EXHIBIT A

SCOPE OF SERVICES

STATEWIDE PAVEMENT MARKING MANAGEMENT SYSTEM

1.0 OBJECTIVE

The Florida Department of Transportation (FDOT) has implemented a Statewide Pavement Marking Management System (PMMS). The purpose of this program is to monitor and manage the condition and performance of pavement marking materials retroreflectivity using a Mobile Retroreflectivity Unit (MRU). This information is used to support informed highway planning, and policy decision making relating to a more effective use of state funds while ensuring the safety of the traveling public. The objective of this contract is for a Consultant to provide services in support of the PMMS. The Consultant will provide the services on-site (in-house) at the State Materials Office (SMO) located in Gainesville, Florida, where the Consultant is expected to have necessary equipment and appropriate staff report for work on a daily basis. The equipment must be for the exclusive use for the subject services. The Consultant should also be prepared to provide services from its own offices or other locations to supplement the work of the Pavement Evaluation Section in-house staff, as needed or directed.

The activities performed by the Consultant include:
1. Statewide Survey of Pavement Marking Materials Condition and Performance
2. Engineering analyses including performance forecasting, and predictive modeling as well as reporting
3. Other related pavement marking materials initiatives

2.0 REFERENCE DOCUMENTS

2.1 Florida Test Method for Measuring Retroreflectivity of Pavement Marking Materials Using a Mobile Retroreflectivity Unit, FM 5-600
2.2 FDOT Quality Assurance for Mobile Retroreflectivity Units
2.3 FDOT Operations Manual for Mobile Retroreflectivity Units
2.4 Mobile Retroreflectivity Unit (MRU) Worksheet, FDOT Form 675-060-15

3.0 SERVICES

The Consultant will be required to perform professional engineering work related to pavement marking management and provide technical assistance to the Pavement Materials Section staff in performing all of the tasks identified in this Scope of Services. The Consultant will provide full time on-site equipment and full time on-site staff to perform...
the subject services at the State Materials Office located in Gainesville, Florida. It is understood that the work will be performed under the general supervision and guidance of the Department. I

The pavement marking activities to be performed by the Consultant include:

3.1 Statewide Survey of Pavement Marking Condition and Performance

The Consultant will be required to provide services to monitor and evaluate the retroreflectivity characteristics of in-service pavement markings. For this purpose, the Consultant will conduct statewide pavement marking testing with a Mobile Retroreflectivity Unit (MRU) in accordance with FM 5-600 and any other governing documents and procedures. The Consultant will provide the necessary in-house staff and resources including equipment to conduct the field-testing including planning and coordination as well as subsequent data collection, analysis, and reporting. Such resources must also include knowledge of interactive referencing and visualization tools such as Global Positioning Systems (GPS) and Geographic Information Systems (GIS) to identify pavement marking sections of interest based on their location characteristics and related performance as well as to have the capability of transferring collected data from the field using mobile internet applications as needed or directed. The Consultant must assure the reasonableness and completeness of all data collected while still on the road testing. The MRU equipment must be calibrated in accordance with manufacturer or service provider procedures. The MRU must also be within the repeatability and reproducibility criteria as documented in Florida Test Method FM 5-600 and Quality Assurance for Mobile Retroreflectivity Units documents. All data collection and processing must be complete in accordance with the Department’s standard practice and as approved by the Department Project Manager. The Consultant will schedule Statewide testing as assigned by the Department, while optimizing resources and minimizing mobilization costs. The Department will initially provide a list of Districts’ contacts, and the Consultant will be required to keep it up to date for purposes of reporting. All Statewide testing must be completed within its annual cycle. All data processing, storage, analysis, and reporting must be completed within three (3) business days of completing the corresponding testing.

The Consultant services must annually evaluate 25,000 lane-miles of pavement markings per year with primary emphasis on yellow center lines and white line (edge and skip) markings for traffic systems analysis.

The following pavement markings materials will be evaluated each year:
3.1.1. One-hundred percent (100%) of the yellow center lines of all state roads in one direction (approximately 12,000 lane-miles). For reference purposes, the list of roadways and their centerline miles are shown in Appendix A. It is anticipated that the testing will be conducted on all (but not limited to) the roadways shown in Appendix A.

