REQUEST FOR COMMENT

RFC Number: 2017-01

DATE: JUNE 8, 2017

PLEASE ADDRESS ALL COMMENTS TO THE DESIGNATED CONTACT:

Ms. Patricia Kappeller
New York State Department of Transportation
Contract Management Bureau
50 Wolf Road, 6th Floor
Albany, NY 12232, USA
E-mail: Patricia.Kappeller@dot.ny.gov

DUE DATE: 12 PM Noon, June 29, 2017

SUBJECT: REQUEST FOR COMMENT ON DRAFT SAFETY INFORMATION MANAGEMENT SYSTEM RFP

TO PROSPECTIVE BIDDERS:

The New York State Department of Transportation (NYSDOT or DOT) is issuing this Request for Comment (RFC) to solicit commentary from vendors on specific sections of a draft Request for Proposal (RFP) for the initiative described below.

PURPOSE AND OBJECTIVE

It is the objective of this RFC to obtain vendor feedback on sections of the draft RFP presented. Further, only comments specifically and explicitly related to the sections of the draft RFP will be considered. Any collateral material such as brochures and marketing material submitted in a response will not be considered.

NYSDOT will use the feedback received from this RFC as a potential input to finalize overall requirements. The intent of the RFP, if it is eventually published, is to seek proposals from responsive and responsible consultants for the acquisition and provisions of a State Safety Information Management System (SIMS) and services to meet Federal standards for reporting, to use new data driven techniques required by Federal legislation, and integrate with NYSDOT Enterprise systems, and sunset legacy applications and procedures. The intent of any future RFP would result in a 3 year deliverable/time and material contract with the option to renew two (2) one-year terms.
CONTENT OF RESPONSE

Vendors are asked to carefully review the content in the documents provided and comment on those sections marked for comment. A response does not bind or obligate the responder or NYSDOT to any provision or procurement of areas referenced. No contract can or will be awarded based on submission of responses to this RFC.

Since this RFC is designed as a tool to collect information and shall not result in a procurement contract is does not fall under the requirements of State Finance Law §§139-j and 139-k (The Procurement Lobbying Law) and there is no restricted period. However, we ask that you direct your questions and responses in writing to the Designated Contact, Patricia Kappeller (Patricia.Kappeller@dot.ny.gov).

Proposals submitted in response to this RFC are subject to the New York State Freedom of Information Law (Public Officers Law, Article 6, hereinafter FOIL). Pursuant to section 87(2)(d) of FOIL, records or portions thereof that are “trade secrets or are submitted to an agency by a commercial enterprise or derived from information from a commercial enterprise and which if disclosed would cause substantial injury to the competitive position of the subject enterprise” may be exempt from disclosure. If the submitted intents to seek an exemption from disclosure (“Critical infrastructure” is defined in §86[5] of FOIL). If the Submitted intends to seek an exemption from disclosure of claimed trade secret materials or claimed critical infrastructure information under FOIL, the Submitted shall at the time of submission, request the exemption in writing and provide an explanation of (i) why the disclosure of the identified information would cause substantial injury to the competitive position of the Submitted, or (ii) why the information constitutes critical infrastructure information which should be exempted from disclosure pursuant to §87(2) of the Public Officers Law. Acceptance of the identified information by the State does not constitute a determination that the information is exempt from disclosure under FOIL. Determinations as to whether the materials or information may be withheld from disclosure will be made in accordance with FOIL at the time a request for such information is received by the State. Where such claimed material is embedded in the Response, it shall be the responsibility of the Submitter, at its sole cost and expense, to submit redacted versions of the Response within five (5) calendar days of a request by NYSDOT.

Please submit your electronic response to this RFC no later than 12pm Noon on June 29, 2017 to: Patricia.Kappeller@dot.ny.gov.

The Department of Transportation thanks you for your assistance in this information collection process.
RFC 2017-01 RESPONSE FORM

RFC RESPONSE FORM: 2017-01 – SAFETY MANAGEMENT SYSTEMS IMPLEMENTATION SERVICES FOR NYSDOT

Please review this RFC, complete the following information, and e-mail to the NYSDOT address shown below, with your response.

_____________  WE DO INTEND TO SUBMIT AN RFC RESPONSE

_____________  WE DO NOT INTEND TO SUBMIT AN RFC RESPONSE FOR THE FOLLOWING REASONS:

__________________________________________________________________________

__________________________________________________________________________

Name and Address of Organization (Include Zip Code):
__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

Date: ________________

Typed Name and Title: ____________________________________________

Telephone: __________________ Fax: ____________________________

E-Mail Address: _________________________________________________

Please e-mail to: Patricia.Kappeller@dot.ny.gov
DRAFT

REQUEST FOR PROPOSALS

NEW YORK STATE DEPARTMENT OF TRANSPORTATION
SAFETY MANAGEMENT SYSTEMS IMPLEMENTATION SERVICES FOR NYS DOT
RFC #2017-01

1 INTRODUCTION

1.1 Purpose
The New York State Department of Transportation (NYSDOT; the Department) is seeking proposals from responsive and responsible consultants for the acquisition and provisions of a Safety Information Management System (SIMS) and services to meet Federal standards for reporting, to use new data driven techniques required by Federal legislation, and integrate with NYSDOT Enterprise systems, and sunset legacy applications and procedures. NYSDOT intends to select and enter into contract #C037625 with a responsive and responsible consultant that provides the best value to the State based on this solicitation.

1.2 Background

1.2.1 NYSDOT Mission

It is the mission of NYSDOT to ensure that our customers – those who live, work, or travel in New York State – have a safe, efficient, balanced, and environmentally sound transportation system.

To attain its missions, the responsibilities, functions, and duties of NYSDOT include coordinating and developing a comprehensive transportation policy for the State; coordinating and assisting in the development and operation of transportation facilities and services for highways, railroads, mass-transit systems, ports, waterways, and aviation facilities; and formulating and keeping current a long-range, comprehensive statewide master plan for the balanced development of public and private commuter and general transportation facilities. This mission also includes administering a public safety program for railroads and motor carriers engaged in intrastate commerce; directing state regulation of such carriers in matters of rates and service; and providing oversight in matters relative to the safe operation of bus lines, commuter railroads, and subway systems that are publicly subsidized through the Public Transportation Safety Board.

Today, the New York State transportation network includes:

- A state and local highway system that annually handles more than 100 billion vehicle miles, encompassing more than 110,000 highway miles, 17,000 highway bridges, and numerous other assets such as large culverts, retaining walls, tunnels, and sign structures
The mission of the Office of Safety and Mobility is to provide a safe and efficient transportation environment for its users through the application of sound traffic engineering principles.

The office of Traffic Safety and Mobility works closely with all Department program areas, other public agencies, local governments and the private sector to accomplish its mission, consistent with statewide and regional program goals. In performing its mission, this Office emphasizes excellence in traffic engineering, high quality products, continuous improvement, customer service, and innovative use of technology.

1.2.2 NYSDOT Safety Data Management

The overall goals of New York’s highway safety program are to provide a safe and efficient transportation environment through the application of sound traffic engineering principles to prevent motor vehicle crashes, save lives and reduce the severity of the injuries suffered. NYSDOT collaborates with education, enforcement, engineering and emergency medical services organizations to save lives, prevent highway related crashes, and reduce the severity of crashes when they occur. NYSDOT is responsible for developing and implementing the New York State Strategic Highway Safety Plan (SHSP), the Highway Safety Improvement Program (HSIP) and other related safety programs, as well as maintaining and improving data for the Safety Information Management System.

