each obligating action described in paragraph a.1. of this award term to <http://www.fsrs.gov>.
- ii. For subaward information, report no later than the end of the month following the month in which the obligation was made. (For example, if the obligation was made on November 7, 2010, the obligation must be reported by no later than December 31, 2010.)

3. *What to report.* You must report the information about each obligating action that the submission instructions posted at <http://www.fsrs.gov> specify.

b. Reporting Total Compensation of Recipient Executives.

1. *Applicability and what to report.* You must report total compensation for each of your five most highly compensated executives for the preceding completed fiscal year, if—

- i. the total Federal funding authorized to date under this award is \$25,000 or more;
- ii. in the preceding fiscal year, you received—
 - (A) 80 percent or more of your annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and
 - (B) \$25,000,000 or more in annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and
- iii. The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/excomp.htm>.)

2. *Where and when to report.* You must report executive total compensation described in paragraph b.1. of this award term:

- i. As part of your registration profile at <http://www.ccr.gov>.
- ii. By the end of the month following the month in which this award is made, and annually thereafter.

c. Reporting of Total Compensation of Subrecipient Executives.

1. *Applicability and what to report.* Unless you are exempt as provided in paragraph d. of this award term, for each first-tier subrecipient under this award, you will report the names and total compensation of each of the subrecipient's five most highly compensated executives for the subrecipient's preceding completed fiscal year, if—

- i. in the subrecipient's preceding fiscal year, the subrecipient received—
 - (A) 80 percent or more of its annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and
 - (B) \$25,000,000 or more in annual gross revenues from Federal procurement contracts (and subcontracts), and Federal financial assistance subject to the Transparency Act (and subawards); and
- ii. The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/execomp.htm>.)

2. *Where and when to report.* You must report subrecipient executive total compensation described in paragraph c.1. of this award term:

- i. To the recipient.
- ii. By the end of the month following the month during which you make the subaward. For example, if a subaward is obligated on any date during the month of October of a given year (*i.e.*, between October 1 and 31), you must report any required compensation information of the subrecipient by November 30 of that year.

d. Exemptions

If, in the previous tax year, you had gross income, from all sources, under \$300,000, you are exempt from the requirements to report:

- i. Subawards, and
- ii. The total compensation of the five most highly compensated executives of any subrecipient.

e. Definitions. For purposes of this award term:

1. *Entity* means all of the following, as defined in 2 CFR part 25:

- i. A Governmental organization, which is a State, local government, or Indian tribe;
- ii. A foreign public entity;
- iii. A domestic or foreign nonprofit organization;
- iv. A domestic or foreign for-profit organization;
- v. A Federal agency, but only as a subrecipient under an award or subaward to a non-Federal entity.

2. *Executive* means officers, managing partners, or any other employees in management positions.

3. *Subaward*:

- i. This term means a legal instrument to provide support for the performance of any portion of the substantive project or program for which you received this award and that you as the recipient award to an eligible subrecipient.
 - ii. The term does not include your procurement of property and services needed to carry out the project or program (for further explanation, see Sec. __ .210 of the attachment to OMB Circular A-133, “Audits of States, Local Governments, and Non-Profit Organizations”).
 - iii. A subaward may be provided through any legal agreement, including an agreement that you or a subrecipient considers a contract.
4. *Subrecipient* means an entity that:
- i. Receives a subaward from you (the recipient) under this award; and
 - ii. Is accountable to you for the use of the Federal funds provided by the subaward.
5. *Total compensation* means the cash and noncash dollar value earned by the executive during the recipient's or subrecipient's preceding fiscal year and includes the following (for more information see 17 CFR 229.402(c)(2)):
- i. *Salary and bonus.*
 - ii. *Awards of stock, stock options, and stock appreciation rights.* Use the dollar amount recognized for financial statement reporting purposes with respect to the fiscal year in accordance with the Statement of Financial Accounting Standards No. 123 (Revised 2004) (FAS 123R), Shared Based Payments.
 - iii. *Earnings for services under non-equity incentive plans.* This does not include group life, health, hospitalization or medical reimbursement plans that do not discriminate in favor of executives, and are available generally to all salaried employees.
 - iv. *Change in pension value.* This is the change in present value of defined benefit and actuarial pension plans.
 - v. *Above-market earnings on deferred compensation which is not tax-qualified.*
 - vi. Other compensation, if the aggregate value of all such other compensation (e.g. severance, termination payments, value of life insurance paid on behalf of the employee, perquisites or property) for the executive exceeds \$10,000.

