metric

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Contract #: 4400025921

IDIQ Contract for Statewide TSMO Program

April 11, 2023

Louisiana Department of Transportation and Development
1201 Capitol Access Road, Room 405-E
Baton Rouge, LA 70802-4438

RE: Contract Nos. 4400025921 | IDIQ Contract for Transportation Systems Management and Operations (TSMO) Program Statewide

To Whom It May Concern:

Metric Engineering, Inc. (Metric) is pleased to submit our proposal for Louisiana's new *TSMO Program Statewide*. We are committed to providing exceptional services to the Louisiana Department of Transportation and Development (LADOTD), offering personal service that results in cost-effective and innovative transportation solutions that are in the public's best interest.

Since meeting the LADOTD staff at the Southeastern ITS Summit in Atlanta, we have prepared for this effort by establishing our office in Louisiana, obtaining our state and individual professional engineering licenses, as well as taken the required courses to work successfully with LADOTD. Additionally, we took time to meet with several of the key leaders with LADOTD to highlight why we would be a good consultant for this contract.

THE METRIC TEAM / FIRM SIZE

Established in 1976, Metric has 340+ professionals, with 180+ of these staff professionals specifically specializing in TSMO/Intelligent Transportation Systems (ITS) & Traffic Operations. Metric is ranked #79 in the top 100 Construction Management-for-Fee Firms in the US (2021) as well as #62 in the Southeast Top 100 Design Firms (2022) and #431 in the Top 500 Design Firms (2021) by Engineering News Record. Metric is a technology focused firm and are the leading ITS experts in Florida *having been involved in the design, integration, inspection, operations, review, and management of ITS services on $2.5B in overall Florida construction in the past 15 years. With every project, we look at ways to link innovation and real-world experiences to keep our clients up-to-date on cutting-edge solutions for tomorrow's transportation challenges.* Metric's team is currently performing TSMO/ITS services, traffic operations planning and design, transportation planning, and/or roadway design on over 76 CSC/DWs for public entities.

FIRM EXPERIENCE / SIMILAR PROJECTS

Metric is known for pioneering the development and implementation of Florida's current advanced transportation systems that we created through Master Plan projects for a number of Florida Department of Transportation (FDOT) districts statewide. Having written *over a dozen TSMO/ITS Master Plans*, we are experts at helping our clients achieve both short-term (1-5 years) and long-term (5+ years) TSMO goals by advocating for robust strategies to be incorporated throughout the project lifecycle from planning through operations and maintenance. Our hallmark success stories include our *FDOT District 3 Districtwide TSMO: ITS & ATMS Consultant (including a TSMO/ITS Master Plan)* and our *FDOT District 5 Continuing Services Contract for Integrated Corridor Management (ICM) - Freeway/Arterial – Operations* contracts, both of which were awarded to Metric *2nd consecutive contract terms. Additionally, Metric has had a relationship with some of our clients for more than 20 years including FDOT District 5, Broward County, and many others for 10+ years.* This means our clients are happy to work with us year after year because we are the trustworthy firm of choice that always delivers! Additionally, we paved the way for the future of *Connected Vehicles (CV) / Connected Autonomous Vehicles (CAV) in our FDOT District 5 ITS Master Plan* that was completed in 2016 and has been used and placed into action throughout Florida. During this contract, our team created the framework that ITS infrastructure would be deployed by as technological advancements quickly become the heart of connecting transportation systems statewide.

STAFF EXPERIENCE/LEADERSHIP

Our proposed Contract/Project Manager (C/PM), ***Dale W. Cody, PE, PTOE***, has 27 years of experience leading as C/PM or Principal-in-Charge on hundreds of ITS/Traffic projects and has dedicated his career advocating for TSMO/ITS and ICM with an emphasis on operations and maintenance. He will be supported by a strong team of industry leading experts including ITS/Traffic engineer ***Jessica Knox, PE, PTOE*** who carries 13 years of experience and leads many of Metric's TSMO/ITS Master Plan projects including the current one for FDOT District 7. ***Mr. Chris Dew, PE, PTOE*** has 13 years of multi-faceted traffic operations and TSMO/ITS experience, including design, operations, analyses, retiming and studies for the Georgia Department of Transportation as well as FDOT.

In addition, we have partnered with a number of local and well-known subconsultant firms who will provide TSMO/ITS support services during this contract. These partners include: [1] **Intelligent Transportation Systems, LLC (ITS,LLC)** (*Providing overall TSMO Program Support*), [2] **Grey Engineering, LLC** (*Providing overall TSMO Program Support as well as Policy Planning Support*), [3] **Franklin Associates, LLC** (*Providing Engagement, Outreach and Stakeholder Training Support*), and [4] **Bonton Associates, LLC** (*Providing overall TSMO Program Support specific to MOT, Safety & Roadway Elements*).

PAST PERFORMANCE & CURRENT WORKLOAD WITH LADOTD

Metric has not worked for LADOTD in the past for these types of professional consulting services; however, Metric does have an existing "as needed" contract with the LADOTD for IDIQ for Debris Monitoring Statewide (Contract No. 440023722), which is run through Metric's Emergency Management Services Division.

APPROACH & METHODOLOGY

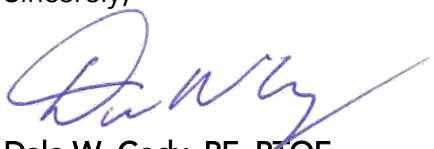
Our team's approach and methodology, as detailed in Section 18 of our enclosed proposal, is focused on the specific items noted in Attachment A - Scope of Services. The Metric staff offers the Department a well-versed team capable of providing engineering services for all the items covered in the Scope of Services and then some. We have also built in redundancy to ensure that we successfully deliver the task orders, and we are very accustomed to working multiple and concurrent task orders with many of our clients, which is a trait we can carry with us to LADOTD.

WHY METRIC?

- ***Experienced Team Leaders & Specific TSMO/ITS experience:*** *Metric's core senior technical staff assigned to this IDIQ contract have significant experience on hundreds of TSMO/ITS projects.*
- ***Dedicated Interest in Working with LADOTD:*** Metric met with key leaders of the LADOTD TSMO/ITS group to share our experience as a result of the Southeastern ITS Summit. Aside from our in-depth understanding and hands-on experience with developing numerous TSMO programs for statewide initiatives, we also have a dedicated interest in adding Louisiana to our growing list of success stories!
- ***Local Presence:*** Metric has *a local office in Harvey, Louisiana* in conjunction with our our partner company, Metric Consulting, LLC.
- ***Well-Known Subconsultants:*** We have added well-known and successful subconsultant partners that are committed to serving LADOTD and the community on this specific IDIQ Contract.

Overall, as with everything we do, we will spare no resource in providing LADOTD our very best effort and commitment to serving as an extension of your staff. We look forward to exceeding your expectations.

Sincerely,



Dale W. Cody, PE, PTOE
Executive Vice President of Traffic Operations and ITS / Contract/Project Manager
(407) 448-0721 | dale.cody@metriceng.com

Sections 1-11

DOTD FORM: 24-102

(Revised January 1, 2023)

PROPOSAL TO PROVIDE CONSULTANT SERVICES

Prime consultant shall complete the DOTD Form 24-102 without altering the Form's text; however, the instruction and/or guidance for Sections 12 through 23 can be removed but do not remove Section title and number.

ANY CONSULTANT FAILING TO SUBMIT ANY OF THE INFORMATION REQUIRED ON THE DOTD FORM 24-102, OR PROVIDING INACCURATE INFORMATION ON THE DOTD FORM 24-102, MAY BE CONSIDERED NON-RESPONSIVE.

1.	Contract Name as shown in the advertisement	IDIQ CONTRACT FOR TRANSPORTATION SYSTEMS MANAGEMENT AND OPERATIONS (TSMO) PROGRAM
2.	Contract Number(s) as shown in the advertisement	4400025921
3.	State Project Number(s), if shown in the advertisement	N/A
4.	Prime consultant name (name must match as registered with the Louisiana Secretary of State where such registration is required by law)	Metric Engineering, Inc. metric
5.	Prime consultant license number (as registered with the Louisiana Professional Engineering and Land Surveying Board (LAPELS) if registration is required under Louisiana law)	EF.0004017
6.	Prime consultant mailing address	**Lake Mary Regional Office:** 525 Technology Park, Suite 153 Lake Mary, Florida 32746
7.	Prime consultant physical address (existing or to be established, if location is used as an evaluation criteria)	**Louisiana Office:** 1821 Commercial Drive #S Harvey, LA 70058
8.	Name, title, phone number, and email address of prime consultant's contract point of contact	Dale Cody, PE, PTOE Executive Vice President of Traffic Operations and ITS **(Assigned Contract/Project Manager)** (407) 448-0721 dale.cody@metriceng.com

9.	Name, title, phone number, and email address of the official with signing authority for this proposal	Dale Cody, PE, PTOE Executive Vice President of Traffic Operations and ITS **(Assigned Contract/Project Manager)** (407) 448-0721 dale.cody@metriceng.com
10.	This is to certify that all information contained herein is accurate and true, and that the team presently has sufficient staff to perform these services within the designated time frame. By submitting this proposal, proposer certifies that it is not engaged in a boycott of Israel and it will, for the duration of its contract obligations, refrain from a boycott of Israel. Proposer also certifies and agrees that the following information is correct: In preparing its response, the proposer has considered all proposals submitted from qualified, potential subcontractors and suppliers, and has not, in the solicitation, selection, or commercial treatment of any subcontractor or supplier, refused to transact or terminated business activities, or taken other actions intended to limit commercial relations, with a person or entity that is engaging in commercial transactions in Israel or Israeli-controlled territories, with the specific intent to accomplish a boycott or divestment of Israel. The proposer also has not retaliated against any person or other entity for reporting such refusal, termination, or commercially limiting actions. DOTD reserves the right to reject the response of the bidder or proposer if this certification is subsequently determined to be false, and to terminate any contract awarded based on such a false response.	 Signature above shall be the same person listed in Section 9: 4/11/2023 Date:
11.	If a Disadvantaged Business Enterprise (DBE) goal has been set for this advertisement, indicate which firm(s) will be used to meet the DBE goal and each firm(s)' percentage.	Firm(s): — Firm(s)' %: Gray Engineering, LLC — 3.5% Bonton Associates, LLC — 3.5% Total — 7% *Additionally, we have one additional firm on our team with additional designations including:* • *Franklin Associates, LLC (MBE – through the Southern Region Minority Supplier Development Council)*

Section 12

Past Performance Evaluation Discipline Table

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

metric

12. **Past Performance Evaluation Discipline Table:**

As indicated in the advertisement, insert the completed table here. The percentages for the prime and sub-consultants must total 100% for **each past performance evaluation discipline**, as well as the overall total percent of the contract.

The **only** past performance evaluation disciplines to be used are: Road, Bridge, Traffic, CE&I/OV, Geotech, Survey, Environmental, Data Collection, Planning, Right-of-Way, CPM, ITS, Appraiser and Other (please specify).

Sub-consultants are allowed to be used for this proposal. Fill in the table by identifying only those evaluation disciplines consistent with the approach and methodology proposed in Section 18 of the DOTD Form 24-102*, the name of each firm that is part of the proposal, and the percentage of work in each past performance evaluation discipline to be performed by that firm. The percentage estimated for each evaluation discipline is for evaluation purposes only and will not control the actual performance or payment of the work. The percentages for the prime and sub-consultants must total 100% for each past performance evaluation discipline, as well as the overall total percent of the contract. (Add rows and columns as needed)

Past Performance Evaluation Discipline(s)	% of Overall Contract	Metric Engineering, Inc.	Intelligent Transportation Systems, LLC	Grey Engineering, LLC (DBE)	Bonton Associates, LLC (DBE)	Franklin Associates, LLC	Each Discipline must total to 100%
ITS	65%	75%	21%	2%	2%	0%	**100%**
Planning (Program Management)	30%	70%	20%	0%	0%	10%	**100%**
Road	5%	10%	10%	40%	40%	0%	**100%**
Identify the percentage of work for the **overall contract** to be performed by the prime consultant and each sub-consultant.							
Percent of Contract	**100%**	70%	20%	3.5%	3.5%	3%	**100%**

Section 13

Firm Size

13. **Firm Size:**

For all firms that are part of this team, indicate the approximate number of personnel to be committed to this contract, by DOTD Job Classification and the total number of personnel within the firm that could provide support, if needed. If a specialized job classification is required and not included on the DOTD job classification list, specify "Other (please specify)" and include the classification title inside the parentheses.

The DOTD Job Classification(s) to be used can be found at the following link:
http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/CCS/Job_Qualification/Job%20Classifications%20with%20Descriptions.pdf

Firm name	DOTD Job Classification	Number of personnel committed to this contract	Total number of personnel available in this DOTD Job Classification (if needed)
Metric Engineering, Inc.	Principal	2	4
	Engineer	2	2
	Engineer Other	4	9
	Project Office Manager	4	5
	Supervisor Other	1	4
	Engineer Intern	2	4
	Senior Technician	2	5
	Technician	2	3
	Other (Grant Writing)	1	N/A
Intelligent Transportation Systems, LLC	Principal	2	3
	Supervisor Engineer	1	1
	Engineer	1	1
	Engineer Intern	0	1
	Technician	0	6
	Other	1	5

Firm name	DOTD Job Classification	Number of personnel committed to this contract	Total number of personnel available in this DOTD Job Classification (if needed)
Grey Engineering, LLC 	Engineer	1	1
Bonton Associates, LLC 	Principal	2	3
	Engineer	2	4
	Engineer Intern	1	9
	Inspector	1	1
Franklin Associates, LLC 	Senior Technician	2	12
	Supervisor – Other	2	4
	Technician	2	4

Section 14

Organizational Chart

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

metric

14: Organizational Chart

metric

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

THE METRIC TEAM

Metric Engineering, Inc. [1]
Intelligent Transportation Systems, LLC [2]
Grey Engineering, LLC [3] (DBE)
Bonton Associates, LLC [4] (DBE)
Franklin Associates, LLC [5] (MBE) *(Southern Region Minority Supplier Development Council Certified)*

State of Louisiana Professional Engineer ✪
State of Louisiana Professional Engineer – *Comity Licensure Pending Approval from LAPELS* ✪
Meeting TERP Requirement ◆
Workzone Training ❍

PRINCIPAL-IN-CHARGE

Douglas Cauley, PE [1] ✪

CONTRACT/PROJECT MANAGER

Dale W. Cody, PE, PTOE [1] ✪◆

TECHNICAL ADVISORS AND QA/QC MANAGER

Craig Carnes [1] – Maintenance & Operations
Rolando Ramirez, PE [1] - Planning/Design
Charles B. Stratton III [1] – Construction
Stefan Escanes, PE, PTOE [1] - Safety

TASK ORDER MANAGERS

Jessica Knox, PE, PTOE [1] ✪◆
Chris Dew, PE, PTOE [1] ✪

PROJECT MANAGEMENT AND PROGRAM ASSISTANCE

Dale W. Cody, PE, PTOE [1] ✪◆
Kimberly McDaniel, PE, PTOE, PTP [2] ✪◆
April Renard, PE, PTOE, RSP2I [3] ✪◆

COORDINATION MEETING & PROJECT REPORTING

Jessica Knox, PE, PTOE [1] ✪◆
Chris Dew, PE, PTOE [1] ✪

CAPABILITY MATURITY MODEL (CMM) ASSESSMENTS

Business Practices/Systems & Technology/Performance Measures
Jessica Knox, PE, PTOE [1] ✪◆
Chris Dew, PE, PTOE [1] ✪
Renata Leach, PE [1]
Edward Grant IV [1]
Penny Kamish [1]
Demetrius Lewis [1]
Joshua Tibbs, EI [1]
Justin Woods [1]
Jovanny Varela [1]
Culture/Organization & Work Force/Collaboration
Kimberly McDaniel, PE, PTOE, PTP [2] ✪◆
Erik Smith, PE [2] ✪❍
April Renard, PE, PTOE, RSP2I [3] ✪◆
LaDarien Beene, PE, PTOE [4] ✪◆❍

STRATEGIC PLAN DEVELOPMENT

Planning/Design
Jessica Knox, PE, PTOE [1] ✪◆
Renata Leach, PE, EE [1]
Chris Dew, PE, PTOE [1] ✪
Taylor Rouse, EI [1]
John Pacheco [1]
Jovanny Varela [1]
Marcus Bonton, PE [4] ✪◆❍
Safety
Chris Dew, PE, PTOE [1] ✪
Josh Reichert, PE [1]
Joshua Tibbs, EI [1]
April Renard, PE, PTOE, RSP2I [3] ✪◆
LaDarien Beene, PE, PTOE [4] ✪◆❍
Maintenance
Demetrius Lewis [1]
Kevin Boston [1]
Justin Woods [1]
Bechise Dyl [1]
Erik Smith, PE [2] ✪❍
Clarke Chauvin, PE, PTOE, PMP [2] ✪◆❍
Operations
Penny Kamish [1]
Edward Grant IV [1]
Kimberly McDaniel, PE, PTOE, PTP [2] ✪◆
Christopher Dodt [2] ✪❍
Construction
Brent Dustin, PE [1]
Mohammad Akber, PE [1]
Clarke Chauvin, PE, PTOE, PMP [2] ✪◆❍

TSMO POLICY DEVELOPMENT AND UPDATES

Jessica Knox, PE, PTOE [1] ✪◆
Renata Leach, PE [1]
Chris Dew, PE, PTOE [1] ✪
Jonathan Katz, PE [1]
Penny Kamish [1]
Brent Dustin, PE [1]
Joshua Tibbs, EI [1]
Justin Woods [1]
Jovanny Varela [1]
Kimberly McDaniel, PE, PTOE, PTP [2] ✪◆
Jonathan Fox, PE, PTOE, PMP [2] ✪◆❍
April Renard, PE, PTOE, RSP2I [3] ✪◆

TSMO STRATEGY AND SOLUTIONS PROJECTS

Jessica Knox, PE, PTOE [1] ✪◆
Chris Dew, PE, PTOE [1] ✪
Renata Leach, PE [1]
Josh Reichert, PE [1]
Jessica Bloomfield, PE [1]
Demetrius Lewis [1]
Taylor Rouse, EI [1]
Justin Woods [1]
Jovanny Varela [1]
Kimberly McDaniel, PE, PTOE, PTP [2] ✪◆
Jonathan Fox, PE, PTOE, PMP [2] ✪◆❍
Erik Smith, PE [2] ✪❍
April Renard, PE, PTOE, RSP2I [3] ✪◆
Marcus Bonton, PE [4] ✪◆❍

FUNDING AND BENEFIT-COST ANALYSIS

Jessica Knox, PE, PTOE [1] ✪◆
Renata Leach, PE [1]
Chris Dew, PE, PTOE [1] ✪
Demetrius Lewis [1]
Joshua Tibbs, EI [1]
Justin Woods [1]
John Pacheco [1]
Jonathan Fox, PE, PTOE, PMP [2] ✪◆❍
Marcus Bonton, PE [4] ✪◆❍
LaDarien Beene, PE, PTOE [4] ✪◆❍

GRANT APPLICATION WRITING AND SUPPORT

Juliann Bertone [1]

ENGAGEMENT, OUTREACH AND STAKEHOLDER TRAINING

Stakeholder Coordination
Jessica Knox, PE, PTOE [1] ✪◆
Taylor Rouse, EI [1]
Kimberly McDaniel, PE, PTOE, PTP [2] ✪◆
April Renard, PE, PTOE, RSP2I [3] ✪◆
Outreach
James Taylor, AICP [5]
Johnathan Hill [5]
Training
Jessica Knox, PE, PTOE [1] ✪◆
Demetrius Lewis [1]
Kimberly McDaniel, PE, PTOE, PTP [2] ✪◆

Section 15

Minimum Personnel Requirements

15. Minimum Personnel Requirements:

MPR No. Do not insert wording from ad	Personnel being used to meet the MPR *(Individual(s) may not satisfy more than one MPR unless specifically allowed by Attachment B of the advertisement)*	Firm employed by	Type of license and discipline meeting MPR/ certification & number (Ex: PE # - Civil)	State of license	License / certification expiration date
1	Douglas Cauley, PE *(47 years' experience)*	metric	PE # 34423 - Civil	LA	09/30/2023
2	Dale W. Cody, PE, PTOE ✪ *(28 years' experience)*	metric	PE # Pending – Civil FL PE # 53995 - Civil	LA✪/FL	02/28/2025
	Jessica Knox, PE, PTOE *(13 years' experience)*	metric	PE #47713 - Civil	LA	09/30/2023
3	Dale W. Cody, PE, PTOE ✪ *(28 years' experience)*	metric	PE # Pending – Civil FL PE # 53995 - Civil	LA✪/FL	02/28/2025
	Jessica Knox, PE, PTOE *(13 years' experience)*	metric	PE #47713 - Civil	LA	09/30/2023
4	Stefan Escanes, PE, PTOE *(14 years' experience)*	metric	PE # 80578 – Civil PTOE # 4502 - Traffic	FL/US	02/28/2025 03/26/2026

✪ *State of Louisiana Professional Engineer – Comity Licensure Pending Approval from LAPELS*

MPR No. Do not insert wording from ad	Personnel being used to meet the MPR *(Individual(s) may not satisfy more than one MPR unless specifically allowed by Attachment B of the advertisement)*	Firm employed by	Type of license and discipline meeting MPR/ certification & number (Ex: PE # - Civil)	State of license	License / certification expiration date
5	Jessica Knox, PE, PTOE *(13 years' experience)*	metric	PE #47713 – Civil	LA	09/30/2023
	Christopher Dew, PE, PTOE *(13 years' experience)*	metric	PE # 47612 – Civil PTOE # 4310 - Traffic	LA US	09/30/2023 07/2024
6	Renata Leach, PE, EE *(16 years' experience)*	metric	PE # 78401 – Civil	FL	02/28/2025
7	Demetrius Lewis *(19 years' experience)*	metric	N/A	N/A	N/A
8	Demetrius Lewis *(19 years' experience)*	metric	N/A	N/A	N/A
9	Brent Dustin, PE *(12 years' experience)*	metric	PE # 81404 - Civil	FL	02/28/2025
	Jonathan Fox, PE, PTOE, PMP *(21 years' experience)*	ITS Intelligent Transportation Systems	PE # 33277 - Civil	LA	09/30/2023

✪ *State of Louisiana Professional Engineer – Comity Licensure Pending Approval from LAPELS*

Section 16

Staff Experience

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

metric

16. **Staff Experience:**

Firm employed by	Intelligent Transportation Systems LLC (ITS LLC)		
Name	 Christopher Dodt	Years of relevant experience with this employer	0.25
Title	Project Manager	Years of relevant experience with other employer(s)	20
Degree(s) / Years / Specialization		N/A – See below for listing of certifications	
Active registration number / state / expiration date		N/A – See below for listing of certifications	
Year registered	N/A	Discipline	N/A

Contract role(s) / brief description of responsibilities

Contract Role(s): Strategic Plan Development

Chris has over ten years of experience with Transportation Management Systems and Operations (TSMO) components, namely with the management and operations of Traffic Management Centers (TMCs). Over those ten years of working in TMC Operations, Chris was responsible for the full day-to-day operations of the centers including coordination with municipalities, law enforcement, EMS, fire, and various LADOTD sections and districts. Chris has achieved a variety of specialty certifications related to TSMO, including:

- TSMO Planning and Implementation (Center for Advanced Transportation Technology; School of Engineering: University of Maryland, 2023)
- CMM: Assessing Agency Capabilities (Center for Advanced Transportation Technology; School of Engineering: University of Maryland, 2023)
- Managing a Corridor (Center for Advanced Transportation Technology; School of Engineering: University of Maryland, 2023)
- Operations Performance Management (Center for Advanced Transportation Technology; School of Engineering: University of Maryland. 2023)
- Program Planning for TSMO (Center for Advanced Transportation Technology; School of Engineering: University of Maryland)
- FHWA Traffic Incident Management for Managers (2013)
- NIMS Training Certificates (US Dept. of Homeland Security Emergency Management Institute, annually from 2007-2017)

Chris' extensive experience in with LADOTD TMC operations and ITS Maintenance Engineering will give him a keen advantage as part of the TSMO contract team.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
01/23 - present	DOTD ITS Maintenance (44-7102. 44-16811), Statewide Louisiana	Project Manager. Chris serves as a project manager for the ITS ME&I IDIQ Contract. He performs routine maintenance on emergency crossover gates, travel time message system, CCTV camera sites, RVD sites, ramp meter sites as well as DMS sites. His skills include device troubleshooting, communication and network troubleshooting, parts replacement, site cleaning, insect extermination, traffic control setup, as well as coordinating with law enforcement, TMC operations staff, and DOTD. Chris manages the firm's ME&I technicians including scheduling, training, and QA/QC of work.
2017 - 2022	Contract for Traffic Management Center (TMC) Operations, New Orleans	Traffic Management Center Supervisor & Traffic Incident Management Assistant Coordinator. Chris managed a staff of ten TMC Operators between the New Orleans and Houma TMCs in a 24/7 emergency operations call center. He was responsible for ensuring that operator staff properly

	disseminated traffic conditions via email and web applications to the media and the motoring public in accordance with the LADOTD TMC standard operations. Chris reviewed and approved traffic incident plans for large scale planned events and emergency conditions due to weather. He coordinated initial training and ongoing assistance to operator staff to ensure all LADOTD requirements were met. He conducted meetings with individuals from all Traffic Incident Management (TIM) responder disciplines, including law enforcement, fire/rescue, emergency medical service, towing and recovery, emergency management, communications, highway/transportation and dispatch within the Louisiana and neighboring states, regions, and local municipalities.
2014-2017	Contract for Traffic Management Center (TMC) Operations, Statewide	TMC Operations Manager & Traffic Incident Management Coordinator. Chris managed the overall operations of five Traffic Management Centers (TMCs). He produced and updated policies within the standard operating procedures and training documents. He managed a staff of approximately 30 employees statewide in 24/7 emergency call operations centers. Chris provided detailed monthly billings to client and ensured that all client expectations were met or exceeded. He actively researched different avenues to maintain efficient operation of TMCs with a high level of accuracy and accountability. He conduct meetings with individuals from all TIM responder disciplines, including law enforcement, fire/rescue, emergency medical service, towing and recovery, emergency management, communications, highway/transportation and dispatch within the Louisiana and neighboring states, regions, and local municipalities.
2012-2014	Contract for Traffic Management Center (TMC) Operations, New Orleans	Traffic Management Center Supervisor & Traffic Incident Management Assistant Coordinator. Chris managed a staff of ten TMC Operators between the New Orleans and Houma TMCs in a 24/7 emergency operations call center. He was responsible for ensuring that operator staff properly disseminated traffic conditions via email and web applications to the media and the motoring public in accordance with the LADOTD TMC standard operations. Chris reviewed and approved traffic incident plans for large scale planned events and emergency conditions due to weather. He coordinated initial training and ongoing assistance to operator staff to ensure all LADOTD requirements were met. He conducted meetings with individuals from all Traffic Incident Management (TIM) responder disciplines, including law enforcement, fire/rescue, emergency medical service, towing and recovery, emergency management, communications, highway/transportation and dispatch within the Louisiana and neighboring states, regions, and local municipalities.
2009-2012	Contract for Traffic Management Center (TMC) Operations, New Orleans	Traffic Management Center Operator/Senior Operator. Chris actively monitored the roadway for abnormal traffic patterns, vehicle crashes, debris, etc., by use of Closed Circuit Televisions (CCTV). He disseminated traffic conditions via email and web applications to the media and the motoring public. He also produced traffic incident plans for large-scale planned events and emergency conditions due to weather. He provided initial training and ongoing assistance to operator staff to ensure all requirements of the LADOTD were always met.
2000-2009	Law Enforcement for Kenner Police Department, Kenner	Police Officer. Chris performed uniform patrol duties in a community with a population of 75,000 people. He investigated felony and misdemeanor criminal offenses, performed traffic control services, and investigated automobile crashes. In the course of his duties, he obtained statements, conducted surveillance, searched for and collected evidence, wrote detailed investigative and arrest reports, issued summonses, made arrests, and executed search and arrest warrants. Chris conducted DWI enforcement patrols and performed a variety of specialized duties during hurricanes and other disasters or emergencies. He served as the Armorer and Field Training Officer (FTO) for Squad of 18 officers. As a **Correctional Peace Officer**, Chris operated various criminal history databases and video surveillance equipment setups, provide accurate booking and comprehensive care, custody, and control of the inmate population at the municipal jail. As a **Property Management Officer**, he installed specialized video and audio surveillance equipment, installed and repaired emergency equipment on police vehicles, scheduled and performed general and technical maintenance on the police fleet, and conducted inventory of specialized police equipment, uniforms, and weapons. Throughout his time as a law enforcement officer, Chris regularly provided court testimony in City, Parish, and State courts. He was awarded the 2008 Police Officer of the Year by the Kenner Rotary Club and received numerous commendations from the Department for exemplary performance as a police officer and for his investigative skills and achievements.

16. **Staff Experience:**

Firm employed by	Metric Engineering, Inc.			
Name	John Pacheco		Years of relevant experience with this employer	3.5
Title	Systems Integration Specialist		Years of relevant experience with other employer(s)	16
Degree(s) / Years / Specialization			Information Systems & Network Administration Studies, Harrisburg Area Community College (1999 - 2002)	
Active registration number / state / expiration date			N/A	
Year registered	N/A	Discipline	N/A	

Contract role(s) / brief description of responsibilities	Contract Role(s): Strategic Plan Development Mr. Pacheco joined Metric in 2019 as an Integration Specialist within Metric's Technology Group and has since been promoted to a Senior Integration Specialist. Within his role at Metric Engineering, Mr. Pacheco's experience includes troubleshooting, installation, and testing technician as well as being a seasoned ITS technician. His responsibilities include network engineering services, installation, configuration, maintenance, and troubleshooting of ITS devices, troubleshooting and repairing fiber optics; troubleshooting and diagnosing problems with network equipment; preventative maintenance on field equipment; utility designation/location services and underground utility troubleshooting and repair. Mr. Pacheco has more than 16 years of experience troubleshooting, installing, and testing fiber optic cable infrastructure and TS devices.
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
11/19 – 3/22	Senior Systems Integrator: Intelligent Transportation Systems Maintenance Services, FDOT District 5: Metric has teamed with Advanced Cabling Solutions to provide the FDOT District 5 ITS Maintenance Services. Maintenance Services provided consist of, but are not limited to the installation, integration, maintenance and repair of fiber optic cable, ITS devices, traffic signal equipment, inventory, and infrastructure. The team also provides contract administration services consisting of 24x7x365 on call staff, Bi-Weekly Status Reports, Monthly Status Reports, Quarterly Reports, Meeting coordination and minutes, Project management plan, Standard Operating Procedures, Project Estimates, and Maintenance Checklists. Inventory and device management of the FDOT District 5 Maintenance and Inventory Management System (MIMS) and Intelligent Transportation System Facility Management (ITSFM) is provided daily.
11/19 – 11/21	Senior Systems Integrator: I-75 On- and Off-System F.R.A.M.E. (Florida's Regional Advanced Mobility Elements), FDOT District 5: Metric represented the FDOT District 5 ITS as the Systems Manager for the I-75 F.R.A.M.E. project which assists in the advancement of the Multimodal Integrated Corridor Management (MMICM) plan. As the Systems Manager, Metric was responsible for coordinating, testing, and providing documentation on the various technologies to include Roadside Units (RSUs), vehicular On-board Units (OBUs) as well as emulated OBUs (mobile devices and/or tablets) to ensure device interoperability. This project was in line with the USDOT goals and contributed to increased safety, reliability and mobility needs

	using advanced CV technologies. Metric staff is responsible for integrating these devices to multiple signal controllers with the goal of verifying the various CV-related applications: Signal Phase & Timing (SPaT), Automated Traffic Signal Performance Measures (ATSPM), MAP messages, Traveler Information Messages (TIM), Basic Safety Messages (BSM), Emergency Vehicle Protocol (EVP), Transit Signal Priority (TSP) and others related to pedestrian safety. Metric staff conducted extensive testing in both the lab and field environments with equipment provided by several CV vendors. As a result of the testing, reports were generated to guide the System Manager in their decision-making process for the development of the CV specifications and eventual decision-making on the F.R.A.M.E., SR 434, and PedSafe projects and any other future CV deployments. Metric was also responsible for configuring, integrating, and testing all CV devices into the FDOT ITS network.
11/2019 - Present	Senior Systems Integrator: City of Tampa ATMS in Hillsborough County Design-Build (Prime Contractor: Traffic Control Devices, Inc.), FDOT District 7: This citywide ATMS project consists of the upgrade of 402 signals to expand the City's existing ATMS. The project includes design, construction, and installation the next generation traffic management system that connects vehicles and people to the transportation system to optimize traffic flow, and improve mobility, reliability, resiliency, and safety. This includes the design and install a fiber optic communications system, Closed Circuit Television (CCTV) traffic cameras, Microwave Vehicle Detection System (MVDS), Flood Sensors, Dedicated Short Range Communication (DSRC) radios/Roadside Units (RSU), traffic signal controllers and cabinets, Uninterruptible Power Supplies (UPS), traffic signal software, predicative analytics, Software, Servers, and Workstations for TMC staff.
11/19 – 3/20	Senior Systems Integrator: Continuing Professional Traffic Engineering Services (2018 – 2020), Orange County: Metric provided miscellaneous professional traffic engineering services on this task work order (TWO) based continuing services contract to support the safe and efficient movement of all users of the County's transportation network. All work performed under this contract complies with the latest Federal Highway Administration Manual on Uniform Traffic Control Devices (MUTCD) and the most recent edition of the Florida Department of Transportation (FDOT) Design Standards, Traffic Engineering Manual (TEM), Speed Zoning Manual, and Manual on Uniform Traffic Studies (MUTS) guidelines. Tasks included but are not limited to: Data Collection (Turning Movement Counts & Machine Traffic Counts); Traffic Studies (Spot Speed Studies, Intersection Delay Studies, Origin & Destination Studies, Traffic Signal Warrant Studies, School Safety Studies, Pedestrian & Bicycle Safety Studies, Road Safety Audit (RSA) Studies, Miscellaneous Traffic Operational & Safety Studies, Roundabout Evaluations, and more); Traffic Signal, ITS, S&PM and Maintenance of Traffic Design Services; Studies & Design Review Support; Traffic Control/ITS Inventory Support; Minor Intersection Design; Signal/Corridor Retiming; Guardrail Analysis & Design; and, Public Involvement Services.