The five priority results that the Commissioner of NYSDOT wants to provide to customers are:
1. To enhance their mobility and have reliable, predictable trips for themselves or in the movement of their goods.
2. Expect both the infrastructure and its users to contribute to the physical safety of people and their goods while in transit.
3. Recognize the critical relationship between a mature, multi-modal transportation system and the state’s economic vitality. Customers see viable transportation options as essential to both economic sustainability and livability of their communities, both Upstate and Downstate.
4. Expect the transportation infrastructure to be secure from external threat or potential abuse.
5. See the impact of transportation-related decisions at both macro and micro levels affecting the environment and expect the system to more than mitigate transportation’s impact.
NYSDOT’s Office of Traffic Safety and Mobility manages Safety Data through application of the Strategic Highway Safety Plan and implementation of the Highway Safety Improvement Program. An overview of these Programs are as follows:

**Data Analysis and Summarization:**
NYSDOT receives crash data daily from DMV and the New York State Police (NYSP). This data forms the basis of highway and modal safety programs administered by the Department.

SIMS is the analytical tool that allows the department to meet all federal mandated highway safety improvement program requirements in a systematic way. SIMS system combines roadway attribute and traffic volume data with the crash data to determine high accident locations as part of the Department’s network screening process (locate and study accidents). High accident locations are prioritized and studied to develop safety countermeasures to reduce crashes.

Specific processes involved are:
- Network Screening
- Systemic Screening
- Site Analysis
- High Accident Location Analysis Process

**Data Queries and Reporting**
NYSDOT also uses the crash data for long term monitoring and evaluation of safety programs and to develop crash reduction factors. The data is also made available for reporting to other State, Regional and Federal users.

1.3 Project Background (Business Need)

1.3.1 Existing NYSDOT Safety Data Management Capabilities

**Safety Information Management System (SIMS-DOT):** SIMS is a database of crash records for both state and local highway that is capable of utilizing two different location referencing systems. State highways utilize a field posted reference marker system and local highways uses a coordinate based location. SIMS provides for the capture and retrieval of data on crashes occurring on New York’s roadways (state and local), with the data being received electronically from the Department of Motor Vehicles’ (DMV) Accident Information System (AIS) and from the NYSP’s TraCS System. SIMS captures a subset of data from AIS, excluding limited data that pertains to individual occupants, primarily drivers, involved in crashes. SIMS does capture images of the original police and motorist reports for each crash.

In addition to assisting in the identification of high accident locations based on all crashes, the data from SIMS are used to compile specialty Priority Investigation Location lists (PILs) based on particular crash types; for example, a skid accident
report is generated annually based on wet road crashes. The SIMS data are used to create standardized annual reports, (average crash rates by facility type, crash severity distributions and etc.) that are available on NYSDOT’s website (www.nysdot.gov).

Post Implementation Evaluations (PIES-DOT): The Safety Information Management System (SIMS) has a module for evaluating the effect that highway safety improvements and projects have in reducing the number and severity of highway crashes. PIES links the location information for completed projects with the type of improvement implemented (with cost) and the crash data for that location. This provides the ability to assess if a particular improvement or project was successful in reducing crashes. Further analysis is performed by the PIES module to create an average value of effectiveness for each improvement type or category known as a reduction factor. These reduction factors are used by the engineers during their Highway Safety Investigation (HIS) program activities to help determine the expected benefit, in terms of accident reduction, for different proposed countermeasures.

Accident Location Information System (ALIS-DOT): ALIS is a GIS web-based database designed to provide map-based record interval, spatial analysis tools, and location coding of crashes by DMV. ALIS is linked with both AIS and SIMS to integrate crash information for use in both systems.

1.4 Reserved

1.5 Reserved

1.6 Reserved

Vendor Comments:
3 PROJECT AND CONTRACT OBJECTIVES

3.1 Project Objectives

The goal of this procurement is to acquire a Program Process review of NYSDOT’s Highway Safety Plan and analysis of processes and a Commercial Off-the-Shelf (COTS) Safety Data software solution and accompanying integration services to fulfill NYSDOT’s Office of Traffic Safety and Mobility business requirements from a responsive and responsible consultant.

3.2 Definitions and Acronyms

See Attachment #14.

3.3 Contract Terms and Rate Adjustments

The Department estimates that the work for the successful consultant will commence on January 1, 2019. The base term or duration for the contract is three years. The contract may be extended for up to two additional one-year periods upon written agreement of both parties and approval by the Office of the State Comptroller and FHWA.

If the contract is extended for the optional years, the Producer Price Index (PPI) as published by the U.S. Department of Labor, Bureau of Labor Statistics, or 2%, whichever is lower, will be used as a basis for adjusting the hourly rates/lump sum deliverable amounts. The rate adjustment will be effective on January 1 and calculated using the previous September Index, using Series ID PCU5413--5413--(Architectural, engineering, and related services. [http://data.bls.gov/timeseries/PCU5413--5413--?data_tool=XGtable](http://data.bls.gov/timeseries/PCU5413--5413--?data_tool=XGtable). If at any time the above Index Series ID is discontinued or becomes unavailable, the State reserves the right to implement a comparable Index.

An example of the rate adjustment calculation is as follows (all numbers and titles used are for illustrative purposes only):

<table>
<thead>
<tr>
<th>QAT-2 Auditor 1/1/18 - 12/31/20 Billing Rate</th>
<th>$9.00/Hour</th>
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<tbody>
<tr>
<td>October 2019 PPI Index (PCU5413--5413--)</td>
<td>132.1</td>
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<tr>
<td>October 2018 PPI Index (PCU5413--5413--)</td>
<td>130.0</td>
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<tr>
<td>Index Point Change</td>
<td>2.1</td>
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<tr>
<td>Divided by previous Index</td>
<td>130.0</td>
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<tr>
<td>Percent change, rounded to nearest tenth</td>
<td>1.6%</td>
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<tr>
<td>QAT-2 Auditor 1/1/21 – 12/31/21 Billing Rate ($9 x 1.016)</td>
<td>$9.14/Hour</td>
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If the actual start of the contract is substantially different than the above estimated date, then the effective date for the rate adjustment will be similarly changed. 

The State reserves the right to request zero percent rate increases for the two additional two-year extensions.

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<th>Vendor Comments:</th>
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## 4 SCOPE OF SERVICES

### 4.1 Project Overview

The objectives of this project are:

The goal of this procurement is to acquire a Program Process review of NYSDOT’s Highway Safety Plan and Highway Safety Improvement Program and deliver a Commercial Off-the-Shelf (COTS) Safety Data software solution and accompanying integration services to implement recommendations based on this review and fulfill NYSDOT’s Office of Traffic Safety and Mobility business requirements from a responsive and responsible consultant.

### 4.2 Tasks

Consistent with the project vision, the following have been identified as key functionalities.

**Task 1 - Safety Data Program Process and Methodology Review**

- Review of NYSDOT SHSP for overall Safety Goals and vision
- Review of NYSDOT HSIP for alignment with Strategic Highway Safety Plan (SHSP).
  - Currently, NYSDOT uses Rate - Quality control method to perform the Highway Accident Location (HAL) analysis.
  - Department would like to make improvements to the current network screening and analysis methodologies to increase the accuracy of the road safety programs and data.
- Review and provide a roadmap of new data requirements, new data sources, high level business processes, and how to transition from the current
NYSDOT linear referencing method (Reference Marker) to the Departments Statewide Enterprise Milepoint Linear Referencing System.