B. REPORTING

1. ADDRESSES FOR SUBMITTAL OF REPORTS AND DOCUMENTS

The Recipient will submit all required reports and documents, under transmittal letter referencing the cooperative agreement number, as follows:

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

Federal Highway Administration
Office of Acquisition Management
1200 New Jersey Ave., SE
Mail Stop E65-101
Washington, DC 20590
Attention: Eric Robinson

Submit an electronic copy and one hard copy to the AOR at the following address:

Federal Highway Administration
To be filled in at award

Attention: To be filled in at award

2. QUARTERLY PROGRESS REPORT

The Recipient will submit an electronic copy of the SF-PPR, to the AOR and the Agreement Specialist on or before the 30th of the month following the calendar quarter being reported. Final PPRs are due 90 days after the end of the agreement period of performance.

<u>Calendar quarters are defined as :</u>	<u>Reports due on or before:</u>
1 st : January – March	April 30 th
2 nd : April – June	July 30 th
3 rd : July – September	October 30 th
4 th : October – December	January 30 th

The quarterly submittal will consist of the SF-PPR cover page and the following required attached information:

In the SF-PPR Block 10. Performance Narrative, (attach additional sheets as necessary) provide concise statements covering the activities relevant to the project, including:

- A summary of work performed for the current quarter;
- A summary of work planned for the upcoming quarter;
- A 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 grant agreement, together with recommended solutions to such problems; or, a statement that no problems were encountered;
- A tabulation of the current and cumulative costs expended by cost element (labor, travel, indirect costs, subrecipients, etc.) by quarter versus budgeted costs.

In the SF-PPR Block 11, Other Attachments, include the following information as attached pages:

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

The SF-PPR and SF-425 forms are available online at
http://www.whitehouse.gov/omb/grants/grants_forms.html.

3. ANNUAL BUDGET REVIEW AND PROGRAM PLAN

The Recipient will submit an electronic copy and one hard copy of the Annual Budget Review and Program Plan to the AOR and one electronic copy and one hard copy to the Agreement Specialist 60 days prior to the anniversary date of this agreement. The Annual Budget Review and Program Plan will provide a detailed schedule of activities, estimate of specific performance objectives, include forecasted expenditures, and 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.

4. ANNUAL PROPERTY REPORT

The Recipient will submit an electronic copy and one hard copy of the SF-428 Tangible Personal Property Report to the AOR and one electronic copy and one hard copy to the Agreement Specialist 60 days prior to the anniversary date of this agreement.

If no property was furnished or acquired during the agreement up to the end date of the reporting period, indicate that information in block 8 of the SF-428. If property was furnished or acquired during the agreement up to the end date of the reporting period, list the property on the SF-428-A and SF-428S forms. Use additional sheets as necessary. Use separate sets of sheets to show Federally owned property and Recipient owned property.

The SF-428 series of forms are available online at
http://www.whitehouse.gov/omb/grants/grants_forms.html.

SECTION VII - AGENCY CONTACT

Address any questions to:
Eric Robinson, Agreement Officer
Federal Highway Administration
Office of Acquisition Management
Email Eric.Robinson@dot.gov
Phone (202) 366-5507

Secondary point of contact is:
Mr. Carl Rodriguez, Team Leader
Federal Highway Administration
Office of Acquisition Management
Email Carl.Rodriguez@dot.gov
Phone (202) 366-4240.