16. **Staff Experience:**

Firm employed by	Metric Engineering, Inc.			Meets MPR No. 1
Name	Douglas K. Cauley, PE		Years of relevant experience with this employer	37
Title	Principal-In-Charge		Years of relevant experience with other employer(s)	10
Degree(s) / Years / Specialization			B.S.C.E / 1970	
Active registration number / state / expiration date			PE #34423 / LA / 09/30/2023	
Year registered	2023	Discipline	Civil Engineering	

Contract role(s) / brief description of responsibilities	Contract Role(s): Principal-in-Charge Mr. Cauley has over 47 years of experience in the design and construction engineering inspection and management of civil engineering improvement projects. As Executive Vice President for Metric Engineering, he manages the North Florida office and has the overall charge of Metric's Construction Engineering and Inspection (CEI) operations throughout Florida *as well as it the Principal-in-Charge for the IDIQ Contract for Debris Monitoring Statewide contract 4400023722*. As a member of the Board of Directors, Mr. Cauley participates in developing policies and overall program direction for Metric Engineering. Prior to joining Metric Engineering in 1985, Mr. Cauley served the Florida Department of Transportation in District Three for 15 years. He served as District Three Construction Engineer for seven years where he managed the construction activities and was responsible for a staff of 170 employees. Prior to that, he served as Assistant District Drainage Engineer. Mr. Cauley has served as Principal-in-Charge, Senior Project Engineer, Project Manager and Resident Engineer on various projects.
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time years of experience specified in the applicable MPR(s).
08/11 – Present	Principal-In-Charge: IDIQ Contract for Debris Monitoring Stateside (Contract No 4400023722, LADOTD: MCL has held this contract for 10 years, having received multiple renewals and activations following numerous hurricane and flood events. Under this pre-positioned contract, Metric provides monitoring and oversight of debris removal operations in accordance with FEMA Category A requirements and is responsible for vendor management, data management, reporting, and overall project compliance over multiple disasters.
08/14 – Present	Principal-In-Charge: Pre-Event Disaster Monitoring / Construction Engineering & Inspection (08/2014-12/2019) & extended (1/2020 – 01/2030), Florida Department of Transportation (FDOT), District 3: Under this pre-position contract, Metric provides debris removal monitoring, vendor management, data validation and reporting in accordance with FEMA/FHWA. Activations under this contract include: Principal-In-Charge: Hurricane Michael (2018): We performed debris monitoring for FDOT District 3 in response to Hurricane Michael, which struck the Florida Panhandle as a high-end category 5 storm event in October of 2018. Principal-In-Charge: Hurricane Hermine (2016): In September of 2016, our staff quickly responded to FDOT District 3 to manage the debris removal caused by Hurricane Hermine. Our staff assisted the District in the initial clearing of debris on the federal

	qualifying and non-federal qualifying roads, as well as the monitoring of the removal of hazardous limbs at the roadsides of these same roads. Principal-In-Charge: Hurricane Ivan (2004): Storm hit September 2004. Metric provided debris monitoring services for all FDOT On, Off, and Interstate Systems in Escambia, Santa Rosa, Okaloosa, and Walton Counties. We were also selected to provide monitoring and inspection of signals and span wire sign replacement/repair on approximately 280 signalized intersections in Escambia, Santa Rosa, Okaloosa, and Walton Counties. Our contract included the initial "cut and toss" (clearing) operations, as well as all monitoring and documenting of pay quantities for debris C & D, leaning trees, hanging limbs, stump removal and white goods for FHWA, FDOT, and FEMA. This contract also included debris reduction and final disposal. This contract consisted of approximately 2.5 million cubic yards of debris. Principal-In-Charge: Hurricane Dennis (2005): Metric provided debris monitoring services for all FDOT On, Off, and Interstate Systems in Escambia County and the non-Asset Management area (North of Interstate 10) in Santa Rosa County. During this contract, we were responsible for approximately 500 miles of roadway. Metric provided complete project administration, Federal program compliance (FEMA/FHWA), and debris monitoring services for this contract. Our contract included verifying all pay quantities on debris, C & D, leaning trees, hanging limbs, stump removal and white goods for FHWA, FDOT, and FEMA for both counties. Other duties included scheduling contractor crews and assisting with FEMA and FHWA appeals.
12/08 – 03/10	Principal-In-Charge: Hurricane Ike - Texas Department of Transportation Houston District: Served as Principal-In-Charge for the successful completion of projects for the Texas Department of Transportation, Texas General Land Office and the Texas Parks and Wildlife Division, Division of State Parks. Work has included the demolition of structures, removal of pavement, Right of Entry work involving the location of land parcels and removal of debris from over 2,000 acres of private land, beach cleanup, sand screening, removal of debris from submerged lands and the pickup of debris from the Texas State Highway System. Much of the before mentioned work has been around and within the limits of marshlands and special aquatic areas requiring extensive environmental permitting with the USACE and Texas Environmental Permitting agencies, all subjected to intense FEMA review and scrutiny.

16. **Staff Experience:**

Firm employed by	Metric Engineering, Inc.		Meets MPR No. 2, 3
Name	 Dale W. Cody, PE, PTOE	Years of relevant experience with this employer	22
Title	Executive Vice President of Traffic Operations & ITS	Years of relevant experience with other employer(s)	6
Degree(s) / Years / Specialization		M.S. / 1995 / Civil Engineering	
Active registration number / state / expiration date		PE Pending / LA PE #53995 / FL / 02/28/2025 PTOE #1206 / US / 11/19/2024	
Year registered	1999	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities	Contract Role(s): Contract/Project Manager / Project Management and Program Assistance Metric's Executive Vice President of Traffic Operations & ITS, Mr. Cody is a former FDOT District 5 Assistant District Traffic Operations Engineer (ADTOE) with "hands on" experience in the program management, planning, design, integration, construction, inspection, operation, and maintenance of Intelligent Transportation Systems (ITS) and advanced traffic signal systems. Mr. Cody has been with Metric since 2002 and has been integral to the success and growth of Metric's ITS/Traffic division – starting with just three staff members and developing this group into the 160+ professionals Metric offers today. Throughout his career, Mr. Cody has served as the Project Manager or Principal-in-Charge on hundreds of ITS/Traffic projects and has been involved in the development and/or modification of ITS and signal specifications, development of Technical Special Provisions and Modified Special Provisions. He is an advocate for Transportation System Management & Operations (TSM&O) and Integrated Corridor Management (ICM), using advanced technologies to help solve transportation issues with an emphasis on Operations & Maintenance (O&M) as well as Performance Measurement reporting. Through this work, he remains an integral part of the planning, designing, and preparation of emerging Connected Vehicles (CV) technologies throughout the state. In addition, he regularly presents to the public, clients, organizations, and at industry events on the advancement of ITS and Technology (with the ultimate goal of Connected and Autonomous Vehicle capabilities) within the transportation industry. Lastly, Mr. Cody presents to colleges and universities with the goal of inspiring the next generation of Transportation Engineers.		
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).		
11/21 - Present	Project Manager: Districtwide TSM&O: ITS & ATMS Consultant, FDOT District 3: This is a Task Work Order (TWO) contract to provide a diversified range of services, including technical and administrative tasks for the Intelligent Transportation System (ITS) and Advanced Traffic Management System (ATMS) programs in District Three. Services are anticipated in all areas of ITS and ATMS, including, but not limited to study, planning, architecture, design, integration, diagnostics, troubleshooting, management, review, evaluation, inspection, engineering, as well as participation in the District's Traffic Incident Management		

	(TIM) Team activities. D3's objective is to provide multilevel priority on-site response to ATMS/traffic signal phasing, timing, coordination, and malfunction issues highlighted by concerned citizens, public officials, and law enforcement personnel.
05/21 – Present	Transportation System Management & Operation (TSM&O) Engineering Analysis and Minor Design – Continuing (2021 – 2026), FDOT District 7: Metric was awarded this contract to provide a range of engineering, planning and technical services to establish and support the Transportation System Management and Operations (TSM&O) program within FDOT District 7. The objective of this contract is to maximize efficiency of transportation systems by focusing on mobility outcomes, such as travel time reliability. There will be a performance driven approach for solving arterial congestion and traffic problems in which Intelligent Transportation Systems (ITS) is utilized to locate and correct congestion causes in real-time. Task Work Orders will be assigned by District 7 related to technical support, strategic planning, studies and conceptual plans, deployment of ITS components and public involvement. Specific TWOs include: TSM&O Program Support: Tasks include building and further developing the PEG and P-PEG goals from the TSM&O Strategic Plan and combining efforts between arterials and freeways. Additionally, Metric will support developing a real time data dashboard; developing an economic vitality component for performance measures; evaluating the feasibility of AMP corridor recommendations; and examining all work program projects and develop "goes-with" TSM&O projects based on solutions from the AMP corridor concepts and solutions. Other activities that might be included with this effort include reviewing and developing plans and specifications for design or design-build contracts to install TSM&O field devices; reviewing project requirements and hardware configuration analysis; developing proper sequencing, cost estimating, scheduling and coordination of ITS projects; performing system engineering; reviewing the utilization of systems devices hardware and software; and coordinating and assisting the TSM&O/ITS Program Office in the developing a system test and acceptance procedure that is part of the SEMP.
09/17 - Present	Project Manager: Continuing Services Contract (CSC) for Integrated Corridor Management (ICM) - Freeway/Arterial – Operations (2017 – 2021) (2021 – 2026), FDOT District 5: The FDOT ICM project seeks to improve overall operations and mobility in the Central Florida area; specifically, through the operation and management of the Regional Traffic Management Center (RTMC) and associated programs on both the freeway and arterial systems. Metric functions as an extension of the Department's resources, providing professional services for a wide range of engineering, technical, management and administrative services to assist with numerous TSM&O projects within the work program. General work elements include RTMC staffing and operations for both freeways and arterials, project management, integration, TIM/first responder coordination, and public information assistance. The current ICM footprint covers nine Freeways and 12 Arterials within Counties/Cities with 452 traffic signals in six jurisdictions (City of Maitland, City of Orlando, City of Winter Park, Seminole County, Orange County, and Osceola County). TSM&O strategies are be utilized and synthesized by our RTMC staff as they integrate the operations of freeway and arterials to improve the travel time reliability of existing transportation network (arterials and freeways). *Metric has held this contract for two consecutive terms including (2017 – 2021) (2021 – 2026)!*
06/15 – 08/16	Consulting Engineering Services - ITS Master Plan, FDOT District 5: Professional services for developing an overarching ITS Master Plan for the region, creating a consensus on what items are to be integrated and what standards needs to be met (security, maintenance, staffing, etc.). This includes an assessment of what is currently in place, what is planned, and where there is vehicular delay. The Plan also covers high level goals the region should be working towards and the types of investment that could work toward these goals, as well as data management and connected vehicle roles and responsibilities.

16. **Staff Experience:**

Firm employed by	Metric Engineering, Inc.			
Name	Craig Carnes		Years of relevant experience with this employer	17
Title	Vice President of ITS Operations		Years of relevant experience with other employer(s)	4
Degree(s) / Years / Specialization			B.S. / 2000 / Electrical Engineering	
Active registration number / state / expiration date			N/A	
Year registered	N/A	Discipline	Civil Engineering	

Contract role(s) / brief description of responsibilities	Contract Role(s): Technical Advisors and QA/QC Manager (Maintenance & Operations) Mr. Carnes has over 21 years of ITS Construction, Maintenance and Project Management experience, and plays a major role with the FDOT District 2, FDOT District 5 and Puerto Rico Highway Transportation Highway Authority (PRHTA) TIM programs. Formerly, he served as an ITS Construction Project Manager for Florida's Turnpike Enterprise, where his responsibilities included Construction Engineering & Inspection (CEI) oversight, ensuring adherence to contractual and Department rules/regulations, integration of all ITS equipment and devices, review of final project testing, and project closeout. He began with Metric in 2006 where he helped open and run Metric's Jacksonville office and where he now utilizes his extensive District 2 experience to handle local coordination for North Florida projects providing ITS Design, TMC Operations, Traffic Engineering Studies, and Traffic Operations Design services. He currently serves as Vice President of ITS Operations overseeing Metric's Transportation Management Center (TMC) Operations, Technology Services, and ITS CEI service lines.
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
11/21 - Present	Districtwide TSM&O: ITS & ATMS Consultant, (2021 – 2026), FDOT District 3: Metric provides professional engineering services for Intelligent Transportation System (ITS) and Advanced Traffic Management System (ATMS) services on a Task Work Order (TWO) basis for District 3's ITS/ATMS programs. These TWO are focused on ITS/ATMS/CAV, planning, research, studies, and design support; project management; integration, operations and maintenance support; communication and network support services; and participation in D3's Traffic Incident Management (TIM) Team activities. District 3's objective is to provide multilevel priority on-site response to ATMS/traffic signal phasing, timing, coordination, and malfunction issues highlighted by concerned citizens, public officials, and law enforcement personnel. *Metric has held this contract for two consecutive terms including (2016-2021) (2021-2026)!*
05/21 – Present	Transportation System Management & Operation (TSM&O) Engineering Analysis and Minor Design – Continuing (2021 – 2026), FDOT District 7: Metric was awarded this contract to provide a range of engineering, planning and technical services to establish and support the Transportation System Management and Operations (TSM&O) program within FDOT District 7. The objective of this contract is to maximize efficiency of transportation systems by focusing on mobility outcomes, such as travel time reliability. There will be a performance driven approach for solving arterial congestion and traffic problems in which Intelligent Transportation Systems (ITS) is utilized to locate and correct congestion causes in real-time. Task Work Orders will be assigned

	by District 7 related to technical support, strategic planning, studies and conceptual plans, deployment of ITS components and public involvement. Specific TWOs include: TSM&O Program Support: Tasks include building and further developing the PEG and P-PEG goals from the TSM&O Strategic Plan and combining efforts between arterials and freeways. Additionally, Metric will support developing a real time data dashboard; developing an economic vitality component for performance measures; evaluating the feasibility of AMP corridor recommendations; and examining all work program projects and develop "goes-with" TSM&O projects based on solutions from the AMP corridor concepts and solutions. Other activities that might be included with this effort include reviewing and developing plans and specifications for design or design-build contracts to install TSM&O field devices; reviewing project requirements and hardware configuration analysis; developing proper sequencing, cost estimating, scheduling and coordination of ITS projects; performing system engineering; reviewing the utilization of systems devices hardware and software; and coordinating and assisting the TSM&O/ITS Program Office in the developing a system test and acceptance procedure that is part of the SEMP.
12/16 - Present	**Systemwide Construction Engineering and Inspection (CEI) Services for Intelligent Transportation Systems (ITS), Lighting and Tolling Projects (2016 – 2020) & (2020 – 2023), Central Florida Expressway Authority:** Metric is providing support personnel to perform CEI services on an as needed, per project basis, for various ITS construction projects in Orange County, Florida. Metric oversees full consultant construction inspection staff, prepares engineering estimates for extra work, processes contractor's invoices for completed work items, conducts progress meetings, documents as built conditions in final "as-built" plans, interprets contract documents and enforces applicable construction requirements, and reviews construction claims for entitlement. Metric staff is also responsible for the development of CFX's ITS Reference and Training manual which will be utilized to provide training for all of CFX's consultant CEIs. Metric has worked on approximately 16 task work orders under this current contract. Metric has held this contract for two consecutive terms including (2016 – 2020) (2020 – 2023)! Specific TWOs include: CFX (408-628B) SR 408 Guide Sign and Lighting Replacements: West Colonial Drive (SR 50) to Ingenuity Drive: This project includes all labor, materials, equipment, and incidentals necessary for SR 408 Guide Sign and Lighting Replacements from West Colonial Drive (SR 50) to Ingenuity Drive. This project also includes sign structure painting and relocation of Arterial Dynamic Message System (ATMS). CFX (599-545A) Single Line Dynamic Message Sign (DMS) Upgrades: This project consists of the construction of the Single Line DMS Upgrades providing all labor, materials, equipment, and incidentals necessary to install systemwide upgrades of single line DMS's. With the signs being located above the express tolling lanes at the Authority's mainline toll plazas, construction also includes the installation of ITS cabinet enclosure upgrades and ITS field communication equipment at various toll plaza locations. CFX (408-422) Hiawassee Photovoltaic Design/Build Services: This project consists of design and construction of two elevated photovoltaic farms (Hiawassee Data Center and Hiawassee Mainline Toll Plaza). This project includes performing all investigations and coordination necessary to produce final signed and sealed plans for the photovoltaic array, drainage, mounting and rack structures, electrical distribution system, utility interconnection, necessary permitting, and traffic control.

16. **Staff Experience:**

Firm employed by	Metric Engineering, Inc.			
Name	Rolando Ramirez, PE		Years of relevant experience with this employer	18
Title	Vice President of Traffic Operations & ITS Production		Years of relevant experience with other employer(s)	6
Degree(s) / Years / Specialization			B.S. / 1997 / Civil Engineering	
Active registration number / state / expiration date			PE / Florida / 2/28/2023	
Year registered	2004	Discipline	Civil Engineering	
Contract role(s) / brief description of responsibilities	Contract Role(s): Technical Advisors and QA/QC Manager (Planning/Design) Mr. Rolando Ramirez, PE has been with Metric since 2004. With 24 years of experience, Mr. Ramirez is the Vice President of Traffic Operations and Intelligent Transportation Systems (ITS) Production and oversees a staff of 40 professionals. He has served as an ITS/ Transportation Systems Management & Operations (TSM&O) Project Manager, leading over 80 ITS design and planning projects. His experience includes planning, studying, and designing of traffic operations, ITS, TSM&O, and advanced traffic signal systems projects. Additionally, he has experience designing ITS infrastructure such as Roadside Units (RSU) and Onboard Units (OBU) for emerging technologies such as Automated Traffic Signal Performance Measures (ATSPM) and Connected Vehicles (CV).			
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).			
11/21 - Present	Districtwide TSM&O: ITS & ATMS Consultant Contract Terms: (2016 – 2021) & (2021 – 2026), FDOT District 3: Metric provides professional engineering services for Intelligent Transportation System (ITS) and Advanced Traffic Management System (ATMS) services on a Task Work Order (TWO) basis for District 3's ITS/ATMS programs. These TWO are focused on ITS/ATMS/CAV, planning, research, studies, and design support; project management; integration, operations and maintenance support; communication and network support services; and participation in D3's Traffic Incident Management (TIM) Team activities. District 3's objective is to provide multilevel priority on-site response to ATMS/traffic signal phasing, timing, coordination, and malfunction issues highlighted by concerned citizens, public officials, and law enforcement personnel. Metric has held this contract for two consecutive terms including (2016-2021) (2021-2026)! Specific TWOs include: Master Plan Continuing Services and Active Arterial Management (AAM) Support: Metric is performing different tasks related to the initial version of the Master Plan. This includes maintaining coordination with stakeholders and maintaining agencies, performing additional analyses to support the selection of specific Master Plan projects and assisting with the district's goal of implementing AAM on targeted corridors. Districtwide Active Work Zone Management Support: Metric is performing tasks related to the implementation of a districtwide Active Work Zone Management (AWZM) plan and Smart Work Zones (SWZs) within the district. The team will help the district convert existing portable changeable message signs to "smart" signs with equipment upgrades and ensuring compatibility with			

	SunGuide®. Metric will also assist the district in selecting two specific construction projects to implement SWZs on and developing plans and specifications for it.
05/21 – Present	Transportation System Management & Operation (TSM&O) Engineering Analysis and Minor Design – Continuing (2021 – 2026), FDOT District 7: Metric was awarded this contract to provide a range of engineering, planning and technical services to establish and support the Transportation System Management and Operations (TSM&O) program within FDOT District 7. The objective of this contract is to maximize efficiency of transportation systems by focusing on mobility outcomes, such as travel time reliability. There will be a performance driven approach for solving arterial congestion and traffic problems in which Intelligent Transportation Systems (ITS) is utilized to locate and correct congestion causes in real-time. Task Work Orders will be assigned by District 7 related to technical support, strategic planning, studies and conceptual plans, deployment of ITS components and public involvement. Specific TWOs include: TSM&O Program Support: Tasks include building and further developing the PEG and P-PEG goals from the TSM&O Strategic Plan and combining efforts between arterials and freeways. Additionally, Metric will support developing a real time data dashboard; developing an economic vitality component for performance measures; evaluating the feasibility of AMP corridor recommendations; and examining all work program projects and develop "goes-with" TSM&O projects based on solutions from the AMP corridor concepts and solutions. Other activities that might be included with this effort include reviewing and developing plans and specifications for design or design-build contracts to install TSM&O field devices; reviewing project requirements and hardware configuration analysis; developing proper sequencing, cost estimating, scheduling and coordination of ITS projects; performing system engineering; reviewing the utilization of systems devices hardware and software; and coordinating and assisting the TSM&O/ITS Program Office in the developing a system test and acceptance procedure that is part of the SEMP.
09/17 - Present	Project Manager: Continuing Services Contract (CSC) for Integrated Corridor Management (ICM) - Freeway/Arterial – Operations (2017 – 2021) (2021 – 2026), FDOT District 5: The FDOT ICM project seeks to improve overall operations and mobility in the Central Florida area; specifically, through the operation and management of the Regional Traffic Management Center (RTMC) and associated programs on both the freeway and arterial systems. Metric functions as an extension of the Department's resources, providing professional services for a wide range of engineering, technical, management and administrative services to assist with numerous TSM&O projects within the work program. General work elements include RTMC staffing and operations for both freeways and arterials, project management, integration, TIM/first responder coordination, and public information assistance. The current ICM footprint covers nine Freeways and 12 Arterials within Counties/Cities with 452 traffic signals in six jurisdictions (City of Maitland, City of Orlando, City of Winter Park, Seminole County, Orange County, and Osceola County). TSM&O strategies are be utilized and synthesized by our RTMC staff as they integrate the operations of freeway and arterials to improve the travel time reliability of existing transportation network (arterials and freeways). *Metric has held this contract for two consecutive terms including (2017 – 2021) (2021 – 2026)!*

16. **Staff Experience:**

Firm employed by	Metric Engineering, Inc.			
Name	Charles B. Stratton, III		Years of relevant experience with this employer	25
Title	Vice President		Years of relevant experience with other employer(s)	9
Degree(s) / Years / Specialization			High School Diploma	
Active registration number / state / expiration date			N/A	
Year registered	N/A	Discipline	Civil Engineering	

Contract role(s) / brief description of responsibilities	Contract Role(s): Technical Advisors and QA/QC Manager (Construction) Mr. Stratton started with Metric in 1998 and currently serves as Metric's Central Florida Reginal Manager and Vice President overseeing the ITS Construction Engineering and Inspection Group (CEI). Early in his career, he led the construction management and administration of roadway and ITS CEI projects; with more than 20 ITS CEI projects completed Statewide. To date, he has overseen or managed hundreds of millions of dollars in ITS design, integration, inspection, and network efforts. Additionally, Mr. Stratton currently assists with Metric's Traffic Incident Management (TIM) Team facilitation statewide (and in Puerto Rico) between multiple Districtwide (DW) contracts. In recent years, he serves as Metric's Quality Assurance (QA) Manager, overseeing all Production submittals and ensuring deliverables are up to standard, submitted correctly and on-time.
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
05/21 – Present	Transportation System Management & Operation (TSM&O) Engineering Analysis and Minor Design – Continuing (2021 – 2026), FDOT District 7: Metric was awarded this contract to provide a range of engineering, planning and technical services to establish and support the Transportation System Management and Operations (TSM&O) program within FDOT District 7. The objective of this contract is to maximize efficiency of transportation systems by focusing on mobility outcomes, such as travel time reliability. There will be a performance driven approach for solving arterial congestion and traffic problems in which Intelligent Transportation Systems (ITS) is utilized to locate and correct congestion causes in real-time. Task Work Orders will be assigned by District 7 related to technical support, strategic planning, studies and conceptual plans, deployment of ITS components and public involvement. Specific TWOs include: TSM&O Program Support: Tasks include building and further developing the PEG and P-PEG goals from the TSM&O Strategic Plan and combining efforts between arterials and freeways. Additionally, Metric will support developing a real time data dashboard; developing an economic vitality component for performance measures; evaluating the feasibility of AMP corridor recommendations; and examining all work program projects and develop "goes-with" TSM&O projects based on solutions from the AMP corridor concepts and solutions. Other activities that might be included with this effort include reviewing and developing plans and specifications for design or design-build contracts to install TSM&O field devices; reviewing project requirements and hardware configuration analysis; developing proper sequencing, cost estimating, scheduling and coordination of ITS projects; performing system engineering; reviewing the utilization of systems devices

	hardware and software; and coordinating and assisting the TSM&O/ITS Program Office in the developing a system test and acceptance procedure that is part of the SEMP.
09/17 - Present	Project Manager: Continuing Services Contract (CSC) for Integrated Corridor Management (ICM) - Freeway/Arterial – Operations (2017 – 2021) (2021 – 2026), FDOT District 5: The FDOT ICM project seeks to improve overall operations and mobility in the Central Florida area; specifically, through the operation and management of the Regional Traffic Management Center (RTMC) and associated programs on both the freeway and arterial systems. Metric functions as an extension of the Department's resources, providing professional services for a wide range of engineering, technical, management and administrative services to assist with numerous TSM&O projects within the work program. General work elements include RTMC staffing and operations for both freeways and arterials, project management, integration, TIM/first responder coordination, and public information assistance. The current ICM footprint covers nine Freeways and 12 Arterials within Counties/Cities with 452 traffic signals in six jurisdictions (City of Maitland, City of Orlando, City of Winter Park, Seminole County, Orange County, and Osceola County). TSM&O strategies are be utilized and synthesized by our RTMC staff as they integrate the operations of freeway and arterials to improve the travel time reliability of existing transportation network (arterials and freeways). *Metric has held this contract for two consecutive terms including (2017 – 2021) (2021 – 2026)!*
12/16 - Present	Systemwide Construction Engineering and Inspection (CEI) Services for Intelligent Transportation Systems (ITS), Lighting and Tolling Projects (2016 – 2020) & (2020 – 2023), Central Florida Expressway Authority: Metric is providing support personnel to perform CEI services on an as needed, per project basis, for various ITS construction projects in Orange County, Florida. Metric oversees full consultant construction inspection staff, prepares engineering estimates for extra work, processes contractor's invoices for completed work items, conducts progress meetings, documents as built conditions in final "as-built" plans, interprets contract documents and enforces applicable construction requirements, and reviews construction claims for entitlement. Metric staff is also responsible for the development of CFX's ITS Reference and Training manual which will be utilized to provide training for all of CFX's consultant CEIs. Metric has worked on approximately 16 task work orders under this current contract. Metric has held this contract for two consecutive terms including (2016 – 2020) (2020 – 2023)! Specific TWOs include: CFX (408-628B) SR 408 Guide Sign and Lighting Replacements: West Colonial Drive (SR 50) to Ingenuity Drive: This project includes all labor, materials, equipment, and incidentals necessary for SR 408 Guide Sign and Lighting Replacements from West Colonial Drive (SR 50) to Ingenuity Drive. This project also includes sign structure painting and relocation of Arterial Dynamic Message System (ATMS). CFX (599-545A) Single Line Dynamic Message Sign (DMS) Upgrades: This project consists of the construction of the Single Line DMS Upgrades providing all labor, materials, equipment, and incidentals necessary to install systemwide upgrades of single line DMS's. With the signs being located above the express tolling lanes at the Authority's mainline toll plazas, construction also includes the installation of ITS cabinet enclosure upgrades and ITS field communication equipment at various toll plaza locations. CFX (408-422) Hiawassee Photovoltaic Design/Build Services: This project consists of design and construction of two elevated photovoltaic farms (Hiawassee Data Center and Hiawassee Mainline Toll Plaza). This project includes performing all investigations and coordination necessary to produce final signed and sealed plans for the photovoltaic array, drainage, mounting and rack structures, electrical distribution system, utility interconnection, necessary permitting, and traffic control.

16. **Staff Experience:**

Firm employed by	Metric Engineering, Inc.		Meets MPR No. 4
Name	Stefan Escanes, PE, PTOE	Years of relevant experience with this employer	11
Title	South Florida Traffic Division Manager	Years of relevant experience with other employer(s)	3
Degree(s) / Years / Specialization		B.S. / 2010 / Civil Engineering	
Active registration number / state / expiration date		PE #80578 / FL / 2025 PTOE #4502 / US / 03/26/2026	
Year registered	2016	Discipline	Civil Engineer

Contract role(s) / brief description of responsibilities	Contract Role(s): Technical Advisors and QA/QC Manager (Safety) Mr. Escanes currently serves as South Florida Project Manager. His traffic engineering expertise spans from transportation planning to safety/traffic operations studies and signalization/TSM&O implementation. His management experience includes management of task work order based contracts and data intensive large-scale projects through various TSM&O, traffic operations, signalization, transportation planning, and PD&E contracts. He also has experience performing traffic analyses (Synchro, Sidra, Vissim, Vistro, Aimsun & Corsim) and quantitative safety analyses (HSM, ISATe, CRF, etc.) for Safety/Traffic Operations and PD&E Studies. His 14 years of experience also includes a number of FDOT District 6 network analyses for master planning efforts and identification and development of priority lists for numerous efforts (Travel Time Reliability, Bottleneck Locations, TSM&O Corridor Rankings, etc.). Mr. Escanes is also one of the leading transportation engineers at Metric when it comes to performing in-depth traffic modeling and simulation services - including Intersection Control Evaluations. In addition, Mr. Escanes is **IMSA Traffic Signal Technician Level II** certified, and proficient in the use of all of the latest data collection equipment, District Six signal equipment and wireless ITS networks for Smart Work Zone Systems.
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
12/18 – Present	Traffic Safety Engineer: Continuing Services Contract for Safety Studies (2018 – 2023), FDOT District 2: Through this contract, Metric conducts various studies in support of District 2's Traffic Safety Program including, but not limited to, signal warrant analysis, intersection analysis, corridor safety studies, composite studies, high crash location list report reviews/crash location updates, and miscellaneous districtwide safety studies. Recent task work orders include the Safety Study for the Intersection of Post Street SR 228) at Hamilton Street, which consisted of a Study Type II – Intersection Analysis.
10/19 – Present	Project Manager: Districtwide Congestion Management & TSM&O Planning Consultant (2019 – 2024), FDOT District 6: The purpose of this planning study is to provide services to further the District's Congestion Management and TSM&O master planning efforts and implementation of corridor-oriented projects throughout the district. Primary tasks of this contract include project management; developing goals, objectives and measures (GOMs); data collection and analysis; prepare white papers

	on status of automated, connected, electric, and shared (ACES) vehicle technologies; develop a TSM&O strategy matrix which define what problem is being solved (i.e. mobility, safety, reliability, etc.); TSM&O needs assessment which will help map out an Action Plan for prioritization of projects; assist with implementation; and perform support services such as design plan reviews and facilitate meetings with FDOT staff and other stakeholders. Tasks include promoting TSM&O Mainstreaming in Planning to further support the implementation of TSM&O Strategies throughout the District.
08/18 – Present	Deputy Project Manager: Districtwide Traffic Engineering Support Services Consultant (2013 – 2018) (2018 – 2023), FDOT District 6: Perform miscellaneous Maintenance of Traffic (MOT) support services within work zones including, but not limited to (1) providing real time traffic monitoring and traffic data collection (2) implementation of smart technologies and concepts (3) signal timing support (4) reviewing MOT Plans and determining the need of the detailed analysis of MOT impacts (5) analysis of MOT alternatives (6) Traffic simulation and modeling of MOT alternatives (7) Coordination with traffic signal maintaining agencies, FDOT offices, and other public agencies (8) providing the data collection and analysis of traffic prior to the beginning of project construction (9) Miscellaneous activities to support the District traffic operations office such as traffic operations studies, coordination with municipalities and other agencies. Miscellaneous activities include performing traffic operations and safety studies, miscellaneous structural analysis, plans preparation, and assist the traffic operations office in developing initiatives such as the Bottleneck Identification and Prioritization List. Additional tasks under this contract have included review of: PD&E Traffic Analysis Methodology, Interchange Justification Report MLOU, Signalization & Signing & Pavement Marking Plans, Traffic Control Plans, Roadway Plans, PD&E Preliminary Engineering Reports; and Final Field Inspections related to Traffic Control.
08/18 – Present	Lead Traffic Engineer: I-395 / SR 836 / I-95 Signature Bridge Reconstruction Design-Build Project, FDOT District 6: This $802 million Design-Build project which involves three projects that was constructed concurrently by the Archer Western-de Moya (AW- dMG) Joint Venture (JV) to minimize impacts to the public. The three projects include: I-95 Concrete Replacement Project, I-395 Improvements, and SR 836 Improvements. Metric serves as a major design team member for structures, ITS, signals, roadway and drainage elements. In addition, Metric prepared all of the NEPA Reevaluation and Traffic Analysis documents (IMR, SIMR, Work Zone Analysis, etc.). Mr. Escanes' responsibilities included preparation the project's Transportation Management Plan (TMP), deployment of a Smart Work Zone System, and analysis of each Traffic Control Plan (TCP) prior submittal and implementation. This TCP analysis led to many innovative configurations substantially improving safety and mobility through the work zone. Mr. Escanes was also the Engineer of Record for the SR 836 SIMR and I-395 IMR Reevaluations justifying the improvements of the DB Concept compared to the RFP Concept.

