Facility Use and Support Services for Vehicle Research and Test Center (VRTC)

ACTIVE

Contract Opportunity

Notice ID

693JJ921RQ000044

Related Notice

Department/Ind. Agency

TRANSPORTATION, DEPARTMENT OF

Sub-tier

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

Office

693JJ9 NHTSA OFFICE OF ACQUISTION

General Information

- **Contract Opportunity Type:** Sources Sought (Original)
- **All Dates/Times are:** (UTC-05:00) EASTERN STANDARD TIME, NEW YORK, USA
- **Original Published Date:** Nov 13, 2020 12:46 pm EST
- **Original Response Date:** Nov 30, 2020 10:00 am EST
- **Inactive Policy:** 15 days after response date
- **Original Inactive Date:** Dec 15, 2020
- **Initiative:**
    - None

Classification

- **Original Set Aside:**
- **Product Service Code:** H923 - OTHER QC/TEST/INSPECT- GROUND EFFECT VEHICLES, MOTOR VEHICLES, TRAILERS, AND CYCLES
- **NAICS Code:** 541380 - Testing Laboratories
- **Place of Performance:**

Washington , DC 20590

USA

Description

Action Code: Sources Sought
Classification Code: H923, OTHER QC/TEST/INSPECT- GROUND EFFECT VEHICLES, MOTOR VEHICLES, TRAILERS, AND CYCLES
Solicitation: 693JJ921RQ000044
Agency/Office: National Highway Traffic Safety Administration (NHTSA)
Location: National Highway Traffic Safety Administration HQ
NAICS Code: 541380, Testing Laboratories, $16.5 M
Point of Contract: Vincent Lynch, Contracting Officer, ph. (202) 366-9568
Title: Facility Use and Support Services for Vehicle Research and Test Center (VRTC)

Description(s):

The National Highway Traffic Safety Administration (NHTSA) intends to negotiate with Transportation Research Center, Inc. (TRC), located in East Liberty, Ohio to award a follow-on, non-competitive, sole source contract for various professional, technical and administrative services and support, including personnel, test facilities and equipment use, and materials processing; necessary for the efficient operation, research and testing activities of the Vehicle Research and Test Center (VRTC). The statutory authority for the proposed sole source award is 41 U.S.C. 253(c)(1) "Only One Responsible Source".

NHTSA requires the continued professional, technical and administrative support services of TRC to staff and maintain daily operations to conduct the scientific and technical activities to support NHTSA’s requirements for Federal Motor Vehicle Safety Standards (FMVSS) and the existence and potential consequences of safety-related defects.

NHTSA welcomes all qualified Small Business and Other Than Small Business concerns, with the appropriate NAICS Code and past experience to submit their Corporate Capability Statements that demonstrate their ability to successfully accomplish the goals of the project as listed below. NHTSA does not intend to award a contract on the basis of responses to this notice or otherwise pay for the preparation of any information submitted. Acknowledgement of receipt of responses will not be made; no formal evaluation of the information received will be conducted by NHTSA. NHTSA may, however, later on issue a Request for Proposals (RFP). However, should such a requirement fail to materialize, no basis for claims against NHTSA shall arise as a result of a response to this notice.

Background:

The NHTSA is an agency of the U.S. Department of Transportation (DOT). NHTSA's mission is to save lives, prevent injuries, and reduce traffic-related health care and other economic costs. The agency develops, promotes, and implements effective educational, engineering, and enforcement programs with the goal of ending vehicle crash tragedies and reducing economic costs associated with vehicle use and highway travel.

VRTC is a research, development, test, evaluation, and investigation facility of the \NHTSA. VRTC is located on the property of the TRC; a component of The Ohio State University at East Liberty, OH. NHTSA has utilized the VRTC facility for over 40 years to conduct scientific and technical activities, which support NHTSA's requirements for FMVSS testing for safety-related defects as well as performing applied research to develop performance criteria for new vehicle safety countermeasures, including objective performance tests and associated test procedures. VRTC is NHTSA's in-house research, development, test and evaluation laboratory and has historically resided on the property managed by TRC.

As the principle research/testing facility for NHTSA, projects related to crash avoidance, crash worthiness and biomechanics technologies are pursued by government researchers at VRTC. NHTSA conducts both static and dynamic testing at the test facility which includes the following major facilities: a 50-acre Vehicle Dynamics Area, 7.5-mile High Speed Test Track, Crash Test Facility, Crash Simulator, Vehicle SmartCenter and Skid Pad. VRTC personnel plan and conduct interactive, long-term, or quick reaction projects with the purpose of including, but not limited to the general advancement of the state-of-the-art understanding of motor vehicle and traffic safety. In-house research into automotive safety provides the necessary governmental expertise and insight into the technology which surrounds many automotive safety issues. VRTC must identify and evaluate alternative approaches to resolving day-to-day technical issues that require quick reaction capability. VRTC is also involved in examining long-term problems, where the issues are not fully developed and where a mixture of analytical and experimental effort is necessary to promote the most sensible solutions. VRTC also conducts engineering research, investigations, and tests to identify or confirm the existence of safety-related defects that may adversely affect vehicle control and traffic safety.