- Review processes and formulas for calculating performance metrics on all public roads.
- Propose a High level plan for calculating highway performance metrics that is integrated with NYSDOT Linear Referencing System (LRS) and NYSDOT assets and inventory.
- Consistent process that can be used in all Safety Programs and procedures (I.E. Network Screening, Systemic Analysis)

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<tr>
<th>Question #1</th>
<th>Section 4.2 – Task 1</th>
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<td>Question #1</td>
<td>Does your firm have experience in completing the proposed task? Answer “Yes” or “No”. If yes, provide a brief description of your experience.</td>
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Vendor Response

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<th>Question #2</th>
<th>Section 4.2 – Task 1</th>
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<td>Question #2</td>
<td>Does your firm have experience with NYSDOT’s Rate – Quality Control methodology? Answer “Yes” or “No”. If yes, provide a brief description of your experience.</td>
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Vendor Response:

**Task 2 - System Integration/Data Management**

- Maintenance of Crash case record including data from all applicable sources (motorist, police, DMV, DOT)
- Accurate identification of all crash locations (State and local highways, rural roads, entire street network)
- Ability to integrate road, traffic and crash data via LRS (NYS Enterprise Linear Referencing System)
- Ability to integrate with the ESRI ArcGIS geographic information system (GIS)
- Plan for integration with NYSDOT “System of Engagement”-(Provide data to, or pull data from)
- Enable updates of the information sources (e.g. Update source CRASH data and updates to Agile Assets Work Orders)
- Display crash locations using geospatial layers representing information from multiple systems
- Consolidate and simplify interfaces through the common location reference (Milepoint LRS) and related capabilities of the ESRI Road and Highways platform
- Tools and reports for tracking data accuracy, completeness, and Timeliness.
### Question #3

Section 4.2 – Task 2

NYSDOT plans on integrating ESRI Roads and Highways as the source of linear referencing. Comment on other potential products(s) that could be integrated for linear referencing.

**Vendor Response:**

**Task 3 - Data Analysis and Summarization**

- **Annual Analysis Calculations**
  - Ability to assist the user in appropriate selection of predefined countermeasures
  - Reduce analysis time for comparing the crash data against multiple systems
  - Centralize reporting and monitoring abilities. View Crash data warehouse information within the application to support analysis and decision making.
  - Calculation of Crash Metrics such as frequencies and rates, on both a statewide level and site/segment level.

- **Site Analysis**
  - Ability to identify crash contributing factors
  - Ability to analyze data and display analysis results via GIS mapping

- **Network Screening Analysis**
  - Priority Ranking based on locations with worst crash metric and/or best economic metric
  - Calculate crash metrics for user-selected crash focus populations.
  - Identify and capture designation of prioritized locations for safety improvements.

- **Systemic Screening Analysis**
  - Statistical Analysis and Summaries
  - Ability to drill down on crash counts and rates for user-selected populations of roadway and crash categories.
  - Ability to apply and associate appropriate risk factors to over-represented crash locations.

- **Highway Safety Investigations**
  - Ability to estimate cost-effectiveness of safety countermeasures
  - Ability to track locations and Improvements
  - Assesses the effectiveness of those improvements

- **Measure Predictions, Report Metrics, Track Investigation Realized Benefit/Cost**
  - Ability to analyze benefit-cost ratio, net-present value
  - Improve the ability to respond quickly and accurately to FOILs and Management
  - Provide the ability to centrally audit the safety efforts to reduce Fatal and Severe crashes on New York State’s Roadways
Task 4 - Data Queries and Reporting

- Ability to aggregate and drill down data
- Graphical User-Interface
- Cross-Tabulation capability
- Selectable reporting attributes and output formats
- Map presentation of the selected crashes with street view
- Ability to share and run a shared query
- Ability to working with layers of data on the map

Task 5 – User Mobile Applications (Proposers must include this task in their in approach and cost, it will be at NYSDOT’s discretion to include this task in the final contract)

- Ability to edit crash location data via mobile device
- Develop mobile application to display crash data in a map presentation
- Ability to share crash data to mobile applications developed by a 3rd party

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<th>Question #4</th>
<th>Section 4.2 – Task 5</th>
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<td>Vendor Response:</td>
<td>Does your firm have experience developing and deploying mobile applications? Answer: “Yes” or “No”. If yes, provide a brief description of your experience.</td>
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<th>Question #5</th>
<th>Section 4.2 – All tasks</th>
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<td>Vendor Response:</td>
<td>In previous contracts have you subcontracted any tasks above to Certified DBE firm? Answer “Yes” or “No”, if yes please list those tasks?</td>
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4.3 Organization and Staffing

The qualifications and prior experience of the proposer are of great importance to NYSDOT. The Consultant will create an organization chart that describes reporting relationships of all key personnel identified in this section. The Consultant will be responsible for providing the following key personnel:

**Project Manager**–The contractor must provide a full time Project Manager (PM) dedicated to this project. The PM shall have at least five (5) years experience in managing projects involving the implementation if transportation management systems, and be fluent in the English language (i.e., speaks, reads, writes, understands, and comprehends English fluently). The PM shall be responsible for directing the Contractor resources, coordinating and communicating with the NYSDOT Project Manager and ensuring the project deliverables are met according to the approved project plan.

**Technical Architect** –Will be responsible for defining, designing and developing the overall structure of the Safety Data system, and overseeing assignments of the implementation team. The Technical Architect shall have at least five (5) years experience in designing and delivering projects involving the implementation of
transportation management systems, and be fluent in the English language (i.e., speaks, reads, writes, understands, and comprehends English fluently).

**Safety Subject Matter Expert** – The Safety Subject Matter Expert shall have at a minimum a Bachelor’s Degree in Civil Engineering from a NYS Accredited University, at least five (5) years experience involving the development and execution of transportation safety evaluation systems, and be fluent in the English language (i.e., speaks, reads, writes, understands, and comprehends English fluently). The Safety Subject Matter Expert shall be responsible for analyzing the Safety Data Methodology.

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<th>Question #6</th>
<th>Section 4.3 – Organization and Staffing</th>
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<td>Does your firm have experience with Federal DOT’s Highway Safety Manual and Methodology? Answer “Yes” or “No”. If yes, provide a brief description of your experience.</td>
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### 4.4 Schedule

- June 8, 2017 – Release of RFC
- June 29, 2017 – Deadline for responses to RFC
- July 27, 2017 – Release of RFP
- August 8, 2017 – RFP Pre-Proposal Webinar
- August 15, 2017 – Deadline for questions from Proposers
- August 22, 2017 – Deadline for responses to questions
- August 29, 2017 – Deadline for submission of Proposals
- Week of September 25, 2017 – Proposer Interviews/Demonstrations
- October 2, 2017 – Designation of Tentative Award
- October 16, 2017 – Negotiation of Final Contract
- February 1, 2018 – Notice of Contract Award

**Vendor Comments:**
5 PROPOSAL FORMAT AND CONTENTS

For the purposes of evaluation, each proposal must be submitted in two parts, bound separately. Part I shall consist of the Technical and Management submittal. Part II is the Cost and Contract submittal. Each part of the proposal must be complete in itself in order that the evaluation of both parts can be accomplished independently and concurrently, and the Technical and Management submittal can be evaluated strictly on the basis of its merits. Cost information is not to be included in the Part I submittal. Your proposal should follow the format listed below.

Web links, photographs, and illustrations (except for the organizational chart) are not to be included unless specifically required in this section.

NOTE: NYSDOT will protect confidential and proprietary information from disclosure to the extent permitted by the Freedom of Information Law (“FOIL”), Article 6 of the Public Officers Law. If an offerer believes information included in their proposal is confidential and proprietary, they should identify those page(s) of their proposal which contain such information as “confidential and proprietary”. Additionally, offerers need to explain the reason(s) why this information should be considered exempt from public disclosure under FOIL. This information is to be provided in the Cover Letter.

Note: Cost information is not to be included in the Part I submittal, and Technical and Management information is not to be included in Part II submittal.

5.1 Part I: Technical and Management Submittal

Part I shall include the following sections:

5.1.1 Cover Letter, and Title page, indicating:

Name, address and phone number of the proposer, and the name, title, address, email, and telephone number of person(s) with authority to negotiate and who may be contacted during the procurement process. Provide a brief description of the proposed approach, work effort and resulting product. Confidential and proprietary information should also be identified and addressed in this section. Not to exceed a single page.