16. **Staff Experience:**

Firm employed by	Metric Engineering, Inc.		Meets MPR No. 2, 3, 5
Name	 Jessica Knox, PE, PTOE	Years of relevant experience with this employer	9
Title	Project Engineer / Project Manager	Years of relevant experience with other employer(s)	4
Degree(s) / Years / Specialization		B.S. / 2010 / Civil Engineering M.S. / 2015 / Industrial Engineering (specializing in Engineering Management)	
Active registration number / state / expiration date		PE #47713 / LA / 9/30/2023 PE #80363 / FL / 2/28/2025 PTOE #4353 / US / 11/20/2023	
Year registered	2016	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities	* Contract Role(s): 1, 3, 4, 5, 6, 7, 8, 10 Ms. Knox has served in numerous Traffic Operations, ITS, and TSM&O roles, diversifying her experience within the industry. While in college, she started as an RTMC Operator; monitoring and analyzing real time traffic data, which provides her a unique operations background. She has performed as an in-house consultant for numerous FDOT districts, where she was responsible for plans reviews, assisting with minor ITS design projects constructed through maintenance contracts, reviewing TSM&O policy and procedure documents, and assisting the client with any tasks necessary. She also has experience as an ITS and Traffic Engineer, including the design of freeway and arterial networks, Advanced Traffic Management Systems (ATMS), Network Integration, and Connected Vehicle (CV) Technologies. She is also currently serving as the Deputy Project Manager and Engineer of Record for the I-4 FRAME project, which is one of the largest CV projects in the country and is serving as the Task Leader on the FDOT D7 TSM&O Master Plan. She also serves as an independent QC reviewer for both traffic and ITS design and studies. This diverse experience has provided Ms. Knox with knowledge and understanding of many facets of the Traffic Operations Program.		
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).		
11/21 - Present	Districtwide TSM&O: ITS & ATMS Consultant, (2021 – 2026), FDOT District 3: Metric provides professional engineering services for Intelligent Transportation System (ITS) and Advanced Traffic Management System (ATMS) services on a Task Work Order (TWO) basis for District 3's ITS/ATMS programs.		

** Contract Role(s) Legend: 1. Task Order Managers | 3. Coordination Meeting & Project Reporting | 4. CMM Assessments | 5. Strategic Plan Development | 6. TSMO policy Development & Updates | 7. TSMO Strategy & Solutions Projects | 8. Funding and B/Cost Analysis | 10. Engagement, Outreach & Stakeholder Training*

	These TWO are focused on ITS/ATMS/CAV, planning, research, studies, and design support; project management; integration, operations and maintenance support; communication and network support services; and participation in D3's Traffic Incident Management (TIM) Team activities. District 3's objective is to provide multilevel priority on-site response to ATMS/traffic signal phasing, timing, coordination, and malfunction issues highlighted by concerned citizens, public officials, and law enforcement personnel. *Metric has held this contract for two consecutive terms including (2016-2021) (2021-2026)!*
05/21 – Present	**Transportation System Management & Operation (TSM&O) Engineering Analysis and Minor Design – Continuing (2021 – 2026), FDOT District 7:** Metric was awarded this contract to provide a range of engineering, planning and technical services to establish and support the Transportation System Management and Operations (TSM&O) program within FDOT District 7. The objective of this contract is to maximize efficiency of transportation systems by focusing on mobility outcomes, such as travel time reliability. There will be a performance driven approach for solving arterial congestion and traffic problems in which Intelligent Transportation Systems (ITS) is utilized to locate and correct congestion causes in real-time. Task Work Orders will be assigned by District 7 related to technical support, strategic planning, studies and conceptual plans, deployment of ITS components and public involvement. Specific TWOs include: TSM&O Program Support: Tasks include building and further developing the PEG and P-PEG goals from the TSM&O Strategic Plan and combining efforts between arterials and freeways. Additionally, Metric will support developing a real time data dashboard; developing an economic vitality component for performance measures; evaluating the feasibility of AMP corridor recommendations; and examining all work program projects and develop "goes-with" TSM&O projects based on solutions from the AMP corridor concepts and solutions. Other activities that might be included with this effort include reviewing and developing plans and specifications for design or design-build contracts to install TSM&O field devices; reviewing project requirements and hardware configuration analysis; developing proper sequencing, cost estimating, scheduling and coordination of ITS projects; performing system engineering; reviewing the utilization of systems devices hardware and software; and coordinating and assisting the TSM&O/ITS Program Office in the developing a system test and acceptance procedure that is part of the SEMP.
06/15 – 08/16	**Consulting Engineering Services - ITS Master Plan, FDOT District 5:** Metric developed an overarching ITS Master Plan that consisted of creating the framework for the direction of ITS for the region by outlining a guide from which local governments can create their ITS Master Plans. This plan covered high-level goals that the region is working towards and investments that could work toward these goals, as well as data management and CV roles and responsibilities. Additionally, our staff developed an interactive GIS map showing locations for 3,244 ITS devices located in Brevard County, Central Florida Expressway Authority (CFX) City of Daytona Beach, City of Orlando, City of Palm Coast, FDOT District 5, Florida Turnpike Enterprise (FTE), Marion County, Orange County, Osceola County, Seminole County, Space Coast TPO, and Volusia County. Devices including Bluetooth Readers, CCTV Cameras, Dynamic Messaging Signs (DMS), and Microwave Vehicle Detection Sensors (MVDS).

16. **Staff Experience:**

Firm employed by	Metric Engineering, Inc.		Meets MPR No. 5
Name	 Chris Dew, PE, PTOE	Years of relevant experience with this employer	6
Title	TSM&O Manager	Years of relevant experience with other employer(s)	7
Degree(s) / Years / Specialization		B.S., Civil & Environmental Engineering, Georgia Institute of Technology (2010)	
Active registration number / state / expiration date		PE #47612 / LA / 09/30/2023 PTOE #4310 / US / 07/2024	
Year registered	2023	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities	* Contract Role(s): 1, 3, 4, 5, 6, 7, 8 Mr. Dew has years of multi-faceted traffic operations and ITS experience, including design, operations, analyses, retiming and studies. He is a well-qualified Project Engineer who holds a Professional Engineering license, is IMSA III certified, and has hands-on experience both in the field and in the office. Since joining Metric, he has been working on several Continuing Services Contract and Districtwide contracts. This diverse experience has given him the opportunity to work more in depth with Transit Signal Priority (TSP) and Adaptive Signal Control Technology (ASCT) including integration into ATMS.now and other signal system controllers and software. Prior to joining Metric, Mr. Dew performed traffic signal timing for numerous systems throughout Georgia for the Georgia Department of Transportation (GDOT) as well as other states and for numerous local government agencies. Additionally, Mr. Dew has designed ITS, new traffic signals, and signal improvements/modifications for various intersections throughout Georgia and other states for both state DOT's and local government agencies. He has also performed numerous traffic studies including the analysis of entire corridors, traffic signal warrants, driveway studies, origin/destination, safety studies and studies pertaining to developments of regional impact (DRI).		
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).		
05/21 – Present	Transportation System Management & Operation (TSM&O) Engineering Analysis and Minor Design – Continuing (2021 – 2026), FDOT District 7: Metric was awarded this contract to provide a range of engineering, planning and technical services to establish and support the Transportation System Management and Operations (TSM&O) program within FDOT District 7. The objective of this contract is to maximize efficiency of transportation systems by focusing on mobility outcomes, such as travel time reliability. There will be a performance driven approach for solving arterial congestion and traffic problems in which Intelligent Transportation Systems (ITS) is utilized to locate and correct congestion causes in real-time. Task Work Orders will be assigned		

** Contract Role(s) Legend: 1. Task Order Managers | 3. Coordination Meeting & Project Reporting | 4. CMM Assessments | 5. Strategic Plan Development | 6. TSMO policy Development & Updates | 7. TSMO Strategy & Solutions Projects | 8. Funding and B/Cost Analysis*

	by District 7 related to technical support, strategic planning, studies and conceptual plans, deployment of ITS components and public involvement. Specific TWOs include: TSM&O Program Support: Tasks include building and further developing the PEG and P-PEG goals from the TSM&O Strategic Plan and combining efforts between arterials and freeways. Additionally, Metric will support developing a real time data dashboard; developing an economic vitality component for performance measures; evaluating the feasibility of AMP corridor recommendations; and examining all work program projects and develop "goes-with" TSM&O projects based on solutions from the AMP corridor concepts and solutions. Other activities that might be included with this effort include reviewing and developing plans and specifications for design or design-build contracts to install TSM&O field devices; reviewing project requirements and hardware configuration analysis; developing proper sequencing, cost estimating, scheduling and coordination of ITS projects; performing system engineering; reviewing the utilization of systems devices hardware and software; and coordinating and assisting the TSM&O/ITS Program Office in the developing a system test and acceptance procedure that is part of the SEMP.
09/17 - Present	Project Manager: Continuing Services Contract (CSC) for Integrated Corridor Management (ICM) - Freeway/Arterial – Operations (2017 – 2021) (2021 – 2026), FDOT District 5: The FDOT ICM project seeks to improve overall operations and mobility in the Central Florida area; specifically, through the operation and management of the Regional Traffic Management Center (RTMC) and associated programs on both the freeway and arterial systems. Metric functions as an extension of the Department's resources, providing professional services for a wide range of engineering, technical, management and administrative services to assist with numerous TSM&O projects within the work program. General work elements include RTMC staffing and operations for both freeways and arterials, project management, integration, TIM/first responder coordination, and public information assistance. The current ICM footprint covers nine Freeways and 12 Arterials within Counties/Cities with 452 traffic signals in six jurisdictions (City of Maitland, City of Orlando, City of Winter Park, Seminole County, Orange County, and Osceola County). TSM&O strategies are be utilized and synthesized by our RTMC staff as they integrate the operations of freeway and arterials to improve the travel time reliability of existing transportation network (arterials and freeways). *Metric has held this contract for two consecutive terms including (2017 – 2021) (2021 – 2026)!*
08/21 - Present	Traffic Engineer: Traffic Operations ITS General Consultant Services (2021-2026), FDOT District 1: Metric provides a wide range of professional engineering services specifically to support all facts of the District 1's Traffic Operations Office ITS Program. This is a Task Work Order based contract related to ITS services including studies, planning, design, integration, diagnostic, operations, management, review, evaluation, and engineering services projects as well as facilitating the Traffic Incident Management (TIM) Team activities and TIM initiatives. Metric also supports in the area of Transportation Systems Management and Operations (TSM&O) to interface state systems with local systems, bringing together efforts from the state, Metropolitan Planning Organizations (MPOs) and local units of governments (i.e. Integrated Corridor Management (ICM), etc.). Metric will continue providing innovative resources to propel ITS, Connected Automated Vehicles, and Automated Traffic Signal Performance Measures within the District. *Metric has held this contract for four consecutive terms including (2009-2014) (2013-2018) (2017-2022) and (2021-2026)!*

16. **Staff Experience:**

Firm employed by	Metric Engineering, Inc.			Meets MPR No. 6
Name	Renata Leach, PE		Years of relevant experience with this employer	16
Title	ITS Production Manager		Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization			B.S. / 2006 / Electrical Engineering	
Active registration number / state / expiration date			PE #78401 / Florida / 2/28/2023	
Year Registered	2015	Discipline	Civil Engineering	
Contract role(s) / brief description of responsibilities	* Contract Role(s): 3, 4, 5, 6, 7 Mrs. Leach joined Metric in 2006 after completing her Electrical Engineering degree. She is Metric's ITS Production Manager overseeing all ITS deliverables. She serves as an ITS Project Manager, ITS Project Engineer and Engineer of Record, and has worked on a multitude of influential traffic operations and ITS projects throughout Florida and the Southeastern U.S.			
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).			
11/21 - Present	Project Manager: Districtwide TSM&O: ITS & ATMS Consultant, FDOT District 3: This is a Task Work Order (TWO) contract to provide a diversified range of services, including technical and administrative tasks for the Intelligent Transportation System (ITS) and Advanced Traffic Management System (ATMS) programs in District Three. Services are anticipated in all areas of ITS and ATMS, including, but not limited to study, planning, architecture, design, integration, diagnostics, troubleshooting, management, review, evaluation, inspection, engineering, as well as participation in the District's Traffic Incident Management (TIM) Team activities. D3's objective is to provide multilevel priority on-site response to ATMS/traffic signal phasing, timing, coordination, and malfunction issues highlighted by concerned citizens, public officials, and law enforcement personnel.			
05/21 – Present	Transportation System Management & Operation (TSM&O) Engineering Analysis and Minor Design – Continuing (2021 – 2026), FDOT District 7: Metric was awarded this contract to provide a range of engineering, planning and technical services to establish and support the Transportation System Management and Operations (TSM&O) program within FDOT District 7. The objective of this contract is to maximize efficiency of transportation systems by focusing on mobility outcomes, such as travel time reliability. There will be a performance driven approach for solving arterial congestion and traffic problems in which Intelligent Transportation Systems (ITS) is utilized to locate and correct congestion causes in real-time. Task Work Orders will be assigned by District 7 related to technical support, strategic planning, studies and conceptual plans, deployment of ITS components and public involvement. Specific TWOs include:			

** Contract Role(s) Legend: 3. Coordination Meeting & Project Reporting I 4. CMM Assessments I 5. Strategic Plan Development I 6. TSMO policy Development & Updates I 7. TSMO Strategy & Solutions Project*

	TSM&O Program Support: Tasks include building and further developing the PEG and P-PEG goals from the TSM&O Strategic Plan and combining efforts between arterials and freeways. Additionally, Metric will support developing a real time data dashboard; developing an economic vitality component for performance measures; evaluating the feasibility of AMP corridor recommendations; and examining all work program projects and develop "goes-with" TSM&O projects based on solutions from the AMP corridor concepts and solutions. Other activities that might be included with this effort include reviewing and developing plans and specifications for design or design-build contracts to install TSM&O field devices; reviewing project requirements and hardware configuration analysis; developing proper sequencing, cost estimating, scheduling and coordination of ITS projects; performing system engineering; reviewing the utilization of systems devices hardware and software; and coordinating and assisting the TSM&O/ITS Program Office in the developing a system test and acceptance procedure that is part of the SEMP.
06/15 – 08/16	ITS Master Plan, FDOT District 5: Metric developed an overarching ITS Master Plan that consisted of creating the framework for the direction of ITS for the region by outlining a guide from which local governments can create their ITS Master Plans. This plan covered high-level goals that the region is working towards and investments that could work toward these goals, as well as data management and CV roles and responsibilities. Additionally, our staff developed an interactive GIS map showing locations for 3,244 ITS devices located in Brevard County, Central Florida Expressway Authority (CFX) City of Daytona Beach, City of Orlando, City of Palm Coast, FDOT District 5, Florida Turnpike Enterprise (FTE), Marion County, Orange County, Osceola County, Seminole County, Space Coast TPO, and Volusia County. Devices including Bluetooth Readers, CCTV Cameras, Dynamic Messaging Signs (DMS), and Microwave Vehicle Detection Sensors (MVDS).
08/21 – Present	Project Engineer: Traffic Operations ITS General Consultant Services (2021-2026), FDOT District 1: Metric provides a wide range of professional engineering services specifically to support all facts of the District 1's Traffic Operations Office ITS Program. This is a Task Work Order based contract related to ITS services including studies, planning, design, integration, diagnostic, operations, management, review, evaluation, and engineering services projects as well as facilitating the Traffic Incident Management (TIM) Team activities and TIM initiatives. Metric also supports in the area of Transportation Systems Management and Operations (TSM&O) to interface state systems with local systems, bringing together efforts from the state, Metropolitan Planning Organizations (MPOs) and local units of governments (i.e. Integrated Corridor Management (ICM), etc.). Metric will continue providing innovative resources to propel ITS, Connected Automated Vehicles, and Automated Traffic Signal Performance Measures within the District. *Metric has held this contract for four consecutive terms including (2009-2014) (2013-2018) (2017-2022) and (2021-2026)!*

16. **Staff Experience:**

Firm employed by	Metric Engineering, Inc.			
Name	Edward Grant, IV		Years of relevant experience with this employer	7
Title	Performance Measures		Years of relevant experience with other employer(s)	15
Degree(s) / Years / Specialization			B.S. / 2003 / Business Administration	
Active registration number / state / expiration date			N/A	
Year registered	N/A	Discipline	Civil Engineering	
Contract role(s) / brief description of responsibilities	* Contract Role(s): 4, 5 Mr. Grant brings over 22 years of transportation, operations, management, technology, and CEI experience gained from several positions held in his career. As a former ITS Construction Coordinator, he has experience not only reviewing ITS, signalization, and lighting plans but also has the field experience to provide proper analysis and feedback to ensure contractors follow FDOT and CFX specifications. Mr. Grant has also managed and overseen the delivery of multiple state and federally funded projects within his career. He has helped integrate, inspect, troubleshoot, and test ITS equipment such as CCTV, DMS, MVDS, Bluetooth, and DSRC systems in the field as well as software such as SunGuide and MIMS at the FDOT District 5 RTMC. In his tenure as an ITS Project Manager, he had the opportunity to work with civil engineering disciplines within the Department as well as work with all the partner local government agencies. Before leaving the Department, Mr. Grant was the District 5 Operations Manager overseeing the RTMC, Road Ranger, FHP, and Traffic Incident Management Contracts for FDOT. Mr. Grant is currently the RTMC Manager leading an ICM team that operates, manages and maintains the interrupted and noninterrupted flow facilities within District 5.			
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).			
09/17 - Present	RTMC Manager: Continuing Services Contract (CSC) for Integrated Corridor Management (ICM) - Freeway/Arterial – Operations (2017 – 2021) (2021 – 2026), FDOT District 5: The FDOT ICM project seeks to improve overall operations and mobility in the Central Florida area; specifically, through the operation and management of the Regional Traffic Management Center (RTMC) and associated programs on both the freeway and arterial systems. Metric functions as an extension of the Department's resources, providing professional services for a wide range of engineering, technical, management and administrative services to assist with numerous TSM&O projects within the work program. General work elements include RTMC staffing and operations for both freeways and arterials, project management, integration, TIM/first responder coordination, and public information assistance. The current ICM footprint covers nine Freeways and 12 Arterials within Counties/Cities with 452 traffic signals in six jurisdictions (City of Maitland, City of Orlando, City of Winter Park, Seminole County, Orange County, and Osceola County). TSM&O strategies are be utilized and synthesized by our RTMC staff as they integrate the operations of freeway and arterials to improve			

** Contract Role(s) Legend: 4. CMM Assessments | 5. Strategic Plan Development*

	the travel time reliability of existing transportation network (arterials and freeways). *Metric has held this contract for two consecutive terms including (2017 – 2021) (2021 – 2026)!* *Mr. Grant serves as the RTMC Manager for this contract overseeing day-to-day operations at the RTMC and ensuring it is properly staffed 24/7/365.*
2016 - 2020	Contract No. 001158	CEI Services for ITS Projects (2016 – 2020), Central Florida Expressway Authority: Metric is provided support personnel to perform CEI services on an as-needed, per project basis, for various ITS construction projects in Orange County, Florida. Metric oversaw full consultant construction inspection staff, prepare engineering estimates for extra work, processes contractor's invoices for completed work items, conducts progress meetings, documents as-built conditions in final "as-built" plans, interprets contract documents and enforces applicable construction requirements, and reviews construction claims for entitlement. Metric staff was also responsible for the development of CFX's ITS Reference and Training manual will be utilized to provide training for all of CFX's consultant CEIs. Metric provided staff such as Project Administrator, Senior ITS Inspector, ITS Inspector(s), Senior Inspector, Inspector(s), and any others deemed necessary to perform the work. CEI services included inspection, testing, management engineering verifying proper coordination of all activities are down properly or documenting significant changes to an assigned project.
12/20 - Present	Contract No. 001726	Systemwide Construction Engineering and Inspection (CEI) Services for Intelligent Transportation Systems (ITS), Lighting and Tolling Projects (2020 - 2023), Central Florida Expressway Authority: Metric is providing support personnel to perform CEI services on an as-needed, per project basis, for various ITS construction projects in Orange County, Florida. Metric oversees full consultant construction inspection staff, prepares engineering estimates for extra work, processes contractor's invoices for completed work items, conducts progress meetings, documents as built conditions in final "as-built" plans, interprets contract documents and enforces applicable construction requirements, and reviews construction claims for entitlement. Metric staff is also responsible for the development of CFX's ITS Reference and Training manual which will be utilized to provide training for all of CFX's consultant CEIs. Metric has worked on approximately 16 task work orders under this current contract.
02/13 – 02/16	*Prior to Metric* ITS Operations Manager: FDOT District 5: Supervised District 5's Regional Traffic Management Center, overseeing 23 employees. Responsible for managing the I-4 Road Rangers Contract with Lynx, manages the I-4 Florida Highway Patrol Contract, and oversees the District 5's Traffic Incident Management (TIM) Team. Other responsibilities include delivering SHRP-2 training to first responders within the district. Managing Central Florida Expressway Authorities ITS equipment to include testing and managing their Wrong Way Driving Project. Representing FDOT during special events.

16. **Staff Experience:**

Firm employed by	Metric Engineering, Inc.			
Name	Penny Kamish		Years of relevant experience with this employer	10
Title	Consultant Project Manager		Years of relevant experience with other employer(s)	22
Degree(s) / Years / Specialization			N/A	
Active registration number / state / expiration date			N/A	
Year registered	N/A	Discipline	Civil Engineering	
Contract role(s) / brief description of responsibilities	* Contract Role(s): 4, 5, 6 Ms. Kamish has over 32 years of experience in Traffic Operations Management and the dissemination of real-time traffic information. She has been a member of the North Florida Freeway Management Team, now referred to as Traffic Incident Management (TIM), for 20 years. She also has a strong record of service within Public/Private sectors coordinating scheduled and non-scheduled traffic events (incidents, special events, hurricanes, major roadway closures and wildfires). Ms. Kamish works diligently as the Project Manager on Metric's District 2 RTMC Operations contract as well as serving as Operations Manager on several operations related contracts or provides assistance producing Standard Operations Guidelines (SOGs) and/or Standard Operations Procedures (SOPs), and Performance Measure Dashboards for reporting purposes.			
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).			
	2012 – Present: Consultant Project Manager: RTMC Operations & Maintenance Services (2012 – 2020) (2020 – 2027), FDOT District 2: This is an operations contract involving the day-to-day management of two locations of the ITS Traffic Management Center. Responsibilities include the use of multiple software programs, including FDOT's SunGuide®, to monitor District 2 devices, including 2,415 ITS Devices* (936 CCTVs; 218 DMS/ADMS/DDMS; 754 MVDS; 22 RWIS; 23 WWD; 4 Beacons; access to 398 BlueTOADS (between District 2, City of Jacksonville and City of Gainesville) 36 Toll DMS; and 24 TPAS DMS) for the purpose of detection of roadway obstructions, including disabled vehicles, crashes, construction as well as congestion. Metric staff was actively involved in all aspects of the successfully opening of District 2's first managed lanes project, with the I-295 West Beltway Express Lanes going live in May of 2019. This included developing SOPs, training modules, and hands on testing of SELS software and simulation. Metric also assisted in the preparation work prior for the First Coast Expressway and managed it for three months prior to Florida's Turnpike Enterprise (FTE) assuming responsibility in December 2019. Metric is also responsible for the dispatch of Road Rangers, FDOT Maintenance, and RISC contractors. The Network staff is actively involved with the District 2 ITS SunGuide® System, both for testing, troubleshooting and the integration of new devices. Metric staff monitor all 511 feedback messages reporting traffic incidents, contact the motorists leaving the feedback to obtain additional information, then make the appropriate FDOT District aware of the incident. Bilingual Operators provide Spanish floodgate recording for all Districts, as requested, as well as providing critical testing for the Spanish module of the 511 system, both phone and website. **Device totals include devices that have not been final accepted but are in the testing*			

** Contract Role(s) Legend: 4. CMM Assessments | 5. Strategic Plan Development | 6. TSMO policy Development & Updates*

	phase and will soon be included in District 2 Operations monitoring. *Metric has held this contract for two consecutive terms including (2012 – 2020) and (2020 & 2027)!* City of Jacksonville System Monitoring & Reporting: The primary focus of services is the monitoring of system health, device maintenance, ATMS.now alarm management, optimization of signals and to maximize coordination between FDOT, NFRTMC, City of Jacksonville Signals and area Law Enforcement. Metric staff have also worked with ATMS.now and SwRI to help guide development of a develop a signal interface in SunGuide®. This will act as a modified Integrated Corridor Management (ICM). SunGuide® and ATMS.now have been tied together so that predefined ICM plans can be activated through SunGuide® response plans and confirmed/ monitored in ATMS.now. Three corridors have been setup on parts of US 90, Normandy and Philips Highway in Duval County for implementation. City of Gainesville Signal Operations: As a part of our District 2 RTMC Operations contract, Metric provides Operators to the City of Gainesville to monitor arterial roadway conditions and provide traffic information to motorists. Based off of criteria and timing plans set up by the City, Metric Operators can flush a ramp back up before it reaches the through lanes as well as during lane-blocking incidents. This contract also involves traffic management to running escorts for large events like a UF Football game and Gator Nationals. Our staff dynamically changes timing plans "on the fly" (based on what the municipality provides) to maximize traffic patterns. Changes are tracked via performance measures to see the C/B Ratio per event due to the signal retiming.
05/21 – Present	Transportation System Management & Operation (TSM&O) Engineering Analysis and Minor Design – Continuing (2021 – 2026), FDOT District 7: Metric was awarded this contract to provide a range of engineering, planning and technical services to establish and support the Transportation System Management and Operations (TSM&O) program within FDOT District 7. The objective of this contract is to maximize efficiency of transportation systems by focusing on mobility outcomes, such as travel time reliability. There will be a performance driven approach for solving arterial congestion and traffic problems in which Intelligent Transportation Systems (ITS) is utilized to locate and correct congestion causes in real-time. Task Work Orders will be assigned by District 7 related to technical support, strategic planning, studies and conceptual plans, deployment of ITS components and public involvement. Specific TWOs include: TSM&O Program Support: Tasks include building and further developing the PEG and P-PEG goals from the TSM&O Strategic Plan and combining efforts between arterials and freeways. Additionally, Metric will support developing a real time data dashboard; developing an economic vitality component for performance measures; evaluating the feasibility of AMP corridor recommendations; and examining all work program projects and develop "goes-with" TSM&O projects based on solutions from the AMP corridor concepts and solutions. Other activities that might be included with this effort include reviewing and developing plans and specifications for design or design-build contracts to install TSM&O field devices; reviewing project requirements and hardware configuration analysis; developing proper sequencing, cost estimating, scheduling and coordination of ITS projects; performing system engineering; reviewing the utilization of systems devices hardware and software; and coordinating and assisting the TSM&O/ITS Program Office in the developing a system test and acceptance procedure that is part of the SEMP.

16. **Staff Experience:**

Firm employed by	Metric Engineering, Inc.			Meets MPR No. 7, 8
Name	Demetrius Lewis		Years of relevant experience with this employer	7
Title	Director of Technology Services		Years of relevant experience with other employer(s)	12
Degree(s) / Years / Specialization			A.A. / 2010 A+, Network+, MSDCT Certificates / 2005 / Information Technology A.A. / 2003	
Active registration number / state / expiration date			N/A	
Year registered	N/A	Discipline	Civil Engineering	
Contract role(s) / brief description of responsibilities	* Contract Role(s): 4, 5, 7, 8, 10 Mr. Lewis joined Metric in 2016 bringing 12+ years of experience in Intelligent Transportation System (ITS), network engineering, administration, design and integration of local- and wide-area networks (LAN/WAN). He was responsible for maintaining FDOT's and Central Florida Expressway's ITS telecommunications system, technical contract writing, management and negotiations, fiber-optic network design and management, reviewing network design plans and fiber schematics, SunGuide® software administration and integration, and interfacing and coordinating with multiple interagency disciplines and externally to successfully develop RFPs and deploy ITS projects. This experience included over 10 years of ITS Project Management at FDOT District 5 where he was responsible for overseeing ITS engineering development and deployment. He is an expert in the management of ITS projects, budgets and schedules, overseeing the installation of ITS infrastructure and subsystems such as Dynamic Message Signs (DMS), Closed-Circuit Television (CCTV) systems, Vehicle Detection System (VDS), and Fiber-Optic Networks (FON). He developed and reviewed documents such as requests for proposals (RFP), Concepts of Operation (ConOps), Systems Engineering Management Plans (SEMP), and Requirements traceability and verification matrices (RTVM), Regional ITS Architectures (RITSA) for ITS projects. As Director of Technology Services at Metric, he currently oversees three primary groups within this division: 1. IT Support Services (Network Engineering, Server Administration & Storage Area Networks), 2. ITS Integration Services (Layer 2+ communication equipment, maintenance, and field device implementation) and 3. Software Solutions (GIS/Software development services). This group leads, or significantly contributes, to cutting edge projects such as Florida's Regional Advanced Mobility Elements (FRAME) or Connected Vehicles (CV) specific projects. They are focused on the planning, testing, and integration of emerging technologies and addressing the need of an ever-evolving transportation industry changes to support a more technologically based model (i.e. CV, Data Management, Network Security, and more).			
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).			

** Contract Role(s) Legend: 4. CMM Assessments | 5. Strategic Plan Development | 7. TSMO Strategy & Solutions Projects | 8. Funding and B/Cost Analysis | 10. Engagement, Outreach & Stakeholder Training*

11/21 - Present	**Districtwide TSM&O: ITS & ATMS Consultant, FDOT District 3:** Metric provides professional engineering services for Intelligent Transportation System (ITS) and Advanced Traffic Management System (ATMS) services on a Task Work Order (TWO) basis for District 3's ITS/ATMS programs. These TWO are focused on ITS/ATMS/CAV, planning, research, studies, and design support; project management; integration, operations and maintenance support; communication and network support services; and participation in D3's Traffic Incident Management (TIM) Team activities. District 3's objective is to provide multilevel priority on-site response to ATMS/traffic signal phasing, timing, coordination, and malfunction issues highlighted by concerned citizens, public officials, and law enforcement personnel. Metric has held this contract for two consecutive terms including (2016-2021) (2021-2026)! Specific TWOs include: Master Plan Continuing Services and Active Arterial Management (AAM) Support: Metric is performing different tasks related to the initial version of the Master Plan. This includes maintaining coordination with stakeholders and maintaining agencies, performing additional analyses to support the selection of specific Master Plan projects and assisting with the district's goal of implementing AAM on targeted corridors. Districtwide Active Work Zone Management Support: Metric is performing tasks related to the implementation of a districtwide Active Work Zone Management (AWZM) plan and Smart Work Zones (SWZs) within the district. The team will help the district convert existing portable changeable message signs to "smart" signs with equipment upgrades and ensuring compatibility with SunGuide®. Metric will also assist the district in selecting two specific construction projects to implement SWZs on and developing plans and specifications for it.
05/21 – Present	**Transportation System Management & Operation (TSM&O) Engineering Analysis and Minor Design – Continuing (2021 – 2026):** Metric was awarded this contract to provide a range of engineering, planning and technical services to establish and support the Transportation System Management and Operations (TSM&O) program within FDOT District 7. The objective of this contract is to maximize efficiency of transportation systems by focusing on mobility outcomes, such as travel time reliability. There will be a performance driven approach for solving arterial congestion and traffic problems in which Intelligent Transportation Systems (ITS) is utilized to locate and correct congestion causes in real-time. Task Work Orders will be assigned by District 7 related to technical support, strategic planning, studies and conceptual plans, deployment of ITS components and public involvement. Specific TWOs include: TSM&O Program Support: Tasks include building and further developing the PEG and P-PEG goals from the TSM&O Strategic Plan and combining efforts between arterials and freeways. Additionally, Metric will support developing a real time data dashboard; developing an economic vitality component for performance measures; evaluating the feasibility of AMP corridor recommendations; and examining all work program projects and develop "goes-with" TSM&O projects based on solutions from the AMP corridor concepts and solutions. Other activities that might be included with this effort include reviewing and developing plans and specifications for design or design-build contracts to install TSM&O field devices; reviewing project requirements and hardware configuration analysis; developing proper sequencing, cost estimating, scheduling and coordination of ITS projects; performing system engineering; reviewing the utilization of systems devices hardware and software; and coordinating and assisting the TSM&O/ITS Program Office in the developing a system test and acceptance procedure that is part of the SEMP.

