



# Pavement Testing and Pavement Management Services

SOQ 24-001

February 9, 2024

**Mott MacDonald**



**Jefferson Parish**  
Ms. Donna Reamey  
General Government  
Building  
200 Derbigny Street, Suite  
4400  
Gretna, Louisiana 70053  
United States of America

**Mott MacDonald**  
650 Poydras Street, Suite  
2550  
New Orleans, Louisiana  
70130  
United States of America

T +1 (504) 529 7687  
mottmac.com

February 9, 2024

**Statement of Qualifications No. 24-001 To Provide Pavement Testing and Pavement Management Services, Resolution No. 143306**

Dear Members of the Selection Committee,

Covering over sixty miles from the Gulf of Mexico to Lake Pontchartrain, Jefferson Parish is a diverse region connected by 2,900 lane miles of roadway. These roadways range from arterials, collectors, residential, and local streets with over 54% consisting of portland cement concrete rigid pavement. To manage this, Jefferson Parish requires an experienced team to provide asset management support, data collection, analysis, and planning to efficiently invest in your streets. This need should be backed by a trusted, local engineering firm who fully understands the intricacies involved in asset and pavement management.

Mott MacDonald appreciates the opportunity to provide Jefferson Parish with our pavement and asset management services. Mott MacDonald is an employee-owned, global engineering, management, and development consultancy firm with a wealth of experience in a wide variety of projects in Louisiana, the US, and across the globe. Our professional staff specialize in asset and pavement management services and offer an understanding in numerous pavement management software systems. Mott MacDonald previously assisted Jefferson Parish with the development of their existing pavement management system, StreetSaver, and have a firm understanding of the standards currently in place with the software including its capabilities and limitations.

Our full-service team is ready to work collaboratively with the Parish staff to provide the utmost quality service and deliverables. As you will see in this Statement of Qualifications, we propose highly qualified professionals in-house including asset management specialists and professional civil engineers with a focus in pavement management. We'll also be supported by our partner, Infrastructure Management Services, LP to enhance our data collection efforts for Jefferson Parish. IMS maintains the largest fleet of data collection vehicles in the United States, and they have extensive experience collecting data for PMS applications, specifically StreetSaver.

We understand that it is essential to the success of your projects that you select a team that can provide the complete range of services and understands the unique challenges associated with implementing pavement management projects. We believe that the Mott MacDonald team is the right choice to serve as your consultant for pavement management services and we appreciate your thoughtful consideration of our interest and capabilities.

J. Brent Rawson, PE  
Principal-in-Charge  
[James.rawson@mottmac.com](mailto:James.rawson@mottmac.com)  
251.287.9443

Austin M. Kittok, PE  
Project Manager – Civil  
[Austin.kittok@mottmac.com](mailto:Austin.kittok@mottmac.com)  
504-799-0448

## TEC Professional Services Questionnaire

### A. Project Name and Advertisement Resolution Number:

To Provide Pavement Testing and Pavement Management Services  
Resolution No.: 143306

### B. Firm Name & Address:

**M** **M**  
**MOTT**  
**MACDONALD**  
**Mott MacDonald, LLC**  
650 Poydras Street, Suite 2550  
New Orleans, Louisiana 70130

### C. Name, title and contact information of Principal, as defined in Section 2-926 of the Jefferson Parish Code of Ordinances, who is a registered, licensed architect, professional engineer, or surveyor in the State of Louisiana:

**J. Brent Rawson, PE**

Principal Project Manager  
Principal-in-Charge

[james.rawson@mottmac.com](mailto:james.rawson@mottmac.com)

251-287-9443

107 St Francis Street, Suite 2900, Mobile, AL 36602

### D. Name and contact information of employee who is a registered and licensed architect, professional engineer, or surveyor in the State of Louisiana in the applicable discipline. A subcontractor may be substituted here only if the advertised Project requires more than one discipline.

**Austin M. Kittok, PE**

Project Manager – Civil

[Austin.kittok@mottmac.com](mailto:Austin.kittok@mottmac.com)

504-799-0448

650 Poydras Street, Suite 2550, New Orleans, LA 70130

### E. Please provide the number of employees whose primary function corresponds with each category:

<u>450</u> Administrative	<u>13</u> Estimators	<u>0</u> Specification Writers
<u>14</u> Architects (Licensed)	<u>13</u> Geologists	<u>6</u> Structural Engineers
<u>5</u> Chemical Engineers	<u>26</u> Geotechnical Engineers	<u>270</u> Graduate Engineers
<u>177</u> Civil Engineers	<u>1</u> Interior Designers	<u>146</u> Project Managers
<u>96</u> Construction Inspectors	<u>2</u> Landscape Architects	<u>170</u> Clerical
<u>4</u> Ecologists	<u>140</u> Land Surveyor	<u>0</u> Grant/Funding Specialist
<u>43</u> Electrical Engineers	<u>14</u> Mechanical Engineers	<u>10</u> Sanitary Engineers
<u>234</u> Engineer Intern	<u>26</u> Environmental Engineers	
<u>15</u> Professional Land Surveyors		<u>1937</u> <b>TOTAL</b>

F. Is this submittal by a JOINT-VENTURE? Please check: YES ☐ NO ☒

If marked "No" skip to Section I. If marked "yes" complete Sections G-H.

## TEC Professional Services Questionnaire

**G. If submittal is by JOINT-VENTURE, list the firms participating and outline specific areas of responsibility (including administrative, technical, and financial) for each firm. Please attach additional pages if necessary.**

1.N/A

2.N/A

**H. Has this JOINT-VENTURE previously worked together? Please check:**

YES ☐ NO ☒

**I. List all subcontractors anticipated for this Project. Please note that all subcontractors must submit a fully completed copy of this questionnaire, applicable licenses, and any other information required by the advertisement. See Jefferson Parish Code of Ordinances, Sec. 2-928(a)(3). Please attach additional pages if necessary.**

Name & Address:	Specialty:	Worked with Firm Before (Yes or No):
1. <b>IMS Infrastructure Management Services LP</b> 10630 75 <sup>th</sup> Street North Largo, Florida 33777	Data Collection Vendor	Yes
2. N/A		
3.N/A		

**J. Please specify the total number of support personnel that may assist in the completion of this Project:**

We estimate 12 individuals will be needed to complete the pavement management services of this project. More employees can be added, as necessary, should it be needed.

## TEC Professional Services Questionnaire

**K. List the professional in charge, key persons, specialists, and individual consultants anticipated for this Project and provide their relevant information below. If necessary, please attach additional documentation (i.e. resume) that demonstrates the employment history and experience of the Firm's key persons that may assist in the completion of this Project. Please attach additional pages if necessary.**

### **PROFESSIONAL IN CHARGE OF PROJECT:**

**Name & Title:**

**J. Brent Rawson, PE**

Principal Project Manager

**Project Assignment:**

Principal-in-Charge

**Name of Firm with which associated:**

Mott MacDonald

**Years' experience with this Firm:**

With this Firm: **19** With other Firms: **22**

**Education: Degree(s)/Year/Specialization:**

Bachelor Science, Civil Engineering, 1981 Mississippi State University

**Active registration: Year first registered/discipline:**

LA PE, Civil, #22345, 1986, AL PE, Civil, #19720, 1993, FL PE, Civil #48661, 1994, TX PE, Civil, #117959, 2014, CO PE, Civil, #49933, 2015

**Other experience and qualifications relevant to the proposed Project:**

Mr. Rawson has more than 40 years of experience providing engineering services on a variety of transportation and roadway projects. His experience includes project management and engineering oversight for various types of roadway projects spanning his career. In the course of these projects, he was responsible for technical oversight of roadway design, stormwater design, transportation planning, maintenance of traffic plans, and integration of other design elements into the overall project plans (structural, electrical, etc.). Mr. Rawson also acts as Mott MacDonald's Supervising Professional per LAPELS for our Louisiana engineering operations.

**Tunnel Inspection and Repair/Rehabilitation, LaDOTD, Plaquemines/Terrebonne/Jefferson Parish, LA:** Project Principal for the repair/rehabilitation plan preparation for the Houma, Harvey, and Belle Chasse Tunnels. Mott MacDonald performed visual inspections of the roadway, structural, geotechnical, mechanical, and electrical components of all three tunnels for LaDOTD. Specifically, as it related to the civil aspects of the project, Mott MacDonald was responsible for the inspection of all roadway defects including surface defects, surface deformations, and cracking to ultimately identify the roadways Performance Condition Index (PCI) and proper rehabilitation/replacement methods to be taken for each section of roadway.

**CR 65, Baldwin County, AL (Project No. 502100456):** Project Principal. This project involves extension of CR 65 in Baldwin County from CR 28 to CR 32. Mott MacDonald is contracted with Baldwin County Highway Department to design new 1-mile-long extension to CR 65 within these limits. The project includes survey, coordination of all geotechnical activities, obtaining environmental clearances/permits and all aspects of the preliminary and final roadway design. Mr. Rawson provided senior oversight of the geometric design and layout of the plan's preparation. Mr. Rawson also was a chief client contact.

**Dauphin Street Improvements, City of Mobile, Mobile, AL:** Project Manager: The project includes the improvements to a major corridor in Mobile, AL by controlling access, improving existing intersections and improving the I-65 Interchange. MM is responsible for providing innovative design concepts that include roundabouts, boulevard corridor sections and diverging diamond interchange at I-65. The Project includes Corridor Studies, Survey, Geotechnical Investigations, Preliminary Plans, and final Design Plans. Mr. Rawson is the project manager overseeing the design, coordination with sub-consultants, public involvement, Right-of-Way, utilities and permitting.

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
<b>Austin M. Kittok, PE</b> Project Manager - Civil
<b>Project Assignment:</b>
Project Manager
<b>Name of Firm with which associated:</b>
Mott MacDonald
<b>Years' experience with this Firm:</b>
With this Firm: <b>7</b> With other Firms: <b>0</b>
<b>Education: Degree(s)/Year/Specialization:</b>
Bachelor Science, Civil Engineering, 2016 University of Louisiana at Lafayette
<b>Active registration: Year first registered/discipline:</b>
LA PE, Civil, #45850, 2021
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Mr. Kittok oversees Mott MacDonald's civil projects in the State of Louisiana, based out of our office in New Orleans, LA. His role is focused on providing project management and engineering support for a range of civil infrastructure projects within Louisiana, Alabama, and Florida. Recently, he has been primarily involved in managing projects for Mott MacDonald's municipal clients in Louisiana, including Jefferson Parish, LaDOTD, City of New Orleans, and City of Kenner. His technical expertise lies in concrete/asphalt roadway design, municipal CIPs, stormwater modeling, GIS data collection, tunnel inspections, and construction administration.</p> <p><b>Water System Pipeline Assessment and Near Term (5-Year) Plan, N-Y Associates, Jefferson Parish, LA:</b> Project Manager for the assessment of Jefferson Parish's existing water system to develop and provide a 5-year capital improvement plan (CIP) for Jefferson Parish's Water Department. Mott MacDonald's scope of work consisted of evaluating and determining problem areas within the Parish's water system through interviews with Parish workers, GIS records, and existing Parish data. Once a full assessment was completed, Mott MacDonald developed a prioritized list of probable water main failures for both transmission and distribution mains and opinion of probable construction cost to replace each line. Through discussions with the Parish a detailed budget was developed for their water replacement program and a Capital Improvement Plan was organized to prioritize future projects based upon impact to the system.</p> <p><b>Little Farms Ave. Resurfacing (Stewart Ave. to Airline Dr.) 2017-022-RBP, Jefferson Parish, River Ridge, LA:</b> Project Manager/Project Engineer for the roadway rehabilitation of Little Farms Ave. (Russell Street – Jefferson Highway). Mott MacDonald's scope of work included evaluation, design, construction administration and resident inspection. The project consisted of ~1-mile of concrete &amp; asphalt roadway restoration, sidewalk/driveway/ADA replacement, and general landscape/drainage improvements.</p> <p><b>Tunnel Inspection and Repair/Rehabilitation, LaDOTD, Plaquemines/Terrebonne/Jefferson Parish, LA:</b> Project Engineer for the repair/rehabilitation plan preparation for the Houma, Harvey, and Belle Chasse Tunnels. Mott MacDonald performed visual inspections of the roadway, structural, geotechnical, mechanical, and electrical components of all three tunnels for LaDOTD. Specifically, as it related to the civil aspects of the project, Mott MacDonald was responsible for the inspection of all roadway defects including surface defects, surface deformations, and cracking to ultimately identify the roadways Performance Condition Index (PCI) and proper rehabilitation/replacement methods to be taken for each section of roadway.</p> <p><b>Milneburg (Group A), City of New Orleans Department of Public Works, New Orleans, LA:</b> Project Manager for the FEMA-eligible street repairs within the Milneburg neighborhood consisting of roughly 260 city blocks. Mott MacDonald's scope for this project consisted of asphalt and concrete pavement assessment to determine proper methods of rehabilitation for each roadway segment, design, construction administration, and resident inspection.</p>



## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
<b>Scott Stevens, PE</b> Principal Project Manager – Pavement Management
<b>Project Assignment:</b>
Project Director
<b>Name of Firm with which associated:</b>
Mott MacDonald
<b>Years' experience with this Firm:</b>
With this Firm: <b>3</b> With other Firms: <b>37</b>
<b>Education: Degree(s)/Year/Specialization:</b>
Bachelor Science, Engineering Science, 1984 University of South Florida
<b>Active registration: Year first registered/discipline:</b>
FL PE, Civil, #39644, 1988
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Mr. Stevens is a recognized leader in pavement management and pavement preservation and has diverse engineering administration and project management experience in both governmental and private sectors. He leads strategic growth, program development and support project delivery for local agency pavement management and engineering projects across the company. His technical experience embraces a wide range of disciplines, including asset management; pavement management including data collection, quality control, data analysis, and conducting training courses; GPS and GIS data collection; dam inspection services; water resource engineering including storm water system rehabilitation design.</p> <p><b>Manatee Pavement Management Services, Bradenton, FL:</b> Subject Matter Expert and Project Manager for the development and implementation of PAVER software to meet County needs. This project included a pavement condition survey of 1,400 centerline miles of asphalt roads following a modified ASTM D6433 inspection methodology. As part of the analysis, providing condition and budget alternatives, project plan development, and neighborhood grouping analysis. responsible for leading the effort to support the County with its roadway maintenance operation, including a Maintenance Quality Assurance survey, implementation, data collection manual, and training.</p> <p><b>City of Raleigh Pavement and Bridge Management Implementation, Raleigh, NC:</b> Subject Matter Expert for supporting the City's pavement and sidewalk management activities as part of a longer five year project to support asset management within the City.</p> <p><b>Hillsborough County Asset Management Support, Tampa, FL:</b> Subject Matter Expert and Project Manager for developing an overall asset management program, including a detailed pavement management system, bridge management system, and culvert management. needs by aligning the County's business processes to the proposed software capabilities. The management systems include the development of maintenance, preservation and rehab actions, action rules and effects modelling, deterioration models, and GIS integration for each asset. The PMS included the analysis of over 3,300 centerline miles of pavements, and the migration of data from the County's legacy PAVER™ system into AgileAssets Pavement Analyst. The Bridge Management System incorporated data from over 250 bridges in the Florida Department of Transportation's bridge inspection database.</p> <p><b>Osceola County Pavement Management System Implementation, Osceola County, FL:</b> Subject Matter Expert for the development and implementation of PAVER™ software to meet Osceola County needs. This project includes development of a Pavement Management Plan for their network of 1,021 centerline miles of asphalt pavement. Inspection tasks include an evaluation of legacy data to ensure accuracy. The historic data was found to be unusable, and a new PAVER database was created based on the County's GIS Road shapefiles. Inspections were performed using a semi-automated approach using a Pegasus mobile data collection platform, coupled with "fee-on-the ground" verification. Final products included written reports, GIS maps, and a PAVER™ database.</p>



## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
<b>Steve Varnedoe</b> Principal – Asset Management
<b>Project Assignment:</b>
QA/QC
<b>Name of Firm with which associated:</b>
Mott MacDonald
<b>Years' experience with this Firm:</b>
With this Firm: <b>7</b> With other Firms: <b>41</b>
<b>Education: Degree(s)/Year/Specialization:</b>
BS, Civil Engineering – Construction, North Carolina State University, 1979
<b>Active registration: Year first registered/discipline:</b>
Professional Engineer; NC #13054, 1986
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Steve Varnedoe is Senior Vice President and Division General Manager of the Asset Management and Engineering Division. He previously served as President of The Kercher Group, Inc. which was acquired by Mott MacDonald in 2021. He has extensive experience in transportation engineering and highway infrastructure management and works with clients to develop and execute asset management programs and strategies that improve organizational function, optimize available resources, and achieve desired performance objectives. His background includes a 29-year career at the North Carolina Department of Transportation (NCDOT), where he rose through the ranks, serving in numerous field management positions before transitioning into senior management. As Chief Engineer, he was responsible for directing a \$3 billion annual construction, maintenance, and operations program across the department's 14 highway divisions. Steve initiated NCDOT's Asset Management and System Preservation programs during his tenure there.</p> <p><b>Maintenance Management System (MMS) RFP Development, Tennessee Department of Transportation (TDOT), TN:</b> Subject Matter Expert to assist TDOT in developing requirements and refining business processes in support of a new Maintenance Management System.</p> <p><b>ERP and Asset Management Systems Implementation Support, West Virginia Department of Transportation (WVDOT), Charleston, WV:</b> Sr. Subject Matter Expert to provide project management support to complete the WVDOH portion of the ongoing ERP and asset management systems implementation which includes maintenance, equipment, inventory, safety, permits and right of way. Supporting RFP development, procurement, and implementation for these systems.</p> <p><b>Strategic General Engineering Consulting, North Carolina Department of Transportation, Statewide, NC:</b> Project Manager for this multi-year on-call contract. Providing the lead role in all assigned Asset Management projects and tasks through the contract, which has included leading a diagnostic assessment of NCDOT's Pavement Management System and associated business processes.</p> <p><b>Transportation Asset Management Plan (TAMP), Delaware Department of Transportation (DelDOT), Statewide, DE:</b> Subject Matter Expert for efforts to develop DelDOT's 2018 Initial TAMP and Final 2019 TAMP. The Consultant Team was subsequently awarded a multi-year project to provide on-going Asset Management implementation support including development of the 2022 TAMP.</p> <p><b>Pavement Management Technical Support, Delaware Department of Transportation (DelDOT), Statewide, DE:</b> Subject Matter Expert. Served as lead on a project to develop a Pavement Preservation Guide for the agency to support program development and project selection using industry best practice with linkage to the Pavement Management System.</p> <p><b>Asset Management Planning for 2019-Bridge Management Assessment, Minnesota Department of Transportation (MNDOT), MN:</b> Subject Matter Expert. Worked with the MNDOT AMPO and Bridge teams to create the desired "to be" business processes for bridge inspection, maintenance and management and define high level functional requirements for a bridge management system and its integration with the Agency's Maintenance Management System.</p>

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
<b>Aaron Gerber, PE</b> Principal Project Manager – Asset Management
<b>Project Assignment:</b>
Principal Engineer – Pavement Management Support
<b>Name of Firm with which associated:</b>
Mott MacDonald
<b>Years' experience with this Firm:</b>
With this Firm: <b>21</b> With other Firms: <b>0</b>
<b>Education: Degree(s)/Year/Specialization:</b>
BS, Civil Engineering, Rowan University, 2003 Graduate Studies, Civil Infrastructure Systems, University of Delaware, 2008
<b>Active registration: Year first registered/discipline:</b>
Professional Engineer: DE #15158, 2008, FL #71107, 2010, MD #35701, 2008, NJ #24GE047629200, 2009, NC #34908, 2008, PA #PE075678, 2008, VA #402045566, 2009
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Mr. Gerber is a leader in the field of infrastructure asset management with an emphasis on pavement engineering and management. He has provided technical and administrative expertise in the following focus areas: transportation asset management planning, project management, business process review, software evaluation, systems configuration, data collection (manual and automated methods), data quality management, engineering knowledge transfer and decision modeling, asset performance modeling, network level and project level treatment selection, innovative preservation treatment applications, asset sustainability analysis, life cycle assessment, life cycle cost analysis, risk assessments, optimization analysis, and training.</p> <p><b>Spartanburg County Pavement and Asset Management Consultant Services, Spartanburg, SC:</b> Project Principal and Business Process Lead to determine the treatment selection processes, decision trees, and performance models for incorporation into the County's pavement management system. Led this initial business process review, data collection and quality management processes, and performed the final calibration and validation of the analysis results and generated the optimization analysis results. Additional support included development of standard operating procedures and end user training.</p> <p><b>Charleston County Pavement Management System Implementation, Charleston, SC:</b> Project Principal and Business Process Lead for determining the treatment selection processes, decision trees, and performance models for incorporation into the County's pavement management system. Led the initial business process review, data collection and quality management processes, and performed the final calibration and validation of the analysis results and generated the optimization analysis results. Additional support included development of standard operating procedures, end user training, and development of a parking lot management system.</p> <p><b>Alachua County Pavement Management Software System Implementation, Alachua County, Gainesville, FL:</b> Project Principal and Technical Lead responsible for the implementation of the County's Pavement Management System. Tasks included the design of the decision-making framework and desired functionality for the software, software configuration and testing, software training and on-going technical support. Tasks also include analyzing the impacts of Equity in pavement project selection and optimization, providing SOPs for use of the software, and supporting Public Works officials with messaging the analysis results and benefits of the program to the Board of County Commissioners.</p> <p><b>City of Dallas Pavement, Alley, and Sidewalk Management Consulting Services, Dallas, TX:</b> Project Principal and Business Process Lead for the implementation of a pavement management system which includes performing initial business process review, developing decision trees, performance models, and treatment rules for an extensive pavement network. Tasks include full system implementation, testing, and validation of output. Support tasks include performing budget optimization analyses, generating project work plans, and reporting to City Council.</p>

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
<b>Katia M. Delgado, PE, APM, LSSWB</b> Senior Project Manager – Asset Management
<b>Project Assignment:</b>
Project Engineer – Pavement Management Support
<b>Name of Firm with which associated:</b>
Mott MacDonald
<b>Years' experience with this Firm:</b>
With this Firm: <b>3 months</b> With other Firms: <b>25</b>
<b>Education: Degree(s)/Year/Specialization:</b>
BS, Civil Engineering, University of Puerto Rico, 1998
<b>Active registration: Year first registered/discipline:</b>
Professional Engineer: Puerto Rico -19085, 2004, Florida – 79031, 2015
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Ms. Delgado is a professional engineer with over 20 years' experience in multiple areas of civil design, including environmental, roadway, soil stabilization pavement and asset management. She has successfully led several multi-million-dollar roadway design projects, as well as a multi-million-dollar paving program. Ms. Delgado has provided technical and administrative expertise in areas such as transportation asset management, pavement management, project management, engineering knowledge transfer, soil stabilization. Her duties have included managing all aspects of design, and construction while overseeing teams of subconsultants, engineers, surveyors, and field inspectors.</p> <p><b>Pavement Management Support Services, Multiple State and Local Agencies:</b> Project Engineer supporting Pavement Management Programs for multiple state and local agencies. Tasks included the development of SOP's, pavement work plan analysis, data analysis and data QC.</p> <p><b>Asset Management System Implementation, Roads &amp; Drainage Division, Polk County, FL:</b> Section Manager for the Asset Management group, responsible for the administration of the division's Asset Management Program, GIS asset inventory, as well as a diverse GIS and field inspection staff. Responsible for the section's operational budget and the daily administration of the division's Computerized Maintenance Management System (CMMS), and staff workload coordination. Oversaw the implementation and subsequent daily administration of a new division-wide maintenance work management system used to aid with the daily planning and recording of all preventive and reactive asset maintenance activities for roadway, traffic, and drainage assets. Tasks also included SOP development, training manuals and video development, division-wide staff training, and maintenance of labor, materials, and equipment databases.</p> <p><b>Pavement Management System Implementation, Roads &amp; Drainage Division, Polk County, FL:</b> Pavement Manager responsible for the yearly \$12M Pavement Management Work Plan development and execution, including project selection, cost estimates, contractor oversight, pavement treatment specifications and bid preparation, and assistance with project inspections. Also responsible for the creation and implementation of the County's formal Pavement Management Program, starting in 2016. This included the adoption of FHWA LTPP pavement condition survey methodology, staff training on condition survey process, QC of pavement condition survey data, as well as implementation and use of a selected analytical software to aid in yearly work plan creation, and network analysis.</p> <p><b>PR-179 Reconstruction &amp; Landslide Mitigation, MSE Retaining Structure, Guayama DOT, PR:</b> Technical Manager responsible for the development of a landslide correction design to restore a 300-ft segment of PR-179, and slope restoration of the PREPA hydroelectric channel adjacent to the road, including all design documents, cost estimates and construction specifications. The proposed solution included the construction of a 30-foot high MSE wall to restore the channel slope and realignment of the segment of affected roadway.</p>