TRC is currently the only independent automotive testing facility sufficiently equipped to fulfill the research requirements of the VRTC. The TRC facilities such as: the Crash Test Facility, HYGE Sled (crash simulator), a 50-acre Vehicle Dynamics Area, Brake Soak, Brake Slope, Skid Pad, Winding Road Course, 7.5-mile High Speed Test Track,

Vehicle SmartCenter and other test surfaces which are located at the same site as the VRTC, provides unmatched capabilities not readily available to NHTSA anywhere else. Testing and research that has to be done by government researchers within NHTSA, including support of rulemaking initiatives, defects analysis, long-term research, anthropomorphic test device development, etc. which dictates full-time daily usage of the facilities and test surfaces provided by TRC. Additionally, TRC provides the supervision and management effort necessary to ensure safe, efficient, and effective administration for control of the work to be performed under the contract. VRTC requires both long-term and quick response research investigation and testing capabilities to perform task order requirements necessary to support administrative functions and programmatic areas. These requirements include professional and technical services involving research and testing activities that are identified by the VRTC on a Task Order completion basis. Participation of multiple divisions may be required in the conduct of a single task. Task Orders may include, but are not limited to, the following activities:

- Provide work space for lease to specific program requirements as needed.
    - Perform static and dynamic tests of crash test dummies and/or dummy components.
- Calibrate test equipment. Equipment may include component test devices, instrumentation systems, and mechanical hardware.
- Qualification/Certification and repair of anthropomorphic test devices (ATD), per the qualification/certification procedures and specifications in 49 Part 572 CFR, SAE Engineering Aides, or other procedures specified by the government in the specific task order document that requests ATD qualifications/certifications.
- Facilitate manufacturing of prototype ATD components. Includes design of new components, part stress analysis using virtual solid models, correspondence/coordination with material suppliers, in-house manufacturing of machined, molded, or assembled parts, testing support, and revisions to existing ATD parts as needed. In-house rapid prototyping, CNC machining, extrusion/injection molding, and three-dimensional printing capabilities are preferred, so that ATD development activities can proceed at an accelerated pace.
- Instrument test articles. Test articles may include anthropomorphic dummies, component test devices, sled (crash simulation) bucks, vehicles and vehicle components, etc. This instrumentation shall enable measurements to be made

related to injury severity, driver control inputs, driver behavior (e.g., eye glance location and dwell duration), vehicle location (i.e., precision GPS), structural response, vehicle response, and/or component response to the testing conducted. This may also include on-board and off-board video cameras and lighting.

- Assemble & install test components as required by individual task orders.
- Maintain and operate government furnished equipment (GFE). GFE may include transducers, data acquisition equipment, photographic and video equipment, dynamometers, vehicle lifts, anthropomorphic test dummies and dummy parts, etc.
- Assist in the design, fabrication, debugging, and operation of new instrumentation and data acquisition systems, components, and test fixtures.
- Assist in the design, fabrication, and debugging of vehicle modifications.
- Perform data entry, process, analyze, and evaluate experimental data results from research and testing efforts conducted by VRTC. Statistical and photographic analysis of test results and test simulations may also be required.
- Design experiments and perform inferential statistical analysis of acquired data using design and analysis methods relevant for application to human behavioral data.
- Analyze crash data (from computer files and examination of hard-copy case files) to identify major aspects of the crash problem.
- Conduct surveys and ergonomics testing with human subjects. Surveys shall be conducted in accordance with government policy in this area.
- Use technical writing skills to prepare progress, event, and final reports of projects or phases of projects as further described and defined in each individual task order.
- Prepare and/or present data presentations or other reports that may require graphs, charts, tables, photographs, video or motion picture filming and other illustrations.
- Use advanced word processing skills to integrate graphs, charts, tables, photographs, video clips, and illustrations into technical reports, presentations, and other documents as further defined in each individual task order.
- Participate in program development of new research and defects investigation activities. Apply knowledge of research/investigative approaches and testing

methodologies from previous, similar activities in developing these programs.

- Conduct human factors testing and evaluation, including experimentation using human test participants, using instrumented vehicles on test courses, public roads, and driving simulators.

- Participate in program briefings with NHTSA personnel in Washington DC, the automotive industry, and related automotive research organizations and component manufacturers.

- Provide space for meetings with up to 250 attendees with ready access to appropriate test facilities.

- Conduct testing on TRC facilities. Testing may include driving passenger cars, light trucks, heavy trucks, buses, and heavy combination vehicles. Testing may also include testing highly automated vehicles in a suitable, safe, limited-access, driving environment. Driving maneuvers may include limit or near-limit of vehicle capability, requiring expertise and experience in performing such maneuvers. Testing may be required on public roads and highways as well as TRC test surfaces. Personnel assigned to perform driving tasks shall meet all licensing requirements to the applicable jurisdiction prior to driving government-owned vehicles.