16. **Staff Experience:**

Firm employed by	Metric Engineering, Inc.			
Name	Joshua Tibbs, EI		Years of relevant experience with this employer	3
Title	Engineer Intern		Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization			B.S. / 2018 / Civil Engineering	
Active registration number / state / expiration date			EI #1100023026	
Year registered	2019	Discipline	Civil Engineering	

Contract role(s) / brief description of responsibilities	* Contract Role(s): 4, 5, 6, 7, 8 Mr. Tibbs joined Metric's Traffic Operations Department as a Traffic Engineer Intern. He has assisted on numerous task work orders involving ATMS/ITS design, retiming, traffic engineering, expansion services and traffic studies. His work mainly focuses on signal retiming studies but have also assisted the Data Collection staff and done CADD work for our Traffic Operations Design group. He utilizes Synchro and Tru-Traffic building traffic models to determine the implementation of the signal retiming and have gotten out into the field to assist in fine-tuning the signal retiming. He has put together Arterial Retiming reports for the FDOT (District 2 and 5), MetroPlan and Brevard County under CSC(s) and Traffic Signal Retiming contracts. For these reports, the team develops Synchro outputs and time-space diagrams in Synchro and Tru-Traffic, as well as utilizing MicroStation to create the node, phase, and condition diagrams. "Helping wherever needed", this group assists in determining TMCs and completing Travel Time runs for the Data Collection staff.
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
11/21 - Present	Traffic Engineer Intern: Districtwide TSM&O: ITS & ATMS Consultant, FDOT District 3: This is a Task Work Order (TWO) contract to provide a diversified range of services, including technical and administrative tasks for the Intelligent Transportation System (ITS) and Advanced Traffic Management System (ATMS) programs in District Three. Services are anticipated in all areas of ITS and ATMS, including, but not limited to study, planning, architecture, design, integration, diagnostics, troubleshooting, management, review, evaluation, inspection, engineering, as well as participation in the District's Traffic Incident Management (TIM) Team activities. D3's objective is to provide multilevel priority on-site response to ATMS/traffic signal phasing, timing, coordination, and malfunction issues highlighted by concerned citizens, public officials, and law enforcement personnel.
09/20 - Present	Traffic Engineer Intern: Continuing Services Contract (CSC) for Integrated Corridor Management (ICM) - Freeway/Arterial – Operations (2017 – 2021) (2021 – 2026), FDOT District 5: The FDOT ICM project seeks to improve overall operations and mobility in the Central Florida area; specifically, through the operation and management of the Regional Traffic Management Center (RTMC) and associated programs on both the freeway and arterial systems. Metric functions as an extension of the

** Contract Role(s) Legend: 4. CMM Assessments I 5. Strategic Plan Development I 6. TSMO policy Development & Updates I 7. TSMO Strategy & Solutions Projects I 8. Funding and B/Cost*

	Department's resources, providing professional services for a wide range of engineering, technical, management and administrative services to assist with numerous TSM&O projects within the work program. General work elements include RTMC staffing and operations for both freeways and arterials, project management, integration, TIM/first responder coordination, and public information assistance. The current ICM footprint covers nine Freeways and 12 Arterials within Counties/Cities with 452 traffic signals in six jurisdictions (City of Maitland, City of Orlando, City of Winter Park, Seminole County, Orange County, and Osceola County). TSM&O strategies are be utilized and synthesized by our RTMC staff as they integrate the operations of freeway and arterials to improve the travel time reliability of existing transportation network (arterials and freeways). *Metric has held this contract for two consecutive terms including (2017 – 2021) (2021 – 2026)!*
06/20 - Present	Traffic Engineer Intern: Continuing Services Contract for Traffic Operations (formally Traffic Signal System Retiming & Traffic Engineering Studies) (2016 – 2021), FDOT District 5: Metric provided professional transportation, planning, and engineering services for assigned traffic operational/safety studies and plan preparation at hundreds of locations throughout Central Florida. The traffic analysis and conceptual recommendations produced then used in the development of construction plans, incorporated into traffic operational/safety improvement projects or in the case of traffic signal timing plans, implemented directly into the field. Typical tasks included ITS Design and Integration, Arterial Retiming, Signal Warrant Analysis, Intersection Analysis, Roadway Study, Composite Study, Signal Inspections, Design Survey, Signal and Roadway Plans Design, Subsurface Utility Locating, and Traffic Volume and Classification Counts. *Metric held this contract for four consecutive terms including (2001 – 2006) (2006 – 2011) (2011 – 2016) (2016 – 2021)!*
05/20 – Present	Traffic Engineer Intern: Districtwide TSM&O Studies & Design (2018-2023), FDOT District 5: TSM&O studies, design and preparation of roadway construction plans for proposed miscellaneous improvements within Volusia, Brevard, Orange, Osceola, Seminole, Marion, and Lake Counties. Preparation of a set of contract plans which may include ITS, roadway, signing and pavement markings, signalization, lighting, sidewalk and/or bicycle ways. Other work types include Concept of Operations, Alternative Intersection Study, Hard Shoulder Study, TSM&O Arterial Corridor Studies, Local MPO & TPO Funded Projects, TSM&O Pedestrian & Bicycle Safety Improvements, Transit Signal Priority Studies and Design, Bridge Security Design, Design of DMS, CCTV, Bluetooth, MVDS, and other general TSM&O improvements. Traffic Engineer Intern: ITS Expansion Services on SR 3 / Courtney Parkway, FDOT District 5: As a TWO under this TSM&O contract, Metric designed the ITS infrastructure sub-system components along the corridor of Courtenay Parkway (SR 3) from Cone Rd to SR 528 in Brevard County, Florida. ITS sub-systems for the project are defined as: extension of fiber optic network system (FON), high resolution traffic signal controllers to support Active Arterial Management (AAM), a high definition video vehicle detection system, a closed-circuit television (CCTV) camera system, a travel-time data collection system for the corridor and Automated Traffic Signal Performance Measures (ATSPM). The design includes detection devices for presence/path and advanced detection on all approaches (minor and major) to gather information for ATSPM. Included ITS, S&PM, and Signalization services.

16. **Staff Experience:**

Firm employed by	Metric Engineering, Inc.			
Name	Justin Woods		Years of relevant experience with this employer	4
Title	Sr. System Integrator I		Years of relevant experience with other employer(s)	17
Degree(s) / Years / Specialization			High School Diploma	
Active registration number / state / expiration date			N/A	
Year registered	N/A	Discipline	Civil Engineering	
Contract role(s) / brief description of responsibilities	* Contract Role(s): 4, 5, 6, 7, 8 Mr. Woods is a Systems Integration Specialist within the Technology Group. Within his role at Metric Engineering, Mr. Woods' responsibilities include installation, configuration, maintenance, and troubleshooting of traffic signal system devices. Other general day-to-day duties include ATSPM reconfigurations for video detection and SIIA Data Collection District-wide.			
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).			
04/22 - Present	Lead Traffic Signal Technician: Intelligent Transportation Systems Maintenance Services (Prime Contractor: Eland Engineering, Inc.), FDOT District 5: This district-wide project consists of providing services to ensure continuous system operation and functionality of all components of the system. Within this project, Metric provides traffic signal assistance to Eland Engineering. This work includes performing Automated Traffic Signal Performance Measures (ATSPM), Transit Signal Priority (TSP) troubleshooting, and Signalized Intersection Inventory Application (SIIA) data collection. Other efforts may include the installation, integration, maintenance and repair of fiber optic cable, ITS devices, traffic signal equipment, inventory, and infrastructure.			
2020 – Present	Sr. ITS Inspector: CEI Services – Support for Traffic Operations (PUSHBUTTON), (2020 – 2025), FDOT District 5: Metric is working on a five-year CEI contract for Traffic Operations and ITS projects for four Pushbutton contracts and $0.5 million that is set aside for ICM related projects. The purpose of this contract is to build needed Traffic Operations and ICM related projects to fill the gaps of the overall transportation system in support of TSM&O initiatives overall. These projects are on an as needed basis using Task Work Orders (TWO). The TWOs are related to Roadway, Signalization and ITS. Some elements involved are asphalt, sidewalk, signing and pavement markings, updates to cabinets or controllers, additional cameras for coverage, FON in addition to future Connect Vehicles components. The work involved in these TWOs are related surveying, inspection, sampling and testing and data collection. There are four pushbutton contracts that consist of two roadway and two signal projects. TWOs will be added and updated as they occur.			

** Contract Role(s) Legend: 4. CMM Assessments I 5. Strategic Plan Development I 6. TSMO policy Development & Updates I 7. TSMO Strategy & Solutions Projects I 8. Funding and B/Cost Analysis*

2019 – Present (As Needed)	Sr. ITS Inspector: Intelligent Transportation System Maintenance Services, FDOT District 5: Metric Engineering has teamed with Advanced Cabling Solutions to provide the FDOT District 5 ITS Maintenance Services. Maintenance Services provided consist of, but are not limited to the installation, integration, maintenance and repair of fiber optic cable, ITS devices, traffic signal equipment, inventory, and infrastructure. The team also provides contract administration services consisting of 24x7x365 on call staff, Bi-Weekly Status Reports, Monthly Status Reports, Quarterly Reports, Meeting coordination and minutes, Project management plan, Standard Operating Procedures, Project Estimates, and Maintenance Checklists. Inventory and device management of the FDOT District 5 Maintenance and Inventory Management System (MIMS) and Intelligent Transportation System Facility Management (ITSFM) is provided daily.
2019 – Present (As Needed)	Sr. ITS Inspector: Intelligent Transportation System Network Administration, Maintenance and Repairs, Osceola County: This project provides Osceola County with ITS Maintenance, TMC support, and network troubleshooting/repair as a follow up to the Osceola County ATMS projects. Scope of work includes network oversight duties, maintaining device warranties (tracking and managing), monthly inventory reporting, troubleshooting of fiber and network communication, assigning and managing all IP addresses, and support services for natural disasters.
2019 – Present (As Needed)	Sr. ITS Inspector: Continuing Engineering Services on a Task Authorization Basis, Osceola County: Metric Engineering provides Osceola County continued services through this contract on an as needed basis. Services provided consist of but are not limited to Technology support to include Traffic Signal and ITS plan reviews, ITS network re-design and configuration, ITSFM data collection and input, SolarWinds configuration and implementation, SunGuide deployment, and Osceola County Toll Plaza assessments.
2019 - 2021	Sr. ITS Inspector: I-75 On- and Off-System F.R.A.M.E. (Florida's Regional Advanced Mobility Elements), FDOT District 5: Metric represented the FDOT District 5 ITS as the Systems Manager for the I-75 F.R.A.M.E. project which assists in the advancement of the Multimodal Integrated Corridor Management (MMICM) plan. As the Systems Manager, Metric was responsible for coordinating, testing and providing documentation on the various technologies to include Roadside Units (RSUs), vehicular On-board Units (OBUs) as well as emulated OBUs (mobile devices and/or tablets) to ensure device interoperability. This project was in line with the USDOT goals and contributed to increased safety, reliability and mobility needs using advanced CV technologies. Metric staff is responsible for integrating these devices to multiple signal controllers with the goal of verifying the various CV-related applications: Signal Phase & Timing (SPaT), Automated Traffic Signal Performance Measures (ATSPM), MAP messages, Traveler Information Messages (TIM), Basic Safety Messages (BSM), Emergency Vehicle Protocol (EVP), Transit Signal Priority (TSP) and others related to pedestrian safety. Metric staff conducted extensive testing in both the lab and field environments with equipment provided by several CV vendors. As a result of the testing, reports were generated to guide the System Manager in their decision-making process for the development of the CV specifications and eventual decision-making on the F.R.A.M.E., SR 434, and PedSafe projects and any other future CV deployments. Metric was also responsible for configuring, integrating and testing all CV devices into the FDOT ITS network.

16. **Staff Experience:**

Firm employed by	Metric Engineering, Inc.			
Name	Jovanny Varela		Years of relevant experience with this employer	5
Title	IT Support Analyst		Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization			High School Diploma	
Active registration number / state / expiration date			N/A	
Year registered	N/A	Discipline	Civil Engineering	
Contract role(s) / brief description of responsibilities	* Contract Role(s): 4, 5, 6, 7 Mr. Varela has an innate technical sense to operate and troubleshoot special software and hardware. He serves as an IT Support Specialist within the Technology group providing assistance with installation, configuration, integration and testing of Intelligent Transportation Systems (ITS) devices. Mr. Varela also provides troubleshooting support of computer systems and workstation and due to his technical savvy, he has taking the initiative to become a licensed drone operator for Metric Engineering completing several drone flight tasks to support traffic and ITS studies. During Mr. Varela's previous role as an Operator at the FDOT District 5 Regional Traffic Management Center, he utilized ITS devices to monitor the roadways in the greater Orlando area. He also coordinated with partnering agencies to expedite response to incidents and promote quick clearance and works with cutting edge technology including traffic signals, Connected Vehicles (CV), freeway management, arterial roadway management, express lanes and more. This assisted in providing a safer transportation system that ensures the mobility of people and goods, enhances economic prosperity and provide real time traveler information and system reliability through Integrated Corridor Management (ICM) strategies.			
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).			
09/17 - Present	Continuing Services Contract (CSC) for Integrated Corridor Management (ICM) - Freeway/Arterial – Operations (2017 – 2021) (2021 – 2026), FDOT District 5: The FDOT ICM project seeks to improve overall operations and mobility in the Central Florida area; specifically, through the operation and management of the Regional Traffic Management Center (RTMC) and associated programs on both the freeway and arterial systems. Metric functions as an extension of the Department's resources, providing professional services for a wide range of engineering, technical, management and administrative services to assist with numerous TSM&O projects within the work program. General work elements include RTMC staffing and operations for both freeways and arterials, project management, integration, TIM/first responder coordination, and public information assistance. The current ICM footprint covers nine Freeways and 12 Arterials within Counties/Cities with 452 traffic signals in six jurisdictions (City of Maitland, City of Orlando, City of Winter Park, Seminole County, Orange County, and Osceola County).			

** Contract Role(s) Legend: 4. CMM Assessments I 5. Strategic Plan Development I 6. TSMO policy Development & Updates I 7. TSMO Strategy & Solutions Projects*

	TSM&O strategies are be utilized and synthesized by our RTMC staff as they integrate the operations of freeway and arterials to improve the travel time reliability of existing transportation network (arterials and freeways). *Metric has held this contract for two consecutive terms including (2017 – 2021) (2021 – 2026)!*
01/17 – 01/22	ITS Maintenance Services, FDOT District 5: Metric teamed with Advanced Cabling Solutions to provide the FDOT District 5 ITS Maintenance Services. Maintenance services provided consist of, but are not limited to the installation, integration, maintenance and repair of fiber optic cable, ITS devices (CCTV, DMS, UPS, MFES, Bluetooth, MVDS and AVI detectors), traffic signal equipment, inventory, and infrastructure. A major portion of the work is assisting the FDOT D5 staff with their ITS network in an effort to ensure all sources available, including but not limited to, those which can provide traffic videos, travel time information, congestion information, traffic incident management coordination, motorist information and other relevant data. The team also provides contract administration services consisting of 24x7x365 on call staff, Bi-Weekly Status Reports, Monthly Status Reports, Quarterly Reports, Meeting coordination and minutes, Project management plan, Standard Operating Procedures, Project Estimates, and Maintenance Checklists. Inventory and device management of the FDOT District 5 Maintenance and Inventory Management System (MIMS) and ITS Facility Management (ITSFM) is provided daily.
11/17 – 11/21	I-75 On- and Off-System F.R.A.M.E. (Florida's Regional Advanced Mobility Elements), FDOT District 5: Metric represented the FDOT District 5 ITS as the Systems Manager for the I-75 F.R.A.M.E. project which assists in the advancement of the Multimodal Integrated Corridor Management (MMICM) plan. As the Systems Manager, Metric was responsible for coordinating, testing and providing documentation on the various technologies to include Roadside Units (RSUs), vehicular On-board Units (OBUs) as well as emulated OBUs (mobile devices and/or tablets) to ensure device interoperability. This project was in line with the USDOT goals and contributed to increased safety, reliability and mobility needs using advanced CV technologies. Metric staff is responsible for integrating these devices to multiple signal controllers with the goal of verifying the various CV-related applications: Signal Phase & Timing (SPaT), Automated Traffic Signal Performance Measures (ATSPM), MAP messages, Traveler Information Messages (TIM), Basic Safety Messages (BSM), Emergency Vehicle Protocol (EVP), Transit Signal Priority (TSP) and others related to pedestrian safety. Metric staff conducted extensive testing in both the lab and field environments with equipment provided by several CV vendors. Furthermore, Metric was actively involved in the development of CV specifications to include Technical Special Provisions (TSPs) as well as Modified Special Provisions (MSPs). Specifications were written relative to the CV equipment and supporting standards for hardware and software that is consistent with the minimum requirements of the USDOT RSU 4.1 Specifications. This document was under development and is being developed in coordination with the FDOT. These documents will assist in the design and deployment of the FRAME, and other ongoing FDOT District 5 projects related to other future CV deployments.

16. **Staff Experience:**

Firm employed by	Metric Engineering, Inc.			
Name	Taylor Rouse, EI		Years of relevant experience with this employer	3
Title	Traffic/ITS Engineer Intern		Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization			B.S. / 2021 / Civil Engineering	
Active registration number / state / expiration date			Engineering Intern / FL	
Year registered	2021	Discipline	Civil Engineering	
Contract role(s) / brief description of responsibilities	Contract Role(s): Strategic Plan Development Ms. Rouse is a Traffic/ITS Engineer Intern who joined Metric in February 2020 as a part-time employee on an internship while she completed her Civil Engineering degree at the University of North Florida (UNF). After receiving her Bachelor's in Civil Engineering from UNF she joined Metric as a full-time employee in July 2021. During her time with Metric, Ms. Rouse has worked on a variety of ITS and Traffic Engineering related projects and Task Work Orders and currently provides weekly Road Ranger Audits, Traffic Incident Management Meeting content, Performance Measures content, and other miscellaneous services under the current District 2 GEC contract.			
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).			
10/21 - Present	Traffic Engineer Intern: Traffic Ops TSM&O Continuing Services Contract, FDOT District 5 (Subconsultant to Vanasse Hangen Brustlin, Inc.): Metric provides services for traffic, ITS, and technology. Through this contract, in-house support is provided to the District through pushbutton work projects and systems engineering in support of the District's current TSM&O program. Metric works alongside VHB to continuously develop the program, and we are also aiding in the expansion of the Traffic Operations Pushbutton and Studies Program. In addition to supplying contract management support, our team helps the District draft and coordinate future governmental agreements, project scopes, and other similar documentation. In addition, Ms. Rouse assisted with the Osceola County TAPS-LA RFP writing.			
02/20 - Present	Traffic Engineer Intern: I-4 FRAME System Manager, FDOT District 7: Metric was awarded this project to implement CV technology connecting the Downtown Tampa area to western portions of Orlando. The I-4 FRAME project will deploy an advanced Integrated Corridor Management (ICM) system consisting of next generation traffic incident management, work zone traffic management, road weather alerts, back-of-queue warning, and speed harmonization message systems such as vehicle-to-infrastructure (V2I) via approximately 700 RSUs with DSRC radios and Cellular Vehicle-to-Everything (C-V2X) capabilities. The project is being designed and implemented using the System Manager Approach to ensure design consistency as well as seamless integration with District 1, District 5, District 7, Florida's Turnpike Enterprise, and numerous local agencies. The I-4 FRAME project will cover 77 miles of I-4, 122 miles of other limited-access routes, and signalized arterial roadways with a total of 491 traffic signals. The final products to be submitted include the complete design for each corridor and all signalized intersections within them, the selection of devices, integration, testing and verification.			

02/20 – Present	Traffic Engineer Intern: Road Safety Audit (RSA), Safety Studies, and Operational Studies Contract, FDOT District 2 (Jacksonville): The project includes conducting Road Safety Audits (RSA) and their corresponding follow-up safety studies as well as operational studies. The RSAs, analysis and recommendations produced are then used in the development of safety recommendations targeting the emphasis areas of the Florida Strategic Highway Safety Plan (FL-SHSP). Additional tasks include resolving complaints or requests received from concerned citizens, review fatal crashes, monitoring safety in specific work-zones, update and maintain the Department's Skid Hazard Reporting System, develop and utilize GIS based tools to identify locations with targeted crash patterns, perform Highway Safety Manual (HSM) analysis, and public involvement.
02/20 – 01/22	Traffic Engineer Intern: Traffic Operations ITS General Consultant Services (2009-2014) (2013-2018) (2017-2022), FDOT District 1: This contract includes a range of study, planning, design, integration, diagnostic, operations, management, review, evaluation, and engineering services; including technical and administrative tasks for Intelligent Transportation System projects for District 1. Metric supports all facets of the Traffic Operations Office ITS Program, including ITS planning, ITS architecture, ITS design, ITS integration, ITS diagnostics, and ITS Operations, including facilitating the Traffic Incident Management (TIM) Team activities and TIM initiatives. As part of this contract, Ms. Rouse led the Systems Engineering Documentation TWO for the City of Lakeland TAPS-LA. *Metric has held this contract for three consecutive terms including (2009-2014) (2013-2018) (2017-2022)!*
06/20 - Present	Transportation Analyst: Consultant Services for Transportation Management Center Area-Wide, FDOT District 2 (Jacksonville): Services to provide a wide range of operational, engineering and planning services to include technical, management and administrative tasks for District 2 ITS Program and Traffic Management Center. Ms. Rouse assists with Road Ranger Audits, Traffic Incident Management (TIM) bi-monthly Team Meetings and newsletters, and other miscellaneous tasks.
06/20 – Present	General Engineering Consultant (GEC) (also referred to as Consultant Services for Transportation Management Center Area-Wide) (sub to Atkins North America), FDOT District 2: ITS System Manager Support Services: As a subconsultant to Atkins under their GEC contract, Metric assists with TMC Operations Support, ITS Network Support, and ITS System Manager Support. Overall services are to provide a wide range of operational, engineering and planning services to include technical, management and administrative tasks for District 2 ITS Program and Traffic Management Center. Tasks include work on all aspects of ITS/TSM&O to include Maintenance, Operations, Planning/Budgeting, Construction Inspection and Plans review, and development and tracking of Performance Measures.

16. **Staff Experience:**

Firm employed by	Metric Engineering, Inc.			
Name	Josh Reichert, PE		Years of relevant experience with this employer	8
Title	Traffic Operations Manager		Years of relevant experience with other employer(s)	6
Degree(s) / Years / Specialization			B.S. / 2008 / Civil Engineering	
Active registration number / state / expiration date			PE #77036 / FL / 2014	
Year registered	2017	Discipline	Civil Engineering	

Contract role(s) / brief description of responsibilities	* Contract Role(s): 5, 7 Josh Reichert, PE is the Traffic Operations Manager at Metric Engineering, Inc., and serves as a Project Manager for numerous Traffic and Transportation Systems Management and Operations (TSM&O) projects throughout the state of Florida. He has a strong background in TSM&O strategies that use of technology to leverage existing roadway infrastructure such as ramp metering, managed lanes, Connected and Automated Vehicles (CAV) and more. This experience includes significant experience and understanding of Intelligent Transportation Systems (ITS) operations and needs, CAV, connected infrastructure, Big Data, Smart Cities, and solutions such as advanced signal detection for future mobility. As the former Florida Department of Transportation (FDOT) District 2 ITS Operations Program Manager, Mr. Reichert oversaw the North Florida Regional Transportation Management Center (RTMC) operations, ITS Maintenance, Road Ranger Service Patrol and Traffic Incident Management (TIM) Team programs. He has been involved with various projects that worked to tie together agency networks in efforts to share resources and data for several stakeholders including FDOT, City of Jacksonville, Jacksonville Transit Authority, University of North Florida (UNF), North Florida Traffic Planning Organization (NFL TPO) and others; and he assisted with coordination efforts between ITS and construction. Prior to this, he worked on FDOT District 2 Safety and Traffic Studies, and gained a wealth of experience in both topics, as well as familiarity with many of FDOT District 2's processes, preferences, and tools (such as FDOT District 2 Traffic Operation's Tracker database).
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
11/21 - Present	Districtwide TSM&O: ITS & ATMS Consultant, (2021 – 2031), FDOT District 3: Metric provides professional engineering services for Intelligent Transportation System (ITS) and Advanced Traffic Management System (ATMS) services on a Task Work Order (TWO) basis for District 3's ITS/ATMS programs. These TWO are focused on ITS/ATMS/CAV, planning, research, studies, and design support; project management; integration, operations and maintenance support; communication and network support services; and participation in D3's Traffic Incident Management (TIM) Team activities.

** Contract Role(s) Legend: 5. Strategic Plan Development | 7. TSMO Strategy & Solutions Projects*

	District 3's objective is to provide multilevel priority on-site response to ATMS/traffic signal phasing, timing, coordination, and malfunction issues highlighted by concerned citizens, public officials, and law enforcement personnel. *Metric has held this contract for two consecutive terms including (2016-2021) (2021-2026)!*
05/21 – 05/26	Transportation System Management & Operation (TSM&O) Engineering Analysis and Minor Design – Continuing (2021 – 2026), FDOT District 7: Metric was awarded this contract to provide a range of engineering, planning and technical services to establish and support the Transportation System Management and Operations (TSM&O) program within FDOT District 7. The objective of this contract is to maximize efficiency of transportation systems by focusing on mobility outcomes, such as travel time reliability. There will be a performance driven approach for solving arterial congestion and traffic problems in which Intelligent Transportation Systems (ITS) is utilized to locate and correct congestion causes in real-time. Task Work Orders will be assigned by District 7 related to technical support, strategic planning, studies and conceptual plans, deployment of ITS components and public involvement. Specific TWOs include: TSM&O Program Support: Tasks include building and further developing the PEG and P-PEG goals from the TSM&O Strategic Plan and combining efforts between arterials and freeways. Additionally, Metric will support developing a real time data dashboard; developing an economic vitality component for performance measures; evaluating the feasibility of AMP corridor recommendations; and examining all work program projects and develop "goes-with" TSM&O projects based on solutions from the AMP corridor concepts and solutions. Other activities that might be included with this effort include reviewing and developing plans and specifications for design or design-build contracts to install TSM&O field devices; reviewing project requirements and hardware configuration analysis; developing proper sequencing, cost estimating, scheduling and coordination of ITS projects; performing system engineering; reviewing the utilization of systems devices hardware and software; and coordinating and assisting the TSM&O/ITS Program Office in the developing a system test and acceptance procedure that is part of the SEMP.
09/17 - Present	Project Manager: Continuing Services Contract (CSC) for Integrated Corridor Management (ICM) - Freeway/Arterial – Operations (2017 – 2021) (2021 – 2026), FDOT District 5: The FDOT ICM project seeks to improve overall operations and mobility in the Central Florida area; specifically, through the operation and management of the Regional Traffic Management Center (RTMC) and associated programs on both the freeway and arterial systems. Metric functions as an extension of the Department's resources, providing professional services for a wide range of engineering, technical, management and administrative services to assist with numerous TSM&O projects within the work program. General work elements include RTMC staffing and operations for both freeways and arterials, project management, integration, TIM/first responder coordination, and public information assistance. The current ICM footprint covers nine Freeways and 12 Arterials within Counties/Cities with 452 traffic signals in six jurisdictions (City of Maitland, City of Orlando, City of Winter Park, Seminole County, Orange County, and Osceola County). TSM&O strategies are be utilized and synthesized by our RTMC staff as they integrate the operations of freeway and arterials to improve the travel time reliability of existing transportation network (arterials and freeways). *Metric has held this contract for two consecutive terms including (2017 – 2021) (2021 – 2026)!*

16. **Staff Experience:**

Firm employed by	Metric Engineering, Inc.		Meets MPR No. 8
Name	Kevin Boston	Years of relevant experience with this employer	11
Title	Technology Project Manager of ITS Maintenance Services	Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization		High School Diploma / 2002	
Active registration number / state / expiration date		N/A	
Year registered	N/A	Discipline	Civil Engineering

Contract role(s) / brief description of responsibilities

Contract Role(s): Strategic Plan Development

Mr. Boston is a Senior Project Manager within the Technology Group. Within his role at Metric Engineering, Mr. Boston's responsibilities include project management of the FDOT District 5 ITS Maintenance Services Contract.

Under this Contract, Mr. Boston oversees the installation, testing, integration, maintenance, and troubleshooting of various ITS & Traffic Signal devices/components, including:

- Blank Out Signs (Southern Manufacturing)
- Bluetooth Readers (Blue Band, BlueMAC, BlueTOAD)
- Cellular Modems (Digi Transport, PepWave)
- Connected Vehicle Roadside Units (Siemens, TrafficCast, Commsignia)
- Closed-Circuit Television Cameras (Axis, Bosch, Cohu, Iris Innovations, GovComm, Pelco, Siqura, Vicon)
- Dynamic Message Signs (Daktronics, Ledstar, SESA)
- Ethernet Switches (RuggedCom, Dell, Brocade/Ruckus, ITS Express)
- Microwave Vehicular Detection Systems (RTMS, Wavetronix)
- Media Converters (Comnet, Etherwan, ITS Express, Moxa, Nitek)
- Port Servers (B&B Electronics, Comtrol, Digi, Moxa)
- Surge Protection Devices (ASCO, Atlantic Scientific, BTU Research, Citel, Wavetronix)
- Layer 2 Switches (Brocade, Dell, Etherwan, ITS Express, RuggedCom)
- Traffic Signal Controllers (Cubic, Econolite, Intelight)
- Uninterruptible Power Systems (Alpha, APC, Clary Corp, Minuteman, Tripp-Lite)
- Video Detection (Autoscope, Gridsmart, Iteris, Miovision, Rhythm)
- Video Encoders (Coretec, iMPath, Vbrick)

Mr. Boston has over 10 years of ITS experience, with 6 years of experience in managing major ITS Integration and Maintenance projects.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).

01/16 – 01/22	Intelligent Transportation Systems (ITS) Maintenance Services, FDOT District 5: Metric teamed with Advanced Cabling Solutions to provide the FDOT District 5 ITS Maintenance Services. Maintenance Services provided consist of, but are not limited to the installation, integration, maintenance and repair of fiber optic cable, ITS devices, traffic signal equipment, inventory, and infrastructure. The team also provides contract administration services consisting of 24x7x365 on call staff, Bi-Weekly Status Reports, Monthly Status Reports, Quarterly Reports, Meeting coordination and minutes, Project management plan, Standard Operating Procedures, Project Estimates, and Maintenance Checklists. Inventory and device management of the FDOT District 5 Maintenance and Inventory Management System (MIMS) and Intelligent Transportation System Facility Management (ITSFM) is provided daily.
01/17 – 01/22	Continuing Services Contract for Traffic Operations (formally Traffic Signal System Retiming & Traffic Engineering Studies) (2016 – 2021), FDOT District 5: Metric provided professional transportation, planning, and engineering services for assigned traffic operational/safety studies and plan preparation at hundreds of locations throughout Central Florida. The traffic analysis and conceptual recommendations produced were used in the development of construction plans, incorporated into traffic operational/safety improvement projects or in the case of traffic signal timing plans, implemented directly into the field. Typical tasks included ITS Design and Integration, Arterial Retiming, Signal Warrant Analysis, Intersection Analysis, Roadway Study, Composite Study, Signal Inspections, Design Survey, Signal and Roadway Plans Design, Subsurface Utility Locating, and Traffic Volume and Classification Counts. *Metric has held this contract for four consecutive terms including (2001 – 2006) (2006 – 2011) (2011 – 2016) (2016 – 2021)!*
10/12 – 10/17	Districtwide Traffic Operations Transportation System Management Support Services (TSM&O), (2012 – 2017), FDOT District 4: This project included support services for the TSM&O program within the FDOT to improve the efficiency of existing transportation network through performance monitoring, active arterial management, Integrating Freeway Management with Arterial Management and Incident Management on Arterials and Freeways. The project included the deployment of an Intelligent Transportation System (ITS) along the District's interstates to monitor and improve incident clearance time and travel time and the implementation of the Advanced Transportation Monitoring System (ATMS). Both systems utilize SunGuide software to manage these devices and traffic signals.
07/14 – 03/16	ITS Freeway Management: I-75 (SR 93) from SR 24 in Alachua County to Georgia State Line, FDOT District 2: This 87 mile ITS project involves two sets of plans, both within the same project limits. The first project involves the design of a fiber / conduit backbone communication system installation. The second project provides the design of the field equipment communication devices, DMS, CCTV, vehicle detectors and deployment.
07/14 – 05/15	ITS Communication System: I-75 (SR 93) from North of US 27 to Alachua County Line, FDOT District 5: ITS elements including Close Circuit Television Cameras (CCTV Cameras) and Microwave Vehicle Detector Stations (MVDS) will be installed on I-75(SR 93) From North of US 27 to the Alachua County Line. New fiber optic cable will also be installed and integrated into existing Fiber Optic Cable and shall be used for network communication to all devices. These devices shall be incorporated into the existing network for control through the Regional Traffic Management Center (RTMC) in Orlando. The Design includes the integration to the existing network and communication scheme of the District 5 SunGuide system. Metric is also responsible for communicating with FL Turnpike and the City of Ocala with any technical coordination.