## **TEC Professional Services Questionnaire**

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
<b>Md Shafiul Azam, PhD, PE</b> Senior Project Manager – Asset Management
<b>Project Assignment:</b>
Project Engineer – Pavement Management Support
<b>Name of Firm with which associated:</b>
Mott MacDonald
<b>Years' experience with this Firm:</b>
With this Firm: 4 With other Firms: 16
<b>Education: Degree(s)/Year/Specialization:</b>
PhD, Transportation and Infrastructure Systems, Purdue University, 2011 MS, Civil Engineering, Wayne State University, 2007 BS, Civil Engineering, Bangladesh University of Engineering and Technology
<b>Active registration: Year first registered/discipline:</b>
Professional Engineer: LA #0043890, ID #19736, 2020, KS #27818, 2020, 2019, NC #049003, 2019, NM #26848, 2021, NV #28311, 2020, RI #13655, 2021, SC #38516, 2020, TN #124379, 2020, TX #125190, 2016
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Dr. Azam has a proven project track record of thought leadership and advanced technical knowledge on a wide spectrum of transportation engineering projects, especially in traffic operation, data science, geographic information systems (GIS), and highway safety areas. His areas of expertise include traffic and transportation engineering, highway safety, infrastructure management, software development, agile methodology, intelligent transportation systems, machine learning, and artificial intelligence. He has implemented Safety Management Information Systems for several state's Departments of Transportation that have been used to support highway safety analysis, perform network screening, and plan safety improvement programs. As a professional service consultant and subject matter expert, he has worked with a range of national and international transportation agencies.</p> <p><b>Spartanburg County Pavement and Asset Management Consultant Services</b>, Spartanburg, SC: Systems Implementation Engineer for the implementation of the AgileAssets Pavement Management System. Responsibilities included leading discovery sessions for data and workflow, developing engineering configuration guide, developing backlog for system configuration, and developing business analytics solutions and reports.</p> <p><b>Charleston County Pavement Management System Implementation</b>, Charleston, SC: Systems Implementation Engineer for the implementation of the AgileAssets Pavement Management System. Responsibilities included leading discovery sessions for data and workflow, developing engineering configuration guide, developing backlog for system configuration, and developing business analytics solutions and reports.</p> <p><b>City of Raleigh Asset Management System Implementation &amp; Engineering Services</b>, Raleigh, NC: Systems Implementation Engineer for the implementation of a PMS, BMS, Structures Analyst System, and Culvert Inspector system. Responsible for configuring the PMS functionalities and features, including data analysis and conversion, geographic information systems (GIS) mapping setup, decision trees, developing ArcGIS dashboard showing Key Performance Indicators (KPI) and optimization results, developing business analytics solutions and reports. Responsible for architecting data and workflow for BMS solutions, assisting in developing engineering configuration guide, developing roadmap for BMS solutions, system configuration, business analytics, and reporting.</p> <p><b>City of Dallas Pavement, Alley, and Sidewalk Management Consulting Services</b>, Dallas, TX: Systems Implementation Engineer for the implementation of AgileAssets Pavement Analyst. Responsibilities included architecting data and workflow for Pavement Management System (PMS) solutions, developing engineering configuration guide, data analysis, performance model verification, system configuration, and developing business analytics solutions and reports.</p> <p><b>Polk County Asset Management System Implementation</b>, Winter Haven, FL: Systems Implementation Engineer and business intelligence report developer for implementing AgileAssets Structure Analyst, including system configuration, data quality control, and development of bridge inspection reports.</p>



## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
<b>Tracy Pilson, EIT</b> Project Manager – Asset Management
<b>Project Assignment:</b>
Engineering Intern – Pavement Management Support
<b>Name of Firm with which associated:</b>
Mott MacDonald
<b>Years' experience with this Firm:</b>
With this Firm: <b>5</b> With other Firms: <b>10</b>
<b>Education: Degree(s)/Year/Specialization:</b>
BS, Civil Engineering, University of Texas, Austin, 1995
<b>Active registration: Year first registered/discipline:</b>
Engineer-in-Training: TX, 1997
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Ms. Pilson is a Project Manager experienced in field data collection and data quality assurance on numerous pavement research projects and pavement condition surveys. She has as served as the field data collection lead for multiple pavement condition surveys including in Texas and North Carolina. Ms. Pilson is currently serving as the project manager for several local government pavement management projects in North Carolina and Virginia. Her work includes providing data quality analysis of field data as well as data quality technical documentation development. Ms. Pilson has a background in many areas of Transportation Engineering from her work at the Center for Transportation Research at the University of Texas at Austin as well as in private industry. The primary focus of her professional experience has been in pavement data collection, concrete pavement research and forensic analysis of pavements showing signs of early distress.</p> <p><b>SCDOT Pavement Quality Index and Pavement Management System</b>, Columbia, SC: Project Manager for a review of SCDOT's pavement management system configuration. The objective of the study is to review the current Pavement Quality Index and provide recommendations for revisions as appropriate.</p> <p><b>City of Raleigh Asset Management System Implementation &amp; Engineering Services</b>, Raleigh, NC: Pavement Data Quality Assurance Lead responsible for development of technical documentation for the City of Raleigh Pavement Management project including RFP for Automated Data Collection, Data Quality Management Plan and Pavement Distress Data Dictionary.</p> <p><b>Town of Wake Forest Pavement Management</b>, Wake Forest, NC: Project Manager for the pavement management system analysis of the Town's pavement condition survey, including multiple funding scenarios to provide optimized treatment recommendations. Responsible for development of the pavement management report to include recommendations and detailed reporting of the pavement management system analysis.</p> <p><b>City of Sanford Pavement Condition Survey and Pavement Management</b>, Sanford, NC: Project manager, data collection lead, and lead pavement rater for the LTPP pavement condition survey and AgileAssets pavement management system analysis.</p> <p><b>New Mexico Department of Transportation (NMDOT) Pavement Management Support</b>, Santa Fe, NM: Project Manager for enhancement phase of NMDOT's Pavement Management System. Work includes full process reviews, modification of condition indices for automated data collection process, refinement of decision trees, development of performance models, system calibration, use of reports to meet MAP-21 performance measure requirements, process improvements, general support for LRS integration and PMS activities, and necessary training.</p>

## TEC Professional Services Questionnaire


**L. Work by Firm or Joint-Venture members which best illustrates current qualifications relevant to this Project. Please include any and all work performed for Jefferson Parish. Please attach additional pages if necessary.**

### PROJECT NO. 1

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p><b>Jefferson Parish Pavement Management System</b> Jefferson Parish, Louisiana</p> <p><b>Jefferson Parish Streets Department</b> Donald J. Hogan, Jr., PE Assistant Director (Streets Department) DHogan@jeffparish.net</p>	<p>Mott MacDonald was a subconsultant to Fugro acting as the pavement management consultant for Jefferson Parish Streets Department. Jefferson Parish sought a Pavement Management System (PMS) that could be implemented to manage nearly 3,000 lane miles of Parish roadway.</p> <p>Mott MacDonald was tasked with supporting Jefferson Parish in determining a pavement management software (PMS) that met their needs of evaluating and prioritizing maintenance projects within the Parish. The Parish needed an objective way to plan rehabilitation projects to best utilize the limited funding allocated for maintaining the roadway system.</p> <p>Mott MacDonald reviewed available market PMS applications with the Parish to identify each applications ability to meet Jefferson Parish's goals and objectives, but also the applications capabilities when it came to ease of use/accessibility, scalability, configurability, reporting and mapping, data import/ export, data linking. A final application known as StreetSaver was chosen to be the Parish's future PMS application.</p> <p>The software allows the Parish to judge the need for rehabilitation of a specific roadway against another roadway based on the pavement condition index (PCI) calculated by the visible distresses seen in the pavement. Since the information is collected and evaluated by computer software, the ability to objectively assign values of pavement quality (0-100) to each road allows the Parish to appropriately order their future repairs. It also allows the Parish to better understand and respond to roadway complaints within the area.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2022	\$387,470.00	\$180,420.00



## TEC Professional Services Questionnaire

<b>PROJECT NO. 2</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p><b>City of Dallas Pavement, Alley, and Sidewalk Management Consulting Services</b> Dallas, Texas</p> <p><b>Ali Hatefi, PE, CFM</b> Director City of Dallas Department of Public Works 214-948-4688</p>	<p>The City of Dallas manages nearly 12,000 lane miles of roadway and required the assistance of a firm to implement a pavement management program to manage the preservation of its pavement assets, as well as the alley and sidewalk assets. The City selected Mott MacDonald to help them achieve this goal by providing asset management and engineering consulting services including a PMS software implementation.</p> <p><b>Pavement Management System (PMS) Selection:</b> Our team conducted a review of the City's As-Is processes, software capabilities and identified requirements. As part of the evaluation effort, we thoroughly documented the City's available data and business processes. Mott MacDonald worked with the City to identify the most appropriate PMS software to meet the City's needs in managing their streets, alleys and sidewalks.</p> <p><b>Pavement Management System Implementation:</b> Mott MacDonald led the project team in identifying all required configuration needs to produce a PMS configuration document. The document included specifications for all data flows, attributes and technical configuration of the system software and database. It also detailed all the Pavement, Sidewalk and Alley Management Engineering setup and inputs for analysis. This included creation of decision rules, deterioration models, treatment lists and all other Engineering inputs needed to run the optimization analysis and produce annual work plans for the City. Our team performed system testing, calibration and validation of results, training and reporting for the City. Mott MacDonald continues to support the City with developing project work plans and presenting the budget and network performance analysis results to City Council.</p> <p><b>Sidewalk and Alley Management:</b> The City of Dallas Infrastructure Management Plan details the needs of the Alley and Sidewalk network in addition to the pavement network. Mott MacDonald's Infrastructure Asset Management philosophy is that all assets managed by an agency require a comprehensive management approach. For the Alley system, Mott MacDonald set up a decision-making framework like the framework developed for pavements with the rules governing sidewalk and alley maintenance, performance, and budgeting would become another roadway classification that can be managed using the same optimization approach as the pavement network.</p> <div style="text-align: right; padding-right: 20px;">  </div>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2020-Ongoing	\$1.1 million	\$1.1 million