5.1.2 A Table of Contents.

5.1.3 Narrative Description

Provide a discussion on the important issues involved in the implementation of this effort. Include enough substantive discussion to demonstrate an understanding of NYSDOT project objectives and familiarity with applicable laws, rules, etc.
5.1.4 Project Delivery Strategy and Approach

Describe the approach for performing the work and accomplishing project objectives. Provide a detailed scope of services which describes by task what will be done. A general scope of services is outlined under Section 4 and should include the following:

- Project Planning and Project Management
- Application Strategy, Architecture and Planning
- Detailed Requirements Definition
- Design Specification
- Configuration/Programming/Development/Integration
- System Testing and Acceptance Testing
- Product Implementation and Deployment
- Communications
- Training and Change Management
- Knowledge Transfer
- Post Implementation Maintenance and Support

You may base your scope of services on these tasks, or suggest alternative tasks which could improve the ability of the project to meet its objectives. NYSDOT wants to allow maximum flexibility for the inclusion and consideration of ideas, initiative and creativity of the proposer. Alternative tasks and suggestions are encouraged and will be reviewed with interest within the framework of the stated objectives and scope of services for the project. Also, include a schedule for completion of the project showing the duration of each task and all major milestones, and include a list of technical assumptions.

| Question #7 | Section 5.1.4 Project Delivery Strategy and Approach
Does your firm have experience with professional writing/documentation of traffic and safety related topics and processes? Answer “Yes” or “No”. If yes, provide a brief description of your experience. |
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| Question #8 | Section 5.1.4 Project Delivery Strategy and Approach
Does your firm have experience User training with a statewide distributed workforce? Answer “Yes” or “No”. If yes, provide a brief description of your experience. |
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| Question #9 | Section 5.1.4 Project Delivery Strategy and Approach
Does your firm have experience implementing a COTS or custom developed application for the proposed scope of services? Answer |
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5.1.5 Risk Management Plan

Clearly describe the methods to be utilized in the identification of potential risk; procedures utilized to predict the likelihood that a risk will occur; the methods for quantifying the potential impact to the project; and the methods for development of action plans to mitigate the impact of that risk occurrence.

5.1.6 Change Management Plan

Describe the process for making any adjustments to any aspect of the project plan or to any already approved deliverable (s). Including anything formally documented in the project plan, or any deliverable produced during the course of the project.

5.1.7 Communications Plan

Describe how communications will be managed on the project including:
- Identification of all stakeholder roles and channels for communication
- Project Information collection and storage procedures
- Distribution structure, specifically detailing what, how, and when information will be shared with stakeholders
- Method by which information will be accessed if it is needed between regularly scheduled communications.

5.1.8 System Testing and Acceptance

Describe the system testing and acceptance strategy proposal which shall include, but not be limited to, validation of system functions against requirements, performance of system functions and security features, how the system interoperates with all interfaces in terms of accuracy and performance.

5.1.9 System Support and Maintenance Plan

Describe the ongoing support and maintenance services to provide support of the proposed solution.

5.1.10 Schedule

Provide a project schedule that includes a detailed list of the tasks and the resources, timeframes, deliverables, and dependencies for each task. All critical milestones, deliverables, tasks, timeframes, dependencies and the schedules’ critical path shall be clearly delineated within the Project Schedule. The Project
Schedule must be fully resourced – all technical and functional roles (Proposer and NYSDOT) required to meet the deliverables shall be clearly identified.

It is expected that the Contractor will locate Key Personnel at NYSDOT as necessary to: coordinate work activities, provide project communication, interact with NYSDOT Subject Matter Experts (SME), and develop business expertise with the goal of successful and timely project completion. Proposer shall include a schedule for Key Personnel minimum Onsite requirements.

5.1.11 Organization and Staffing

- Provide an organizational chart for the project showing the names of the Consultant’s Project Manager and Key Personnel.
- Describe the staffing management plan to ensure effective and efficient delivery of services while meeting the project objectives.
- Describe the Roles and responsibilities of both the Contractor and NYSDOT organizations for all tasks.
- Describe the staff requirements for both the Contractor’s staff and corresponding NYSDOT staff required to implement the solution.
- It is expected that the Contractor will locate Key Personnel at NYSDOT as necessary to: coordinate work activities, provide project communication, interact with NYSDOT Subject Matter Experts (SME), and develop business expertise with the goal of successful and timely project completion.
- Include an estimate of total effort hours contributed by each of the key personnel to each task and an estimate of total effort hours for each task.
- If subconsultants are to be used, explain the specific need for the expertise and describe the arrangements. Discuss your plan for phasing project personnel into the effort. The Consultant’s Project Manager shall serve as the primary contact with the NYSDOT Project Manager. The Consultant’s Project Manager is responsible for the performance of all key personnel, production staff and support staff assigned to this Agreement by the Consultant, as well as contractual matters on the Consultant’s side. Describe the level and type of interaction with NYSDOT.

5.1.12 Experience

The qualifications and prior experience of the proposer are of great importance to NYSDOT. Direct, prior experience in data management and integration is highly desirable.
- Provide a list of projects, with reference contact information, currently in progress and those completed within the last three years which are relevant to this effort.
- Provide case studies that describe how your company has supplied similar solutions to other transportation department customers, preferable large state or municipal transportation agencies or authorities.
• Provide Consultant Key Personnel Resume and Reference form in Attachment 13. Indicate proposed key personnel who are, or have worked, on such projects.

    Include names, addresses and phone numbers of contact points with the
listed clients and Key Personnel. NYSDOT reserves the right to request
information from any source so named.

The Key Personnel (as identified in Attachment 12) proposed by the designated Consultant are an important factor in the evaluation of its proposal. Thus, the Department expects that the personnel proposed will be available at the start of the contract term. As a result, any personnel proposed by the designated Consultant that does not perform the required work under the contract for the initial 30 calendar days after the effective date of the Notice to Proceed will, at NYSDOT’s discretion, result in a $10,000 charge per personnel title as Liquidated Damages.

In addition, if at any time during the term of the contract a member of the Consultant’s Key Personnel needs to be replaced, the Consultant shall have 30 calendar days to submit a qualified Candidate (same level of experience and expertise) to NYSDOT for approval. In the event the Consultant is unable to provide a qualified Candidate within 30 calendar days, and NYSDOT must use in-house NYSDOT staffing, or NYSDOT must hire a separate consultant to provide the personnel, NYSDOT will, at its discretion:

• Charge and bill the Consultant $100/hour for the use of in-house NYSDOT personnel, or
• Charge and bill the Consultant a 10% administrative fee on top of and in addition to whatever NYSDOT is billed by an out-of-house consultant. If, for example, NYSDOT must hire a separate consultant to provide a service at $100/hour, NYSDOT will charge and bill the Consultant $110.

The determination that a Candidate is “qualified” is the sole decision of NYSDOT. All amounts specified above will be billed as an off-set against future Consultant invoices.

<table>
<thead>
<tr>
<th>Question #10</th>
<th>Section 5.1.12 Experience</th>
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<tr>
<td>Vendor Response:</td>
<td>Does your firm have experience implementing similar systemic safety analysis solutions for any other Transportation customers? Answer “Yes” or “No”. If yes, provide a brief description of your experience.</td>
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<table>
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<th>Question #11</th>
<th>Section 5.1.12 Experience</th>
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<tr>
<td>Vendor Response:</td>
<td>Does your firm have experience with DOT’s Rate – Quality Control method to perform the Highway Accident Location (HAL) analysis and performing Highway Safety Investigations (HSI)? Answer “Yes” or</td>
</tr>
</tbody>
</table>
Part II: Cost and Administrative Submittal

Part II of the proposal consists of two general sections:

- A Cost Proposal, which shall set forth the lump sum amount for Task 1 and hourly rates/direct non-salary costs for performing the work in the scope of services in Tasks 2-5; and
- The Administration Section, which shall specify the proposer’s acceptance of the terms and conditions contained in the draft Contract enclosed as Attachment 1 to this solicitation, as well as host several other administrative items.

**Question #12**

Section 5.2 Cost Proposal

Do you have experience with SMSI software licensing? Answer “Yes” or “No”. If yes:

a. Was it user or server based licensing?
b. What was the duration and renewal process?
c. Was software maintenance included in the licensing fees?
d. Were the licenses able to be transferred between users or servers?