16. **Staff Experience:**

Firm employed by	Metric Engineering, Inc.			
Name	Bechise Dyl		Years of relevant experience with this employer	< 1
Title	Systems Integrator I		Years of relevant experience with other employer(s)	3
Degree(s) / Years / Specialization			B.S. / In Progress (2023) / Electrical and Computer Engineering	
Active registration number / state / expiration date			N/A	
Year registered	N/A	Discipline	Civil Engineering	
Contract role(s) / brief description of responsibilities	Contract Role(s): Strategic Plan Development Ms. Dyl is an Integration Specialist within the Technology Group. Within her role at Metric Engineering, Ms. Dyl's responsibilities include network engineering services, installation, configuration, maintenance, and troubleshooting of ITS devices. Other general day-to-day duties included troubleshooting and repairing fiber optics; troubleshooting and diagnosing problems with network equipment; preventative maintenance on field equipment; utility designation/location services; and underground utility troubleshooting and repair.			
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).			
01/2023 - Present	System Integration: I-4 FRAME System Manager, FDOT District 7: Metric was awarded this project to implement CV technology connecting the Downtown Tampa area to western portions of Orlando. The I-4 FRAME project will deploy an advanced Integrated Corridor Management (ICM) system consisting of next generation traffic incident management, work zone traffic management, road weather alerts, back-of-queue warning, and speed harmonization message systems such as vehicle-to-infrastructure (V2I) via approximately 700 RSUs with DSRC radios and Cellular Vehicle-to-Everything (C-V2X) capabilities. The project is being designed and implemented using the System Manager Approach to ensure design consistency as well as seamless integration with District 1, District 5, District 7, Florida's Turnpike Enterprise, and numerous local agencies. The I-4 FRAME project will cover 77 miles of I-4, 122 miles of other limited-access routes, and signalized arterial roadways with a total of 491 traffic signals. The final products to be submitted include the complete design for each corridor and all signalized intersections within them, the selection of devices, integration, testing and verification.			
01/2023 - Present	System Integration: US 41 Arterial FRAME Systems Manager Project, FDOT District 1: As a TWO under Metric's Traffic Operations ITS General Consultant Service contract, this project (as part of Florida's Regional Advanced Mobility Elements (FRAME)) deployed connected and automated safety applications along the US 41 corridor (7 miles; 25 signals total) from Airport Road to Pine Island Road in Lee County. This project was in support of FDOT's District 1 goal to improve safety and mobility along US 41, especially since US 41 is parallel to I-75 and serves as a detour route during incident management. All signals were interconnected with Econolite Advance Traffic Controller (ATC) (version range 2.58 and 2.64). Metric designed and implemented this project by utilizing the System Manager approach to ensure design consistency as well as seamless integration with District 1 and Lee County. Metric evaluated the connection of the CV technologies and			

	supplemental applications to the existing Lee County's ATMS and FDOT District 1's SunGuide®. Our staff evaluated and determined optimal locations for Roadside Units (RSUs), as well as integration and compatibility of CV applications to support such as Signal Phasing and Timing (SPaT) and Passive Pedestrian Protection. As part of our evaluation, we recommended hardware upgrade needs, including but not limited to vehicle and pedestrian detection, edge computing devices and controllers, to local agency infrastructure to support CV technology. Finally, we identified MAP requirements and any other applicable CV applications as well as identified security requirements for both software and hardware. Metric developed a ConOps, System Validation Plan (SV), SEMP, high-level cost estimates, and CV equipment procurement analysis. Stakeholder coordination also plays a vital role in this project.

16. **Staff Experience:**

Firm employed by	Metric Engineering, Inc.		Meets MPR No. 9
Name	Brent Dustin, PE	Years of relevant experience with this employer	6.5
Title	ITS CEI Operations Manager / Senior Project Engineer	Years of relevant experience with other employer(s)	5.5
Degree(s) / Years / Specialization		B.S. / 2009 / Civil Engineering	
Active registration number / state / expiration date		PE #81404 / FL / 2025	
Year registered	2016	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities	Contract Role(s): Strategic Plan Development / TSMO Policy Development and Updates Mr. Dustin is a registered Professional Engineer with over 12 years of construction engineering inspection (CEI) experience, recently serving as Sr. Project Engineer on several system-wide ITS, lighting, and signalization focused contracts for the Central Florida Expressway Authority (CFX). Mr. Dustin has also worked for FDOT in both Maintenance and Construction roles, serving as Operations Program Engineer, Construction Project Manager, Final Estimates Coordinator, Contract Support Specialist, and Inspector. With a thorough knowledge of CFX and FDOT policies and procedures and serving in roles from Inspector through Sr. Project Engineer, Brent has developed a thorough knowledge of the entire construction process making him an asset to any project.		
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).		
03/18 - 10/20	Senior Project Engineer: Contract No. 001158	CEI Services for Intelligent Transportation Systems (ITS) Projects (2016 – 2020), FDOT Central Florida Expressway Authority: Metric is providing support personnel to perform CEI services on an as-needed, per project basis, for various ITS construction projects in Orange County, Florida. Metric oversees full consultant construction inspection staff, prepare engineering estimates for extra work, processes contractor's invoices for completed work items, conducts progress meetings, documents as-built conditions in final "as-built" plans, interprets contract documents and enforces applicable construction requirements, and reviews construction claims for entitlement. Metric staff is also responsible for the development of CFX's ITS Reference and Training manual will be utilized to provide training for all of CFX's consultant CEIs. Metric provides staff such as Project Administrator, Senior ITS Inspector, ITS Inspector(s), Senior Inspector, Inspector(s), and any others deemed necessary to perform the work. CEI services includes inspection, testing, management engineering verifying proper coordination of all activities are down properly or documenting significant changes to an assigned project. Assigned TWOs include: (599-524) Network Phase II Project: This project consists of providing all labor, materials, equipment and incidentals necessary to transport, install, test and successfully deploy fiber splice enclosures, fiber cable feeder and drop replacements, and resplice existing and proposed fiber optic cable along numerous corridors as shown on the Plans in Orange County, Florida. *TWO Amount: $1.2M* (599-541) Dynamic Curve Warning System: This project consists of providing all labor, materials, equipment and incidentals necessary to transport, install, test and successfully deploy a Dynamic Curve Warning System (DCWS) on SR 417 Central Florida		

	GreeneWay southbound off-ramp to SR 408 East-West Expressway westbound as shown on the Plans in Orange County, Florida. *TWO Amount: $315K* (599-537) Supplemental Data Collection Sensors & CCTV Deployment: This project consists of providing all labor, materials, equipment and incidentals necessary to transport, install, test and successfully deploy Closed-circuit Television Cameras (CCTV), Data Collection Sensors (DCS), Dynamic Messaging Signs (DMS), Traffic Monitoring Stations (TMS), Wireless Access Points (WAP) devices, fiber optic backbone duct bank replacements and locate systems consisting of route markers, stickers/decals, tone-wire and radio detection side-leg terminators along numerous corridors as show in the Plans in Orange County, Florida. *TWO Amount: $6.41M* (599-156) SR 408 West Bound Exit to Old Winter Garden Road Traffic Signals: This project consists of providing all labor, materials, equipment and incidentals necessary to transport, install, test and successfully deploy new traffic control signals at the intersection of SR 408 WB Offramp and Old Winter Garden Road in Orange County, Florida. *TWO Amount: $376K* (599-547) CCTV Deployment SR 429: This project consists of providing all labor, materials, equipment and incidentals necessary to transport, install, test and successfully deploy Closed-Circuit Television Cameras (CCTV) at twelve (12) locations on SR 429 Wekiva Parkway and SR 453 Mount Dora Connector as shown on the Plans in Orange County, Florida. *TWO Amount: $1.18M* (599-527) CFX HQ Building Security System Upgrades: This project consists of providing all labor, materials, equipment and incidentals necessary to perform upgrades to the CFX Headquarters Building Security System including replacing and adding new Security Surveillance Cameras (CCTV) and integrating the existing access system with the CCTV control system in Orange County, Florida. *TWO Amount: $381K* (599-525) Single Line Dynamic Message Sign (DMS) Upgrades: This project consists of the construction of the Single Line Dynamic Message Sign (DMS) Upgrade, including all labor, materials, equipment and incidentals necessary to install a systemwide upgrade. The signs are located above the express tolling lanes at the Authority's mainline toll plazas. Construction also includes the installation of ITS cabinet upgrades and ITS field communications equipment at various toll plaza location in Orange County, FL. *TWO Amount: Amount: $4.6M.* (599-526A & B) Wrong Way Driving Vehicle Detection and Countermeasures Equipment Installation: This project consists of the construction of the Single Line Dynamic Message Sign (DMS) Upgrade, including all labor, materials, equipment and incidentals necessary to install a systemwide upgrade. The signs are located above the express tolling lanes at the Authority's mainline toll plazas. Construction also includes the installation of ITS cabinet upgrades and ITS field communications equipment at various toll plaza location in Orange County, FL. *TWO Amount: $3.2M. CFX Reference: Ben Dreiling, Director of Construction, (407) 690-5000*
02/19 – 10/20	Senior Project Engineer: Systemwide Construction Engineering and Inspection (CEI) Services (Sub to RKK) – Contract No. 001487, Central Florida Expressway Authority: Metric is providing support personnel to perform CEI services on an as-needed, per project basis, for various construction projects in Central Florida as a sub-consultant to Rummel, Klepper and Kahl, LLP. Metric provided staff includes: Senior Project Engineer, Project Administrator, Senior ITS Inspector, Senior Tolling Inspector, ITS Inspector, Tolling Inspector, Electrical Inspector and any others deemed necessary to perform the work. CEI services includes inspection, testing, management, engineering, and verifying proper coordination of all activities as well as documenting significant changes to an assigned project.

16. **Staff Experience:**

Firm employed by	Metric Engineering, Inc.		
Name	Mohammad Akber, PE	Years of relevant experience with this employer	3
Title	ITS Engineer	Years of relevant experience with other employer(s)	6
Degree(s) / Years / Specialization		M.S. / 2014 / Industrial Engineering B.S. / 2011 / Civil Engineering	
Active registration number / state / expiration date		PE #86385 / FL / 2025	
Year registered	2019	Discipline	Civil Engineering

Contract role(s) / brief description of responsibilities	**Contract Role(s): Strategic Plan Development** Mr. Akber currently serves Metric as a Project Administrator on our Systemwide ITS project for the Central Florida Expressway Authority. Additionally, Mr. Akber has been the Engineer of Record and/or an ITS Engineer for several ITS projects, as well as on several of Metric's Continuing Services / Districtwide Contracts. He has a strong background in project management including managing a team of professionals while working on multiple projects, communication with clients, as well as keeping track of project budgets and schedules. He has experience in preparing studies for ITS Master Plans and Traffic Engineering Reports, as well as preparing System Engineering Management Plan (SEMP) and the Concept of Operations (ConOps) documentation. He is also experienced in ITS design and construction services for the placement of ITS devices such as DMS, VDS, CCTV's and more and how to connect these devices to existing systems efficiently. Additionally, he has a strong background in managing and overseeing Joint Use Permits and wind load analysis & testing efforts related to miscellaneous structures to accommodate additional devices through his work at IJUS working under two separate Duke Energy contracts which has been an added benefit to his ITS design projects.
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
12/20 - Present	**Project Administrator: Contract No. 001726 I Systemwide Construction Engineering and Inspection (CEI) Services for Intelligent Transportation Systems (ITS), Lighting and Tolling Projects (2020 - 2023), FDOT Central Florida Expressway Authority:** Metric is providing support personnel to perform CEI services on an as-needed, per project basis, for various ITS construction projects in Orange County, Florida. Metric oversees full consultant construction inspection staff, prepares engineering estimates for extra work, processes contractor's invoices for completed work items, conducts progress meetings, documents as built conditions in final "as-built" plans, interprets contract documents and enforces applicable construction requirements, and reviews construction claims for entitlement. Metric staff is also responsible for the development of CFX's ITS Reference and Training manual which will be utilized to provide training for all of CFX's consultant CEIs. Metric has worked on approximately16 task work orders under this current contract. *Metric has held this contract for two consecutive terms including (2016 – 2020) (2020 – 2023)!*

05/20 - Present	ITS Engineer: Professional Engineering Consultant Services for Development of the Intelligent Transportation Systems Master Plan, (2020 – Present), FDOT Central Florida Expressway Authority: Metric will support CFX by developing an ITS Master Plan by evaluating CFX's current systems to determine future needs and formulate an implementation strategy for the future development and maintenance of the system. Main tasks include: 1) Determine Vision, Goals & Objectives; 2) Document Existing Conditions, Infrastructure & Communication; 3) Identify Transportation Technology Needs and Future Requirements; 4) Identify Applicable Technology Strategies; 5) Identify/Document the Regional ITS Architecture (RITSA); 6) Create a Concept of Operations (ConOps); and, 7) the creation of the overall ITS Master Plan. Metric's final ITS Master Plan will be a comprehensive report that contains all essential technology information, recommendations and a system-wide implementation methodology. The entire project includes heavy stakeholder coordination with local and regional agencies in order to support developing Regional Transportation Partnership Projects which provide a benefit for CFX and adhere to the goals of the CFX Five-Year Strategic Plan. *Mr. Akber worked with the team to prepare Task 1 (Vision, Goals and Objectives) and Task 2 (Existing Conditions and Infrastructure) of the ITS Master Plan*.
05/20 - Present	ITS Engineer: Districtwide TSM&O Studies & Design (2018-2023), FDOT District 5: TSM&O studies, design and preparation of roadway construction plans for proposed miscellaneous improvements within Volusia, Brevard, Orange, Osceola, Seminole, Marion, and Lake Counties. Preparation of a set of contract plans which may include ITS, roadway, signing and pavement markings, signalization, lighting, sidewalk and/or bicycle ways. Other work types include Concept of Operations, Alternative Intersection Study, Hard Shoulder Study, TSM&O Arterial Corridor Studies, Local MPO & TPO Funded Projects, TSM&O Pedestrian & Bicycle Safety Improvements, Transit Signal Priority Studies and Design, Bridge Security Design, Design of DMS, CCTV, Bluetooth, MVDS, and other general TSM&O improvements. ITS Engineer: ITS Expansion Services on SR 3 / Courtney Parkway, FDOT District 5: A Task Work Order under Metric's DW TSM&O Studies & Design (2018-2023) contract, Metric designed the ITS infrastructure sub-system components along the corridor of Courtenay Parkway (SR 3) from Cone Rd to SR 528 in Brevard County, Florida. ITS sub-systems for the project are defined as: extension of fiber optic network system (FON), high resolution traffic signal controllers to support Active Arterial Management (AAM), a high definition video vehicle detection system, a closed-circuit television (CCTV) camera system, a travel-time data collection system for the corridor and Automated Traffic Signal Performance Measures (ATSPM). The design includes detection devices for presence/path and advanced detection on all approaches (minor and major) to gather information for ATSPM. Included ITS, S&PM, and Signalization services. ITS Engineer: ITS Expansion Services on SR 507, FDOT District 5: A Task Work Order under Metric's DW TSM&O Studies & Design (2018-2023) contract, this included ITS design services for SR 507 are between Palm Bay Rd and Apollo Blvd. A 72-strand single-mode (SM) Fiber was installed along the entire corridor in proposed and existing conduit. A Master Hub, with a layer 3 switch, and power service was proposed at the intersection of SR 507 and SR 500. A switch was proposed for all signal cabinets not already on the network. Five CCTV cameras were installed on existing structures within the project limits.

16. **Staff Experience:**

Firm employed by	Metric Engineering, Inc.			
Name	Jonathan Katz, PE		Years of relevant experience with this employer	6
Title	ITS Engineer		Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization			B.S. / 2016 / Civil Engineering	
Active registration number / state / expiration date			PE #91110 / FL / 2025	
Year registered	2023	Discipline	Civil Engineering	
Contract role(s) / brief description of responsibilities	Contract Role(s): TSMO Policy Development and Updates Mr. Katz joined Metric after graduating from UCF with his Civil Engineering degree. Since joining Metric, he has gathered experience creating ITS/TSM&O Master Plans, assisting with design on ITS and signing projects, performing various types of traffic studies, and creating Systems Engineering documents for a wide range of projects, including express lanes and Transit Signal Priority projects.			
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).			
06/21 – Present	ITS/Traffic Engineer Intern: Districtwide TSM&O: ITS & ATMS Consultant, FDOT District 3: This is a TWO-based contract to provide a diversified range of services, including technical and administrative tasks for the Intelligent Transportation System (ITS) and Advanced Traffic Management System (ATMS) programs in District Three. Services are anticipated in all areas of ITS and ATMS, including, but not limited to study, planning, architecture, design, integration, diagnostics, troubleshooting, management, review, evaluation, inspection, engineering, as well as participation in the District's Traffic Incident Management (TIM) Team activities. D3's objective is to provide multilevel priority on-site response to ATMS/traffic signal phasing, timing, coordination, and malfunction issues highlighted by concerned citizens, public officials, and law enforcement personnel.			
01/17 – 01/22	ITS/Traffic Engineer Intern: Continuing Services Contract for Traffic Operations (formally Traffic Signal System Retiming & Traffic Engineering Studies) (2016 – 2021), FDOT District 5: Metric is providing professional transportation, planning, and engineering services for assigned traffic operational/safety studies and plan preparation at hundreds of locations throughout Central Florida. The traffic analysis and conceptual recommendations produced are then used in the development of construction plans, incorporated into traffic operational/safety improvement projects or in the case of traffic signal timing plans, implemented directly into the field. Typical tasks include ITS Design and Integration, Arterial Retiming, Signal Warrant Analysis, Intersection Analysis, Roadway Study, Composite Study, Signal Inspections, Design Survey, Signal and Roadway Plans Design, Subsurface Utility Locating, and Traffic Volume and Classification Counts. *Metric has held this contract for four consecutive terms including (2001 – 2006) (2006 – 2011) (2011 – 2016) (2016 – 2021)!*			
09/19 – Present	ITS/Traffic Engineer Intern: Districtwide Continuing Services - ITS Consultant, FDOT Florida's Turnpike Enterprise: This contract is a Continuing Services contract for ITS Design Services covering multiple areas within the FTE system of toll roads. Services include the development of studies, concepts, design memorandums, and/or construction plans in relation to improving the Turnpike's ITS, including any other incidental elements, including but not limited to: roadway, roadside, structures, signing and			

	pavement markings, traffic operations, lighting, utility relocation, maintenance of traffic, cost estimates, environmental permits, environmental mitigation plans and other incidental items. Central Florida & South Florida DMS Replacements, Florida's Turnpike Enterprise: As a TWO under this DW Continuing Services – ITS Consultant contract, Metric prepared construction plans and a specification package to replace the existing Dynamic Message Signs (DMS) along SR 91, SR 417 (Southern Connector), SR 417 (Seminole Expressway), SR 570 (Polk Pkwy.), and SR 589 (Suncoast Pkwy.) in Central Florida. The same services are provided in South Florida including SR 821 (HEFT), SR 869 (Sawgrass), and SR 91 (Turnpike Mainline). Other services include traffic & crash data, drainage, environmental permitting, roadway, and S&PM improvements. CV Readiness Study & Implementation Plan, Florida's Turnpike Enterprise: Metric was tasked with conducting a CV Readiness assessment for the FTE under Metric's DW Continuing Services ITS Consultant contract. With the FTE's interest in deploying CV technology on its roadway infrastructure, they have requested the assistance of the Metric staff to help them to prepare for the future of CV deployments. As a part of this task, the Metric staff researched and documented the current state of CV technology within the industry and conducted various internal hardware, software and storage needs, security, and staffing proficiency assessments as well as roadway infrastructure evaluations as it pertains to the readiness of FTE to deploy CV technology. All these tasks aid in the development of a short and long-term CV Technical Implementation Plan for FTE. Metric worked with FTE on the identification of key stakeholders and interviewed and worked with the various agencies to identify and document current initiatives, lessons learned, use cases, expected benefits, and more. This assessment was conducted at a national and statewide level.
02/20 – Present	I-4 FRAME System Manager, FDOT District 7: Metric was awarded this project to implement CV technology connecting the Downtown Tampa area to western portions of Orlando. The I-4 FRAME project will deploy an advanced Integrated Corridor Management (ICM) system consisting of next generation traffic incident management, work zone traffic management, road weather alerts, back-of-queue warning, and speed harmonization message systems such as vehicle-to-infrastructure (V2I) via approximately 700 RSUs with DSRC radios and Cellular Vehicle-to-Everything (C-V2X) capabilities. The project is being designed and implemented using the System Manager Approach to ensure design consistency as well as seamless integration with District 1, District 5, District 7, Florida's Turnpike Enterprise, and numerous local agencies. The I-4 FRAME project will cover 77 miles of I-4, 122 miles of other limited-access routes, and signalized arterial roadways with a total of 491 traffic signals. The final products to be submitted include the complete design for each corridor and all signalized intersections within them, the selection of devices, integration, testing and verification.
07/17 – 06/18	ITS Master Plan, River to Sea (R2C) TPO: Metric provided professional services to provide guidance to the TPO for making rational, outcome-driven decisions relating to investment in ITS projects and strategies. The targeted outcome was integrated and coordinated, multi-agency ITS system that maximizes the safety and efficiency of the multi-modal transportation system. The study was built on efforts completed in Phase 1 of the ITS Master Plan and the FDOT District 5 ITS Master Plan. The ITS Master Plan determined ITS mobility and safety needs, identified applicable ITS strategies, developed alternative project concepts, and developed concept requirements to determine the value of each alternative, updated the regional ITS architecture as may be needed to accommodate Volusia and Flagler County, and recommended high value alternatives for development (utilizing Transportation System Management and Operations (TSM&O) principles) based on cost and benefit, to provide a prioritized list of projects sufficiently defined to submit to FDOT for programming in the Department's 5-year Work Program.

16. **Staff Experience:**

Firm employed by	Metric Engineering, Inc.		
Name	Jessica Bloomfield, PE	Years of relevant experience with this employer	20
Title	North Florida Design Manager/Project Manager	Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization		B.S., Civil Engineering, Washington State University (2002)	
Active registration number / state / expiration date		PE #66427 / FL / 02/28/2025	
Year registered	2007	Discipline	Civil Engineering

Contract role(s) / brief description of responsibilities	Contract Role(s): TSMO Strategy and Solutions Projects Ms. Bloomfield currently is Metric Engineering's Area Design Manager for North Florida and serves as a Project Manager and Roadway Engineer. She focuses on all aspects of highway design and planning, as well as drainage design, project management, and utility design and coordination. She has completed 21 RRR projects, four capacity projects, and multiple safety and operational projects. She is also responsible for preparing construction cost estimates and specification packages.
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
10/19 – 07/21	Project Manager: Design Group 20-10: Resurfacing Projects for SR 273 (Campbellton Hwy) from SR 77 (Main St.) to Jackson County Line & SR 10 (US 90/Jackson Ave) from SR 277 (Vernon Hwy) to End of 4 Lane East of Chipley, FDOT District 3: The SR 273 is a milling and resurfacing project consisting of two 12' travel lanes and 5' shoulders in Washington County. The project includes new sidewalks, guardrail upgrades, S&PM plans, drainage modifications, temporary traffic control plans (TTCP), and utility coordination. The SR 10 is also a milling and resurfacing project in Washington County. This roadway consists of a five-lane section with four 10' or 12' travel lanes, as well as paved medians with two-way left turn lanes. This project includes curb and gutter upgrades; guardrail upgrades, pedestrian lighting; S&PM plans; utility coordination; ITS design; sidewalk design; drainage modifications; signalization and reconstructing pedestrian detectors, signal heads and ADA repairs and upgrades, and public involvement. This project requires ROW acquisition for construction.
01/15 – 03/15	Project Manager/Engineer of Record: SR 30 (Business 98) from SR 75 to SR 30A in Bay County, FDOT District 3: This 3R project was 6 miles long downtown Panama City, Millville, Springfield, Parker, and Callaway This project involves ADA upgrades, new sidewalk construction, radius improvements, a new mast arm, guardrail upgrades, signing and pavement marking plans, signalization, 4 miles of ITS Interconnect, and traffic control plans. Coordination efforts included an informal public meeting to describe the proposed construction. Meetings with affected utility owners also took place.
04/14 – 04/16	Project Manager/Engineer of Record/Utility Coordinator: SR 189 (Beal Parkway) at SR 393 (Mary Esther Boulevard) Intersection Improvements in Okaloosa County, FDOT District 3: The project began with preparation of a traffic study to determine the required operational improvements. The design involved widening SR 189 to provide an additional thru lane, additional turn lanes, and bike lanes. Lane widths were minimized, and the existing Right-of-Way was utilized to the fullest extent to minimize

	impacts to property owners and utility owners. The project also involved sidewalk, drainage modifications, MOT, utility coordination, signalization, ITS, S&PM, ADA improvements, and gravity walls.
08/14 – 11/17	Project Manager: SR 292 (Gulf Beach Highway/Barrancas Ave.) from Merritt Street to 3rd Street PD&E Study, Escambia County, FDOT District 3: Served as Project Manager for this PD&E Study and Operational Improvements project. The project involved widening to provide an additional thru lane and bike lanes, sidewalk, right-of-way acquisition, PD&E Study to receive LDCA, and final design plans. The project also included, drainage design, ITS and signalization, signing and pavement marking plans, and ADA improvements.
03/17 – 03/19	Utility Coordinator/Engineer of Record for Utility Adjustment Plans: US 231 (SR 75) from 23rd Street to Pipeline Road and US 231 at CR 2327 (Transmitter Road), FDOT District 3: This multi-laning project involves 6-laning US 231 and widening side streets for operational improvements. Metric's role is to design widening on CR 2327 and provide interim design for the intersection of US 231 at CR 2327, perform utility coordination, ITS design, and signalization design.
12/20 - Present	Engineer of Record (Surface Streets): I-395 / SR 836 / I-95 Reconstruction Design-Build, FDOT District 6: This $802 million Design-Build project, involves three projects being constructed concurrently by the Archer Western-de Moya (AW- dMG) Joint Venture (JV) to minimize impacts to the public. Metric serves as a major design team member for structural, ITS, signals, roadway and drainage elements. *Ms. Bloomfield is the EOR for the surface street portion of the project.*
2015 - 2021	Continuing Services for Design of Minor Projects with Construction Costs Less Than $2,000,000 (2015 – 2021), Seminole County: Task work orders under this contract are limited by construction costs of $2,000,000 or study costs of $100,000. Services include construction plans preparation, environmental, drainage permitting as well as preliminary and final design phases. Projects include but are not limited to: roadway reconstruction, roadway traffic safety projects, sidewalk and bicycle/pedestrian improvements, intersection improvements, stormwater/water quality improvements, stormwater basin studies, traffic signal designs, traffic studies, preliminary engineering studies, ITS services, peer reviews and any miscellaneous design support services. *TWO #5 - SR 434 @ Sand Lake Road*

16. **Staff Experience:**

Firm employed by	Metric Engineering, Inc.			
Name	Juliann Bertone		Years of relevant experience with this employer	2
Title	Director of Long-Term Recovery		Years of relevant experience with other employer(s)	8
Degree(s) / Years / Specialization			M.A. / Global Leadership & Sustainable Development B.S. / Integrated Marketing Communications	
Active registration number / state / expiration date			N/A	
Year registered	N/A	Discipline	Grant Writing Consultant	
Contract role(s) / brief description of responsibilities	Contract Role(s): Grant Application Writing and Support Ms. Bertone has extensive experience in CDBG-DR, cross-cutting federal compliance requirements and development and execution of federally funded programs. She is a quality improvement project leader, who plans and organizes multiple projects, meetings and presentations; creatively collaborates with partners in government, non-profit, for profit, and academic settings to enhance project skill set; conducts data collection and specializes in data driven reports; and easily manages goals, details and scheduling. Juliann is well-versed in training and technical assistance, subrecipient management, program design, and compliance requirements including CDBG-DR and APRA. With demonstrated subject matter expertise in public health and comprehensive disaster recovery, Juliann is well equipped to manage a broad range of disasters. As a graduate of the Regional Institute for Health and Environmental Leadership's Advanced Leadership Program; former member of City of Boulder's Health Advisory Committee; collaborating member of the Colorado Department of Public Health Equity and Environmental Justice steering committee; voting board member of social justice non-profit Hawaii People's Fund; member of Hawaii Food Policy Council think tank; supervisor of graduate level practicum students; and volunteer organizer, Juliann offers unique experience in stakeholder engagement and delivery of community-driven solutions.			
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).			
04/22 – Present	Grant Management Project (CDBG), Terrebonne Parish Consolidated Government, Louisiana (Sub to CSRS): As a subconsultant to CSRS, our Team was selected by Louisiana's Terrebonne Parish Consolidated Government for the Grant Management and Administrative Services For HUD, FEMA and Other Federally Funded Programs contract. MCL will support CSRS by providing program management, grant and project management for disaster recovery funding, planning advisory services, grant writing, reimbursement and closeout activities, compliance maintenance, and guidance for several government aid programs.			
09/21 – Present	Associate Program Manager | COVID-19 Response and Assistance, Unified Government of Wyandotte County and Kansas City, Kansas: The Unified Government of Wyandotte County and Kansas City, Kansas (Unified Government) is a consolidated			

	city/county government that serves all citizens of the City of Kansas City and the County of Wyandotte. In response to the COVID-19 pandemic, ARPA funding was utilized to provide urgent and targeted funding for workers and families. The Unified Government sought assistance in maximizing its ARPA funding opportunities while identifying additional federal and state grants to provide relief to citizens. To expedite their efforts, the Unified Government requested grant discovery, community liaison, and technical government grant writing services to maximize the funds they were allocated. Metric was brought on to identify federal funding opportunities through ARPA, and to collaborate with state agencies to ensure the Unified Government received the maximum amount of funding possible. Metric provides the Unified Government with comprehensive grant management and cost recovery services, including strategic planning, FEMA PA cost recovery, program implementation support, and technical assistance. Metric is also supporting the Unified Government through the creation and operation of an ARPA Small Business Grants Portal, which is using $550,000 of allocated ARPA funds to directly support small businesses within the Unified Government. Metric is providing a Non-Profit Grants Portal, and is writing a $100 million EDA Build Back Better grant submittal, a $2 million EDA travel, tourism, and outdoor recreation grant, a $2 million National Oceanic and Atmospheric Administration (NOAA) education grant, and a second FEMA PA application. To date, Metric has helped the Unified Government receive a $2 million NOAA multi-year education grant. Several other grant applications are pending submittal and/or award.
07/20 – 06/21	Associate Program Manager | COVID-19 SPARK Grant Management Support, Finney County, Kansas: In March 2020, the COVID-19 pandemic was declared a major disaster throughout the U.S. Later that month, Kansas' Governor (Laura Kelly) issued an emergency declaration and authorized the use of state resources and personnel to assist with the pandemic's response and recovery operations through the use of Strengthening People and Revitalizing Kansas (SPARK) grant funds. The allocation of SPARK grant funds opened the door for reimbursement for all eligible public assistance applicants for the County - including nearly 37,000 residents. Metric was retained by Finney County to support grant management and writing for COVID-19 related reimbursements aimed at increasing resiliency by improving the systems that support housing, government access, and public infrastructure. Metric provides Finney County with comprehensive grant management and cost recovery services that cover strategic planning, FEMA PA cost recovery, program implementation support, and technical assistance and training. The strategic planning aspect of the contract covers how to properly utilize different sources of funding, including the State's SPARK grant. The FEMA PA cost recovery portion covers FEMA cost recovery and project application training for Finney County staff. Overall, Metric is managing a grant program that includes $10.9 million in funding. Metric wrote a grant funding request for $1.8 million in new state grants, and launched four separate grant programs. To date, Metric has assisted over 100 households, 29 businesses, and 20 community organizations.

16. **Staff Experience:**

Firm employed by	Intelligent Transportation Systems LLC (ITS LLC)			
Name	Clarke Chauvin, P.E., PTOE, PMP		Years of relevant experience with this employer	6
Title	Traffic Engineer		Years of relevant experience with other employer(s)	3.5
Degree(s) / Years / Specialization			Bachelor of Science / 2013 / Civil Engineering, Louisiana State University	
Active registration number / state / expiration date			P.E.0041770 / LA / Exp. 9/30/23 | PTOE 4337 / Exp. 11/20/2023 | PMP 1812148 / Exp. 11/31/2023	
Year registered	2016 (PE); 2017(PTOE)	Discipline	P.E./Civil, PTOE, PMP	

Contract role(s) / brief description of responsibilities	* Contract Role(s): Strategic Plan Development Clarke has nearly ten years of engineering experience, most of which has focused on complex signal design and intelligent transportation system (ITS) design and maintenance. Clarke currently oversees ITS LLC's work on the ITS Maintenance IDIQ contracts with the Louisiana Department of Transportation and Development (LADOTD). His experience includes system diagnostics and troubleshooting, system testing, management and operations, and systems maintenance. Clarke's varied experiences in design, ITS, and traffic signal design make him an important member of the TSMO program development and implementation.
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
02/16 - present	DOTD ITS Maintenance (44-7102. 44-16811), Statewide Louisiana | Pre-Professional, Engineer. Clarke has served as a pre-professional and now as engineer for the existing ITS Maintenance Retainer. He has performed routine maintenance on emergency crossover gates, travel time message system, CCTV camera sites, RVD sites, ramp meter sites as well as DMS sites. His skills include device troubleshooting, communication and network troubleshooting, parts replacement, site cleaning, insect extermination, traffic control setup, as well as coordinating with law enforcement, TMC operations staff, and DOTD. In addition to setting up monitoring for recent hub site generators, Clarke determined a solution for monitoring all existing generator sites.
07/22 – Present	LADOTD Task Order - Connected & Autonomous Vehicles (C/AV) Team and Working Group Support, Louisiana Statewide: Clarke is serving as ITS LLC's project manager for the firm's portion of this work. The goal of this task order is to bring various practitioners together to begin developing projects, programs, infrastructure, statutes, and other mechanisms necessary to prepare the State of Louisiana for the integration of connected and autonomous vehicles on the state's highways and roadways.
08/15 – 07/19	SASOL Lake Charles Chemical Project – Adaptive Traffic Signal Systems (Westlake) | Signal/ITS Design Engineer. In support of the $8.9 billon ethane cracker chemical plant expansion, Clarke provided signal design support for multiple intersections. His efforts included developing preliminary signal permit plans, developing timing models, conducting field investigations,

	providing quantities, constructability reviews, and signal construction inspection. Additionally, Clarke provided support for the first Adaptive corridor installed in the state of Louisiana. Along Sampson St., an adaptive corridor was implemented and is currently operational. Clarke was involved in the Synchro modeling, TSI documentation, and producing as-built drawings for the system.
02/18 – 07/19	System B (LA 108) Adaptive Traffic Signal Corridor (Westlake) | Project Manager. Clarke was the Project Manager for the implementation of the System B adaptive traffic signal corridor. In addition to allocating IP addresses, configuring devices (both for network communication and signal operation), and managing construction and coordination, Clarke worked to bring an isolated traffic signal into the adaptive system through cellular communication. Clarke worked with DOTD to use a private cellular network to remotely connect to the signal equipment. He configured the cellular modem to allow port forwarding of the devices required for the adaptive system and oversaw the installation and configuration for all of the equipment for these signals. The communication system is currently active and the signals have been integrated into DOTD's adaptive system. Clarke is currently responsible for ongoing maintenance and performance monitoring and has set up network management software to collect performance data and notify ITS LLC and DOTD with issues.
06/18 – 07/19	US 90 Adaptive Corridor (Westlake) | Signal/ITS Design Engineer. Clarke performed network design and construction project management for the US 90 adaptive traffic signal corridor in Westlake, LA. In addition to performing the initial field wireless testing to determine appropriate frequency, power, mounting heights, etc., Clarke designed and allocated IP addresses for the various equipment at these intersections. He programmed controllers, switches, radar detection, and wireless Ethernet radios. The communication system is currently active and the signals have been integrated into DOTD's adaptive system. Clarke is currently responsible for ongoing maintenance and performance monitoring and has set up network management software to collect performance data and notify ITS LLC and DOTD with issues.
03/19 – 04/20	H.012661 D07 FYA – US 171 Adaptive Traffic Signal Corridor (Sulphur) | Project Manager. Clarke served as Project Manager in addition to performing network design, integration, and performance monitoring for the Adaptive traffic signal corridor installed in Sulphur, LA. From initial field wireless testing to device configuration and installation to network and traffic performance monitoring, Clarke was involved in creating a quality project with proven reliability and proven performance. Phasing construction to set up communications prior to the Adaptive turn on in November 2019 allowed ITS LLC to create a baseline for traffic operations to compare against active Adaptive system operation. ITS LLC also utilized NMS software to evaluate the network communications for speed, uptime, and reliability. Performance monitoring for the project is ongoing.