3.1.2. Sampling of other line markings including center, skip and edge lines, on selected multi-lane facilities (approximately 8,000 lane-miles).

3.1.3. Conduct special request testing (approximately 5,000 lane miles) to identify initial and long-term evaluation of projects that incorporate new and/or improved materials, degradation rates, and construction practices, which may result in longer lasting pavement markings and cost-effective designs. High frequency testing may be conducted on experimental projects and during the initial stages of new project construction, and at different time intervals thereafter for long-term performance monitoring. Projects must be performed within a maximum of two (2) weeks upon request. The services may involve activities that include retroreflectivity testing, as well as any other testing deemed necessary for pavement marking materials performance assessment purposes including forensic investigations. The Consultant will provide the necessary resources to perform the testing and data collection activities, and to operate the test equipment which will be provided by the Consultant and/or by the Department, whichever option is determined to be more feasible and economical. In addition, services may require site specific testing (handheld equipment) and coordination of Maintenance of Traffic (MOT), if needed, through the appropriate District representatives giving them at least two (2) weeks notice to arrange for MOT, requiring the use of handheld equipment.

3.2 Data Analyses and Reporting

The Consultant staff will be required to review, evaluate and analyze data and all relevant information as obtained, provided and/or collected using appropriate data analysis methods and techniques as required and/or directed.

Consultant will provide a full-time, on-site engineer with a background and experience in lane delineation materials, such as pavement markings and pavement markers. The engineer will assist, as the state’s technical representative, on all topics related to the materials’ performance. Activities may include but are not limited to management and engineering analyses of the retroreflectivity information, forecasting and development of pavement marking performance prediction models, provide technical expertise to support associated Districts’ operations, conducting forensic investigations, review of lab test results, and participation in studies on material performance or evaluation of data collection processes.
The Consultant must report all MRU data in accordance with FDOT Form 675-060-15. The Consultant will be required to manage the Department’s pavement marking database to assist end users in making maintenance decisions. In addition, the associated data and information must also be presented both spatially and geographically when needed or directed. The Consultant must also assist in the interactive query of historical data in preparation of annual and ad-hoc reports related to the performance of pavement marking on the state highway system. The Consultant will also be required, as needed and/or directed, to develop software or improve existing applications for collection of data, automated analysis of large amounts of data, visualization of data, and reporting of data. The Consultant must also ensure the quality, relevancy, and appropriateness of all data, information, documentation and processes.

3.3 Training and Technology Transfer

The Consultant may be required to provide formal and informal training as part of technology transfer to Department staff in the areas of performance evaluation and condition assessment of pavement systems as well as operation of certain test equipment and data acquisition systems, data processing methods, software and applications as directed by the Department.

3.4 Other related pavement marking performance testing and evaluation

The Department at its discretion may request the Consultant to provide additional pavement marking performance testing and evaluation services which are within the level of expertise of the Consultant, but not specifically defined in the Scope of Service. Additional services will be defined by the Department Project Manager on an as-needed basis.

4.0 CONTRACT ADMINISTRATION MEETINGS

The Consultant will be responsible for attending contract meetings on an as-needed basis, as determined by the Department Project Manager. Consultant must be available with no more than one (1) weekday notice to attend meetings at the request of the Department. The Consultant must be prepared to answer questions relating to any services provided under this contract. If the contract administrative meetings are of a general nature, attendance by the Consultant is not directly billable to the Department on this contract, and shall only be recoverable through overhead for the Consultant firm.

5.0 DEPARTMENT RESPONSIBILITIES

5.1 The Department shall provide a Project Manager who shall be responsible for all coordination with the Consultant pertaining to all contractual matters,
invoicing and reporting. The Department may also designate a manager for each Task Work Order who shall be responsible for working with the Consultant Project Manager to define the specific work to be performed and the schedule for completion of each task, the Consultant staffing to be provided, and the cost. The Department Project Manager shall be responsible for approval of any additional staffing to be provided including additional consultant staff (approval must be coordinated with the Procurement Office), and shall give approval of all products and services.