## TEC Professional Services Questionnaire

### PROJECT NO. 3


Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility	
<p><b>Spartanburg County Pavement and Asset Management Consultant Services</b> Spartanburg, South Carolina</p> <p><b>Travis Brown, PE</b> Director Spartanburg County Department of Public Works 864-595-5318</p>	<p>The County sought a consultant that could provide engineering and software implementation services necessary for a pavement management system with capabilities to evolve into a full asset management system in the future for managing additional infrastructure assets. Mott MacDonald provided ongoing engineering consulting support for the pavement management program including pavement engineering, selection of treatments, specifications, pilot studies, alternative treatment options, executive level presentations, conducting public hearings, budgetary evaluations, and developing reports for various levels of County government and the public.</p> <p><b>Asset Management Roadmap Workshop:</b> Mott MacDonald provided Spartanburg County with an Asset Management Roadmap document to serve as a record of the outcomes and conclusions of a three-day facilitated visioning workshop. The workshop identified Spartanburg County's long-range needs and goals for more effectively managing its transportation infrastructure assets (pavements, bridges, stormwater etc.).</p> <p><b>Pavement Management Discovery:</b> Our team met with the County's pavement management team to develop the engineering input required for the Pavement Management System (PMS). This included decision trees, performance models and other required configuration data. As a result of this effort, we provided an engineering configuration document as a guide to document the design of the decision-making framework of the PMS.</p> <p><b>Pavement Condition Data Oversight and Quality Management:</b> Mott MacDonald assisted the County in developing a Data Quality Management Plan (DQMP), Data Dictionary and data collection RFP. After the County selected a data collection vendor, we provided oversight and quality control for the data collection effort. This effort ran in conjunction with the Pavement Management System implementation.</p> <p><b>Pavement Management System Implementation:</b> In conjunction with the data collection, our team implemented the County's PMS and completed system training in 2021. The implementation included all system configuration, calibration, testing and calibration, SOP development and support for the initial set of analysis runs. These analyses provide the initial reporting for County Administration. The County will continue to use the system to develop planned work and implement an objective results-oriented work program continues to improve the County's roadway network.</p> <p><b>Maintenance Quality Assurance Program:</b> As part of a parallel effort to support the County with its roadway maintenance operation, Mott MacDonald set up a Maintenance Quality Assurance program for the County. This effort included review of current businesses processes, recommendation of business process for planning and budgeting, facilitation of key asset identification and threshold condition rating, development of field inspection handbook, including implementation and training. This includes a MQA data collection manual, rater training, and implementation of an iPad based data collection process.</p>	
<p><b>Completion Date (Actual or estimated)</b></p>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
<p>2019- Ongoing</p>	<p>\$740,000</p>	<p>\$740,000</p>




## TEC Professional Services Questionnaire

<b>PROJECT NO. 4</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p><b>Charleston County Pavement Management System Implementation</b> Charleston, South Carolina</p> <p><b>Mackenzie Kelley, PMP</b> Construction Project Manager Charleston County Government 843-202-6157</p>	<p>For Charleston County, a plan was needed to continue the evolution of their pavement management program to include a state-of-the-art pavement management system with more robust analytics for performing multi-constraint scenario analyses. Additionally, the County desired assistance with the task of automated collection of pavement condition data. The following tasks were included in the plan to assist the County:</p> <p><b>Pavement Management Discovery:</b> Our team met with the County's pavement management team during three days of in-person meetings to review business processes and develop the engineering input required for the Pavement Management System (PMS). Discussions with the County included decision trees, performance models and other required configuration data. As a result of this effort, we provided an engineering configuration document as a guide to document the design of the decision-making framework of the PMS.</p> <p><b>Oversight and Quality Management of Pavement Condition Data Collection:</b> Mott MacDonald assisted the County in the development of a Data Dictionary and Data Quality Management Plan for automated pavement data collection. These documents helped set the requirements needed for procurement of data collection services and ensures that the data collection will be performed accurately utilizing the same specifications which will better facilitate comparability between survey years. Mott MacDonald further assisted the County in development of the RFP for data collection, responding to questions, preparing addendums and preliminary review of RFP responses. Once a vendor was selected, Mott MacDonald performed the necessary data quality assurance activities including selection and setup of calibration sections as well as review and analysis of collected data to verify compliance with data formats and compliance to accuracy and repeatability standards.</p> <p><b>Pavement Management System Implementation:</b> In conjunction with the data collection, our team implemented the County's PMS and completed system training. The implementation included system configuration, calibration and testing, SOP development, setup and completion of optimization analysis, as well as reporting and go-live support. These analyses provide the initial reporting for County Administration. The County will continue to use the system to develop planned work and implement an objective results-oriented work program to improve the County's roadway network. The County is working toward implementing a full asset management system beyond pavements to include additional infrastructure assets. Mott MacDonald continues to provide support to the County in their pavement and asset management programs. More recent activities have included the development of a parking lot management system as well ongoing data collection, data management and analysis support, process improvements, program documentation updates, asset integration support and assistance with executive, legislative and public communication.</p> <div style="text-align: right; padding-right: 20px;">  </div>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2019-Ongoing	\$501,937	\$501,937

## TEC Professional Services Questionnaire

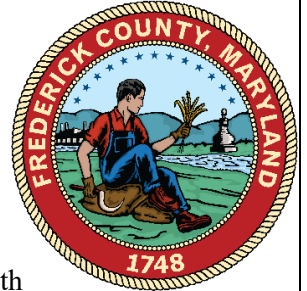
<b>PROJECT NO. 5</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p><b>Polk County Asset Management System Implementation</b> Winter Haven, Florida</p> <p><b>Austin W. Potts, PE</b> Polk County BoCC Roads &amp; Drainage Division Polk County, FL <a href="mailto:austinPotts@polk-county.net">austinPotts@polk-county.net</a></p>	<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 65%;"> <p>Mott MacDonald worked closely with Polk County to select and implement a new pavement management system, optimizing the County's decision-making process for pavement planning and programming.</p> <p>Polk County manages nearly 2,400 centerline miles of roadway and needed a new, systematic, and reproducible method of determining priorities and optimal timing of improvements to manage the preservation of its roadway system. Mott MacDonald conducted a review of the County's As-Is processes and software capabilities and identified requirements. Our team created a new set of indices and reporting statistics as desired by the County to support a consistent method of identifying optimum treatments.</p> <p>We then undertook a task to compare the current software platform used by the County with available pavement management software packages in the market and assisted the County in selecting a new system. To achieve the goal of identifying and implementing a new pavement management system, Mott MacDonald provided expertise in pavement asset management, engineering guidance, and software implementation.</p> <p>We implemented and configured the selected PMS to the County's specific needs. This included the development of condition indices, decision trees, treatments, performance models, treatment rules, other improvement variables, performance measures, and associated reporting to support the County's budget optimization processes, project selection, and performance targets. Mott MacDonald trained County staff to perform condition assessments and developed a data quality management program for the County. We also trained County staff on use of the software and provide ongoing support as needed. This includes policy manuals, configuration guides, and standard operating procedures to manage of the entire pavement management program.</p> <p>After implementation, these improvements helped the County make more strategic and optimized pavement planning and programming decisions. This improved decision-making will in turn help the County justify and maintain a sustainable funding stream for a full range of treatments, backed up by a new, optimized, and data driven pavement management framework. Additional efforts have included implementation of a AgileAssets Structure Inspector, Bridge Analyst and Maintenance Management Modules.</p> </div> <div style="width: 30%; text-align: center;">  </div> </div>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2016-Ongoing	\$1.9 million	\$1.9 million

## TEC Professional Services Questionnaire

<b>PROJECT NO. 6</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p><b>Hillsborough County Asset Management Program Support,</b> Tampa, Florida</p> <p><b>Bridgette Gutierrez</b> Enterprise Program Management Office Information &amp; Innovation Administration (813) 274-6532 GutierrezB@HCFLGov.net</p>	<p>Hillsborough County encompasses the Tampa metropolitan area and is a blend of highly urbanized road networks, suburban neighborhoods, and rural farm-to-market routes. This network mix of nearly 3,700 centerline miles of roadway and about 250 bridges pose a significant level of complexity in determining the best management approach. The County wanted to improve efficiency and capability by procuring a consultant to review their business practices, improve and advise on data collection needs, and implement a software package that could be tied to GIS and Business Intelligence (BI) reporting processes.</p> <p>The County's existing systems and processes used to manage their pavement and bridge assets were not sophisticated enough to provide information in a timely fashion and relied heavily on manual project work plan development, mapping, and reporting of results to executives and administrators. The County had been using PAVER™ for pavements, and spreadsheets for bridges.</p> <p>Mott MacDonald has completed a discovery phase to review business processes and define asset management software configuration requirements the County's new implementation of AgileAssets Pavement Analyst and Structures Manager systems. Mott MacDonald developed a database and engineering configuration document that details business and technical needs for the system implementations.</p> <p>The County desired to implement the new ASTM E3303 data collection methodology. This change is anticipated to be implemented after a transition period where both PAVER and AgileAssets will be maintained concurrently allowing the County to continue collecting data consistent with past processes while planning to migrate to a fully automated data collection methodology. Our team assisted in the development of decision trees with performance models with the County team and defining a treatment toolbox for improved treatment recommendations.</p> <p>Structures Manager system was configured by Mott MacDonald staff to directly import data from the Florida Department of Transportation's Local Government Bridge Inspection Program and perform optimized maintenance and replacement analyses. Additionally, Mott MacDonald staff developed custom reporting formats to assist the County with their annual reporting requirements.</p> <p>Future activities will include PMS and BMS system training, and development of Standard Operating Procedure documents. Additionally, the County has requested Mott MacDonald to begin the process of developing a Culvert Management System for the County's 100,000 culvert inventory.</p> <div style="text-align: right; padding-right: 20px;">  <p><b>Hillsborough County Florida</b></p> </div>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2019-Ongoing	\$1.25 million	\$1.25 million

## TEC Professional Services Questionnaire

<b>PROJECT NO. 7</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p><b>Frederick County Pavement Management System Implementation</b> Frederick, Maryland</p> <p><b>Robert Stull</b> Project Manager Frederick County Government 301-600-2181</p>	<p>Mott MacDonald is providing pavement management services and implementation of the County's pavement management program for Frederick County's 1,500 centerline mile roadway network. Mott MacDonald performed the following:</p> <p><b>Pavement Management System Needs Assessment:</b> We conducted Reconciliation Meetings where all software and engineering implementation details were defined.</p> <p><b>Data Migration:</b> Data was successfully migrated from the County's existing RSMS system. Our team created street inventory/GIS compatibility to ensure that all past and future GIS data will be compatible with the pavement management system and other software systems already in place.</p> <p><b>System Configuration:</b> Our configuration of the management setup included decision trees, repair strategies and performance models and County specific reporting features.</p> <p><b>Pavement Inspection Services:</b> Mott MacDonald developed a distress-based visual pavement condition rating methodology for evaluating County-maintained pavements. Mott MacDonald also provides pavement condition surveys of the entire road network.</p> <p><b>Budget and Project Selection Analysis Support:</b> As part of an On-Call Technical Support Contract, Mott MacDonald performs various multi-constraint optimization analyses and develops County specific reports as requested by the County, which include developing customized manager dashboards. Mott MacDonald produces a yearly report of the pavement program for submittal to County Council for consideration of budget and work plan needs.</p> <p><b>System Training:</b> Our team conducted formal end-user system training with County staff to ensure that key staff are properly utilizing the system and understand the system capabilities.</p> <p><b>Standard Operating Procedure (SOP) Development:</b> We developed SOPs for the proper maintenance and use of their Pavement Management System.</p> <p><b>System Expansion:</b> Mott MacDonald collected median and shoulder data and modified the software to store and analyze the data. We added all county-maintained parking lots and trained road raters to perform condition assessments of the parking lots. Other expansion services include developing a robust neighborhood analysis, development of an enhanced preservation program and improved GIS capabilities.</p>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2011-Ongoing	\$2.5 million	\$2.5 million