16. **Staff Experience:**

Firm employed by	Intelligent Transportation Systems LLC (ITS LLC)			
Name	Erik Smith, P.E.		Years of relevant experience with this employer	0.2
Title	Project Manager		Years of relevant experience with other employer(s)	27
Degree(s) / Years / Specialization			Bachelor of Science / 1995 / Civil Engineering, Louisiana State University	
Active registration number / state / expiration date			P.E.0029085 / LA / Exp. 9/30/24	
Year registered	2000 (PE)	Discipline	Civil	
Contract role(s) / brief description of responsibilities	* Contract Role(s): 4,5,7 Erik has over 27 years of engineering experience, particularly in the specialty area of Intelligent Transportation Systems (ITS) Maintenance. Prior to joining ITS LLC, Erik had a prosperous career at LADOTD where he managed the ITS Maintenance Section for many years. His extensive knowledge of intelligent transportation systems, traffic management center operations, incident management, and the inner workings of the Louisiana Department of Transportation and Development will be integral to the team for the TMSO program. The relationships he built during his time at LADOTD will enhance the team's ability to communicate effectively as the TSMO program develops and is deployed. Erik will be able to help identify potential challenges and develop solutions in advance to keep the project moving forward. In addition to his experience, Erik also achieved the following certifications related to TSMO: • TSMO Basics (Center for Advance Transportation Technology, School of Engineering, University of Maryland, 2023) • Communicating the Value of TSMO (Center for Advance Transportation Technology, School of Engineering, University of Maryland, 2023) • Integrating TSMO into Your Agency (Center for Advance Transportation Technology, School of Engineering, University of Maryland, 2023) • Introduction to Operations Performance Measures and Management (Center for Advance Transportation Technology, School of Engineering, University of Maryland, 2023) • National Traffic Incident Management Responder Training (Center for Advance Transportation Technology, School of Engineering, University of Maryland, 2023) • TSMO 101: What is this TSMO thing anyway? (Center for Advance Transportation Technology, School of Engineering, University of Maryland, 2023)			
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).			

** Contract Role(s) Legend: 4. CMM Assessments | 5. Strategic Plan Development | 7. TSMO Strategy & Solutions Projects*

06/12 – 03/16	LADOTD ITS Maintenance Statewide (44-2500, H.007026) | Project Manager. Erik served as the Project Manager for LADOTD for the retainer contract. His roles included project management, quality control checks, and site reviews. Reviewed and approved the project management plan, equipment maintenance plan, and traffic control plans.
07/16 - 03/19	LADOTD ITS Management, Operations, and Maintenance Statewide (44-7102, H.011537) | Project Manager. Served as the Project Manager for LADOTD for the retainer contract. Roles included project management, quality control checks, and site reviews. Reviewed and approved the project management plan, equipment maintenance plan, traffic control plans, and performance indicators.
01/20 - 01/23	LADOTD ITS Management, Operations, and Maintenance Engineering and Inspection (ME&I) Statewide (44-16811, H.013868) | Project Manager. Served as the Project Manager for LADOTD for the retainer contract. Roles included project management, quality control checks, and site reviews. Reviewed and approved the project management plan, project communication plan, equipment maintenance plan, traffic control plans, and performance indicators. Erik's knowledge of the ITS from planning, maintenance, operations, and communications has made him a highly valuable asset to the ITS Maintenance team especially his knowledge of the ITS as it was designed and constructed.
01/06 - 01/23	LADOTD ITS Maintenance Program (Louisiana, Statewide) | Program Manager. Erik developed and managed the LADOTD ITS Maintenance Program. In this role he performed extensive research of ITS Maintenance policies and best practices throughout the US. He led a staff of 25 LADOTD employees to perform ITS Maintenance activities statewide on traffic cameras, dynamic message signs, vehicle detectors, queue detection, and emergency crossover gates for traffic incident management. Additionally, he led the maintenance activities statewide on interstate ramp meters for traffic demand management. Erik served as the state's subject matter expert on ITS Maintenance throughout this time.
01/06 - 01/23	LADOTD Telecommunications Program (Louisiana, Statewide) | Program Manager. Erik managed the LADOTD Telecommunications Program. In this role, he performed extensive research of telecommunications policies, products, services, and best practices throughout the US. He led a staff of 25 LADOTD employees to perform telecommunications selection, procurement, installation, and maintenance activities statewide on telephones, radios, fiber optic cable, Ethernet cable, Ethernet routers, Sonet Regens, microwave radio towers, tower buildings, and many other telecommunication devices. Erik planned, deployed, and managed the voice and internet circuits for LADOTD's traffic management centers used for traffic incident management, road weather management, special event management, and traveler information. He planned, deployed, and managed the internet circuits for LADOTD's traffic management centers used for interstate ramp meters for traffic demand management. Erik served as the chair of LADOTD's Infrastructure sub-committee of the Connected and Autonomous Vehicle (CAV) Committee and the state's subject matter expert on communications products, services, and technology throughout this time.
06/08 – 09/09	LADOTD New Orleans Regional Traffic Management Center (Orleans Parish, La) | Project Manager. Erik served as the project manager for LADOTD for the communications, inside and outside plant wiring, video display, and video distribution portions of the TMC construction project. His work on the communications circuits and video display system facilitated the traffic incident management performed by the TMC staff.

16. **Staff Experience:**

Firm employed by	Intelligent Transportation Systems LLC (ITS LLC)			Meets MPR No. 9
Name	Jonathan Fox, P.E., PTOE, PMP		Years of relevant experience with this employer	8
Title	Principal		Years of relevant experience with other employer(s)	13
Degree(s) / Years / Specialization			Bachelor of Science / 2003 / Civil Engineering, Louisiana State University	
Active registration number / state / expiration date			P.E.0033277 / LA / Exp. 09/30/23 | PTOE 2329 / Exp. 11/07/2025 | PMP 1812148 / Exp. 04/27/2024	
Year registered	2007 (P.E.) 2007 (PTOE)	Discipline	P.E./Civil, PTOE	
Contract role(s) / brief description of responsibilities	* Contract Role(s): 6, 7, 8 Jonathan has over 20 years of experience in traffic engineering and intelligent transportation systems. He currently serves as Principal at Intelligent Transportation Systems LLC (ITS LLC). His background includes traffic studies and assessments, traffic signal design, and ITS systems engineering. Jonathan's ITS-related experience includes system diagnostics and troubleshooting, system testing, management and operations, and systems maintenance. Jonathan's varied experiences in design, ITS, traffic engineering, and program management make him an asset to the team managing the TSMO program development and implementation.			
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).			
08/15 – 07/19	SASOL Lake Charles Chemical Project – Adaptive Traffic Signal Systems (Westlake) | Lead Traffic Engineer. Jonathan was the lead traffic engineer on new traffic signal designs, upgrades, communication design, and integration. He oversaw developing traffic signal plans, simulation models, communication layouts, network design, surveillance, travel time management, and permit applications. Six of these intersection upgrades were integrated by Jonathan's team as the first Adaptive Traffic Signal System deployed in the state of Louisiana (System A). Jonathan has overseen the design, implementation and integration of the Sasol System B (LA 108 signal corridor) as well as LA 27 (Beglis Rd.) @ LA 379 (Houston Rive Rd.). These were constructed and the adaptive functionality was turned on in July of 2019. These intersection designs used stop bar and setback radar detection as well as wireless and cellular communications. Efforts for Sasol also included design and construction support for a temporary traffic signal on Old Spanish Trail at Prater Road.			
06/18 – 07/19	US 90 Adaptive Corridor (Westlake) | Project Manager & Design Lead. Jonathan has served as the project manager and overall design lead for the US 90 adaptive traffic signal corridor in Westlake, LA. Designs included preparing updated traffic signal inventory (TSI) forms as well as communications support of two isolated traffic signals. Equipment included in the design consisted of new radar detection and unlicensed wireless communications. Jonathan oversaw the integration of the intersections into the adaptive system in Lake Charles			

** Contract Role(s) Legend: \| 6. TSMO policy Development & Updates \| 7. TSMO Strategy & Solutions Projects \| 8. Funding and B/Cost Analysis*

06/18 – 07/19	US 90 Adaptive Corridor (Westlake)	Project Manager & Design Lead. Jonathan served as the project manager and overall design lead for the US 90 adaptive traffic signal corridor in Westlake, LA. Designs included preparing updated traffic signal inventory (TSI) forms as well as communications in support of two isolated traffic signals. Equipment included in the design consisted of new radar detection and unlicensed wireless communications. Jonathan oversaw the integration of the intersections into the adaptive system in Lake Charles.
12/14 – Present	DOTD ITS Maintenance (44-2500, 44-7102. 44-16811) (Statewide)	Supervisor Engineer. Served as supervisor engineer for ITS LLC under the existing ITS Maintenance Retainer contract. Roles include project management support, quality control checks, site reviews, as well as investigating options and developing concepts to improve sites. Jonathan's knowledge of the ITS from planning through operations has made him a highly valuable asset to the ITS Maintenance team especially his knowledge of the ITS as it was designed and operated.
2007 – 2010	I-12 Ramp Metering Design and Implementation (East Baton Rouge Parish)	Engineer. Jonathan provided signal layout design support, quality control and fiber optic communications design for 16 ramp meters in the Baton Rouge area, including plan layouts, fiber allocations, and technical specification. He also handled construction administration, fiber inspection, fiber test review, and integration coordination. This was the first implementation of ramp metering in the state.
10/12 – 12/14	Baton Rouge ITS Phase 3 (Baton Rouge)	Project Manager & Design Lead: Jonathan oversaw the System Engineering Analysis (SEA) document for the project in compliance with the FHWA Rule (23 CFR Part 940.11) to determine project scope and analyze implementation constraints including minimizing the impact of construction on the traveling public and using existing fiber optic communications. Several ITS deployments projects were solely focused on the core urban area, leaving gaps. The solution to meet the LADOTD's goal of the Baton Rouge ITS Phase 3 project was to supplement the area with 16 additional closed circuit television video cameras, 5 dynamic message sign sites, 1 HUB site, 30 Bluetooth detection sites, 1 travel time message sign (first in the state), and 8 ramp meters that cover five parishes over 50 miles to help with blind areas. He led the development of the plan set from conception to Final Plans.

16. **Staff Experience:**

Firm employed by	Intelligent Transportation Systems LLC (ITS LLC)		
Name	Kimberly D. McDaniel, P.E., PTOE, PTP	Years of relevant experience with this employer	0.5
Title	Principal | Chief Executive Officer	Years of relevant experience with other employer(s)	19
Degree(s) / Years / Specialization		Bachelor of Science / 2003 / Civil Engineering, Louisiana Tech University Master of Science / 2005 / Civil Engineering, Wayne State University	
Active registration number / state / expiration date		P.E.0032973 / LA / Exp. 9/30/23 | PTOE 2072 / Exp. 10/02/2025 | PTP 802 / Exp. 03/14/2025	
Year registered	2007 (PE); 2007 (PTOE); 2022 (PTP)	Discipline	P.E./Civil, PTOE, PTP
Contract role(s) / brief description of responsibilities	* Contract Role(s): 2, 4, 5, 6, 7, 10 Currently serves as Principal and Chief Executive Officer for Intelligent Transportation Systems LLC (ITS LLC). Most of her 20 year career has been spent in the private industry as an engineering consult; however, she served six years in public service at the Louisiana Department of Transportation and Development. While at LADOTD, Kimberly played a lead role in the development of state laws (Revised Statutes), policies, and programs related to Access Management, Traffic Impacts, and Complete Streets. All of these required extensive coordination with a variety of internal LADOTD stakeholders, as well as external elected officials, municipalities, private developers, and the general public. Kimberly spent much of that time traveling the state and working with stakeholders in both the development of these policies and programs as well as educating stakeholders on the implementation of such. Her experience integral in these processes make her a key asset to this team for the development and implementation of a TSMO program in Louisiana.		
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).		
10/08 – 08/14	LADOTD Access Management Program, Louisiana Statewide | Engineer VI: Kimberly developed and managed the LADOTD Access Management Program. In this role, she performed extensive research of access management policies and best practices throughout the US. Kimberly led multiple focus groups and policy development teams consisting of LADOTD employees, consulting engineers, commercial developers, residential developers, real estate agents, attorneys, municipal employees, and elected officials from around the state to develop a policy for LADOTD which would regulate the granting of access to state highways. The policy was adopted as Louisiana Administrative Code Title 70, Part I, Chapter 15. Kimberly authored the Access Connections Policy, a document expanding the criteria of the code. She developed training courses for DOTD employees, consultants, contractors, real estate professionals, and elected officials and conducted trainings throughout the state of Louisiana. Kimberly served as the state's Subject Matter Expert on Access Management throughout this time.		

** Contract Role(s) Legend: 2. Project Management & Program Assistance \| 4. CMM Assessments \| 5. Strategic Plan Development \| 6. TSMO Policy Development & Updates \| 7. TSMO*

06/12 – 08/14	LADOTD Traffic Impacts Policy & Program, Louisiana Statewide	Engineer VI: Kimberly assisted with the development of a revised Traffic Impacts Policy to be used throughout the state for studies related to commercial or large-scale residential development. The program was integral to the success of the Access Management Program as it sought to outline the requirements to study the potential traffic impacts of proposed developments and determine effective mitigation strategies for the additional traffic. Denials of these studies at the District level were also appealed to the Access Management & Traffic Impacts Appeals Board which Kimberly chaired. Kimberly coordinated traffic impact reviews with LADOTD District and Headquarters staff.
2009-2014	LADOTD Complete Streets Work Group, Louisiana Statewide	Engineer VI: Kimberly served on the Complete Streets Work Group for LADOTD representing the Traffic Engineering Management Section. The main goal of the task force was to research and evaluate best practices in the area of complete streets and to use that information to develop a Complete Streets Program for the Louisiana Department of Transportation and Development. A final report of the work group was published in July 2010, but Kimberly remained on the work group as policies and other program elements were developed until her departure from LADOTD in September 2014.
07/22 – Present	LADOTD Task Order - Connected & Autonomous Vehicles (C/AV) Team and Working Group Support, Louisiana Statewide	Policy Development: Kimberly is assisting with the policy development part of the Connected & Autonomous Vehicles Team. The goal of this task order is to bring various practitioners together to begin developing projects, programs, infrastructure, statutes, and other mechanisms necessary to prepare the State of Louisiana for the integration of connected and autonomous vehicles on the state's highways and roadways.
07/22 – Present	Contract for Replacement of 16 Bridges District 08, Northern Louisiana	Principal: Kimberly is serving as the Principal for this project. The project includes the replacement of 16 rural bridges in northeast Louisiana. Kimberly is leading a team to develop Traffic Management Plans to be used to maintain or detour traffic during construction. For some of the bridge replacements, the Traffic Management Plan will employ the use of a temporary traffic signs, and others will utilize a temporary bypass roadway.
10/08 – 08/14	LADOTD Access Management Program, Louisiana Statewide	Engineer VI: Kimberly developed and managed the LADOTD Access Management Program. In this role, she performed extensive research of access management policies and best practices throughout the US. Kimberly led multiple focus groups and policy development teams consisting of LADOTD employees, consulting engineers, commercial developers, residential developers, real estate agents, attorneys, municipal employees, and elected officials from around the state to develop a policy for LADOTD which would regulate the granting of access to state highways. The policy was adopted as Louisiana Administrative Code Title 70, Part I, Chapter 15. Kimberly authored the Access Connections Policy, a document expanding the criteria of the code. She developed training courses for DOTD employees, consultants, contractors, real estate professionals, and elected officials and conducted trainings throughout the state of Louisiana. Once implemented, she chaired and managed the Access Management & Traffic Impacts Appeals Board, coordinating appeals submitted by landowner/developer applicants whose requests for access were denied by the District. Kimberly served as the state's Subject Matter Expert on Access Management throughout this time.

16. **Staff Experience:**

Firm employed by	Grey Engineering, LLC			
Name	April Renard, P.E., PTOE, RSP2I		Years of relevant experience with this employer	< 1
Title	Principal & Owner		Years of relevant experience with other employer(s)	16
Degree(s) / Years / Specialization			Bachelor of Science / 2006 / Civil Engineering	
Active registration number / state / expiration date			PE #35660 / LA / 09/30/2024 PTOE #3905 / US / 07/21/2024 RSP2 & I / LA	
Year registered	2010	Discipline	Civil Engineer	
Contract role(s) / brief description of responsibilities	* Contract Role(s): 4,5,6,7,10 Safety and Complete Streets Subject Matter Expert			
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).			
02/23 – present	City of Central Pavement Management Plan: Ms. Renard is the lead program manager for the City of Central's Pavement Management Plan. This includes developing policy level decision-making tools using data-driven approaches and objective project prioritization criteria and institutionalizing these tools within the City's regular operating procedures. Once implemented, these policy and programmatic changes withstand political cycles and remove subjectivity from the process so that tax dollars are spent fairly on Central's locally owned roadway network.			
06/22 – Present	Town of St. Francisville's Commerce Street Betterment Project: Ms. Renard is the lead engineer for the redesign of Commerce Street. The scope of the project includes narrowing the travel lane widths, installing wide sidewalks and new curbs, constructing raised crosswalks, providing angled on-street parking near the park's entrance, and retrofitting the catch basins with biofiltration beds.			
10/22 – Present	BREC Dawson's Creek Trail and Health Loop: Ms. Renard is the lead engineer for developing the conceptual layouts of the proposed health loop, connecting the Dawson's Creek Trail at Perkins Road Community Park to Ward's Creek Trail. This includes conducting on-site assessments of proposed trail segments and establishing the servitude limits for the proposed trail location.			
10/20 – 9/21	City of Baton Rouge & Parish of East Baton Rouge MOVEBR Capacity Program Complete Streets Lead: Ms. Renard served as the Subject Matter Expert on Complete Streets by reviewing all design studies, project design reports, and preliminary plans to ensure pedestrians, bicyclist, and transit users of all ages and abilities are provided reasonable and appropriate facilities given a project's context. Ms. Renard also led the development of standard street cross sections that were adopted into the			

** Contract Role(s) Legend: I 4. CMM Assessments I 5. Strategic Plan Development I 6. TSMO policy Development & Updates I 7. TSMO Strategy & Solutions Projects I 10. Engagement, Outreach & Stakeholder Training*

	MOVEBR Design Guidelines to improve walkability, bikability, ADA compliance, transit accommodations, calm traffic, mitigate stormwater runoff impacts, and improve water quality. She also produced and hosted a MOVEBR Design Guidelines workshop.
10/20 – Present	City of Baton Rouge & Parish of East Baton Rouge MOVEBR US 61/Scenic Highway Enhancement Project (LA 408/Harding Boulevard to Swan Avenue): Ms. Renard is the project lead for the Scenic Highway Survey and Preliminary Design, developing existing plan and profile sheets, determining feasible typical sections and intersection geometry given constrained Right-of-Way and limited budget. Her work involves coordinating with various stakeholders within the community, the MOVEBR Program Management Team, and LADOTD representatives while producing technical concepts to address the purpose and need of the project. Concepts include ADA compliant sidewalks, bike lanes, traffic calming countermeasures, transit stop improvements, and green infrastructure (e.g. biofiltration swales and curb extensions).
7/19 - 10/20	City of Baton Rouge & Parish of East Baton Rouge MOVEBR Project Manager	CSRS, Inc.: In the early phases of MOVEBR, Ms. Renard created the data-driven prioritization schema of MOVEBR projects and led the collection and processing of the data to produce the first tier of prioritized projects. Ms. Renard also developed the MOVEBR federal funding strategy matrix for pursuing federal funds for eligible projects. After the overall program strategy was developed, Ms. Renard served as a Project Manager for 6 MOVEBR Capacity Program projects (Midway, Constantin/Dijon, Old Hammond Highway Segment 1, Old Hammond Highway Segment 2, Harding at I-110 Interchange, Ardenwood-Lobdell Connector), which included coordinating all aspects of project delivery (e.g. traffic analysis, environmental permitting, state and federal agency requirements, design, Right-of-Way acquisition, utility coordination) for reducing project delivery time (schedules are managed in Primavera P6).
09/14 - 07/19	LADOTD Highway Safety Manager: Ms. Renard was responsible for the development and implementation of **Louisiana's Strategic Highway Safety Plan** in coordination with the Federal Highway Administration. She provided direction to staff on the State's safety data analysis processes for identifying potential Highway Safety Improvement Program projects (23 U.S.C. 148). Ms. Renard provided guidance across disciplines on **data-driven safety considerations within LADOTD's project delivery process** and led the **Complete Streets Policy implementation** activities for Louisiana. This included development of a **statewide Complete Streets Introductory training** for all LADOTD employees. Other projects included the management of the East Baton Rouge Parish Bicycle and Pedestrian Masterplan contract, oversight of the Local Road Safety Program in coordination with the Louisiana Local Technical Assistance Program (LTAP) Office, and the **creation and administration of the first-of-its-kind Safe Routes to Public Places Program**. While a LADOTD employee, Ms. Renard represented the State on the AASHTO Task Force for the Second Edition of the Highway Safety Manual and served as an expert witness concerning protected safety data.
02/10 – 09/14	LADOTD Highway Safety Engineer: In her position, Ms. Renard managed consultant contracts for feasibility studies, developed a **Road Safety Assessment report template and process**, **developed safety study guidelines for Transportation Management Plans**, served on the State's Work Zone Task Force, **conducted training and provided technical assistance for highway safety analytical tools**, and conducted high-profile engineering studies (e.g. Statewide Cable Median Barrier Study, LA 10 Task Force study)

16. **Staff Experience:**

Firm employed by	Bonton Associates			
Name	LaDarien Beene, PE, PTOE		Years of relevant experience with this employer	1
Title	Project Manager		Years of relevant experience with other employer(s)	8
Degree(s) / Years / Specialization			BS / 2013 / Civil Engineering	
Active registration number / state / expiration date			Professional Engineer / 45333 / Louisiana / 09/30/23	
Year registered	2021 (PE, PTOE)	Discipline	Civil	
Contract role(s) / brief description of responsibilities	* Contract Role(s): 4,5,8 LaDarien specializes in managing and overseeing transportation projects, with an emphasis on road design, traffic analysis, and data collection. He is adept at applying AASHTO, ADA, PROWAG, MUTCD, LADOTD, and MOVEBR guidelines and compliance to all design projects. He also has extensive knowledge analyzing safety conditions to identify safety countermeasure recommendations for preliminary and final design plans. He brings a unique understanding of LADOTD's processes and procedures from his 8 years as a traffic engineer with the Department. His training includes: • NHI Course No. 142005 "NEPA and the Transportation Decision-making Process" and • LADOTD Traffic Engineering Process & Report (Modules 1-3). • ATSSA Traffic Control Design Supervisor			
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).			
04/21 – 03/22	Evangeline St. (West) Area ADA Transition (20-EN-HC-0061), Baton Rouge, LA. City of Baton Rouge. Project Manager. Manage project delivery team to develop design plans (Preliminary and Final) for proposed ADA barrier improvements (sidewalk repair/replacement, curb, and gutter, handicap ramps, crosswalks, etc.), site plan details, special provisions, repair schedule, and cost estimates in support of the MOVEBR Program.			
11/22 – Present	Ardenwood-Lobdell Connector Design (20-CP-HC-0017), Baton Rouge, LA. City of Baton Rouge. Project Manager. Manage Final Design of a new connector road within the proposed Ardendale development. The proposed section is an urban/walkable two-lane road with pedestrian accommodations to improve traffic capacity, pedestrian connectivity, safety, and access management. Work includes preparing horizontal and vertical geometry, drainage analysis, drainage design, design drainage maps, green infrastructure analysis and design, earthwork modeling, design surface modeling, quantities, and engineering calculations.			
08/21 – 12/22	LA73: US 61 (Airline)-Essen Lane (H.010652.5: LA 73), Baton Rouge, LA. LADOTD. Project Manager. Manage the preparation of design plans (Preliminary and Final) for roadway rehabilitation, sidewalk repair, curb-gutter repair/replacement, and installation of ADA facilities in compliance with LADOTD design and PRR safety guidelines.			

** Contract Role(s) Legend: 4. CMM Assessments | 5. Strategic Plan Development | 8. Funding and B/Cost Analysis*

09/21 – Present	S. Harrell's Ferry Rd. Multi-Use Path (20-EN-HC-0028), Baton Rouge, LA. City of Baton Rouge. Project Manager. Manage the preparation of design plans (Preliminary and Final) for a multi-use path, ADA compliant facilities, and striping modifications to increase pedestrian and bicycle mobility along S. Harrell's Ferry Rd. and connectivity to existing sidewalks in support of the MOVEBR Program.
07/21 – 03/22	Fairfields Ave. Area ADA Transition (20-EN-HC-0053), Baton Rouge, LA. City of Baton Rouge. Project Manager. Manage the project delivery team to develop design plans (Preliminary and Final) for proposed ADA barrier improvements (sidewalk repair/replacement, curb-gutter, handicap ramps, crosswalks, etc.), site plan details, special provisions, repair schedule, and cost estimates in support of the MOVEBR Program.
04/21 – 11/21	Fuqua St./Gracie St. Area ADA Transition (20-EN-HC-0052), Baton Rouge, LA. City of Baton Rouge. Project Manager. Managed the preparation and delivery of design plans (Preliminary and Final) for proposed ADA barrier improvements (sidewalk repair/ replacement, curb-gutter, handicap ramps, crosswalks, etc.), site plan details, special provisions, repair schedule, and cost estimates in support of the MOVEBR Program.
11/17 – 11/18	LA 3002 (S. Range Avenue) Proposed Safety Improvements (H.011645), Denham Springs, LA. LADOTD. Lead Engineer. Conducted analysis study to identify and provide recommendations for access management/safety improvements along S. Range Avenue to be carried forward into preliminary and final design plans. Design plans developed to implement raised median and other low-cost safety and access management measures along LA 300 to support modifying the two-way left turn lane to allow dedicated left turns, signal retiming, driveway closure, and adding bulb-outs for U-turns. The project is approximately 1.04 miles in length.

16. **Staff Experience:**

Firm employed by	Bonton Associates			
Name	Marcus Bonton, PE		Years of relevant experience with this employer	2
Title	Principal, Transportation		Years of relevant experience with other employer(s)	12
Degree(s) / Years / Specialization			BS / 2008 / Civil Engineering	
Active registration number / state / expiration date			Professional Engineer / 40389 / Louisiana / 09/30/24	
Year registered	2016	Discipline	Civil	

Contract role(s) / brief description of responsibilities	* Contract Role(s): 5,7,8 Marcus has 14+ years of experience in implementing strategy, development, management, and delivery of **transportation**, **civil design**, **planning** solutions. He has managed and supervised transportation projects and design tasks for design studies, LADOTD Stage 0, **roundabout design, corridor design, corridor modeling, access management, pavement rehabilitation/PRR, safety, pedestrian facility, and ADA compliance** design. His Training Certifications include: • NHI Course No. 142005 "NEPA and the Transportation Decision-making Process" • ATSSA Traffic Control Design Supervisor • Highway Safety Manual • LADOTD Traffic Engineering Process & Report (Modules 1-3) • NE Roundabouts Level 1 & 2 Training
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
11/22 – Present	Ardenwood-Lobdell Connector Design (20-CP-HC-0017), Baton Rouge, LA. City of Baton Rouge. Principal/Technical Lead. Responsible for the Quality Assurance/Quality Control of the Final Design deliverables for the new connector road within the proposed Ardendale development. The proposed section is an urban/walkable two-lane road with pedestrian accommodations to improve traffic capacity, pedestrian connectivity, safety, and access management. Work includes preparing horizontal and vertical geometry, drainage analysis, drainage design, design drainage maps, green infrastructure analysis and design, earthwork modeling, design surface modeling, quantities, and engineering calculations.
08/21 – 12/22	LA 73: US 61 (Airline)-Essen Lane (H.010652.5: LA 73), Baton Rouge, LA. LADOTD. Principal/Technical Lead. Responsible for providing technical oversight and QA/QC of design plans for roadway rehabilitation, sidewalk repair, curb gutter repair/replacement, ADA facilities in compliance with LADOTD design and PRR safety guidelines.
08/21 – 12/22	Fairfields Ave. Area ADA Transition (20-EN-HC-0053), Baton Rouge, LA. City of Baton Rouge. Principal/Technical Lead. Responsible for QA/QC and the development of design plans (preliminary and final) for proposed ADA barrier improvements (sidewalk repair/replacement, curb, and gutter, handicap ramps, crosswalks, etc.), site plan details, special provisions, repair schedule, and cost estimates in support of the MOVEBR Program.

** Contract Role(s) Legend: 5. Strategic Plan Development I 7. TSMO Strategy & Solutions Projects I 8. Funding and B/Cost Analysis*

09/21 – Present	S. Harrell's Ferry Rd. Multi-Use Path (20-EN-HC-0028), Baton Rouge, LA. City of Baton Rouge. Principal/Technical Lead. Provided technical oversight and QA/QC for the preliminary and final design plans for a multi-use path, ADA compliant facilities, and striping modifications to increase pedestrian/bicycle safety, mobility, and connectivity to existing sidewalks in support of the MOVEBR Program.
11/22 – Present	Ardenwood-Lobdell Connector Design Study (20-CP-HC-0017), Baton Rouge, LA. City of Baton Rouge. Project Manager. Managed the preparation and completion of the project design study in support of the MOVEBR Program. The study included proposed line and grade alternatives, intersection improvements, access management, bicycle lanes and sidewalks, roadway widening, pedestrian facility design and safety measures, drainage, green infrastructure, pond site analysis, and exhibits.
11/19 – 12/20	Marlyville-Fontainebleau Group E (RR120), New Orleans, LA. City of New Orleans. Project Manager. Managed preparation and submittal of design plans and specifications for full-depth roadway replacement, sidewalk/curb ramps repair, subsurface drainage, water, sanitary sewer design, and driveways adjustments under the Joint Infrastructure Program (JIRR).
01/16 – 03/17	LA 182 New Iberia Preservation and Sidewalks Stage 0 Feasibility Study (H.012295.1), Iberia Parish, LA. LADOTD. Project Designer. Assisted in developing alternatives to provide ADA compliant curb ramps, driveway crossings, crosswalk locations, access management, evaluation of pedestrian and bicycle safety considerations, and traffic control improvements along LA 182 that follow LADOTD design guidelines, which had similar features to what would be required for the Jimmie Davis Bridge Replacement. Any necessary utility relocations were also identified.
05/15 – 02/17	Vine Street Corridor Stage 0 Feasibility Study (H.011358.1), St. Landry Parish, LA. LADOTD. Project Designer. Supported the development of alternatives to evaluate the resolution of roadway geometry and clear zone inadequacies. As part of the Study, design criteria, typical sections, subsurface Utility Engineering (SUE) findings and exhibits, roadway safety improvements, existing pedestrian facilities, cost estimates, ROW, environmental impacts, and social impacts were evaluated taken into consideration. LADOTD Stage 0 Checklists were also completed. The evaluation results were presented in a Stage report document and project conceptual layout exhibits in compliance with LADOTD guidelines.