5.2 The Department must furnish, without charge, the following to the Consultant for performance of the contract services:

5.2.1 Department policies, procedures, standards, and other information relevant to assigned services;

5.2.2 All specifications, schedules, reports, and other information prepared by or for the Department by others, which are readily available to the Department and which the Department considers pertinent to the Department's assigned responsibilities;

5.2.3 Readily available pavement related data necessary for the Consultant to perform issued tasks;

5.2.4 For in-house Consultant staff, the necessary office space, equipment, and supplies to complete assigned work as determined by the Department Project Manager.

6.0 CONSULTANT RESPONSIBILITIES

6.1 The Consultant shall provide and maintain an up-to-date list of staff with agreed-to classifications and approved salaries (subject to the contract Exhibit “B”) that would be available to be assigned to specific Task Work Orders. No consultant staff, except those specifically identified in a Task Work Order or those specifically agreed to by the Department Project Manager, shall charge time to that particular Task Work Order.

6.2 Consultant must request approval from the Department’s Project Manager for any modifications or additions to the list of available staff prior to the initiation of any work by that individual. If applicable, new job classifications may be added to the contract via contract amendment. Consultant shall submit a copy of the resume and payroll register before new staff can be added.

6.3 For a Task Work Order where Consultant staff are anticipated to work the majority of a 40 hour week at Department facilities, the Consultant will be reimbursed at the field rate, and staff who are anticipated to work on
average the majority of the week at the home office should be reimbursed at the home rate.

6.4 The Consultant will be required to perform all the services identified in this Scope of Services, and to provide the necessary staff and equipment as required.

6.5 The Consultant must provide staff to work at the Pavement Materials Section or any other location as may be defined by the Department. The Consultant must provide staff that is highly motivated and able to work with little oversight in a professional office environment.

6.6 The Department will set the schedule of in-house Consultant staff working at the Pavement Materials Section on a full-time basis (80 hrs. bi-weekly on average). All overtime must be authorized in advance in writing by the Department.

6.7 The Consultant equipment must be used solely for the Department’s needs and uses. At no time during the contract period may the Consultant use its on-site staff and/or equipment on non-Department projects.

6.8 The Consultant Engineer will be responsible for and oversee all aspects of the Consultant services agreement, including reviewing Consultant staff performance, data quality, and invoices to ensure accuracy and no errors. The Consultant must be able to lead and manage activities. The Consultant must have sufficient data processing and management experience.

6.9 The Consultant Technician(s) will be responsible for collecting, processing, and uploading data in a format specified by the Department. The Consultant Technician(s) will be responsible for reviewing collected data and the performance against historical data in the field. As assigned by the Department, the Consultant Technician(s) will be responsible for managing field testing schedules while maintaining the 80 hrs. bi-weekly schedule during a standard work week. The Consultant Technician(s) will be responsible for all personal documentation of timesheets, travel, etc. The Consultant staff must have a minimum of 1 year of experience in terms of operating mobile based testing equipment or have certification by the Consultant as an experienced technician with all operation and trouble shooting skills needed to perform MRU testing in the field.

6.10 The Consultant is responsible for providing adequate training including Department approved Maintenance of Traffic, driver safety, and development of its own staff to meet Department needs prior to contract and maintain certifications for the length of the contract.

6.11 The Consultant must provide sufficient staff who possess acceptable levels
of customer service, initiative, active engagement, and the ability to complete all assigned work on schedule. If, at any time, the Department's Project Manager determines that the abilities of a particular staff assigned to a Department Task is inadequate, the Consultant Project Manager is expected to remedy, within 10 working days or as specified by the Department Project Manager, the situation to ensure quality and timely performance of the assigned work as approved by the Department Project Manager.

6.12 The Consultant must perform all tasks in accordance with all FDOT Guidelines and Standards, applicable Florida statutes and any other State and/or Federal laws and policies.