**Vendor Response:**

The above general sections shall include the following:

1. **Cost Proposal**

   Task 1 - Safety Data Program Process and Methodology Review

   NYSDOT requires that all cost information be presented using the RFP-provided Microsoft Excel spreadsheets (see **Attachment 14 ‘Cost Proposal Workbook’**) in both a hardcopy Part II response and an electronic copy on CD, securely presented in the Part II response. The accuracy of calculations and formulas in the spreadsheet are the sole responsibility of the offeror.

   When completing the Excel cost worksheets included in **Attachment 14**, offerors shall follow these instructions:

   1. The one-time and recurring costs the proposer provides within the Cost Proposal must include ANY AND ALL one-time and recurring fees, charges, or costs for the duration of the contract, including but not limited to:
a. All direct and indirect costs, all overhead, fees, profit,
b. Labor, parts, shipping, material and equipment cost;
c. Software licensing;
d. Emergency work;
e. Maintenance services as specified herein;
  f. Repairs and replacement of major or minor parts as necessary;
g. Administrative, reporting or other requirements;
h. Travel costs, parking fees, and any other ancillary fees including permits;
   licenses, insurance, etc., and
  i. Services not explicitly stated in these specifications, but necessarily attendant
     thereto as applicable to the associated item for which the rate/fee is being
     quoted.

2. Terminology used in the cost spreadsheets for products and services must be
   consistent with the terminology used in the technical portion of the response.

3. All worksheets included in Attachment 14 must be completed in order for the
   response to be considered complete.

4. Proposer should not make entries in colored cells in Attachment 15’s Excel
   spreadsheets. Changes should not be made to the spreadsheet format or formulas.
   Proposers shall not attach any additional or qualifying information.

Tasks 2 – System Integration/Data Management, Task 3 – Data Analysis and
Summarization, Task 4 – Data Queries and Reporting, Task 5 – User Mobile
Applications

a. Salaries
   Present a salary schedule to list descriptive job titles for the staff to be assigned to this
   project and their present hourly rates. If additional titles are used but are not assigned,
   they should be listed. The schedule should be prepared to distinguish anticipated
   assignment by project section/task.

   Direct Labor or Direct Salary Cost component (A), the Indirect Cost component, also
   known as Overhead Cost component (B), and the Fee component (C), such that:

   SHR = A + B + C

   The calculation of the fee component, C, is to be made using the following
   formula:  C = M times (Direct Labor Cost + Overhead Cost), or C = M x (A + B),
   where M = the fee multiplier.

b. Direct Non-Salary Costs
   A direct non-salary cost schedule shall list by task number the items of direct non-
   salary costs (out-of-pocket expenses) expected to be incurred in the performance of
   the project. Travel, meals and lodging reimbursements shall be limited to the
   prevailing maximum rates established by the State Comptroller. The latest state and
   nationwide rates are available at the following Web site:  http://www.gsa.gov/
Subconsultant costs (if any) should be shown in the schedule. On separate sheets, explain each item with all factors leading to the derivations of the cost.

Cost Proposal Instructions

Use Attachment 17 to complete the Cost Proposal response form. This attachment contains instructions to guide completion of this form. Should any questions arise pertaining to this form and its instructions, please submit them to the designated NYSDOT contact person before the Question & Answer deadline.

2. Administration Section
All signatures on each copy must be an original.

a) Acceptance of Agreement Terms and Conditions
Offerors shall complete and submit the “Consultant Information and Certifications Form,” included as Attachment 2 to this RFP, to indicate their acceptance of all of the terms and conditions contained in the draft Agreement (Attachment 1). Attachment 2 also requires the signature of an official authorized to bind the offeror to all of its provisions, a statement certifying that the proposal shall remain valid for at least 365 days, a statement that the firm accepts the RFP’s Scope of Services ‘as-is’, and a statement that, if awarded the contract, the offeror will comply with all the requirements of the RFP, including all of its attachments. Altering this form without the prior expressed written approval of the New York State Department of Transportation is prohibited and may lead to the proposal being deemed non-responsive and subsequently dismissed. No exceptions to any of the draft contract’s terms and conditions will be entertained by NYSDOT. Conditional bids will be deemed non-responsive.

b) DBE Participation
In Part II of your firm’s proposal, provide the following:

i. Complete and submit Attachment 5 DBE Participation Information. Provide the legal names of all certified DBE consultants (prime and/or subconsultant).

ii. For firms whose DBE participation is less than the established goal stated in Section 2 (or where the prime consultants certified as a DBE proposes to meet the Department’s DBE participation goal via their meaningful participation), the firm must also complete and submit Attachment 5a: DBE Participation Solicitation Log. Submission of a Goal Attainment Explanation Letter shall be required for proposals with either partial goal attainment or no goal attainment at all.
c) Modification Acknowledgement Forms
   The Proposer shall include a completed Attachment 10: Form AOR, acknowledging receipt of any Modifications issued by the Department.

d) Non-Collusion Bidding Certification
   All Proposers shall submit a completed Attachment 11: Non-Collusive Bidding Certificate.

e) Procurement Lobbying Law


   Filing the two required forms is mandatory for all consultants in order to be considered for contract award. These Forms are:

   • Offerer’s Affirmation of Understanding of and Agreement pursuant to State Finance Law §139-j (3) and §139-j (6) (b) https://www.dot.ny.gov/main/business-center/consultants/consultants-repository/offers_affirmation_and_agreement_form.pdf

   Failure to submit the required PLL forms with your proposal will result in elimination from consideration for contract award.

   Use Contract Number C037625 wherever requested in the forms. Please call or e-mail the individuals identified as the Designated Contacts in section 1.4 of this RFP if you have any questions regarding how to complete this required form.

   Per the Procurement/Lobbying Law of 2005, any person who wishes to contact NYSDOT regarding this project during the restricted period (i.e. from advertisement through designation), may only contact the persons noted in Section 1.4 to this solicitation.

   For additional information, refer to Attachment 3: Procurement Lobbying Law Compliance.


6 CRITERIA FOR EVALUATION OF PROPOSALS

6.1 General

Proposals shall be pre-screened to determine if they meet the minimum RFP responsiveness (reference Section 1.3). Those which do not shall be deemed non-responsive and shall be removed from further consideration.

Proposals shall then be evaluated by the Department using a Best Value Method evaluation process based on the technical and cost criteria described below. Technical considerations are of greater importance than pricing considerations; however, price is a significant factor in the Department’s evaluation of proposals. Technical proposals will be scored based on the information provided under Section 5.1 in accordance with the pre-established criteria listed in Section 6.3. The cost portion of Section 5.2 will be point scored in accordance with the pre-established criteria listed in Section 6.4.

Technical and Management Proposal evaluation will be accomplished by a representative committee comprised, as appropriate, of technical, program and management personnel. Committee members will score each proposal individually and then meet as a group to discuss the proposals. Evaluators will be allowed to revise scores on the basis of the committee discussions. Only proposals determined to be technically acceptable and susceptible for contract award will be considered further and have their cost proposal included in the selection process.

Proposers responding to this RFP may be requested to clarify issues or to provide additional insights into their proposal through written clarifications and/or technical interviews. If written clarifications are required to complete the technical evaluation of proposals, evaluators will be allowed to revise their technical scores based on this additional information. Furthermore, the Department reserves the right to ask clarifying questions regarding each cost proposal (Part II) and DBE participation as well.

If technical interviews are required to complete the technical evaluation of proposals, the criteria listed below under subsection 6.5 will be used to evaluate the technical interviews and the total percentage for technical proposals (see below) will be redistributed so that [600%] will be for the written submission(s) and [100%] for the technical interview. Clarification questions may also be asked of proposers after technical demonstrations have been completed. Technical Interviews, if required, will be held at the Department’s offices located in Albany, New York at a date and time to be determined by NYSDOT.

The Department reserves the right to request best and final offers from firms that are determined to be susceptible for contract award.