16. **Staff Experience:**

Firm employed by	Franklin Associates, LLC			
Name	Johnathan Hill		Years of relevant experience with this employer	4
Title	Advisory Services Practice Lead		Years of relevant experience with other employer(s)	15
Degree(s) / Years / Specialization			Ph.D. / In Progress / Organizational Leadership MA / 2016 / Ministry BS / 2008 / Business Management	
Active registration number / state / expiration date			N/A	
Year registered	N/A	Discipline	N/A	
Contract role(s) / brief description of responsibilities	* Contract Role(s): Engagement, Outreach & Stakeholder Training Public Engagement Lead – coordinate and design implementation plan, supervise engagement implementation and documentation			
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).			
12/18 – 09/19	LSU Campuswide Facilities Assessment – coordinated engagement among 500+ stakeholders, developing and coordinating focus groups, facilitating the procurement of human capital data and development of continued communications to and from various stakeholder groups throughout the process.			
12/19 – 04/23	Lead for communications/outreach and business outreach engagement on East Baton Rouge Parish's capacity improvements efforts (MOVEBR), inclusive of more than 30 independent infrastructure improvement projects.			
09/19 – 12/19	Developed deep analysis on 36-year engagement plan tied to first Louisiana transportation public-private partnership			
12/19 – 04/23	Managed team deployed to coordinate PIO role on state's first public-private transportation partnership (Belle Chasse Bridge)			
03/17 – 10/18	Served as liaison for nine statewide regional traffic safety coalitions, managing more than $1M in NHTSA grants			

16. **Staff Experience:**

Firm employed by	Franklin Associates, LLC			
Name	James Taylor, AICP		Years of relevant experience with this employer	12
Title	Planner, Senior Project Manager		Years of relevant experience with other employer(s)	20
Degree(s) / Years / Specialization			MS / 1996 / Landscape Architecture BS / 1989 / Horticulture AICP	
Active registration number / state / expiration date			AICP #0221110 American Institute of Certified Planners	
Year registered	2006	Discipline	N/A	
Contract role(s) / brief description of responsibilities	* Contract Role(s): Engagement, Outreach & Stakeholder Training Public Engagement Design and Implementation – coordinate and design implementation plan, engagement implementation and documentation			

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
04/15 – 04/23	I-10 Widening/Baton Rouge (Stage 0, Stage 1, Design/Build) – engagement lead
08/11 – 04/23	I-49 Inner City Connector (Stage 0, Stage 1) – engagement lead
	Move Ascension Transportation Plan and Deployment – engagement lead
02/22 – 04/23	Mississippi River Bridge South (LA 1 to LA 30) Pre-NEPA study – engagement lead

Section 17

Firm Experience

17. Firm Experience:

Firm name	metric		Past Performance Evaluation Discipline(s)*	ITS / Traffic	
Project name	Districtwide TSM&O: ITS & ATMS Consultant Contract Terms: (2016 – 2021) & (2021 – 2026)		Firm responsibility (prime or sub?)	Prime	
Project number	CAE29	Owner's name	Florida Department of Transportation (FDOT) District 3		
Project location	FDOT District 3		Owner's Project Manager	Amy DiRusso	
Owner's address, phone, email	1074 Highway 90, Chipley, FL 32428 / (850) 330-1241 / amy.dirusso@dot.state.fl.us				
Services commenced by this firm (mm/yy)	11/21		Total consultant contract cost ($1,000's)	$1,500 (2016 – 2021) $1,500 (2021 – 2026)	
Services completed by this firm (mm/yy)	Ongoing		Cost of consultant services provided by this firm ($1,000's)	$889.82* (2016 – 2021) $712.29* (2021 – 2026) (*Task Order totals as of 4/3/2023)	

Key Staff Involved: Dale Cody, PE, PTOE, Jessica Knox, PE, PTOE, Rolando Ramirez, PE, Renata Leach, PE, EE, Craig Carnes, Demetrius Lewis, Ricardo Gonzalez, PE, and Josh Reichert, PE

Relevant Services

- Project Management & Program Assistance
- Strategic Plan Development
- TSMO Policy Development and Updates
- TSMO Strategy and Solution Projects
- Performance Measures
- Stakeholder Training
- Benefit-Cost Analysis

Metric provides professional engineering services for Intelligent Transportation System (ITS) and Advanced Traffic Management System (ATMS) services on a Task Work Order (TWO) basis for District 3's ITS/ATMS programs. These TWO are focused on ITS/ATMS/CAV, planning, research, studies, and design support; project management; integration, operations and maintenance support; communication and network support services; and participation in D3's Traffic Incident Management (TIM) Team activities. District 3's objective is to provide multilevel priority on-site response to ATMS/traffic signal phasing, timing, coordination, and malfunction issues highlighted by concerned citizens, public officials, and law enforcement personnel. *Metric has held this contract for two consecutive terms including (2016-2021) (2021-2026)!* Select TWOs include:

- ITS Master Plan Continuing Services: Metric is performing the tasks associated with developing a Master Plan for District 3. This includes maintaining coordination with stakeholders and maintaining agencies, performing additional analyses to support the selection of specific Master Plan projects.
- Districtwide Active Work Zone Management Support: Metric is performing tasks related to the implementation of a districtwide Active Work Zone Management (AWZM) plan and Smart Work Zones (SWZs) within the district. The team will help the district convert existing portable changeable message signs to "smart" signs with equipment upgrades and ensuring compatibility with SunGuide®. Metric will also assist the district in selecting two specific construction projects to implement SWZs on and developing plans and specifications for it.

17. Firm Experience:

Firm name	metric		Past Performance Evaluation Discipline(s)*	ITS / Traffic	
Project name	Transportation System Management & Operation (TSM&O) Engineering Analysis and Minor Design – Continuing (2021 – 2026)		Firm responsibility (prime or sub?)	Prime	
Project number	CAD13	Owner's name	Florida Department of Transportation (FDOT) District 7		
Project location	FDOT District 7		Owner's Project Manager	Megan Arasteh, PE	
Owner's address, phone, email	11201 N. McKinley Dr., Tampa, FL 33612 / 813-415-4623 / Megan.Arasteh@dot.state.fl.us				
Services commenced by this firm (mm/yy)	05/21		Total consultant contract cost ($1,000's)	$5,000	
Services completed by this firm (mm/yy)	05/26		Cost of consultant services provided by this firm ($1,000's)	$857.29 (*TWO totals as of 4/3/2023)	

Key Staff Involved: Dale Cody, PE, PTOE, Charles Stratton III, Rolando Ramirez, PE, Jessica Knox, PE, PTOE, Edward Grant IV, Penny Kamish, Renata Leach, PE, EE, Josh Reichert, PE, Chris Dew, PE, PTOE, Mohammad Akber, PE, Ricardo Gonzalez, PE, Jonathan Katz, PE, Craig Carnes, Demetrius Lewis, Eric Wyllins, CVP, and Jessica Bloomfield, PE

Relevant Services

- TSM&O Policy Development and Updates / Strategy and Solution Projects
- Project Management & Program Assistance
- Coordination Meetings & Reporting
- Engagement, Outreach, and Stakeholder Training

Metric was awarded this contract to provide a range of engineering, planning and technical services to establish and support the Transportation System Management and Operations (TSM&O) program within FDOT District 7. The objective of this contract is to maximize efficiency of transportation systems by focusing on mobility outcomes, such as travel time reliability. There will be a performance driven approach for solving arterial congestion and traffic problems in which Intelligent Transportation Systems (ITS) is utilized to locate and correct congestion causes in real-time. Task Work Orders will be assigned by District 7 related to technical support, strategic planning, studies and conceptual plans, deployment of ITS components and public involvement. Select Task Work Orders include:

- TSM&O Program Support (including TSM&O Master Plan): Tasks include the development of the TSM&O Master Plan for the District. This includes TSMO/ITS/ATMS planning, research, and study support services, conducting research for existing and future ITS/ATMS deployments, preparing cost estimates for deployments, which includes life-cycle cost analyses and operational costs. Other tasks include preparing or conducting conceptual deployment studies to help guide operation and maintenance of projects. Signalization warrant and justification studies, lane closure analysis, and cost feasibility studies. Evaluating the feasibility of the Arterial Management Program (AMP) corridor recommendations and examining all work program projects and develop "goes with" TSM&O projects based on solutions from the AMP and TSM&O Master Plan concepts and solutions.

17. Firm Experience:

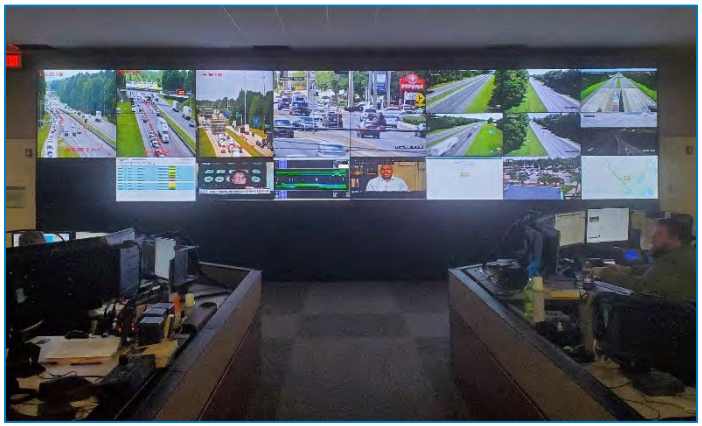
Firm name	metric		Past Performance Evaluation Discipline(s)*	ITS / Traffic	
Project name	Continuing Services Contract for Integrated Corridor Management (ICM) - Freeway/Arterial – Operations (2017 – 2022) & (2021 – 2026)		Firm responsibility (prime or sub?)	Prime	
Project number	CAG21	Owner's name	Florida Department of Transportation (FDOT) District 5		
Project location	FDOT District 5		Owner's Project Manager	Jeremy Dilmore, PE	
Owner's address, phone, email	719 S. Woodland Blvd., DeLand, FL 32720 / (386) 943-5360 / Jeremy.dilmore@dot.state.fl.us				
Services commenced by this firm (mm/yy)	09/17	Total consultant contract cost ($1,000's)	$15,000 (2017 – 2022) $20,203.61 (2021 – 2026)		
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$14,403.96* (2017 – 2022) $20,203.61* (2021 – 2026) (*Totals as of 4/3/2023)		

Key Staff Involved: Dale Cody, PE, PTOE, Demetrius Lewis, Josh Reichert, PE, Chris Dew, PE, PTOE, Penny Kamish, Charles Stratton III, and Edward Grant

Relevant Services

- TSM&O Policy Development and Updates / Strategy and Solution Projects
- Project Management & Program Assistance
- Engagement, Outreach, and Stakeholder Training

The FDOT ICM project is seeking to improve overall operations and mobility in the Central Florida area; specifically, through the operation and management of the Regional Traffic Management Center (RTMC) and associated programs on both the freeway and arterial systems. Metric Engineering functions as an extension of the Department's resources, providing professional services for a wide range of engineering, technical, management and administrative services to assist with numerous Transportation System Management & Operation (TSM&O) projects within the work program. General work elements include RTMC staffing and operations for both freeways and arterials, project management, integration, TIM/first responder coordination, and public information assistance. *Metric has held this contract for two consecutive terms including (2017-2022) (2021-2026)!*



Statistics:

- The current AAM footprint covers 10 roadways covering 250 traffic signals.
- The jurisdictions that are covered are as follow: City of Maitland, City of Orlando, City of Winter Park, Seminole County, Orange County, and Volusia County
- The future footprint will include the agencies above and also the following: Osceola County and City of Kissimmee

17. Firm Experience:

Firm name	metric	Past Performance Evaluation Discipline(s)*	Traffic / ITS / CEI
Project name	Systemwide Construction Engineering and Inspection (CEI) Services for Intelligent Transportation Systems (ITS), Lighting and Tolling Projects (2016 – 2020) & (2020 – 2023)	Firm responsibility (prime or sub?)	Prime
Project number	001726	Owner's name	Central Florida Expressway Authority
Project location	Central Florida Expressway Authority	Owner's Project Manager	Ben Dreiling, PE
Owner's address, phone, email	4974 Orl Tower Road, Orlando, FL 32807 / (407) 690-5000 / ben.dreiling@cfxway.com		
Services commenced by this firm (mm/yy)	12/16	Total consultant contract cost ($1,000's)	$6,800 (2016 – 2020) $6,000 (2020 – 2023)
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$6,832.87* (2016 – 2020) $4,078.20* (2020 – 2023) (*TWO totals as of 4/3/2023)

Firm Members Involved: Dale Cody, PE, PTOE, Rolando Ramirez, PE, Charles Stratton III, Craig Carnes, Mohammad Akber, PE, Eric Wyllins, and Brent Dustin

Relevant Services

- Project Management & Program Assistance

Metric is providing support personnel to perform CEI services on an as needed, per project basis, for various ITS construction projects in Orange County, Florida. Metric oversees full consultant construction inspection staff, prepares engineering estimates for extra work, processes contractor's invoices for completed work items, conducts progress meetings, documents as built conditions in final "as-built" plans, interprets contract documents and enforces applicable construction requirements, and reviews construction claims for entitlement. Metric staff is also responsible for the development of CFX's ITS Reference and Training manual which will be utilized to provide training for all of CFX's consultant CEIs. Metric has worked on approximately 17 task work orders under this current contract. *Metric has held this contract for two consecutive terms including (2016 – 2020) (2020 – 2023)!* Specific TWOs include:

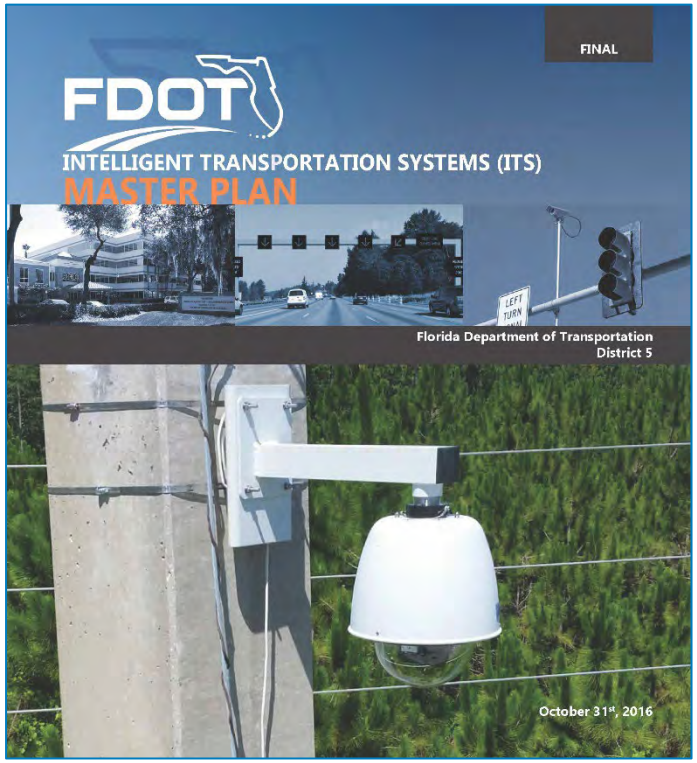
- CFX (408-628B) SR 408 Guide Sign and Lighting Replacements: West Colonial Drive (SR 50) to Ingenuity Drive: This project includes all labor, materials, equipment, and incidentals necessary for SR 408 Guide Sign and Lighting Replacements from West Colonial Drive (SR 50) to Ingenuity Drive. This project also includes sign structure painting and relocation of Arterial Dynamic Message System (ATMS).
- CFX (599-545A) Single Line Dynamic Message Sign (DMS) Upgrades: This project consists of the construction of the Single Line DMS Upgrades providing all labor, materials, equipment, and incidentals necessary to install systemwide upgrades of single line DMS's. With the signs being located above the express tolling lanes at the Authority's mainline toll plazas, construction also includes the installation of ITS cabinet enclosure upgrades and ITS field communication equipment at various toll plaza locations.
- CFX (408-422) Hiawassee Photovoltaic Design/Build Services: This project consists of design and construction of two elevated photovoltaic farms (Hiawassee Data Center and Hiawassee Mainline Toll Plaza). This project includes performing all investigations and coordination necessary to produce final signed and sealed plans for the photovoltaic array, drainage, mounting and rack structures, electrical distribution system, utility interconnection, necessary permitting, and traffic control.

Prime Firm: Metric Engineering, Inc.

17. Firm Experience:

Firm name	metric		Past Performance Evaluation Discipline(s)*	ITS	
Project name	Districtwide ITS Master Plan (June 9, 2015 – August 2016)		Firm responsibility (prime or sub?)	Prime	
Project number	C9K04	Owner's name	Florida Department of Transportation (FDOT) District 5		
Project location	FDOT District 5		Owner's Project Manager	Jeremy Dilmore, PE	
Owner's address, phone, email	719 S. Woodland Blvd., DeLand, FL 32720 / (386) 943-5360 / Jeremy.dilmore@dot.state.fl.us				
Services commenced by this firm (mm/yy)	06/15	Total consultant contract cost ($1,000's)	$342.87 (2015 – 2016)		
Services completed by this firm (mm/yy)	08/16	Cost of consultant services provided by this firm ($1,000's)	$342.87 (2015 – 2016)		

Key Staff Involved: *Dale Cody, PE, PTOE, Renata Leach, PE, EE, Jessica Knox, PE, PTOE, Edward Grant, Penny Kamish, Demetrius Lewis, and Rolando Ramirez, PE*



Relevant Services

- Project Management & Program Assistance
- Coordination Meetings & Project Reporting
- Capability Maturity Model Assessments
- Strategic Plan Development
- Engagement, Outreach and Stakeholder Training
- TSMO Policy Development and Updates
- TSMO Strategy and Solution Projects

Metric developed an overarching ITS Master Plan that consisted of creating the framework for the direction of ITS for the region by outlining a guide from which local governments can create their ITS Master Plans. This plan covered high-level goals that the region is working towards and investments that could work toward these goals, as well as data management and CV roles and responsibilities. Additionally, our staff developed an interactive GIS map showing locations for 3,244 ITS devices located in Brevard County, Central Florida Expressway Authority (CFX) City of Daytona Beach, City of Orlando, City of Palm Coast, FDOT District 5, Florida Turnpike Enterprise (FTE), Marion County, Orange County, Osceola County, Seminole County, Space Coast TPO, and Volusia County. Devices including Bluetooth Readers, CCTV Cameras, Dynamic Messaging Signs (DMS), and Microwave Vehicle Detection Sensors (MVDS).

17. Firm Experience:

Firm name	ITS Intelligent Transportation Systems		Past Performance Evaluation Discipline(s)*	ITS, Traffic	
Project name	Calcasieu Point LNG Development		Firm responsibility (prime or sub?)	Sub	
Project number	N/A	Owner's name	Lake Charles LNG		
Project location	Lake Charles, LA		Owner's Project Manager	John Kelly	
Owner's address, phone, email	1300 Main Street; Houston, TX 77002; (713) 989-7411; john.kelly@energytransfer.com				
Services commenced by this firm (mm/yy)	09/2015		Total consultant contract cost ($1,000's)	(Confidential)	
Services completed by this firm (mm/yy)	10/2017		Cost of consultant services provided by this firm ($1,000's)	(Confidential)	

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

Firm Members Involved: Jonathan Fox, Clarke Chauvin

The new Lake Charles LNG plant was constructed to provide new liquification facilities as well as non-liquification support facilities to expand LNG processing at existing facilities in Lake Charles, LA. Because of the significant increase in workforce to support these operations, traffic in and around the new plant was expected to also see significant increases. Additionally, during construction, there would be a need for routes to transport oversized load with large and heavy equipment that was constructed offsite and brought in for the facility.

Proposed Adaptive Signal Installation: Country Club Road at Weaver Road

Traffic Study: ITS LLC was initially tasked with performing an updated traffic study along three major corridors crossing I-210 in Lake Charles, LA, to determine the impacts of the facility development, both during and after construction, and identify areas for improvements. Because at that time the region was undergoing unprecedented industrial growth, and subsequently residential and commercial growth, the traffic study was expansive and changed scope throughout the process as more information was known about future developments in the area. The study mainly focused on three plant construction projects with different levels, phasing, and timelines of construction. The study ultimately led to proposed signal improvements along the three corridors as well as some additional isolated and temporary signals. ITS LLC was also tasked with creating permit plans for almost 30 unique traffic signals including along coordinated corridors, isolated permanent, and isolated temporary signals which were fully actuated.

Adaptive Traffic Signal Design: ITS LLC was later tasked with accommodating some of the planned construction activities. For site prep, one developer intended to bring multiple loads of dirt from one side of the facility to the other, crossing LA 384 (Big Lake Rd.). ITS LLC performed an additional separate traffic impact study for the addition of a signal for the temporary haul road at a state highway crossing. This was a unique situation that required ITS LLC to manipulate intricate defaults of the analysis software to accurately portray the size, startup time, and top speed of these oversized, articulating dump trucks. Factors evaluated in the analysis included safety, quantifying volumes, designing signal timings, and evaluating the long-term duration of these activities as well as the daily schedule of activities. Ultimately, the traffic study provided adequate signal warrant data and resulted in a temporary signal waiver. As a result, ITS LLC produced a TSI plan set for this intersection for permitting.

Nature of firm's responsibility: Sub-Consultant; Responsible for all traffic engineering tasks including studies, design, and communications

17. Firm Experience:

Firm name	ITS Intelligent Transportation Systems		Past Performance Evaluation Discipline(s)*	ITS	
Project name	IDIQ Contract for Intelligent Transportation Systems (ITS) Management, Operations, and Maintenance Engineering and Inspection (ME&I)		Firm responsibility (prime or sub?)	Sub	
Project number	H.013868	Owner's name	Louisiana Department of Transportation and Development (LADOTD)		
Project location	Statewide Louisiana		Owner's Project Manager	Joshua Harrouch	
Owner's address, phone, email	1201 Capitol Access Rd | Baton Rouge, LA 70802 | joshua.harrouch@la.gov				
Services commenced by this firm (mm/yy)	04/2020	Total consultant contract cost ($1,000's)	$12,000		
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	Ongoing		

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

Firm Members Involved: Jonathan Fox, Clarke Chauvin, Christopher Dodt

ITS LLC has been a chosen partner of LADOTD for ITS Maintenance, Engineering, and Inspection since the inception of the first retainer contract awarded in 2012. Since that time, ITS LLC has enjoyed a continuous relationship with LADOTD's ITS Section and has participated on all subsequent retainers since (44-2500 & 44-7102). Since the first contract, ITS LLC's services have been expanded to include more defined roles for project management, operations, engineering, and inspection. ITS LLC is proud of its ongoing commitment to the maintenance of LADOTD's ever-growing ITS infrastructure.

On this contract, ITS LLC is responsible for both ongoing routine maintenance as well as responsive repairs for outages that occur. The ongoing maintenance includes visiting 236 camera sites to provide checking, testing, inspecting, cleaning, and periodic repair and replacement of components as required by the routine ME&I schedule. Technicians ensure that cameras are working properly, that all equipment – including all wiring and connections – is in good working order, that the site is cleaned and free of debris of unwanted insects and vegetation, and that the operations meet LADOTD standards. This results in limited downtime of the equipment and the best level of service for the motoring public. This work includes devices such as traffic cameras, dynamic message signs, vehicle detectors, ramp meters, emergency crossover gates, and queue warning systems.

The responsive ME&I activities are performed to correct any reported failures of ITS equipment. When an outage occurs at one of the 236 sites assigned to ITS LLC, it is reported to the firm. ITS LLC technicians respond to the site within 24 hours to troubleshoot the problem, perform system testing, and make necessary hardware repairs to get that site back up and running as quickly and safely as possible. This sometimes involves coordination with equipment manufacturers' tech support personnel in addition to ITS LLC's in-house technicians.

Nature of firm's responsibility: Sub-Consultant

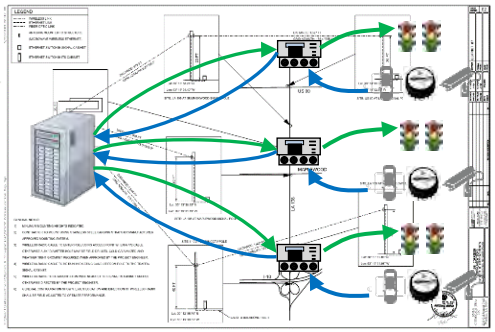
17. **Firm Experience:**

Firm name	ITS Intelligent Transportation Systems		Past Performance Evaluation Discipline(s)*	ITS, Traffic	
Project name	Lake Charles Chemicals – Adaptive Traffic Signal Systems A & B		Firm responsibility (prime or sub?)	Sub	
Project number	L2CC-990-11-DW-24	Owner's name	Sasol		
Project location	Westlake and Sulphur, LA		Owner's Project Manager	Eric Flemming	
Owner's address, phone, email	2201 Old Spanish Trail; Westlake, LA; eric.flemming@worleyparsons.com				
Services commenced by this firm (mm/yy)	08/2015	Total consultant contract cost ($1,000's)		(Confidential)	
Services completed by this firm (mm/yy)	07/2019	Cost of consultant services provided by this firm ($1,000's)		(Confidential)	

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

Firm Members Involved: Jonathan Fox, Clarke Chauvin

ITS LLC worked with the Louisiana Department of Transportation and Development and Trafficware, the system manufacturer, to turn on the first Adaptive traffic signal system in the State of Louisiana. The system has eased travel along the corridor, allowing better progression and more efficient operations.



Getting to the point of turning on the system took a lot of project management, planning, coordination, design and integration. ITS LLC performed signal design for six traffic signals on the Sampson St. corridor (System A) and four traffic signals on the LA 108 corridor (System B). The design included upgrading controllers to ATCs, upgrading detection for increased accuracy and traffic data collection, as well as PTZ CCTV camera for remote monitoring (see picture) and seven BlueTOAD units for travel time and speed data collection. In addition to determining the network allocations and communications paths, ITS LLC also designed, configured, and implemented the communications equipment.

A private cellular network connection was originally chosen as an alternative to fiber optic communications. ITS LLC was retained to provide ongoing maintenance support which has included troubleshooting server, network, and detection issues. Since DOTD's ITS Section completed the Lake Charles ITS Phase 2, it allowed ITS LLC to move the cellular communications system over to an unlicensed wireless radio system. ITS LLC conducted wireless assessments, designed, configured and installed 18 radio units between the two systems. This has resulted in fewer adaptive nuisance alarms as well as removed ongoing monthly cellular charges. This project ultimately brought 12 adaptive signals online and established the infrastructure needed to continue to add adaptive systems in the area. Sasol and the design team were recognized for their efforts by receiving the 2018 Louisiana Transportation Conference award for "Use of Innovative Product or Technology."

Nature of firm's responsibility: Sub-Consultant; Responsible for all traffic engineering tasks including studies, design, and communications

Prime Firm: Metric Engineering, Inc.

metric

17. Firm Experience:

Firm name	GREY		Past Performance Evaluation Discipline(s)*	Road/Traffic	
Project name	Commerce Street Betterment Project		Firm responsibility (prime or sub?)	Prime	
Project number	N/A	Owner's name	Town of St. Francisville		
Project location	St. Francisville, Louisiana		Owner's Project Manager	Laurie Walsh	
Owner's address, phone, email	11936 Ferdinand Street, St. Francisville, LA 70775; (225) 635-3688; lwalsh@townofstf.com				
Services commenced by this firm (mm/yy)	06/22	Total consultant contract cost ($1,000's)	$25		
Services completed by this firm (mm/yy)	06/23	Cost of consultant services provided by this firm ($1,000's)	$25		

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

Firm Members Involved: April Renard, P.E., PTOE, RSP2I

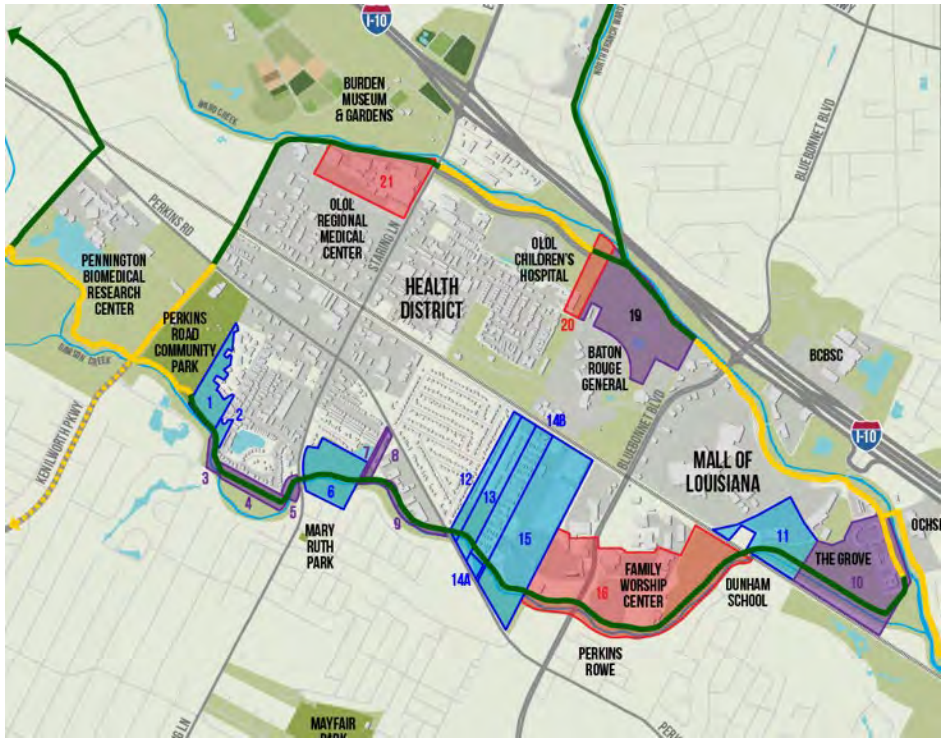
Ms. Renard, as the firm's owner/principal and engineer, is the lead for the Commerce Street Betterment Project extending from Burnett Road to Pecan Grove Road. The project goals are to improve walkability, reduce vehicular speeds, enhance tourism, encourage healthy transportation choices, and protect the environment through the use of green infrastructure strategies. Phase 1 will extend from Burnett Road to Ferdinand Street and include angled on-street parking along the edge of Parker Memorial Park, burial of overhead electric power lines, ADA compliant sidewalks on both sides of the roadway, pedestrian-scale lighting, and a raised crosswalk with curb extensions and biofiltration beds on both ends. Phase 2 will extend from Ferdinand Street to Pecan Grove Road and will include a signal upgrade at the intersection of Commerce Street and Ferdinand Street to include audible pedestrian signals, ADA compliant sidewalks on both sides of the roadway, pedestrian-scale lighting, and a raised crosswalk with curb extensions and biofiltration beds on both ends.

17. **Firm Experience:**

Firm name	GREY		Past Performance Evaluation Discipline(s)*	Road	
Project name	BREC Dawson's Creek Trail & Health Loop		Firm responsibility (prime or sub?)	Prime	
Project number	N/A	Owner's name	BREC		
Project location	Baton Rouge, Louisiana		Owner's Project Manager	Kelly Duggan	
Owner's address, phone, email	6201 Florida Boulevard, Baton Rouge, LA 70806; 225-273-6405 EXT 1701; kelly.duggan@brec.org				
Services commenced by this firm (mm/yy)	10/22	Total consultant contract cost ($1,000's)		$6	
Services completed by this firm (mm/yy)	12/23	Cost of consultant services provided by this firm ($1,000's)		$6	

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

Firm Members Involved: April Renard, P.E., PTOE, RSP2I



Ms. Renard is the lead for developing conceptual layouts for the Dawson's Creek Trail, connecting the BREC Perkins Road Community Park to other trail segments and eventually the Ward's Creek Trail. The scope of work includes conducting on-site assessments of existing conditions, identifying existing utilities and significant vegetation, collecting ground elevation data, and establishing servitude limits for trail construction.

Prime Firm: Metric Engineering, Inc.

metric

17. **Firm Experience:**

Firm name	GREY		Past Performance Evaluation Discipline(s)*	Survey & Road	
Project name	MOVEBR Scenic Highway Enhancement Project		Firm responsibility (prime or sub?)	Sub	
Project number	N/A	Owner's name	City of Baton Rouge – Parish of East Baton Rouge		
Project location	Scotlandville, Louisiana		Owner's Project Manager	Tom Stephens	
Owner's address, phone, email	1100 Laurel Street, Baton Rouge, LA 70802; (225)389-3186; tstephens@brgov.com				
Services commenced by this firm (mm/yy)	02/22	Total consultant contract cost ($1,000's)		$637,000	
Services completed by this firm (mm/yy)	06/23	Cost of consultant services provided by this firm ($1,000's)		$25	

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

Firm Members Involved: April Renard, P.E., PTOE, RSP2I

Ms. Renard serves as a sub-consultant to GOTECH, Inc. who is responsible for surveying and preliminary engineering services for US 61 / Scenic Highway from LA 408 / Harding Boulevard to Swan Avenue. Project concepts are constrained by existing Right-of-Way and limited budget. The scope of work includes a topographic survey, traffic study, existing drainage map, drainage design, green infrastructure report, typical sections, plan and profile sheets, a design study, and preliminary design report.

Ms. Renard worked with GOTECH to develop conceptual geometry and also worked with Arcadis to produce a traffic study that assessed feasible alternatives for the corridor and the intersections. Draft roadway geometry has been developed to incorporate ADA compliant sidewalks, bike facilities, traffic calming countermeasures, transit stop improvements, and crossing improvements.

The final design study will include a proposed typical section, plan and profile sheets, intersection geometry and a preliminary engineering cost estimate. In addition, safety improvements will be incorporated at the intersection of Scenic and Harding Boulevard.