## TEC Professional Services Questionnaire

<b>PROJECT NO. 8</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p><b>Manatee Pavement Management Services</b> Bradenton, Florida</p> <p><b>Phil Catalano</b> Pavement Manager Manatee County, Florida 941-708-7450, x7613</p>	<p>Mott MacDonald is supporting Manatee County, Florida with the development of a Pavement Management System. The project includes a pavement condition survey, configuration of a PAVER™ database, 5-Year maintenance plan, end user training, and on-call technical support.</p> <p><b>Pavement Condition Survey:</b> As a subconsultant, Mott MacDonald provided the pavement condition assessment, data analysis, and project planning. We performed a pavement condition survey for each road section within the County maintained network between June and October 2021. The data collection included inspection of 1,406 centerline miles of roads consisting of 12,995 individual road segments. All condition data was collected following a modified ASTM D6433 inspection methodology. The overall value of the pavement asset is assessed to be approximately \$2.670 Billion dollars. Our team provided a condition analysis along with pavement condition projections to evaluate the effect of various funding levels on future asset conditions.</p> <p><b>Pavement Management System Configuration:</b> Our team worked closely with Manatee County to implement a comprehensive pavement management system that will assist the County manage their pavement assets. Mott MacDonald was responsible for the configuration of a PAVER™ software database. The PAVER system allows for the storage and analysis of various pavement asset data including the inventory, condition, construction history, deterioration modeling, and project planning. Additionally, the system allows for budgetary analysis of the pavement network to track efforts to maintain the asset at a condition that is acceptable to the County.</p> <p><b>Five-Year Plan:</b> The Mott MacDonald team assisted County staff in the development of a Five-Year Capital Improvement program for maintenance resurfacing. Multiple budget scenarios were run to determine the annual funding necessary to achieve different overall network conditions. Additionally, specific projects were formulated within PAVER and incorporated into a multi-year work program based on available maintenance funding.</p> <p><b>Training and Support:</b> Mott MacDonald provided County staff with training on the use of PAVER™. On-call support is also being provided. Future efforts are anticipated to include the migration of the pavement management system from PAVER™ to Trimble's Pavement Express software for better compatibility with the County's City Works system. Efforts may also include the evaluation and efficacy of conducting automated pavement condition inspections using ASTM D6433 or ASTM E3303.</p>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2012-Ongoing	\$500,000	\$500,000



## TEC Professional Services Questionnaire

<b>PROJECT NO. 9</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p><b>City of Raleigh Asset Management System Implementation &amp; Engineering Services</b> Raleigh, North Carolina</p> <p><b>Benjamin Griffin, PE</b> Street Maintenance Division Manager City of Raleigh, North Carolina 919-996-6903</p>	<p>Raleigh, North Carolina is one of the fastest-growing cities in America. The City's Transportation Department maintains over 1,100 miles of roadway, and average daily traffic can see up to 40,000 vehicles per day. Beginning with the collection of pavement condition data using the latest automated data collection technology, Raleigh has moved toward a comprehensive asset management program using state-of-the-art software with deterioration modeling and sophisticated optimization capabilities.</p> <p>The initial phase of the project was to develop a five-year Asset Management roadmap for the City to develop a full road map for implementation of the City's asset management vision. The effort started with the development of a Data Dictionary, a Data Quality Management Plan (DQMP) and RFP for Pavement data collection. The project has continued with oversight and quality management of the pavement condition data collection, Pavement Management System implementation, Bridge Management System implementation, Sidewalk Inventory implementation, and On-Call Asset Management consulting services. The City once used an approach where the roads in the worst condition were fixed first. However, transportation leaders determined this approach wasn't cost-effective. Allocating funds to the worst parts of the roadway network allowed the parts in good condition to deteriorate over time. To move away from this worst-first approach and improve the city's roads on a limited budget, Mott MacDonald was hired to implement a pavement management system (PMS). We developed a comprehensive strategy to switch from visual inspection of pavement condition to automated data collection. Crack density, which measures the total crack length per unit area, was the primary pavement metric used to generate automated data. Crack density measurements were 90% accurate and 90% repeatable over the data collection cycle. This data collection method along with the pavement management system analysis allowed the city to see which streets need prioritization.</p> <p>At this stage, the Pavement and Bridge Management Systems are complete and an add-on project to implement a culvert inspection system was undertaken. The City also completed a comprehensive data collection effort for sidewalks that included a portion of the City's sidewalk network which was imported into asset management system for the sidewalk inventory component of the project. Our team will continue to provide asset management program support and data quality management services for the City for the remainder of the five-year contract.</p> <div style="text-align: right; padding-right: 20px;">  </div>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2018-December 2023	\$1.01 million	\$1.01 million




## TEC Professional Services Questionnaire

### PROJECT NO. 10

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p><b>Water System Pipeline Assessment and Near Term (5-Year) Plan</b> Jefferson Parish, Louisiana</p> <p><b>Sidney J Bazley</b> Director Jefferson Parish Water Department 504-736-6744</p>	<p>The Jefferson Parish Water Department recognized the need to implement a water system pipe rehabilitation and replacement program and requested an updated water criteria assessment of the existing water systems located on both the East and West Banks of the Parish. Mott MacDonald and N-Y Associates developed new criteria to complete the assessment based on guidance provided by Jefferson Parish. Efforts were also placed on providing the Parish with comparisons of all pipe segments previously evaluated in 2008 by MWH Global Inc. to demonstrate how the assessment had reevaluated these specific pipe segments.</p> <p>The evaluation of Jefferson Parish's water system consisted of both transmission and distribution mains ranging from 4" to 60" diameter pipes. All pipe segments were evaluated using the updated criteria to determine problem areas within the Parish's existing water system. Such evaluations were completed through interviews with Parish workers, GIS records, and existing water model data received from the Parish. After a full assessment was completed, a prioritized list was developed of probable water main failures of both transmission and distribution mains. Additional analysis was completed to provide Jefferson Parish with an order of magnitude construction cost estimate with 30% contingency, to replace the assessed mains.</p> <p>Through discussions with the Parish a detailed budget was developed for their water replacement program and a Capital Improvement Plan (5-year CIP) was organized to prioritize future projects based upon impact to the system. A report detailing the methodology taken during the evaluation process along with the recommendations for the CIP was provided to Jefferson Parish.</p>	
<p style="text-align: center;"><b>Completion Date (Actual or estimated):</b></p>	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
<p>November 2022</p>	<p>\$250,000.00</p>	<p>\$125,000.00</p>



## TEC Professional Services Questionnaire

<b>PROJECT NO. 11</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p><b>Little Farms Ave. Resurfacing (Stewart Ave. to Airline Dr.) 2017-022-RBP</b> Jefferson Parish, Louisiana</p> <p><b>Matthew Zeringue, PE</b> Assistant Director Jefferson Parish Engineering 504-736-6507</p>	<p>The 2017 Road Bond Program consisted of 71 roadway, pedestrian/bike path, and bridge related improvement projects within the East and West Banks of Jefferson Parish.</p> <p>Mott MacDonald was awarded the design and engineering services associated with the Little Farms Ave. Resurfacing project as part of the 2017 road bond program. The project extended across three council districts of Jefferson Parish which included districts 2, 3, &amp; 4 along Little Farms Ave. (Stewart Ave. to Airline Dr.).</p> <p>Mott MacDonald's scope of work consisted of design, construction administration, and resident inspection. The design of the project included full depth replacement of existing asphalt and concrete pavement, general mill and overlay to reshape the existing cross section of the roadway, and replacement of existing ADA ramps and sidewalks to provide pedestrian friendly walkways within the neighborhood. General landscaping was also completed along the project limits which included the construction drainage swales for positive drainage and installation of both Bermuda and St. Augustine sodding.</p> <div style="text-align: right; margin-top: 20px;">  </div>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
December 2023	\$2,645,043.94	\$295,943.94

## TEC Professional Services Questionnaire

<b>M. List all prior and/or on-going litigation between Firm and Jefferson Parish. Please attach additional pages if necessary.</b>		
<b>Parties:</b>		<b>Status/Result of Case:</b>
<b>Plaintiff:</b>	<b>Defendant:</b>	
1.N/A	N/A	Mott MacDonald does not have any prior and/or on-going litigation with Jefferson Parish.
2.		
3.		
4.		
<b>N. Use this space to provide any additional information or description of resources supporting Firm's qualifications for the proposed project.</b>		

### About us

Mott MacDonald is a global engineering, management and development consultancy focused on guiding our clients through many of the planet's most intricate challenges. Improvement is at the heart of what we offer: better economic development, better social and environmental outcomes, better businesses, and a better return on investment.

Mott MacDonald in North America is a practice-driven organization, directed by an executive board and led by a network of national and regional practice leaders. Our expertise by sector includes transportation, advisory, water, internal development, energy, and built environment. Each practice is led by renowned technical experts and supported by a community of professionals with common interest, resulting in a proven structure that fosters best practices and drives sustainability. Our skills encompass asset management, pavement management, planning, project and program management, studies and design, project finance, technical advisory services, management consulting, and beyond.

At Mott MacDonald we believe that teamwork—staff and clients working together— is an essential element of any project. Teamwork assures that we are fully in tune with our clients' objectives and expectations, and that our efforts are focused on meeting these needs. We work best in partnership, helping our clients to establish the steps needed to meet their strategic ambitions, using analytical front-end advice that helps fund, plan, design, deliver and sustain their goals.

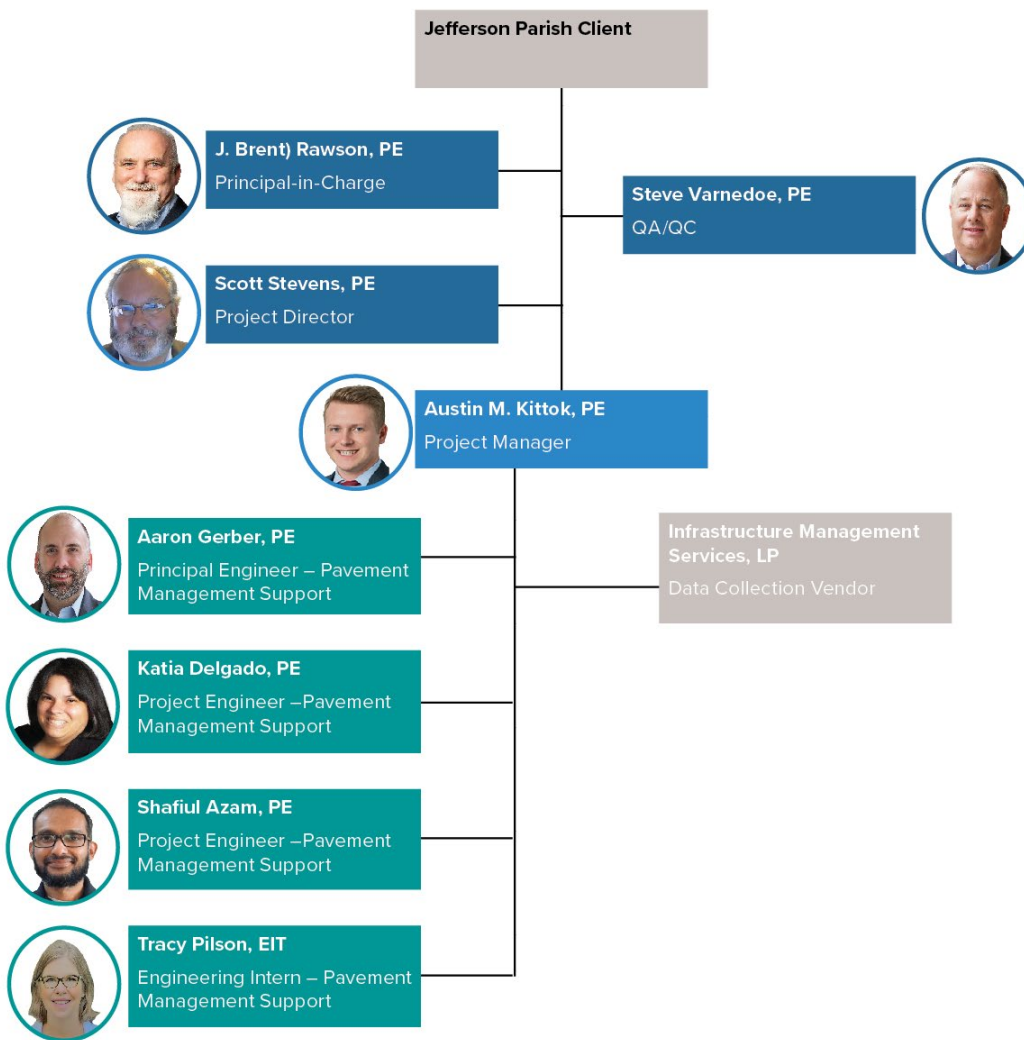
## TEC Professional Services Questionnaire

Mott MacDonald's multi-disciplinary and diverse base of technical skills enables us to respond to virtually any infrastructure, transportation, or environmental need of our clients. Mott MacDonald's technical expertise in pavement management, asset management, and capital improvement planning, with a total commitment to teamwork and successful project solutions, have kept our clients coming back to us for decades.