- Conduct automotive cyber security research including reverse engineering, penetration testing, analyses of vehicle architectures, methods for performing remote attacks, and third-party device issues. Study global positioning system spoofing and denial of service attacks.

- Conduct radio frequency interference and electromagnetic frequency testing. This shall include radiated power measurements of digital short-range communications radios, radar antennas, and other electromagnetic equipment.

- Conduct simulation tests on the HYGE sled and full-scale crash tests in many different configurations. These tests may involve collection of electronic data from instrumentation, video data from high-speed cameras and still photography.

- Assist in management of day-to-day program requirements.

- Provide general administrative support in the areas of building maintenance, parts pick-up, switchboard operation and receptionist duties, typing, filing, report preparation and reproduction, and other administrative functions as described in individual task orders.

- Identify, locate, obtain pricing, and purchase test vehicles, vehicle components, equipment, software, and/or other materials in support of task orders.

- Conduct testing using unique and/or prototype test devices. Inherent in this testing are increased safety and security requirements and certifications of personnel involved.

- Review and research submissions from Vehicle Owners' Questionnaires (VOQs), manufacturers, and other sources for possible trends and indicators of safety defects.

- Perform testing, analysis, and inspections that will assist in confirming the existence or non-existence of defects in motor vehicles or motor vehicle components/equipment.

- Prepare samples for metallurgical and other material sciences-related analysis. Conduct testing on these samples using government furnished equipment (GFE).

- Perform static and dynamic tests of vehicles and vehicular components.

- Develop and conduct tests to evaluate performance and potential safety benefits of advanced crash avoidance technologies.

- Transport test vehicles to and from VRTC to other test facilities or organizations. CDL certification will be required for some drivers.

- Provide technical drawing format and techniques expertise.

- Generate parts, fixtures, and assembly drawings as required. Drawings will usually be required in electronic format. A drawings database will be maintained. Conduct component and assembly dimensional evaluation/assessments of materials and parts.

- Develop, modify, and/or utilize finite element models, kinematics, and whole-body simulation models, CAD software and databases.

- Conduct literature surveys to research the state-of-the-art and previous work in areas of technical interest to VRTC.

- Perform static or dynamic tests involving post-mortem human or animal subjects. OSHA's Bloodborne Pathogens Standard requirements will be adhered to for all testing in this area.

- Fuel economy, emissions, and wind tunnel testing.

Objective:

The Contractor shall provide necessary professional, technical, and administrative services and support, including personnel, facilities, and equipment use, and materials

processing for the purpose of assisting the VRTC with research and testing activities. These services shall be identified as a requirement of VRTC on a task order completion basis. Inherent in providing these services, the Contractor shall provide the supervision and management effort necessary to ensure efficient and effective administration and control of work performed as further described below.

Capabilities:

The corporate capability statement must address the capabilities necessary to accomplish the scope outlined above as well as the additional tasks and characteristics given below:

The VRTC Contractor must identify and evaluate alternative approaches to resolving day-to-day technical issues that require quick reaction capability. VRTC is also involved in examining long-term problems, where the issues are not fully developed and where a mixture of analytical and experimental effort is necessary to promote the most sensible solutions. The VRTC Contractor is also responsible to conduct engineering research, investigations, and tests to identify or confirm the existence of safety-related defects that may adversely affect vehicle control and traffic safety.

Format of Corporate Capabilities Statement:

The anticipated period of performance is for a base period of sixty (60) months after award of the resultant contract. An Indefinite Delivery, Indefinite Quantity (IDIQ) Contract, whereby Firm Fixed Price (FFP), Cost Plus Fixed Fee (CPFF), and Time and Materials (T&M) Task Orders, or a combination thereof is anticipated.

This notice of intent is **NOT A REQUEST FOR COMPETITIVE PROPOSALS** nor is a Request-for-Proposal solicitation document currently available.

Interested firms should identify their capability provide the services described above. The written response must include detailed information relating to the specific data being requested. Expressions of interest without sufficient detail to permit evaluation of one's ability to provide the requested information will not be considered. A determination by the Government not to compete this action based upon responses to this notice is solely within the discretion of the Government. Information received will be considered solely for the purpose of determining whether to conduct a competitive acquisition. In the absence of responses from interested firms demonstrating their capability, NHTSA intends to request a proposal from the Transportation Research Center, Inc. on a noncompetitive basis for the work described. Responses must be received by the listed procuring office within 15 days from the date of publication of this notice.

Attachments/Links

Download All Attachments/Links

Attachments

Document	File Size	Access	Updated Date
DRAFT SOW (693JJ921RQ000044).pdf (opens in new window)	220 KB	Public	Nov 13, 2020
Sources Sought Notice (693JJ921RQ000044) Transportation Research.pdf (opens in new window)	170 KB	Public	Nov 13, 2020

Contact Information

Contracting Office Address

- OFFICE OF ACQUISITION MANAGEMENT 1200 NEW JERSEY AVE SE, ROOM W51-30
- WASHINGTON , DC 20590
- USA

Primary Point of Contact

- **Vincent Lynch**
- vincent.lynch@dot.gov
- Phone Number2023669568