6.13 The Consultant must provide computers to conduct their daily work assignments/emails and must be compatible with FDOT requirements.

6.14 The Department will not be responsible for providing proprietary software packages to the Consultant. The Department will provide readily available computer software to be used on Department computer equipment that is necessary to complete in-house tasks.

6.15 The Consultant will be responsible for providing electronic copies of all work products (reports, spreadsheets, datasets, drawings, graphics, etc.) to the Department in a format compatible with the Department's computer systems. The Consultant will be able to provide work products in Portable Document Format (PDF) and/or any other format specified by the Department as needed. Computations based on computer programs other than the Departments must conform to all Department accuracy and format requirements.

6.16 The Consultant will be responsible to ensure all on-site equipment is functional, reliable, and calibrated in accordance with the Department’s guidelines and procedures for the term of the contract. If the on-site equipment does not meet the above criteria, remedial action including providing replacement equipment must be taken within 72 hours or as deemed necessary by Project Manager.

6.17 The Consultant must meet the criteria set forth by the Department in accordance with the FDOT documents, Florida Test Method FM 5-600 and Quality Assurance for Mobile Retroreflectivity Units. The Consultant must provide an independent certification or manufacturer certification that their equipment meets precision requirements by the Department.

6.18 All plans, specifications, computer files, reports and products prepared or obtained under this contract as well as all data collected, together with summaries and charts derived there from, must be exclusively the property
of the Department without restriction or limitation on their use and must be made available, upon request, to the Department at any time during the performance of such services and/or upon completion or termination of this agreement. The Consultant must not copyright any material and products or patent any invention developed under this agreement.

6.19 Equipment
The Consultant will be responsible for providing MRU test equipment for the sole and exclusive use on this service contract. The minimum equipment requirements are included in Section 6.20.

6.20 MRU System Requirements

A. Handheld Retroreflectometer

Each MRU system must have a handheld retroreflectometer that complies with ASTM E-1710 to provide site specific testing if needed. The handheld retroreflectometer must be capable of collecting accurate and repeatable data within the manufacturer specifications and must be calibrated annually by the manufacturer or Department approved testing facility. The handheld retroreflectometer must be in good operational order for the duration of the contract.

B. Mobile Retroreflectivity Unit

The Mobile Retroreflectivity Unit will consist of a specialized vehicle and pavement marking measuring equipment while complying with FM 5-600. The MRU must be capable of collecting accurate and repeatable data within the specialized vehicle operating range up to 60 mph. The equipment must be ruggedized for the highway testing environment, and must be mounted with minimum disturbance to the specialized vehicle, and such that the operator(s) can safely and conveniently operate it. It must be noted that this specialized vehicle is not used to transport persons, but rather specialized equipment for the purposes of accomplishing FM 5-600. The MRU equipment must be in good operational order for the duration of the contract.

For operational purposes, the MRU will require the following equipment needs as listed below:

1. Back up camera, reflective striping for safety (sides and rear of vehicle), and security alarm.
2. Ability to facilitate transfer of collected data using mobile broadband.
3. Specialized vehicle must be equipped with a roof mounted safety lighting bar (minimum width of 46") using a clear lens LED setup with traffic direction and rear flash control.
4. Vendor must ensure that any modification(s) to the MRU meets the vehicle manufacturer's Gross Axle Weight Rating (GAWR), while maintaining or improving the specialized vehicle handling and stability.

5. Provide an air pressure gauge which can be calibrated for monitoring tire pressure.

6. Maintain a maintenance log with event and/or replacement part(s) provided or available upon request for duration of contract.

7.0 GENERAL

7.1 Legal Proceedings

The Consultant will serve as an expert witness in any legal proceeding relating to the work performed under the scope of this contract, if required by the Department.

7.2 Personnel Qualifications

The Consultant shall assign only competent technical and professional personnel qualified by the necessary experience and education to perform assigned work. The Consultant is responsible for ensuring that staff assigned to work under this Agreement has the training established by the Department as a prerequisite for consultant staff to perform work. If the required training is such that it can be applied by the trainee to work on other contracts, (regardless of whether or not the trainee would work on other agreements), the cost of the trainee's time and expenses associated with the training is not directly billable to the Department on this contract, and shall only be recoverable through overhead for the Consultant firm.