### Key personnel

Our team has more than 40 years of experience providing asset and pavement management throughout North America and 20+ years providing engineering services to the Greater New Orleans Metropolitan Region. Leading our team is Project Manager, Austin Kittok, PE located in Mott MacDonald's New Orleans Office at 650 Poydras Street. Mr. Kittok is Mott MacDonald's Account Manager for Jefferson Parish and will serve as our point of contact with the Parish. He will be assisted by Mott MacDonald's Supervising Professional for Louisiana Mr. J. Brent Rawson, PE and our Project Director Mr. Scott Stevens, PE who has 40 years of experience in the transportation sector including asset and pavement management. He and Mr. Kittok will be supported by our highly skilled pavement management staff, local personnel, and QA/QC oversight from Mr. Steve Varndoe, PE.

### Organization Chart



## **Evaluation criteria**

### **1.**

#### **Professional training and experience in Pavement Testing and Management Services**

Mott MacDonald's specialized asset and pavement management services has helped state agencies and local municipalities across North America by utilizing our expert's extensive highway domain knowledge, unparalleled systems expertise, and unique blend of agency and industry experience. Our capabilities in high end asset management systems (AMS) software, e.g. AgileAssets, Deighton, AASHTOWare BRM, PAVER, and StreetSaver offers our clients a wide range of pavement management system services.

#### **Pavement Management System Review and Support**

Mott MacDonald fully understands the Parish's current pavement management software (PMS), StreetSaver, and the current information specified within the software as Mott MacDonald was the pavement management consultant who assisted Jefferson Parish in identifying a PMS best suited for their goals and objectives, ease of use/accessibility, scalability, configurability, reporting and mapping, data import/ export, and data linking which was ultimately chosen to be StreetSaver. As such, Mott MacDonald is more than capable of completing discovery sessions with the Parish to assist in updating the PMS to meet their current needs.

Mott MacDonald also prides ourselves in not only providing experts in PMS but ensuring our clients understand the software they choose to operate in. We believe it is vital for agencies who purchase a PMS, to assist in managing their assets, also understand the software's capabilities and limitations. As we've completed in the past, Mott MacDonald provides training to our client's key staff on each PMS we implement to ensure staff can utilize the system and its capabilities once Mott MacDonald has completed our scope.

#### **Data Collection**

Understanding the correct ASTM format to which data must be collected for each PMS is key to completing any automated pavement condition inspection. Our Team has worked alongside a trusted partner in IMS Infrastructure Management Services on several successful projects by utilizing their data collection vehicles for our collection efforts. IMS operates the largest fleet of Road Surface Tester (RST) data collection vehicles in the United States. The RSTs are equipped with specialized data collection technology, including second generation Laser Crack Measurement Systems (LCMS-2) and a Ladybug 5+ camera for collecting high-definition right-of-way imagery. Additionally, the RST data is tracked through GIS which is used to create detailed maps of the entire network. Using this technology, IMS collects information on pavement distresses and condition data for an entire network of roads. Refer to IMS's TEC Section "N" for additional qualifications.

#### **Data Analysis**

A pavement management program is highly dependent on the data that is used to drive decisions. Our Team performs the data analysis needed to develop and implement client specific deterioration models when needed, which are used in a PMS to predict future conditions and budgetary needs. The accuracy of predictions is fundamental to the success of a pavement management program to ensure funding is adequate and the right treatments are applied at the right time in the life cycle. This data analysis is commonly carried out using Python, R, or other data analysis programs for summarizing, cleaning, and analyzing large historical condition and construction datasets to determine accurate predictions of deterioration.

## TEC Professional Services Questionnaire

### Capital Improvement Plan Development

Mott MacDonald is well versed in the development of near-term plans for a range of public assets. Whether it is utilities, transits, or roads Mott MacDonald understands the planning efforts and essential collaboration required with each agency to ensure their investment decisions are strategically assigned to their assets to maximize their available funding.

Through our expert's knowledge and understanding in PMS applications, Mott MacDonald is able to assist our clients in running multiple budget scenarios to determine the necessary annual funding to manage their assets and also identify strategic projects to improve their assets for the community, based on their current funding limits.

2.

### Size of the firm

While we are conventionally structured, our practice culture seeks to ensure the consistent delivery of excellent services, regardless of location. We're proud to be able to provide our services to Jefferson Parish through the resources within our New Orleans, Louisiana office and surrounding Gulf Coast areas. With more than 60 offices strategically positioned across North America and over 2,500 employees among them, we are able to better support our local clients by bringing in additional resources on projects when specialized expertise is needed.

HEADQUARTERS Metropark (Iselin)

#### UNITED STATES

AL Birmingham  
CA Los Angeles  
Orange  
Sacramento  
San Diego  
San Francisco  
San Jose  
San Ramon  
Oakland  
CO Lakewood  
CT Rocky Hill  
DE Newark  
Rehoboth  
FL Chipley  
Delray Beach  
Jacksonville  
Panama City  
Pensacola  
Tallahassee  
GA Duluth  
IL Chicago  
KY Lexington  
LA West Monroe  
New Orleans  
MA Boston  
Westwood  
West Springfield  
MD Baltimore  
MI Detroit  
Plymouth  
MS Hattiesburg

NC Charlotte  
Fayetteville  
Fuquay-Varina  
Raleigh  
NJ Freehold  
Iselin  
Morristown  
NY Buffalo  
New York City  
Tarrytown  
OH Cleveland  
OK Tulsa  
OR Portland  
PA Philadelphia  
Pittsburgh  
TX Austin  
Corpus Christi  
Pearland  
The Woodlands  
West Houston  
UT Salt Lake City  
VA Arlington  
WA Seattle  
WV Charleston  
Morgantown

CANADA  
AB Calgary  
BC Vancouver  
ON Toronto  
QC Montreal

35+

Asset/pavement  
management engineers  
nationwide

11+

Pavement management  
engineers servicing the  
Gulf Coast Region

54

Professionals in  
Louisiana

3.

### Capacity for timely completion

Based on our currently contracted work, Mott MacDonald has prepared man-hour forecasts extending the anticipated length of this contract. Based upon those projections and estimates of anticipated future work for that same period, Mott MacDonald believes at this time that the proposed staff and teaming partners are more than adequate to handle the currently contracted and projected work.

The Mott MacDonald team will, at all times, maintain sufficient resources to achieve the project in a timely and efficient manner.

## TEC Professional Services Questionnaire

4.

### **Past performance**

See Section L.

5.

### **Office Location**

The location of the principal office where work will be performed is Mott MacDonald's New Orleans office located at 650 Poydras Street, Suite 2550 New Orleans, Louisiana 70130

6.

### **Adversarial legal proceedings between the Parish and Mott MacDonald**

Mott MacDonald does not have or has ever had any adversarial legal proceedings involving Jefferson Parish.

7.

### **Project references**

See Section L.



**O. To the best of my knowledge, the foregoing is an accurate statement of facts.**

**Signature:**  **Print Name:** J. Brent Rawson,

**Title:** Principal Project Manager **PE** **Date:** 2/9/2024



# **IMS Infrastructure Management Services, LP**

## TEC Professional Services Questionnaire

**A. Project Name and Advertisement Resolution Number:**

To Provide Pavement Testing and Pavement Management Services  
Resolution No.: 143306

**B. Firm Name & Address:**



**International Cybernetics Company, LP dba Infrastructure Management Services**

10630 75<sup>th</sup> Street  
Largo, Florida 33777

**C. Name, title and contact information of Principal, as defined in Section 2-926 of the Jefferson Parish Code of Ordinances, who is a registered, licensed architect, professional engineer, or surveyor in the State of Louisiana:**

N/A, Vendor completing data collection and non-engineering services

**D. Name and contact information of employee who is a registered and licensed architect, professional engineer, or surveyor in the State of Louisiana in the applicable discipline. A subcontractor may be substituted here only if the advertised Project requires more than one discipline.**

N/A, Vendor completing data collection and non-engineering services

**E. Please provide the number of employees whose primary function corresponds with each category:**

<u>46</u> Administrative	<u>0</u> Estimators	<u>0</u> Specification Writers
<u>0</u> Architects (Licensed)	<u>0</u> Geologists	<u>0</u> Structural Engineers
<u>0</u> Chemical Engineers	<u>0</u> Geotechnical Engineers	<u>0</u> Graduate Engineers
<u>5</u> Civil Engineers	<u>0</u> Interior Designers	<u>0</u> Project Managers
<u>0</u> Construction Inspectors	<u>0</u> Landscape Architects	<u>0</u> Clerical
<u>0</u> Ecologists	<u>0</u> Land Surveyor	<u>0</u> Grant/Funding Specialist
<u>0</u> Electrical Engineers	<u>0</u> Mechanical Engineers	<u>0</u> Sanitary Engineers
<u>0</u> Engineer Intern	<u>0</u> Environmental Engineers	<u>3</u> GIS Services
<u>0</u> Professional Land Surveyors	<u>7</u> Testing	<b><u>92</u> TOTAL</b>
<u>31</u> Technical/Analysts		

**F. Is this submittal by a JOINT-VENTURE? Please check: YES ☐ NO ☒**

**If marked "No" skip to Section I. If marked "yes" complete Sections G-H.**

## TEC Professional Services Questionnaire

**G. If submittal is by JOINT-VENTURE, list the firms participating and outline specific areas of responsibility (including administrative, technical, and financial) for each firm. Please attach additional pages if necessary.**

1.N/A

2. N/A

**H. Has this JOINT-VENTURE previously worked together? Please check:**

YES ☐ NO ☒

**I. List all subcontractors anticipated for this Project. Please note that all subcontractors must submit a fully completed copy of this questionnaire, applicable licenses, and any other information required by the advertisement. See Jefferson Parish Code of Ordinances, Sec. 2-928(a)(3). Please attach additional pages if necessary.**

Name & Address:	Specialty:	Worked with Firm Before (Yes or No):
1. N/A		
2. N/A		
3. N/A		

**J. Please specify the total number of support personnel that may assist in the completion of this Project:**

  2

## TEC Professional Services Questionnaire

**K. List the professional in charge, key persons, specialists, and individual consultants anticipated for this Project and provide their relevant information below. If necessary, please attach additional documentation (i.e. resume) that demonstrates the employment history and experience of the Firm's key persons that may assist in the completion of this Project. Please attach additional pages if necessary.**

### **PROFESSIONAL IN CHARGE OF PROJECT:**

**Name & Title:**

**Dave Bratton, PE**

Pavement / Project Engineer

**Project Assignment:**

Data Collection Vendor

**Name of Firm with which associated:**

IMS Infrastructure Management Services, LP

**Years' experience with this Firm:**

With this Firm: **12** With other Firms: **0**

**Education: Degree(s)/Year/Specialization:**

BS Civil Engineering, Bradley University

**Active registration: Year first registered/discipline:**

Licensed PE in Illinois and Texas

Texas License No. 145824

**Other experience and qualifications relevant to the proposed Project:**

David Bratton is a project engineer at IMS with 12 years of experience in pavement management involving condition assessment, prediction modeling, and budget evaluation. He has worked extensively with automated pavement data collection that conform to multiple standards (ASTM, MTC, VDOT, IDOT), dynaflect and falling weight deflectometer, and right of way asset acquisition. Mr. Bratton has implemented pavement management programs for software packages including CarteGraph, Lucity, Paver, StreetSaver, and others across North America.

**Key West, FL – Project Manager:** Mr. Bratton served as project manager for the pavement management system implementation of 100 miles of City-owned roads on the island of Key West. One of the main concerns of the City was the identification of roads with utility patches as they had historically gone unrecorded and were becoming detrimental to the ride quality of the pavement network. Semi-automated surface distress and ROW image collection was paired with deflection testing in order to assess pavement condition and identify patched areas. This data was then used as the basis for funding needs analysis that incorporated input from the City's engineering department on prioritizing areas with patch related ride quality issues. The project concluded with the creation of a comprehensive report that summarized the project approach, findings, and recommendations.