An award shall be made to the offeror whose proposal receives the highest total score after considering all technical and cost/price evaluation factors. Should NYSDOT opt to request best and final offers, it reserves the right to re-score technical and cost proposals. Further,
NYSDOT reserves the right to re-score technical and cost proposals should a firm withdraw form this solicitations or be deemed non-responsive after initial evaluation and scoring.

**Note:** In the event two or more proposals are found to be “substantially equivalent”, the Department reserves the right to award the contract under the terms of State Finance Law §163 (10)(a).

At the conclusion of the evaluation process, an announcement of the Department’s designation(s) will be posted on the NYSDOT web site. All non-designated firms shall be notified in writing regarding the results from the solicitation, and will be offered an opportunity to hold a debriefing. Further, it is expressly understood that this Request for Proposals does not commit the Department to award a contract, pay any costs incurred in the preparation of a proposal to this request, or to procure or contract services or supplies. Further, the Department shall have no obligation or liability whatsoever to the vendor selected as a result of this solicitation unless and until a contract satisfactory to the Department is approved and executed by the vendor and all necessary State officials.

### 6.2 Pre-Screening of Proposals

NYSDOT will conduct a pre-screening of each proposal to ensure all contents have been submitted in accordance with the minimum proposal responsiveness requirements as specified in the RFP. RFP specifications include that it is NYSDOT’s sole discretionary determination as to whether a proposal is complete (reference “Minimum RFP Responsiveness” Section 1.3). Proposals which do not meet the mandatory specifications in the Minimum RFP Responsiveness section will be deemed non-responsive by NYSDOT and will not be considered further.

As part of the pre-screening process, the proposed DBE participation percentages offered for NYSUCP certified prime consultants and/or NYSUCP certified subconsultants will be reviewed (Attachment 5 DBE Participation Information). To count towards the Department’s DBE participation goal, each firm must be currently listed in the NYSUCP Directory. If the proposed DBE participation is less than the established 18 percent (18%) goal (or where a prime consultants certified as a DBE proposes to meet the Department’s DBE participation goal via their meaningful participation), the firm’s evidence of a Good Faith Effort (Attachment 5a DBE Participation Solicitation Log) to achieve the goal will be reviewed, along with the firm’s letter of explanation (Goal Attainment Explanation Letter) as to why it was unable to meet the goal. During the review process, which will include verification of a firm’s Good Faith Effort evidence, if it is determined by the Department that the firm did not provide an acceptable Good Faith Effort, then the proposal will be deemed non-responsive and will be removed from further consideration.
6.3 **Technical and Management**

The technical and management proposal will be scored and will represent 600% of the total score for a proposal. The major evaluation criteria are listed in descending order of importance. Sub-criteria within major evaluation factors are also in descending order of importance.

A proposal to be deemed technically acceptable and susceptible to contract award must receive an average raw committee score of 360.00 points or higher out of a total possible of 600 points.

1. **Approach, Scope of Services, and Schedule**

   a. **Quality of Project Delivery Strategy and Approach: (up to 460 points)**

      - **Task 1: Safety Data Program Process and Methodology Review**
        o Review of existing processes to perform analysis, screening and investigations
        o Plan for calculating highway performance metrics that is integrated with NYSDOT Linear Referencing System (LRS)
        o Plan for using data for calculating required screening and improvement measures

      - **Task 2: System Integration/Data Management**
        o Application Administration
        o Code and Adjust Crash Location

      - **Task 3 - Data Analysis and Summarization**
        o Annual Analysis Calculations
        o Site Analysis
        o Network Screening Analysis
        o Systemic Screening Analysis
        o Highway Safety Investigations
        o Measure Predictions, Report Metrics, Track Investigation Realized Benefit/Cost

      - **Task 4 - Data Queries and Reporting**
        o Queries Reporting

      - **Basic Information Technology Requirements**
        o NYS ITS Standards
        o System Interfaces
        o User Interface
        o System Administration
        o System Security

      - **Integration with DOT applications and data sources**
        o Integration with ODI/Oracle
        o Data Warehouse Interface
        o GIS Interface

   b. **Training & Knowledge Transfer Requirements (up to 50 points)**
- User Manuals
- Training
- Application Support

c. Completeness and Reasonableness of Schedule (up to 30 points)


2. Consultant and Key Personnel Experience (up to 20 points)
   a. Quality, extent and relevance of experience, education and training of key personnel.
   b. Quality, extent and relevance of current and prior experience of the firm.

3. Organization and Staffing (up to 20 points)
   a. Quality of project organization; reasonableness of staff/task allocations for each task and total effort.
   b. Quality of plan for phasing key personnel into project.
   c. Extent and quality of interaction with key participants.

**6.4 Cost**

The cost portion of the cost and contract proposal will be point scored and will represent 300% of the total score for a proposal. The Contractor shall provide, in the cost spreadsheets provided in Attachment 17: Cost Proposal Workbook, the total cost to perform the Scope of Services.

The calculation of a cost score will be determined by the following method:

A. The lowest cost proposal will receive the full amount of points.
B. Every other proposal within the competitive range will be given points in relation to the lowest price.
C. This point total will be calculated by dividing the lowest proposed price by the total price of each proposal, multiplied by the maximum weight for price (300 points).
6.5 Technical Interviews (up to 100 points)

Technical Interviews will be held at the Department’s offices located in Albany, New York at a date and time to be determined by NYSDOT.

1. Ability of the presenting consultant team to address and answer the committee’s clarifying questions. (up to 40 points)

2. Additional insights into technical aspects of the firm’s proposal. (up to 30 points)

3. Ability to address the committee’s follow-up questions and concerns. (up to 30 points)

Vendor Comments:
7 Reserved

8 ATTACHMENTS
8.1 ATTACHMENT 1: Reserved
8.2 ATTACHMENT 2: Reserved
8.3 ATTACHMENT 3: Reserved
8.4 ATTACHMENT 4: Reserved
8.5 ATTACHMENT 5: Reserved
8.6 ATTACHMENT 6: Reserved
8.7 ATTACHMENT 7: Reserved
8.8 ATTACHMENT 8: Reserved
8.9 ATTACHMENT 9: Reserved
8.10 ATTACHMENT 10: Reserved
8.11 ATTACHMENT 11: Reserved
8.12 ATTACHMENT 12: Reserved
8.13 ATTACHMENT 13: Reserved
8.14 ATTACHMENT 14: Reserved
### NYS Office of ITS Security Standards and Policies

Statewide technology policies and guidelines set standards and define best practices for the NYS Information Technology community. By submitting a bid, all Bidders agree that under any subsequent contract entered into between ITS and the successful bidder, the winning Bidder must comply with and remain compliant with applicable New York State Information Technology Security Policies, as they currently exist or are reasonably modified or added to in the future, currently published by the NYS Enterprise Information Security Office (EISO) at [its.ny.gov/eiso/policies/security](http://its.ny.gov/eiso/policies/security) or at such other website as ITS may designate in the future, upon notice to the winning Bidder. Below is a summarized list of Policies and Standards.

*Please note: Not all policies are applicable to every project.*

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<th>Policy No.</th>
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<tr>
<td>NYS-G10-001</td>
<td>Secure Use of Social Media Guideline</td>
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<td>Cyber Incident Response Standard</td>
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<td>Information Security Risk Management Standard</td>
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<td>Remote Access Standard</td>
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<td>NYS-S14-013</td>
<td>Account Management / Access Control Standard</td>
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ITS Technical Services and Standards Overview
Exhibit 1 – Technology Services Overview

February 28, 2017
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<td>Azim Ahmed</td>
<td>DRAFT – Content update, removed duplicates, reorganized and reformatted to standard template</td>
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<td>Maha Madan</td>
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2. Introduction

The Office of Information Technology Services (ITS) provides architectural frameworks and platform components used to build, configure, and customize proposed solutions. A proposed solution must use the supported enterprise shared service platforms and components whenever practical. ITS enterprise technologies are available for the successful bidder to build and configure a solution that meets business requirements defined by the New York State customer agency. All builds and configurations must comply with NYS Information Technology Policies, Standards, and Best Practice Guidelines. These guidelines can be found on the ITS website at https://www.its.ny.gov/tables/technologypolicyindex.