7.3 Subconsultant Services

Services assigned to any subconsultants must be approved in writing and in advance by the Department Project Manager, Procurement Office, and the Consultant Project Manager in accordance with this Agreement. All subconsultants must be technically qualified by the Department to perform all work assigned to them. Additional subconsultants with specialized areas of expertise may be required to complete specific Task Work Order assignments. Any subconsultant to be hired and all work assignments to be performed, and all rates of compensation shall be agreed to by the Department Project Manager, Procurement Office and the Consultant Project Manager and documented in the contract file prior to any work being performed by the subconsultant. Any new subconsultant must be added to the contract via contract
amendment (in coordination with the Procurement Office) prior to any issuance of work on a Task Work Order.

7.4 Projects-Related Correspondence

The Consultant will furnish copies of all written correspondence between the Consultant and any party pertaining to the services rendered for the Department’s records within one week of the receipt or mailing of said correspondence. The Consultant is responsible for recording and distributing the minutes of all meetings pertaining to this contract.

7.5 Cooperation and Performance of the Consultant

During the life of this contract, the Department will, at its discretion, conduct reviews of the various phases of the Consultant’s tasks. Reviews will be conducted in accordance with established Department policy on work phases to determine compliance with this contract and the sufficiency with which procedures are being effectively applied to assure that the activities are performed in reasonable conformity with Department policies, plans, specifications, and contract provisions. The Consultant will cooperate and assist the Department’s representatives in conducting the reviews.

When deficiencies are indicated in a review, the Consultant in conformance with the Department’s recommendations will immediately implement remedial action. The Department’s remedial recommendations and the Consultant’s actions are to be properly documented. In general, remedial action will be required commensurate with the degree and nature of the deficiencies cited. Additional compensation will not be allowed for remedial action taken to correct deficiencies by the Consultant.

7.6 Consultant Not Employee or Agent

The Consultant and its employees, agents, representatives, or subconsultants/subcontractors are not employees of the Department and are not entitled to the benefits of State of Florida employees. Except to the extent expressly authorized herein, Consultant and its employees, agents, representatives, or subconsultants/subcontractors are not agents of the Department or the State for any purpose or authority such as to bind or represent the interests thereof, and shall not represent that it is an agent or that it is acting on the behalf of the Department or the State. The Department shall not be bound by any unauthorized acts or conduct of Consultant.

7.7 Ownership of Works and Inventions

The Department shall have full ownership of any works of authorship,
inventions, improvements, ideas, data, processes, computer software programs, and discoveries (hereafter called intellectual property) conceived, created, or furnished under this Agreement, with no rights of ownership in Consultant or any subconsultants/subcontractors. Consultant and subconsultants/subcontractors shall fully and promptly disclose to the Department all intellectual property conceived, created, or furnished under this Agreement. Consultant or subconsultant/subcontractor hereby assigns to the Department the sole and exclusive right, title, and interest in and to all intellectual property conceived, created, or furnished under this Agreement, without further consideration. This Agreement shall operate as an irrevocable assignment by Consultant and subconsultants/subcontractors to the Department of the copyright in any intellectual property created, published, or furnished to the Department under this Agreement, including all rights thereunder in perpetuity. Consultant and subconsultants/subcontractors shall not patent any intellectual property conceived, created, or furnished under this Agreement. Consultant and subconsultants/subcontractors agree to execute and deliver all necessary documents requested by the Department to effect the assignment of intellectual property to the Department or the registration or confirmation of the Department’s rights in or to intellectual property under the terms of this Agreement. Consultant agrees to include this provision in all its subcontracts under this Agreement.
SCORING OF LETTERS OF RESPONSE

Project:
FDOT Financial ID No. (s):
Consultant:
Evaluator:
Signature: __________________________ Date: ______________

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Comments are to be addressed on the next page. Please be advised that you are required to address each subsection thoroughly.

Evaluator’s Initials ______