**City of Flower Mound, TX – Project Manager:** In 2022, Mr. Bratton served as project manager for the pavement management program update of 383 miles of asphalt and concrete roadways in Flower Mount, TX. Automated pavement data collection was used to calculate a pavement condition index (PCI) for each segment in the network and an inventory of pavement striping/markings was created and linked to images of the asset from the survey. This data was then used as the basis for funding needs analysis that incorporated input from the City's engineering department and City council members. The project concluded with the creation of a comprehensive report that summarized the project approach, findings, and recommendations.

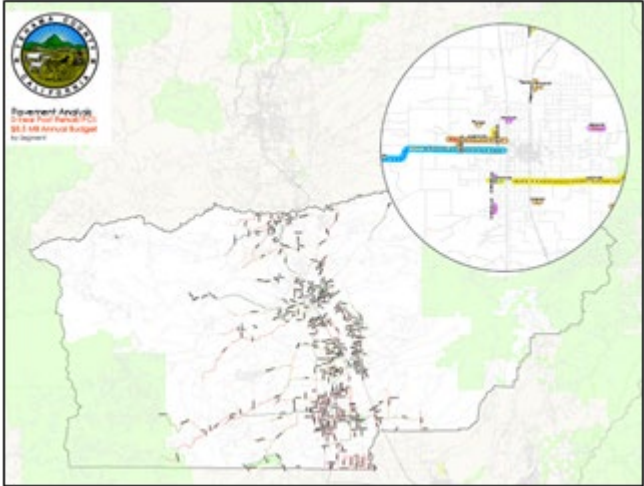
## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
<b>Amir Ghanbari, PhD, EIT</b> Project Engineer   Data Scientist
<b>Project Assignment:</b>
Data Collection Vendor
<b>Name of Firm with which associated:</b>
IMS Infrastructure Management Services, LP
<b>Years' experience with this Firm:</b>
With this Firm: <b>1</b> With other Firms: <b>9</b>
<b>Education: Degree(s)/Year/Specialization:</b>
BS Civil Engineering, Sharif University, Tehran, Iran (07/01/2013) MS Transportation Material, Sharif University, Tehran, Iran (08/21/2015) PhD Pavement Engineering, North Carolina State University, Raleigh, NC (11/23/2020)
<b>Active registration: Year first registered/discipline:</b>
EIT
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Dr. Amir Ghanbari is a dedicated project engineer and data scientist with a strong background in pavement management, pavement materials, highway and airport pavement design, and construction supported by more than 9 years of work experience. Dr. Ghanbari has extensive experience with pavement management systems, non-destructive testing and falling weight deflectometer back calculations, pavement condition index analysis, pavement life cycle cost analysis and preservation techniques, highway and airport pavement design, and asphalt material characterization. He has also contributed to several FHWA reports and 20 published articles. Dr. Ghanbari is proficient with various type of pavement/asset management software such as AgileAssets, Paver, StreetSaver, Lucity, and Cartegraph. Dr. Ghanbari has been selected for this project team should the County elect to utilize the AgileAssets software during this agreement.</p> <p><b>City of Moline, IL– Principal Engineer:</b> In 2022, Dr. Ghanbari served as principal engineer for the City's comprehensive pavement management program. This survey consisted of an automated ASTM D6433 PCI survey of approximately <b>300</b> miles of City-managed arterial, collector, and local roadways. International Roughness Index (IRI) data and rutting data were also collected for each roadway during the survey. Dr. Ghanbari worked collaboratively with the City to customize the development of projects into practical sizes so the city can easily maintain it for the next five years. This project involved implementation of Easy Street Analysis (ESA) for pavement management. However, since the city network was composed of many composite surface pavements, additional functionality was made to the program so that ESA can handle more rehab strategies for composite pavements. This custom-built improvement lay the foundation for the city's five-year plan strategy.</p> <p><b>City of Centennial, CO– Project Engineer:</b> In 2022, Dr. Ghanbari managed the implementation of a pavement management system and the automated ASTM D6433 PCI survey of 564 miles of the city's roadways. International Roughness Index (IRI) ride quality data as well as rutting data were collected for each roadway as well. Structural testing was also conducted on the arterials and collectors (245 miles in total) using a Fast FWD system to assess the City's network structural integrity (SI). This project uses both ESA and PAVER for pavement management. In collaboration with the City team, Dr. Ghanbari is developing five-year pavement preservation and M&amp;R plans. He has also conducted PAVER training to City staff.</p>

## TEC Professional Services Questionnaire

<b>L. Work by Firm or Joint-Venture members which best illustrates current qualifications relevant to this Project. Please include any and all work performed for Jefferson Parish. Please attach additional pages if necessary.</b>		
<b>PROJECT NO. 1</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p><b>City of Dallas, TX</b>  <b>Point of Contact:</b> Shahad Mohammed, PMP, Program Administrator, Pavement and Asset Management  <b>Phone:</b> (214) 717-1617  <b>Email</b> shahad.mohammed@dallas.gov</p>	<p><b>Phase 1. ASTM D6433 and GPR Survey (Complete)</b>  IMS deployed a fleet of five LCMS-2-equipped IrisPRO Pave data collection vehicles to complete the ASTM D6433 PCI survey of approximately 6,000 centerline miles of city-managed arterial, collector, and local roadways in just three months to stay on track of the city's aggressive schedule. IMS is the first provider to implement both ASTM D6433 and the new ASTM E3303 protocols for the city—collection efforts for both ran in parallel through the existing TxShare program. IMS' innovative approach to objective data collection included IRI and rutting data for each roadway, HD images captured at 15-foot intervals, with data delivered in a geodatabase and integrated into the city's existing pavement management system. IMS worked with the city to configure the AgileAssets map module to integrate and display pavement condition and other data through the map interface in a format consistent with the city's horizontal and vertical control network system.</p> <p><b>Phase 2. Sidewalk and Pedestrian Curb Ramp Inventory (Complete)</b>  IMS conducted a comprehensive review of the HD ROW imagery collected during Phase 1 to identify the location of sidewalks and pedestrian curb ramps. IMS collected sidewalk data, which included location, configuration, material type, and overall condition. Geodatabases containing the collected information were created for incorporation into the city's GIS. This phase of the project represents the first step in the city's efforts to develop a sidewalk masterplan and ADA transition plan.</p> <p><b>Phase 3. Pavement Condition Survey Data Reprocessing per ASTM E3303 (02/2024 Planned)</b>  The city is investigating the novel implementation of the new ASTM E3303 pavement condition assessment standard as part of this project. ASTM E3303 is new in the industry and not widely adopted; however, it is a fully automated standard and may provide the city with more repeatable cracking metrics for year-over-year comparisons. IMS is currently reprocessing the pavement condition data collected and is working with the city to assess the utility of the data.</p>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
October 2022 to February 2024 (planned)	\$756,739	\$756,739

## TEC Professional Services Questionnaire

<b>PROJECT NO. 2</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p><b>Tehama County, California</b>  <b>Point of Contact:</b> Jim Simon, Public Works Director  <b>Phone:</b> (530) 385-1463 <b>Email:</b> <a href="mailto:jsimon@tcpw.ca.gov">jsimon@tcpw.ca.gov</a></p>	<p>IMS implemented a pavement management system and performed a linear automated pavement condition assessment on approximately 830 centerline miles of the county roadway network. In addition, deflection testing using FastFWD was conducted on 240 survey miles. IMS forecasted the condition of the county's roadways and developed practical M&amp;R recommendations. To make this information more accessible, IMS created an online GIS-based StoryMap, which displayed pavement condition and M&amp;R recommendations. Data was loaded into IMS' ESA spreadsheet and formatted for upload into StreetSaver.</p> <div style="text-align: center; margin-top: 20px;">  </div>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
December 2023	\$316,000	\$316,000



## TEC Professional Services Questionnaire

<b>PROJECT NO. 3</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility</b>	
<b>Lake Forest, California</b> <b>Point of Contact:</b> Doug Erdman, Assistant City Engineer <b>Phone:</b> (949) 282-5233 <b>Email:</b> <a href="mailto:derdman@lakeforestca.gov">derdman@lakeforestca.gov</a>	In 2022 IMS conducted the second pavement survey for the city after having successfully completed the previous one in 2020. IMS Infrastructure Management Services, LLC (IMS) undertook a contract with the City of Lake Forest to perform a comprehensive pavement condition assessment and funding analysis for approximately 170 centerline miles of City-maintained asphalt roadways. The project, aligned with the OCTA PMP, involved key tasks. Employing an automated data collection vehicle equipped with LCMS2 and high-definition imagery to survey and assess pavement conditions, classifying distress as per ASTM Standard D6433. Configuring collected data for integration with the StreetSaver pavement management program and updating models for forecasting future costs and conditions. Assessing the impact of current funding levels on the overall network condition over seven years, determining the funding needed to sustain the current average network PCI, and achieving an increase of one point in the average network PCI. Presenting a comprehensive report detailing the condition results and findings, along with budget scenarios. In 2022 IMS also collected street signs and associated attributes	
Completion Date (Actual or estimated)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
December – 2020	\$75,000 (2020)	\$75,000 (2020)
June - 2023	\$75,000 (2022)	\$75,000 (2022)

## TEC Professional Services Questionnaire

<b>PROJECT NO. 4</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<b>Ridgecrest, California</b> <b>Point of Contact:</b> Travis Reed, Public Works Director <b>Phone:</b> (760) 499-5080 <b>Email:</b> <a href="mailto:treed@ridgecrest-ca.gov">treed@ridgecrest-ca.gov</a>	In June 2022, IMS Infrastructure Management Services utilized cutting-edge LCMS technology to assess 134 centerline miles of asphalt roadways in Ridgecrest. The IrisPRO van captured high-resolution data on pavement cracking, rutting, and roughness. Furthermore, conducted a crack mapping survey for 96 miles to support a FEMA claim for earthquake damages. This data was then input into the Easy Street Analysis™ pavement management system, generating representative pavement condition scores for each segment. These scores assist decision-makers in prioritizing maintenance and rehabilitation efforts. Using the ESA system, IMS developed multi-year pavement maintenance and rehabilitation recommendations, considering distress severity, quantity, and type, surface type, pavement strength, and functional class. IMS forecasted the condition of the City's roadways and developed practical M&R recommendations and a 5-year pavement management plan. Data was loaded into ESA spreadsheet and formatted for upload into StreetSaver. Furthermore conducted a crack mapping survey for 96 miles to support a FEMA claim for earthquake damages.	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
January 2024	\$132,565.00	\$132,565.00
<b>PROJECT NO. 5</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<b>Arizona Department of Transportation (ADOT) 2024, 2023, 2022</b> <b>Point of Contact 1:</b> Robert Bush, Program Manager <b>Phone:</b> (602) 672-8846 <b>Email:</b> rbush@azdot.gov	ICC is performing a pavement condition survey, collecting HD imagery, and conducting a sign and striping inventory across nearly 15,000 miles of interstate, state, US routes, and HPMS sections across Arizona. Photolog images are available agencywide with no license restrictions through ICC's Inform cloud-based, pavement and asset data visualization software. ICC is collecting, processing, and validating the geospatial roadway data-items identified in the FHWA's HPMS and Model Inventory of Roadway Elements (MIRE)—providing ADOT with reliable, repeatable information to meet HPMS requirements for programming, planning, FHWA compliance, and internal forecasting for M&R development. In addition to ICC's current work with ADOT, IMS completed two federally funded pavement and sign data collection projects managed by ADOT for the Cities of Glendale and Goodyear, Arizona under a previous contract.	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
Ongoing 4-year project. First 2 of 4 year cycles completed.	~\$4,000,000 (for 4 years)	~\$4,000,000 (for 4 years)