Using NYS ITS enterprise shared services and components for on premise solutions is the preferred architecture, however, other products may be proposed based on potential integration advantages and/or alignment with the ITS enterprise strategic direction and with approval by the New York State Chief Technology Officer.
3. ITS Managed Services – Infrastructure

3.1. Supported Servers and Database

3.1.1. General Purpose Servers

Virtual servers to support multiple sized workloads running current supported operating systems. Service features include configuration of memory and CPU based on tiers (small, medium, large), managed network, system monitoring, security, and capacity planning:

Operating Systems: IBM AIX, Microsoft Windows, or Red Hat Linux (RHEL)

Web Server Options: RedHat Apache HTTP, Microsoft IIS

3.1.2. Application Servers

Application servers and platforms to support Java J2EE and .NET frameworks. Service offerings include standalone and scalable configuration of memory and CPU based on tiers (small, medium, large), managed network, system monitoring, security, and capacity planning.

Java J2EE Application Servers: RedHat JBoss

Microsoft .NET: Native Windows or ITS Private Cloud

3.1.3. Database System

Managed relational database services include database support and physical database design in addition to infrastructure support. The service targets OLTP structured data workloads. Supported technologies include current releases of:

Oracle Database
Server

Microsoft SQL Server
### 3.3. Managed IBM z-series Mainframe Services

Service Features: Review, configure, generate, install, and maintain the mainframe operating system software including libraries, components, patches, and upgrades.

Service Options: Disaster Recovery

### 4.1. Identity Management

#### 4.1.1. User Authentication

User authentication is available using ny.gov and Active Directory. Agency user authentication must leverage ADFS. External users and citizens that are not integrated through ADFS will be supported using ny.gov accounts. Both methods pass credentials using Oracle Identity Manager to the CRM/OLTP solution where role based security is defined.

#### 4.1.2. Data Integration Security

Data Integration security is managed by the ITS SOA backplane. Security access controls and logging requirements for integration and data access is to be established by ITS in alignment with NYS security policy.

### 4.2. User Interface and Customer Experience

The preferred UI for external users is Oracle Policy Automation (OPA) web determination and Siebel UI for internal users. .Net is an option for rich/custom interfaces that do not fit in the OPA/Siebel model.

### 4.3. Data Integration
4.3.1. SOA Backplane

The ITS SOA backplane is used to connect customer portals to CRM/OLTP system of record, agency internal systems, and databases. The ability to integrate with existing .Net applications that support ORA is engineered through integration services established using the ITS SOA Backplane. The ability to share/integrate data with organizations both internal and external to the proposed solution is engineered through web services that are established using ITS SOA Backplane. Possible integrations may include but are not limited to development of legacy system interfaces, back office applications, peripheral technology services, and other inter-application SOA/API services developed by ITS based on the project system design specifications.

- SOA Akana

4.3.2. Managed File Transfers

Batch managed file transfer (MFT) imports and exports may also be required when web services are not a viable option. ITS MFT services will be available for this requirement.

- IBM Sterling/Aspera

4.4. CRM and BPM

4.4.1. Customer Relationship Management (CRM)

Core CRM system, UI, data design, workflow design and development are the responsibility of the SI. ITS supported technology sets are based on Oracle Siebel products. These include:

- Oracle Service Cloud
- Siebel CRM Innovation Pack
- Siebel Public Sector on premise configuration built for NYS ITS internal state cloud
- Siebel Public Sector E-Service
- Siebel eMail Response
- Siebel Mobile
- Siebel CTI
- Siebel Partner Portal
- Siebel Partner Manager
• Siebel Tools
• Oracle UPK

4.4.2. Business Process Management (BPM)

Scheduling function is supported through Oracle Real Time Scheduling and preferred over custom scheduling solutions.

• Siebel Application Management Pack
• Oracle Policy Automation
• Oracle Real-Time Scheduler (ORS)
• Siebel Data Quality
• Oracle Enterprise Data Quality
• IBM WebSphere Process Server

4.5. Document Management

The Enterprise Content repository is managed by ITS. New York State’s ECM APIs provide SOAP-based web services that support integration using the following base capabilities for use by client applications that have to store and manage content in a NYS Transactional Enterprise Content Repository:

1. Single and Multiple Document Ingestion
2. Document Query and Retrieval based on metadata
3. Update Document Metadata
4. Delete document

The Siebel integration requires the use of Siebel EAI to call this repository services which are transport agnostic.

4.5.1. Capture

Document ingestion for new cases use Kofax Capture software to image paper documents, Siebel File upload integration capabilities with IBM FileNet, as well as automated e-scan capabilities to capture email messages and attachments.
4.5.2. Store and Retrieve

FileNet is the preferred platform, however Documentum and the CMIS standards are currently supported if there is a strong justification. With CMIS any object store that supports the CMIS standard is accessible using the CMIS standard APIs even if the Object Stores implementation of CMIS is varies. If a new object store is required, a new protocol can be quickly added by modifying one functional component.

*Message and Transport Protocols Supported include:* SOAP over HTTP or JMS, REST, JSON, FTP, and more are supported. If an additional protocol is required, a new protocol can be added by modifying one functional component.

4.6. Master Data Management

The Oracle Customer Hub is an available technology for master data that extends beyond the Siebel operational systems of record.

- Oracle MDM
- Enterprise Oracle Data Quality

Integration support for existing verification services such as address validation and identity verification is supported by ITS.

4.7. Business Intelligence and Analytics

Data warehouse for custom reporting and analytics is:

- MSSQL (SQL Server 2014 w/X-Velocity)

Reporting, Business Intelligence and Data Analytics capabilities is provided through:

- Case Management Analytics Fusion Edition
- Oracle Business Intelligence Suite Enterprise Edition Plus
- Business Intelligence Management Pack
- BI Publisher for Siebel Reports
- Oracle Data Integrator for ETL

4.8. Customer Correspondence
Document generation and correspondence with delivery of the documents to a designated output channel is supported by ITS through services based on the project system design specifications.

- OpenText Exstream
- GovDelivery (email/SMS gateways)

4.9. Geographic Information Systems (GIS)

The statewide GIS platform provides capability to share and discover geographic information, create and manage state geographic assets, visualize and analyze geospatial information, and collaborate geographic data in real-time. It is used to find, create, and share maps to meet analytical requirements. All maps and APIs should go through the standard NYS offering rather than Google, Bing, or other industry sources. GIS services such as map and feature services is exposed to service consumers as a RESTful end-point.

- ESRI ArcGIS 10.3.x

4.10. Other ITS Standard Capabilities

Payment Gateway - Integration development with payment gateways will depend on established patterns and merchant provider.

Collaboration Meeting Rooms – CMR in alignment with ITS standards is a preferred solution for system extensions for managed videoconference meetings.

Statewide Financial System (SFS) – Statewide application based on PeopleSoft for Agency accounting and financial management.

Human Capital Management – Agency employee management and recruitment based on PeopleSoft and Oracle Taleo Cloud.

Web Content Management – Acquia Cloud provides website authoring, collaboration, and administration tools allows users to create and manage website content. Akamai serves content to end-users via a cloud based media and software delivery network.

Grants Management – Agate Software.

E-Licensing – Accela.
**Virtual Desktop** - VMWare’s Virtual Desktop Infrastructure (VDI) solution is used to provide desktop applications and network access to the majority of agency users. Through VDI users are provided the Microsoft Office Desktop Suite and Internet access.

**eMail and Collaboration** - eMail and workplace collaboration are provided from a public cloud via Microsoft 0365 Exchange, One Drive and SharePoint.
Identity Verification (NY.gov/OIM)
- Single Sign On
  - Role Mapping
    - Administrator
    - Location Editor
    - Analyst/Engineer
    - SafetyNet
    - Query

Management Reporting Data Sources
- Data Warehouse
  - ArcGIS
  - Roads and Highways
  - PSS/OPPM (Project Data)
  - Filenet
- Crash Data
  - Transformed

CLEAR Application
- Crash Data Admin
- Location Editing
- HAL Calculations
- Network Screening
- Systemic Screening
- Site Analysis
- Safety Investigation
- Safety Net UI

Warehouse "CLEAR"

Reporting/Analytics

Agile Assets
- Maintenance Module

Internal DOT Applications
- ADRP
- Safety Net

Appendix G - Safety Data Integration Project - Future State
<table>
<thead>
<tr>
<th>Name</th>
<th>Entity/System/Subsystem</th>
<th>Application/Technology</th>
<th>Entity Explanation/Purpose of System</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLEAR Application</td>
<td>System</td>
<td>TBD</td>
<td>Commercial-Off-The-Shelf (COTS) system(s) for the Office of Traffic Safety and Mobility, Safety Programs. The system must provide an overarching ability to support Administration, Location Editing, High Accident Location (HAL) calculations, Network Screening, Systemic Screening, Site Analysis, and Safety Investigations. It must also be able to generate an XML report to support the NYS DOT compliance with the Federal SafetyNet mandated Commercial Vehicle Crash reporting requirements.</td>
</tr>
<tr>
<td>Identify Verification (NY.Gov ID)</td>
<td>System</td>
<td>Exhibit 1</td>
<td>The NY.gov ID Service provides a centralized user identity and access management solution for NYS Internet and Intranet applications. See Exhibit 1, Section 4.1.1 for details.</td>
</tr>
<tr>
<td>Name</td>
<td>Entity/ System/Subsystem</td>
<td>Application/ Technology</td>
<td>Entity Explanation/Purpose of System</td>
</tr>
<tr>
<td>-----------------------------</td>
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<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Management Reporting Sources</td>
<td>Data</td>
<td>System Various</td>
<td>There will be four data sources that contain information which will be used by the COTS solution. These include the Esri ArcGIS application, Roads and Highways, PSS/OPPM, and the FileNet document repository.</td>
</tr>
<tr>
<td>Crash Data (Transformed)</td>
<td>System</td>
<td>Oracle v12 c</td>
<td>The NYS DOT receives data about vehicle crashes in NYS from the DMV. Received crash data is formatted using DMV entities and coding. The NYS DOT has established a process that transforms the received data and stores the information in a format that is usable by downstream analysis and other DOT applications.</td>
</tr>
<tr>
<td>CLEAR Warehouse</td>
<td>Data</td>
<td>System Oracle v12 c</td>
<td>Information, including DMV-sourced crash data, that is used or generated when performing analysis and investigation tasks in the CLEAR application will be transferred to a database schema that can be used for management reporting purposes. It is anticipated that this data will be refreshed nightly.</td>
</tr>
<tr>
<td>Name</td>
<td>Entity/System/Subsystem</td>
<td>Application/Technology</td>
<td>Entity Explanation/Purpose of System</td>
</tr>
<tr>
<td>-------------------------------------------</td>
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</tr>
<tr>
<td>Reporting/Analytics</td>
<td>System</td>
<td>OBIEE</td>
<td>Reporting capabilities within the NYS DOT are delivered using the Oracle Business Intelligence Enterprise Edition reporting tools. Data definitions, set up for this BI tool, and implementation tasks are performed by internal NYS ITS staff.</td>
</tr>
<tr>
<td>Agile Assets</td>
<td>System</td>
<td>Oracle v11 g</td>
<td>The Agile Assets application includes a module supporting the work tasks that are assigned to DOT staff responsible for maintenance tasks on roadways in NYS. \ The CLEAR application must support the initiation of Work Orders in the Agile Assets application when a low-cost improvement is identified during a safety investigation. \ CLEAR application PIL Locations and Segment Accident Rates will be transferred to the Agile Assets application to enhance their existing roadway data. \ Information relating to completed Work Orders must be transferred back to the CLEAR application.</td>
</tr>
<tr>
<td>Accident Damage Recovery Program</td>
<td>System</td>
<td>Oracle</td>
<td>The ADRP application receives information relating to Vehicle Crashes that involve public property, enabling the NYS DOT to recover damages from motorist insurance carriers.</td>
</tr>
<tr>
<td>SafetyNet</td>
<td>System</td>
<td>XML</td>
<td>NYS DOT is required to report Commercial Vehicle crash information to the Federal Motor Carrier Safety Administration (FMCSA). FMCSA created the SafetyNet program to support this mandated reporting. \ The CLEAR application must produce the required XML reporting file to import into SafetyNet for upload to FMCSA.</td>
</tr>
</tbody>
</table>
8.18 ATTACHMENT 18: CRASH LOCATION AND ENGINEERING ANALYSIS REPOSITORY (CLEAR) INTERFACES
Overview:

NYS ITS will provide the historical data that must be migrated to the selected CLEAR application solution. This data must be used to provide the initial population of the application database.

Vendor is responsible for establishing the methods for incorporating and disseminating all data that is required by the CLEAR application on an ongoing basis. The methods established to incorporate data from other NYS DOT applications into the CLEAR application and to distribute CLEAR application information to other NYS DOT applications must align with NYS ITS technical requirements (see attached ITS Technical Services and Standards Overview document).

A. Program Support System (PSS)/Oracle Project Portfolio Management (OPPM)

PSS/OPPM is the system of record for capital project dates, cost, locations, work types and accomplishments. Users must be able to initiate updates of existing CLEAR application safety investigations with associated capital project details.

B. SafetyNet

Commercial Vehicle crash data is exported from the CLEAR application to an XML file for upload to the NYS DOT Federal Motor Carrier Safety Administration (FMCSA) SafetyNet Application.

C. ArcGIS

The NYS DOT uses the Esri ArcGIS application to manage geographic data about roadways in NYS. Display of ArcGIS specific location data and map layers from within the CLEAR application is a critical functionality that must be supported. The capture of location data, including GIS coordinates and milepoints, on individual crash records must be supported.

D. Accident Damage Recovery Program (ADRP)

8.18.1 ADRP is the business software application used to manage public property damage claims for properties managed by the NYS DOT. Crash data from crashes resulting in public property damage and Insurance Carrier information for drivers and companies involved in such crashes must be distributed from the CLEAR application to the ADRP application.
E. Roads and Highways

The NYS DOT Roads and Highways application manages the roadway linear referencing system and is the source for roadway Inventory, Sufficiency, NYS Reference Marker and Daily Traffic Volume data. The CLEAR application must be able to access and use this information to perform analysis based on roadway characteristics and calculate safety measures.

F. Agile Assets

The Agile Assets application provides roadway asset management information for the NYS DOT. There is a bi-directional sharing of data between the CLEAR and Agile applications. Information from the CLEAR application that must be transferred to the Agile Assets application includes Priority Investigation Locations (PILs) and calculated roadway segment crash rates. In addition, Agile Assets maintenance Work Orders must be initiated by CLEAR application users for those safety improvements that are low cost. The Agile Assets application must provide Work Order status and asset maintenance information to the CLEAR application.

G. FileNet

The FileNet document repository stores the crash reporting forms received from citizens and State Police officers. These documents must be retrievable through the CLEAR application interface, using the web services templates provided by the NYS Enterprise ITS Electronic Content Management (ECM) team.
8.19 ATTACHMENT 19: REQUIREMENTS MATRIX

Attachment 19, which contains the RFP’s Requirements Matrix, is be downloaded from the NYSDOT project web site, located at https://www.dot.ny.gov/business . Click on “Consulting Services”, then click on “Opportunities”, and then click on the date to the left of ‘C037625…”.

<table>
<thead>
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<th>Vendor Comments:</th>
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</table>
8.20 ATTACHMENT 20: Reserved