## TEC Professional Services Questionnaire

<b>PROJECT NO. 6</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<b>Wyoming Department of Transportation (WYDOT)</b> <b>2024, 2023, 2022</b> <b>Point of Contact:</b> Ethan Crockett, PE, Pavement Management & Research Engineer <b>Phone:</b> (307) 777-4726 <b>Email:</b> ethan.crockett@wyo.gov	<p>ICC collects pavement distress data and HD imagery along approximately 10,535 lane miles of WYDOT's roadway network each year under its current contract. This includes interstate, non-interstate NHS, non-NHS, and county roads across the state's geographically diverse terrain. ICC collects IRI, rutting, cracking, faulting, texture, and geometrics using GPS and DMI. Data is collected in compliance with HPMS requirements and is formatted for upload into WYDOT's pavement management system. ICC delivers accurate data that supports WYDOT's near-term and future M&amp;R decision-making and formal multi-year plans for improved user experience, higher road safety, and optimal funding allocation.</p> <p>Pavement condition data is collected using ICC's IrisPRO Pave data collection vehicle equipped with an LCMS-2 pavement imaging system, Ladybug 5+ 360° camera, dual line-laser profiler, and inertially aided positioning devices. ICC worked closely with WYDOT to customize the DQMP during project kickoff and performs QC measures in accordance with the final plan to ensure proper equipment calibration and verification procedures are followed.</p>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
Started 2021, last cycle year 2024 with two (2) one (1) year extensions available	~\$1,500,00.00 for 3 years	~\$1,500,00.00 for 3 years
<b>PROJECT NO. 7</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<b>Delaware Department of Transportation (DelDOT)</b> <b>2024, 2023, 2022, 2021</b> <b>Point of Contact:</b> Sarah McDougall, DelDOT Project Manager <b>Phone:</b> (302) 760-2080 <b>Email:</b> sarah.mcdougall@delaware.gov	<p>ICC collects road condition data for DelDOT annually along 5,987 miles as a major subcontractor to Kimley-Horn. Roads collected include 4,438 miles of state-maintained roads (749 miles of which are NHS roadways) and 1,549 miles of suburban streets. State and suburban miles are collected biennially and NHS miles are collected in the off years. ICC processes distress data in accordance with Delaware's Pavement Management Distress Dictionary, the project-specific DQMP, and HPMS data requirements.</p> <p>Pavement condition data is collected using ICC's IrisPRO Pave data collection vehicle equipped with an LCMS-2 pavement imaging system, Ladybug 5+ 360° camera, dual line-laser profiler, and inertially aided positioning devices.</p> <p>ICC processes and reviews 30 control sites of 0.1 miles each to ensure QA throughout the statewide project area. The data is made available to DelDOT for independent review and approval through ICC's web-based Connect application.</p>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2021, last cycle year 2024 with two (2) one (1) year extensions available	~\$1,500,000 for 3 years	~\$1,500,000 for 3 years

## TEC Professional Services Questionnaire

<b>PROJECT NO. 8</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p><b>City of Fort Worth, TX</b>  <b>Point of Contact:</b> Omar Elbagalati, PhD, PE (former Engineering Manager, Pavement Management)  <b>Phone:</b> (480) 330-6305  <b>Email:</b> omar_bagalaty@hotmail.com</p>	<p><b>Pavement Condition Survey &amp; ROW Asset Inventory</b>            IMS conducted an ASTM D6433 pavement condition survey of 4,250 miles of city-managed arterial, collector, and local roadways as well as bus lanes. In addition, IMS performed a ROW asset inventory that included signs, sign supports, streetlights, signals, curb and gutter, pavement markings, speed bumps/cushions as part of this \$2.5 million project which began in 2021. IMS worked closely with the city to break the large roadway network into manageable zones to accelerate the schedule. The automated ASTM D6433 PCI survey included the collection of IRI and rutting data for each roadway. IMS conducted a thorough review of the city's pavement management system database to ensure the information was accurately updated based on the results of the survey. The database audit included a review of GIS/PMS linkage, functional class, surface type, length, width, and number of lanes. Special attention was given to preserving historical information, which required a select number of customized fields to be added.</p> <p><b>Sidewalk Condition &amp; ADA Pedestrian Curb Ramp Compliance Assessment</b>            The city's sidewalk and pedestrian curb ramp inventory and ADA compliance survey consisted of a comprehensive review of all the city's approximately 4,250 centerline miles of roadways to identify the location of sidewalks and pedestrian curb ramps. IMS collected sidewalk data, which included location, material type and overall condition from HD ROW imagery that was collected during the pavement condition survey. IMS deployed mobile lidar to capture precise measurements of the city's pedestrian curb ramps to determine whether they met ADA requirements. In total, approximately 2,556 miles of sidewalk were inventoried, and all adjacent pedestrian curb ramps were measured using lidar. Geodatabases containing the collected information were created for incorporation into the city's GIS and VUEworks asset management system</p>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
07/2021 to 10/2023	\$2,476,694.00	\$2,476,694.00

## TEC Professional Services Questionnaire

<b>PROJECT NO. 9</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p><b>Pasco County, Florida – 2024, 2020, 2018</b></p> <p><b>Point of Contact:</b> DJ Sebestyen, Project Manager</p> <p><b>Phone:</b> (727) 834-3611 ext. 1007</p> <p><b>Email:</b> dsebestyen@pascocountyfl.net</p>	<p>Pasco County, Florida has selected IMS as their pavement and asset management program consultant for a wide range of activities since 2018. Planned work in 2024 includes migrating the county's roadway data to from the county's existing PavePRO software to IMS' current Easy Street Analysis (ESA) tool. IMS will export and convert the most recent PavePRO data and link the GIS from PavePRO to two ESA spreadsheets, one for residential roads and one for major roads.</p> <p>IMS led the county's development of a robust pavement and asset management program in two phases (2018 and 2020), which included an ASTM D6433 PCI survey of 1,875 miles of roadway. Pavement condition data was collected continuously in the driven lane using an LCMS-2-equipped IrisPRO Pave data collection vehicle and deflection testing of 490 miles of arterial and collector roads was performed using a Dynaflect in Phase 1.</p> <p>IMS developed several asset inventories (more than 800,000 features identified), which included condition data, for sidewalks and ADA ramps, traffic signs and supports, curbs and gutters, catch basins, swales, shoulders, bike paths, traffic signals, striping and markings, guardrails, handrails, and medians. The county maintains approximately 1,085 miles of sidewalks and 4,215 ramps. The asset inventories were developed during post-processing activities from collected ROW HD imagery and integrated with PavePRO and Cityworks.</p> <p>IMS updated GIS of roads and assets that maintained the CityWorks FacilityID schema and conducted PavePRO training for county staff.</p>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2018 to 2024 (planned)	\$1,210,041 (to date)	\$1,210,041 (to date)

## TEC Professional Services Questionnaire

<b>PROJECT NO. 10</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p><b>City of North Port Florida – 2022</b></p> <p><b>Point of Contact:</b> Danny Quick, PE, City Engineer</p> <p><b>Phone:</b> (941) 240-8076</p> <p><b>Email:</b> dquick@northportfl.gov</p>	<p>IMS has provided pavement and asset management services to the city over the past 19 years. During the 2022-2023 cycle, IMS conducted a pavement and asset management system update for 814 centerline miles of the City of North Port's predominantly asphalt roadways. The imagery collected by IMS' IrisPRO Pave data collection vehicle was used to extract attributes and condition of the city's sidewalk network.</p> <p>IMS surveyed major and divided roads in two-directions to provide a better viewing area for asset extraction. GIS line work and field imagery were prepared for expedited QC/QA review immediately following completion of the pavement distress surveys, and upon city approval used for the development of the asset geodatabase. Some clean up and editing of the city-provided GIS was required to develop accurate asset inventories.</p> <p>In addition, IMS deployed a FastFWD to assess the structural integrity of the city's arterials and collectors (106 test miles), maintaining continuity with IMS' previous projects for network coverage while adopting the latest technology for a deeper analysis. IMS led the city's pavement management software transition from PavePRO to Lucity, conducting legacy data cleanup, and providing two 4-hour Lucity training sessions and ad-hoc guidance as requested.</p> <p>IMS applied sophisticated algorithms to improve the cross-functional usage in Lucity across city departments, streamlining the maintenance of multiple assets that tied back to the street centerline in GIS. IMS recommendations included dedicating part of the city's available funds to inexpensive pavement preservation activities and concentrate rehabs on critical PCI candidates with the highest cost of deferral. IMS' overall recommended course allows for the gradual increase of the network's average PCI and decrease of the backlog.</p>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
Dec 2022 – February 2024 (planned)	\$244,328	\$244,328



## TEC Professional Services Questionnaire

**M. List all prior and/or on-going litigation between Firm and Jefferson Parish. Please attach additional pages if necessary.**

Parties:		Status/Result of Case:
Plaintiff:	Defendant:	
1.N/A	N/A	N/A
2. N/A	N/A	N/A
3.N/A	N/A	N/A
4. N/A	N/A	N/A

**N. Use this space to provide any additional information or description of resources supporting Firm's qualifications for the proposed project.**

### **Firm Overview**

IMS Infrastructure Management Services, now powered by International Cybernetics Company (ICC), has revolutionized roadway infrastructure management since 1975. With the 2022 merger of IMS and ICC, the IMS team of infrastructure consultants is now backed by ICC's industry leading data acquisition technologies. We take pride in having one of the industry's largest fleets of advanced pavement, sidewalk, and right of way (ROW) asset data collection systems.

Over the past five years, we have made a \$5 million investment in enhancing our Unify™ software suite, solidifying our position as an industry leader in providing fully integrated, end-to-end data collection, processing, and visualization tools. Our advanced systems—combined with our rigorous approach to quality control (QC)—empower us to generate unparalleled data quality while setting the industry benchmark for the fastest turnaround time. The actions that we have taken over the past five years illustrate our continued commitment to improving data quality while simultaneously reducing data collection costs for our clients.

### **FIRM QUALIFICATIONS**

- **49 years of experience** helping DOTs, cities and counties assess, analyze, and manage pavements and ROW assets, **with successful project delivery for more than 1,000 municipalities** in that time
- **87 employees** across the United States and Canada, **including 10 engineers (six possessing PhDs)**
- Extensive experience with more than **15 pavement and asset management systems**, including, AgileAssets, Cartegraph OMS, Cityworks, Lucity, PAVER, StreetLogix, StreetSaver, VUEWorks, and others
- Project teams led by Professional Pavement/Infrastructure Engineers
- Largest fleet of second-generation laser crack measurement system (LCMS-2) equipped IrisPRO Pave data collection vehicles dedicated to municipal pavement management in the United States
- QC/QA technicians independently certified through the rigorous Orange County Transportation Authority (OCTA) for ASTM D6433 condition rating

## TEC Professional Services Questionnaire

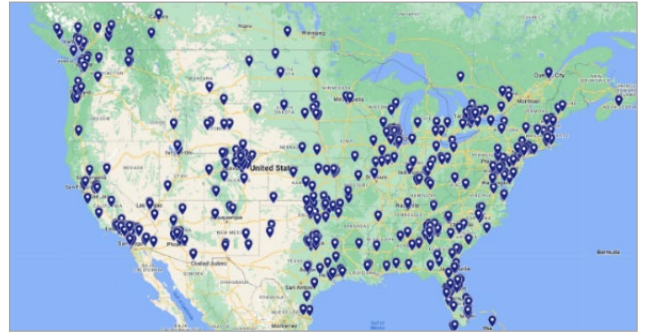
We offer the following pavement management services:

- Training
- Automated pavement condition assessments.
- Non-destructive pavement testing and analysis.
- ROW asset inventory development using 360° imagery and mobile lidar.
- Sidewalk and Americans with Disabilities (ADA) compliance surveys.
- GIS Data visualization dashboards
- Pavement management system implementation support.
- Pavement management Plan and Capital Investment Plan development.

Welcome to the new era of infrastructure management, where consulting services are powered by advanced technologies. Together, IMS powered by ICC are paving the way forward!

### **Firm Qualifications and Experience**

Our technical team completes more than 100 pavement and asset management projects annually and stands second to none in our ability to establish cost effective maintenance management programs for large and small agencies alike. We have earned a reputation for excellence over the course of thousands of projects for municipal clients across the United States performed over almost five decades.



**O. To the best of my knowledge, the foregoing is an accurate statement of facts.**

Signature:  Print Name: Patrick Warren

Title: Director of Client Services Date: 2/6/2024