17. **Firm Experience:**

Firm name	BONTON ASSOCIATES		Past Performance Evaluation Discipline(s)*	Road	
Project name	Ardenwood-Lobdell Connector Design		Firm responsibility (prime or sub?)	Prime	
Project number	20-CP-HC-0017	Owner's name	East Baton Rouge Parish, Department of Transportation and Drainage		
Project location	East Baton Rouge, LA		Owner's Project Manager	Kahli Cohran, PE	
Owner's address, phone, email	222 Saint Louis Street, 8th Floor, Baton Rouge, LA | 225-283-0101 | cohran@civilsolutioncgi.com				
Services commenced by this firm (mm/yy)	11/22		Total consultant contract cost ($1,000's)	$677	
Services completed by this firm (mm/yy)	11/23		Cost of consultant services provided by this firm ($1,000's)	$677	

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

Firm Members Involved: Marcus Bonton, PE; LaDarien Beene, PE, PTOE; Darius Bonton, PE

Relevant Services

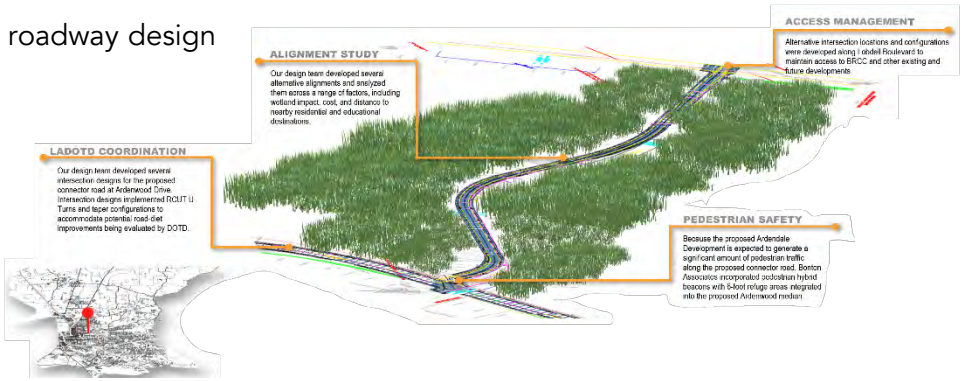
- Bike and Pedestrian Crossing Improvements
- Mobility and Connectivity Improvements
- Work Zone Management

As part of the City of Baton Rouge's MOVEBR program, Bonton Associates is preparing the Final Design of a new connector road within the proposed Ardendale development. The proposed section is an urban/walkable, two-lane with pedestrian accommodations. The new connector road will connect Ardenwood Drive and Lobdell Boulevard and improve traffic capacity, pedestrian connectivity, safety, and access management.

The Final Design Components include Topographical Survey and Development of Right-of-Way maps; Subsurface Utility Engineering (SUE); Landscaping and Green Infrastructure Implementation; Electrical and Illumination Design; and Final Design Roadway and Drainage Construction Plans and Specifications.

Firm's Role: As the Project Prime, Bonton Associates is responsible for all roadway design elements and supporting details, including:

- Horizontal and vertical geometry
- Intersection Design and Access Management
- Safety (Pedestrian Facility Accommodations and Improvements)
- Drainage Analysis and Design
- Design drainage maps
- Green infrastructure analysis and design
- Earthwork modeling



Prime Firm: Metric Engineering, Inc.

17. **Firm Experience:**

Firm name	BONTON ASSOCIATES		Past Performance Evaluation Discipline(s)*	Planning	
Project name	S. Harrell's Ferry Road Multi-Use Path (O'Neal to Woodlake Drive)		Firm responsibility (prime or sub?)		
Project number	20-EN-HC-0028	Owner's name	East Baton Rouge Parish, Department of Transportation and Drainage		
Project location	East Baton Rouge, LA		Owner's Project Manager	Alex Farr, PE	
Owner's address, phone, email	222 Saint Louis Street, 8th Floor, Baton Rouge, LA | 225-298-0800 | afarr@sigmacg.com				
Services commenced by this firm (mm/yy)	05/21		Total consultant contract cost ($1,000's)	$136.71	
Services completed by this firm (mm/yy)	02/23		Cost of consultant services provided by this firm ($1,000's)	$136.71	

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

Firm Members Involved: Marcus Bonton, PE; LaDarien Beene, PE, PTOE

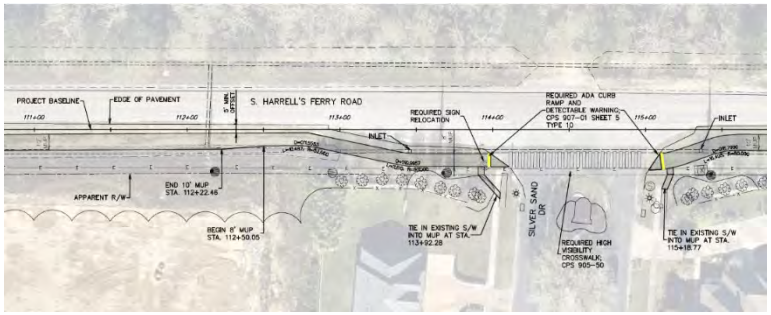
For the S. Harrell's Ferry Rd. Multi-Use Path project, Bonton Associates conducted a Design Study and prepared Preliminary/Final Plans for a new multi-use path, ADA-compliant facilities (curb ramps, crosswalks, etc.), drainage improvements, and green infrastructure with the goal of increasing pedestrian/bicycle safety and mobility.

Relevant Services

- Bike and Pedestrian Crossing Improvements
- Mobility and Connectivity Improvements
- Work Zone Management

Firm's Role:

Bonton Associates prepared the Design Study, Preliminary, and Final Design Plans for the multi-use path. As part of the deliverable, the Bonton team implemented AASHTO, LADOTD, and MOVEBR/BTR DTD design guidelines and standards to develop typical sections, details, plan and profile sheets, drainage design, drainage maps, green infrastructure design, cross-sections, engineering calculations, and quantities.



With a limited width of space to provide the proposed improvements, our team developed solutions for the multi-use path that included a cross section that varies in path width where necessary and clear zone/buffer width requirements from S. Harrell's Ferry Rd. to accommodate vehicular traffic while maintaining the safety of multi-use path users.

Other design features were implemented to ensure pedestrian safety and comfort, including:

- Conventional driveway type design that encourages motorists to drive more slowly when entering the property.
- Pedestrian signage and information in accessible formats.
- Intersection treatments, including: curb ramps; detectable warnings; high-visibility crosswalks, etc.

17. Firm Experience:

Firm name	FRANKLIN ASSOCIATES		Past Performance Evaluation Discipline(s)*	Other – Public Involvement	
Project name	I-10: LA 415 to Essen Lane on I-10/I-12		Firm responsibility (prime or sub?)	Sub	
Project number	LA DOTD S.P. NO. H.004100.5	Owner's name	LA Department of Transportation and Development		
Project location	East and West Baton Rouge Parishes		Owner's Project Manager	Nick Olivier	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802; 225-379-1133; nicholas.olivier@la.gov				
Services commenced by this firm (mm/yy)	October 2021	Total consultant contract cost ($1,000's)	$427,000.00		
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$250,000		

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

Firm Members Involved: Perry Franklin, Risa Mueller, James Taylor, **Johnathan Hill**, Brandy Bones, Courtney Paige, **Stephanie James**, Ted Devall, Avery Jack

Relevant Services

- Data compilation
- Public meeting development and deployment
- Survey development and deployment
- Inquiry coordination

I-10 Widening, Baton Rouge – CMAR Design Team post-FONSI. James Taylor led this effort as the project moved into a CMAR process with design efforts rolling into construction. Franklin's team was responsible for development and deployment of all public engagement (in person and digital) tied to design elements of the new structures, as well as response inquiries throughout the process. Franklin handled coordination of data compilation, trending and analysis on comments received through online and public meeting efforts during design efforts tied to the widening project from LA 415 to the I-10/I-12 split at Essen Lane.

17. Firm Experience:

Firm name	FRANKLIN ASSOCIATES		Past Performance Evaluation Discipline(s)*	Other – Public Involvement	
Project name	MOVEBR		Firm responsibility (prime or sub?)	Sub	
Project number	N/A	Owner's name	East Baton Rouge Parish		
Project location	East Baton Rouge Parish		Owner's Project Manager	Fred Raiford, Transportation Director	
Owner's address, phone, email	P.O. Box 1471, Baton Rouge, LA, 70821; 225-389-3000, fraiford@brgov.com				
Services commenced by this firm (mm/yy)	12/ 2019	Total consultant contract cost ($1,000's)		$637,000	
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)		$510,000	

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

Firm Members Involved: **Johnathan Hill**, **Stephanie James**, Cristina LaCroix, Perry Franklin.

MOVEBR is the largest and most significant transportation infrastructure investment in East Baton Rouge Parish history. Franklin's team, led by Johnathan Hill, created the public outreach strategy to disseminate information to stakeholders; developed and revised scope of work for Public Information Coordination; worked closely with program management team to align communications regarding the city-parish's largest infrastructure program with program goals; facilitated/implemented key trainings for small businesses enabling higher participation in the program; and coordinated public meetings in person and online. We continue to ensure that timely and accurate project-specific information is developed and disseminated via web, social media, eblasts, direct mail, phone and in person through public meetings as projects move ahead. We have successfully enhanced public awareness of taxpayer-funded capacity improvement efforts across the parish while addressing constituent concerns as these improvements are implemented, and while providing engagement opportunities on projects still in design phases. Additionally, Franklin responds to numerous public inquiries regarding the status of various projects and potential impacts to the residents during construction. We have created content and provided presentations to key stakeholder groups within the community to keep the informed of the program's progress and provide updates on specific projects as requested. We have also assisted in increasing involvement of small businesses within the MOVEBR program. The website we provide content for can be translated into dozens of languages.

Outcomes: Enhanced public awareness of taxpayer-funded capacity improvement efforts across the parish while addressing constituent concerns and providing engagement opportunities on projects still in design phases. Assisted in increasing involvement of small businesses within the MOVEBR program.

Section 18

Approach and Methodology

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

metric

18. Approach and Methodology:

The Metric Team

Founded in 1976, Metric is a full-service firm with expertise in delivering any TSMO/ITS project from concept to beyond completion, with a focus on applying future technologies for the safety and convenience of today's travelers. Metric is among the top transportation consulting engineering firms specializing in TSMO/ITS and Traffic Operations projects. *We are leading ITS experts and have been involved in the design, integration, inspection, operations, review, and management of ITS services on $4.5B in overall construction in the past 15 years and have 180+ dedicated ITS/Traffic personnel. We are bringing this expertise to LADOTD and we now have a local office in Louisiana for this effort.* Metric already has an existing (as needed) contract with LADOTD on an IDIQ Contract for Debris Monitoring Statewide (Contract no. 440023722), where we have already built a relationship with the LADOTD through working on emergency management contracts from their office in Harvey, LA.

We have developed more than a dozen TSMO/ITS Master Plans over the past seven years. During the development of these master plans, our focus is always on stakeholder coordination and integrating TSMO within the Department's work processes. The Master Plans that we develop focus not only on projects, but also on operational resources such as staffing and maintenance as well as strengthening existing relationships. *As discussed during our marketing meeting in January, building relationships and getting stakeholder buy-in is an important part of creating a Master Plan and advancing a TSMO/ITS program.*

A. Project Approach - How Work Will be Performed

Our contract leaders include Contract/Project Manager (C/PM), Dale Cody, PE, PTOE, and Task Order (TO) Managers, Jessica Knox, PE, PTOE, and Chris Dew, PE, PTOE. Mr. Cody will be the primary point-of-contact for the Metric team. These professionals have worked together for years and have managed thousands of TOs for other clients and have developed tracking systems for action items and scheduling to ensure that all tasks are completed on time and at a high quality. In addition, our Quality Assurance/Quality Control (QA/QC) process ensures that all deliverables, from the scope and staff hour estimate to the work product are reviewed by an independent reviewer prior to submittal in order to ensure a high-quality product.

Program Management & Program Assistance

Our Contract/Project Management approach is simple. *We combine attentiveness and responsiveness with focused effort and experienced staff who can independently and properly plan and execute the requested TOs.* We will begin with a meeting with LADOTD PM and key staff to gain an understanding of the TO. This will allow us to develop a scope of services (SOS) that defines continued coordination, the required deliverables as well as any required procedures. We will also request any available background information that will be required for the TO. Meeting minutes will be developed for all meetings. Our proposed C/PM, Mr. Cody, will assign the most appropriate team of professionals to any projects that arise under this contract. He is also responsible for making sure that the team stays on schedule and within budget. Our Contract/Project Management Plan (C/PMP) consists of various steps outlined at the onset of this contract and upon approval of the TOs LADOTD PM through team communication, Quality Control (QC) procedures, project schedule, and budget controls.

Technical Equipment, Hardware, Software, and other Resources and Capabilities. *The Metric team houses the equipment to complete any TOs and routinely trains and develops staff in new technologies and techniques. For example, Metric is currently storing and configuring over 600 RSU's and hundreds of other ITS devices for multiple Connected Vehicle (CV) projects.* In addition, Metric's data collection equipment includes dedicated data collection trucks with 90 automated traffic counters (Pico2500/4500, MetroCounter, Jamar TRAX Apollyon, Oriux ADR-Sabre), 31 MioVision Cameras, 8 video cameras, 6 Qstarz Travel Recorder XT GPS Data Loggers, 4 Jamar TMC count boards, 4 countPAD's, 7 drones, and 2 LIDAR speed guns. Finally, some of our Traffic Modeling software includes CUBE, Vissim, Synchro (all versions), Tru-Traffic V.10, Siemens – Tactics, Trafficware - ATMS.now/StreetSync, and GIS.

B. Coordination Meeting & Project Reporting

Coordination Meetings. *Kick-Off Meeting.* As the first step for each TO, Metric will hold a kick-off meeting with the LADOTD PM and key staff. During this meeting, administrative issues such as invoicing procedures, the number of reports required, the report format, and administrative routing procedures will be discussed. We will also determine the Project Schedule, the need for additional meetings, key delivery dates, impacts to operations, and any other issues associated to the schedule. ***Project Management Meetings & Resource Sharing.*** Metric holds weekly internal Project Management meetings where all budgets, project schedules, and resource sharing between offices are discussed at length. This aids in keeping all of our projects not only on schedule and within budget, but allows an open forum for all disciplines to discuss the utilization of staff, share insight, build relationships, etc.

Developing Project Schedules. *Scheduling Experience*. Our proposed Technical Advisors/and QA/QC Managers possess a great deal of experience in evaluating project schedules, having performed this function on hundreds of projects! They are proficient in the use of Primavera, SureTrak, Microsoft Project, etc. In addition, Metric tracks all issues using action item lists, submittal logs and TSMO/ITS specific tracking sheets to ensure that we are always aware of every issue on the TO. This ensures that there are no last-minute concerns at the end of the project that might delay final acceptance. The schedule will be approved by the LADOTD and updated as necessary. The project control process involves regularly gathering data on project performance and comparing it with the planned performance. This process will occur regularly throughout the project. It starts with establishing a baseline plan that shows how the project scope will be accomplished. A regular reporting period is established for comparing the actual progress with the planned progress. During each reporting period, data on actual performance and information on any changes to the project scope, schedule, or budget is collected and tracked. Once the updated schedule and budget have been calculated, they are compared with the baseline schedule and budget and analyzed for

variances to determine whether the project is ahead or behind schedule. The project control process continues throughout the project. **Monthly Status Report – TOs.** ***Emphasis on Communication.*** Metric places a strong emphasis on communications with all project stakeholders including the LADOTD, subconsultants, Utility Owners, local agencies, general public, and others as determined by the TO. Communication methods include personal contact, meetings (in-person or virtual), e-mails, and a project specific internet website (SharePoint Site). This site will help reduce time and costs on the project by ensuring that all parties have the current project documents and reduce duplication of efforts. *The website has the advantage of consolidating all information to one location, thus ensuring that you will ALWAYS have access to all information on the project!* Please note that this website will be username and password protected. ***Monthly Progress Reports.*** Progress Reports are provided, outlining the progress and the percentage complete. By providing reports monthly, it continually evaluates the project progress relative to the project schedule. ***Monthly Progress Meetings.*** In conjunction with the Progress Reports, our C/PM, Mr. Cody, will sit down with the LADOTD's PM and go through the reports to ensure all questions are answered, and explanations are provided should there be any variances from the project schedule. ***Internal Team Meetings.*** Metric leaders hold weekly PM meetings to ensure the day-to-day project production is kept on schedule. Subconsultants involved in TOs are also included in the team meetings. ***Key Milestones in Schedule.*** In addition to the base line established for the project schedule, key milestones are identified. This ensures the subsequent phases of the project have the necessary information to proceed and remain on schedule. **Project Schedule:** A sample project schedule is provided to the right, to demonstrate our understanding of the SOS. In this case, the project schedule illustrates the steps involved in preparing a typical TSMO Master Plan.

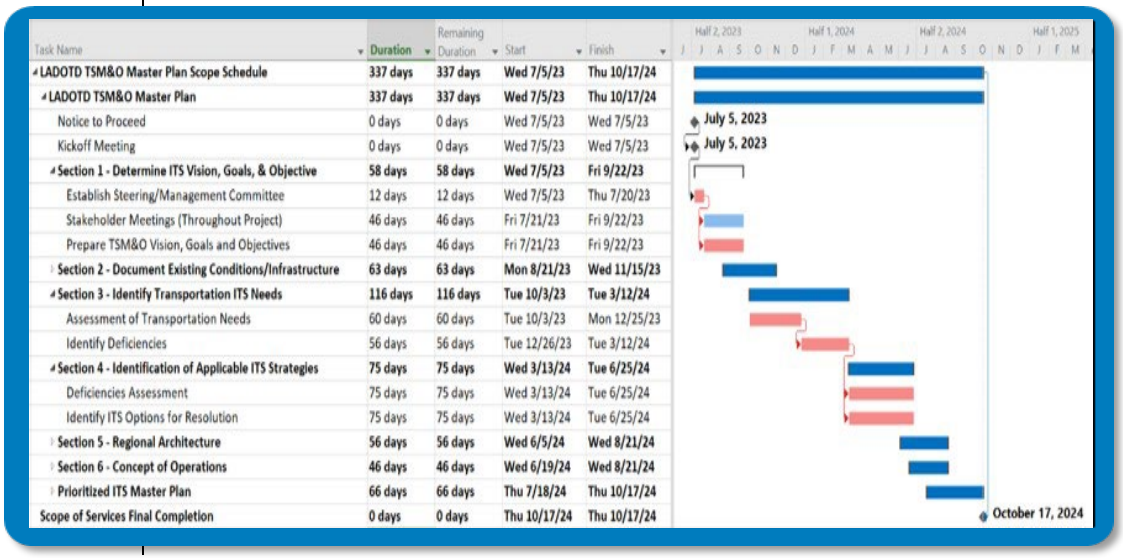
C. Capability Maturity Model (CMM) Assessments

Metric has experience developing over a dozen TSMO/ITS Master Plans which have utilized the CMM self-assessment, or a modification of the CMM, in order to evaluate the current state of TSMO for the agency. To implement CMM assessments, our team will first meet with the Department and key stakeholders to determine the focal dimensions to track throughout the model. *The six dimensions of capability to focus on are business processes, collaboration, culture, organization/staffing, systems technology, and performance measures.* The self-assessment will rank each dimension as level 1 (Performed), level 2 (Managed), level 3 (Integrated), or level 4 (Optimized). With this baseline, we can produce custom evaluation questionnaires as a tool to score each district's current capability for each focal dimension. Based on these results, our team will provide personalized action plans to help improve the statewide deployment of an enhanced TSMO/ITS plan. Through the many strategic recommendations that we have provided to our previous clients, our plan will cater towards implementing training programs, technology upgrades, organizational changes, and collaboration with other agencies. Finally, we provide periodic reviews and updates to ensure improvement measures are still effective and relevant to LADOTD's goals.

D. Strategic Plan Development

With Metric's experience in developing TSMO/ITS Master Plans, our team understands the importance that a master plan has in developing and deploying a robust program to advance Louisiana to the highest capability level per the CMM. To improve TSMO capabilities within Louisiana, it is important to have a performance-based planning framework to follow. The CMM process is a guidance framework that helps agencies evaluate and improve the effectiveness of their TSMO activities. The first step of developing the TSMO Strategic Plan will be reviewing the results of the CMM and identifying strengths and weaknesses to develop a plan to improve areas of deficiencies while ensuring continued performance in areas of strength. With the strategic plan, Metric will propose to approach the plan in 7 sections, as described below.

- **Section 1 – Identify Vision, Goals, and Objectives of the TSMO Program.** This section will detail a vision, along with goals and objectives for the Master Plan that will serve as a guide for the project team in order to facilitate future TSMO goals of the State. Performance measures will be defined to track progress towards the goals and objectives recognized within the TSMO Master Plan and will provide necessary guidelines for success. As part of this section, we will work with the LADOTD staff to establish a Steering Committee for the project consisting of local stakeholders to include LADOTD, local municipalities and transportation agencies, Public Safety, Transit, ITS & Traffic Operations, maintenance, etc. Metric will meet with the stakeholders on a periodic basis to familiarize them with the TSMO Master Plan and keep them abreast of progress, while soliciting input throughout the process. This will provide all stakeholders "ownership" of the plan and help to facilitate the implementation of the plan.
- **Section 2 – Existing Conditions & Infrastructure.** In order to evaluate and determine the needs of the State, we must first understand the existing conditions. This section will entail meeting with stakeholders and gathering all existing conditions as well as already planned or programmed projects with additional TSMO elements. This will include ATMS systems and equipment, communications systems and networks, fiber availability, agreements, protocols, and procedures for data collection and dissemination, and all recent transportation plans or studies where TSMO or ITS are included. For the performance measures identified in Section 1 to be properly analyzed, baseline conditions must be identified by reviewing



Task Name	Duration	Remaining Duration	Start	Finish
LADOTD TSM&O Master Plan Scope Schedule	337 days	337 days	Wed 7/5/23	Thu 10/17/24
LADOTD TSM&O Master Plan	337 days	337 days	Wed 7/5/23	Thu 10/17/24
Notice to Proceed	0 days	0 days	Wed 7/5/23	Wed 7/5/23
Kickoff Meeting	0 days	0 days	Wed 7/5/23	Wed 7/5/23
Section 1 - Determine ITS Vision, Goals, & Objective	58 days	58 days	Wed 7/5/23	Fri 9/22/23
Establish Steering/Management Committee	12 days	12 days	Wed 7/5/23	Thu 7/20/23
Stakeholder Meetings (Throughout Project)	46 days	46 days	Fri 7/21/23	Fri 9/22/23
Prepare TSM&O Vision, Goals and Objectives	46 days	46 days	Fri 7/21/23	Fri 9/22/23
Section 2 - Document Existing Conditions/Infrastructure	63 days	63 days	Mon 8/21/23	Wed 11/15/23
Section 3 - Identify Transportation ITS Needs	116 days	116 days	Tue 10/3/23	Tue 3/12/24
Assessment of Transportation Needs	60 days	60 days	Tue 10/3/23	Mon 12/25/23
Identify Deficiencies	56 days	56 days	Tue 12/26/23	Tue 3/12/24
Section 4 - Identification of Applicable ITS Strategies	75 days	75 days	Wed 3/13/24	Tue 6/25/24
Deficiencies Assessment	75 days	75 days	Wed 3/13/24	Tue 6/25/24
Identify ITS Options for Resolution	75 days	75 days	Wed 3/13/24	Tue 6/25/24
Section 5 - Regional Architecture	56 days	56 days	Wed 6/5/24	Wed 8/21/24
Section 6 - Concept of Operations	46 days	46 days	Wed 6/19/24	Wed 8/21/24
Prioritized ITS Master Plan	66 days	66 days	Thu 7/18/24	Thu 10/17/24
Scope of Services Final Completion	0 days	0 days	Thu 10/17/24	Thu 10/17/24

all existing conditions. ● **Section 3 – Identify TSMO Needs.** This section will use a combination of Section 1 and Section 2 to identify needs in the State's transportation and TSMO/ITS systems. This will help select the best locations where TSMO investments could be made to enhance system efficiency and optimization. This will include information regarding central software and specific elements of the Advanced Traffic Management and Emergency Operations Center (ATM/EOC) and RTMCs, such as servers, video walls, encoders/decoders, workstations, racks, switches, etc. ● **Section 4 – Identification of Applicable TSMO Strategies.** Metric will review the transportation problems and needs identified in Section 3. This review will determine the nature and cause(s) of each problem or need and determine if there are any candidate TSMO improvements or strategies that can address or mitigate the problem or need. We will consider the potential for future technologies and how they may be utilized to meet the needs of the State. After candidate TSMO improvement strategies have been identified, they will be carefully screened to establish an initial priority for each of the projects. Where possible, the anticipated benefits and life cycle cost of each candidate will be quantified to aid in comparison. ● **Section 5 – Regional ITS Architecture (RITSA).** The Statewide and Regional ITS Architectures represent a shared vision of how each agency's system will work together in the future, sharing information and resources to provide a safer, more efficient, and more effective transportation system for travelers in the State. The ITS architecture covers the broad spectrum of ITS, including Traffic Management, Transit Management, Traveler Information, Maintenance and Construction, Emergency Management, and Archived Data Management over this time horizon. Metric will review the existing RITSA to ensure proposed projects are designed consistent with the RITSA and recommend any updates that would be needed to accommodate the proposed projects. ● **Section 6 – Concept of Operations (ConOps).** A ConOps provides an overview of the project/system to be deployed as well as specific details as to the current system or situation being addressed, any desired changes, assumptions and constraints, operational issues, how the project/system is to be used, involvement of stakeholders, and how the project/system will be supported and maintained. ConOps documents are most effective when developed early on in the planning stages of a project. The Metric team will develop a high level ConOps for the TSMO Master Plan to serve as a record of the project/system needs, requirements, interactions, agreements, and constraints regarding all parties involved from conception. ● **Prioritized Master Plan.** The Metric team will develop a prioritized TSMO Master Plan that is based on the information obtained from Sections 1-6 and Steering Committee input. The plan will describe the existing systems as well as programmed TSMO systems and associated implementation timeframes. This will define the baseline conditions of the Master Plan. Using information collected from previous sections, a list of potential TSMO projects will be developed to address deficiencies in the existing and planned infrastructure consistent with the TSMO Vision, Goals, and Objectives from Section 1. To prioritize the list of potential TSMO projects, the Metric Team will develop screening criteria and apply these criteria to each of the projects.

E. Engagement, Outreach and Stakeholder Training

Metric's staff is exceptionally competent in representing our clients through a variety of public-facing roles and engaging with the community to ensure projects receive high acceptance among the residents. We understand that implementing a statewide TSMO/ITS Strategic Plan will need input from a variety of stakeholders within the state. *We have specifically named our most experienced team members and local well-known LADOTD subconsultants to lead the effort to engage and develop an outreach plan for both internal and external stakeholders, which includes Metric's Dale Cody, PE, PTOE, and Jessica Knox, PE, PTOE, Intelligent Transportation Systems, LLC's (ITS, LLC) Kimberly McDaniel, PE, PTOE, PTP, and Franklin Associates, LLC's (FA) James Taylor, AICP.* ITS, LLC and FA have led numerous public involvement efforts for the LADOTD.

F. TSMO Policy Development Updates

Business Processes are one of the six dimensions of capability in the CMM framework that refers to the planning, programming, budgeting, project development, and implementation required for TSMO programs. It is also one of the dimensions that is last to progress to the next level. Integrating TSMO considerations into existing institutional processes is vital to improving overall system safety, reliability, and efficiency. Metric will provide industry leaders the opportunity to review and provide guidance on policy development as required by this contract. We will conduct a review of existing LADOTD policies, show where TSMO can be incorporated, and assist with the development of new policies.

G. TSMO Strategy and Solution Projects

We understand that we may be asked to develop and prepare plans for TSMO solutions as part of this contract and that any new roadways should be designed with TSMO elements. We also understand that many facilities exist where only TSMO strategies and solutions are possible to improve mobility and safety. Examples of TSMO strategies and solutions are as follows: **Work Zone Management** provides an opportunity for immediate benefit by coordinating the work zone operations with the TMC(s). Some tools that can be deployed include remote CCTVs, DMSs, Bluetooth, and RSUs. *These tools should be strategically placed along work zones and/or detour routes to allow for real-time operations during construction. Metric currently provides work zone management support for over a dozen counties.* ● **Traffic Incident Management (TIM)** supports the detection, verification, clearance, and traffic management associated with incidents on freeways and expressways and ultimately controlled at the RTMC or local TMCs through the use of CCTV, traffic sensors, telecommunications, and centralized command. The approach for TIM should include immediate responsiveness to issues on the roadway combined with coordination with first responders, asset management, service patrol units, etc. *The goal is to safe up an incident area to protect motorists and first responders while also opening the road as quickly as possible to minimize secondary crashes. Metric currently handles TIM for almost half of the State of Florida.* ● **Special Event Management** uses a combination of traffic control and traveler information techniques to manage the flow of transportation during major events. Special Event Management can consist of temporary traffic control items, or the design and deployment of trail blazers, DMSs, etc. to handle traffic during the arrival and departure of patrons for each event. Ultimately, *the goal is to provide tools to the traffic management staff to communicate with the public and make changes to signal times, routing, etc.* ● **Road Weather Management** can be accomplished using Road Weather Information System (RWIS) stations placed at strategic locations or utilizing third-party data to provide updates to the RTMC and local TMCs. This data can then be used to notify motorists of flooding, low visibility (fog), severe weather, etc. using DMSs, 511, etc. ● **Transit Management** can include roadway strategies such as Transit Signal Priority (TSP) to improve the on-time arrival of buses. It can also be expanded to include transit operations directly such as *Dynamic Transit Capacity Assignment, Transit Traveler Information, Dynamic Fare Reduction, and Transfer Connection Protection. Metric has designed over 100 TSP intersections.* ●**Freight Management** uses advanced technologies (such as using vehicle proximity alert systems to warn drivers of the

impending arrival of a train) to improve safety at grade highway intersections. *Metric designed a Freight Management system using CV technology to the Port of Tampa.* ● **Traffic Signal Coordination** utilizes traditional retiming methods and adaptive signal control time signals to adapt continuously to fluctuations in traffic flows to pass through signalized intersections. *Metric has provided traditional retiming and adaptive retiming at thousands of intersections. In addition, we actively manage both systems in RTMCs.* ● **Traveler Information** uses data for predictive, pre-trip, and, en-route, traveler information to create a comprehensive picture of current traffic conditions. Information is supplied to drivers in a variety of ways, including roadside dynamic message signs, smart phones, web-based systems and more. Traveler services information is also implemented via the use of information management systems to create a centralized database of traveler services and reservation opportunities that are made available in a range of ways including kiosks and smart phones. *Metric has coordinated with WAZE to provide information on roadway changes, incidents, etc. We also provide information using 511.* ● **Ramp Management** includes wrong-way driving (WWD) countermeasures, active traffic management via dynamic junction control, and adaptive ramp metering. *Metric has designed and inspected dozens of WWD systems. We also operate dozens of WWD systems and have reviewed ramp metering systems to determine operation requirements.* ● **Active Transportation and Demand Management** features incident and travel management to detect/verify and manage traffic around incidents and influences traveler behavior by either reducing demand for travel or spreading demand in space and time. *Metric manages half of Florida's TIM Teams and also manages hundreds of traffic signals that incorporate diversion routes and active arterial management.* ● **ICM** involves an integrated approach to transportation along a specific corridor with multiple roadway types and transit facilities managed in coordination to optimize transportation service delivery and algin agency strategies. *Metric currently handles all of Central Florida in an ICM approach. This includes all of the freeways and expressways as well as hundreds of traffic signals coordinated together.* ● **Improved Bike & Pedestrian Crossings** uses innovative ITS solutions to focus on the safety of pedestrians and cyclists, i.e., in-pavement lighting to alert drivers when pedestrians enter crosswalks, illuminated pushbuttons, and a bicycle warning system that uses detectors and electronic signs to identify bicycle traffic to motorists. *Metric has designed, deployed, and configured LIDAR Bike/Ped systems to improve Ped safety.* ● **Connected & Automated Vehicle Deployment** utilizes in-vehicle technologies to alert drivers to traffic conditions, routes, and other service availabilities. Data can be extracted from carrier networks to provide information such as vehicle speed and location. Connected and Automated Vehicle technology can also use automatic cruise control to avoid collisions between vehicles and at intersections, can enhance drivers' night vision via technology to avoid crashes, and, lastly, takes the driver completely out of the equation by enabling vehicles to be operated autonomously. *Metric has configured over 600 hundred RSUs and designed over half of the CV systems in Florida.* ● **Mobility on Demand** is based on the idea that a user can identify when and where they want to go somewhere and then input it into a system that will provide options that provide time traveled as well as cost. *Metric has been involved in the development of a system to select the mode of travel based on cost and time.*

H. Funding and Benefit-Cost Analysis

Most important for a TSMO Program is to present a business case that demonstrates the value of the program to leadership. The most obvious way to demonstrate value is by demonstrating benefit in dollars. Working with other TSMO Programs, we have been able to show monetary value in the reduction of secondary crashes [(Required Open Roads Time – Actual Average Open Roads Time) * Cost of a Crash], the savings in time, fuel, etc. by the use of diversion routes and even the cost savings of advertising in media events when providing information to the public. There are numerous other ways to show valuation as well that can result in a real Benefit/Cost valuation for leadership. In addition, a TSMO program should carefully identify project objectives and performance measures that can be provided to leadership to continue to show the value of the program (i.e., Travel Time Reliability, Crash Reduction, etc.). Finally, identifying a success story that has occurred over the past time period to illustrate the success of the program and to personalize the program. Typically, we have provided this type of information in Executive Monthly Reports (Very succinct with just a few pages), Monthly Reports, Quarterly, and Annual Reports.

I. Grant Writing and Support

Members of the Metric Team have assisted several clients with researching, applying for, and obtaining funding for projects. Metric has an intimate knowledge in the operations of numerous federal, state, and local grant sources, including specific funding sources for TSMO projects at the state and local levels as well as federal sources such as the Federal Transportation Association (FTA), Surface Transportation Program (STP), the Congestion Mitigation and Air Quality (CMAQ) program, and others. Additionally, through our emergency management services service line, Metric has helped multiple clients with long-term recovery services where grants are involved from the U.S. Department of Housing and Urban Development (HUD), the U.S. Department of the Treasury, the Federal Emergency Management Agency, and other state agencies. Through our HUD projects, we understand the intricacies of the laws, regulations, policies, timelines, processes, and systems that govern the American Rescue Plan Act (ARPA) funds. In developing grant applications, Metric uses a process that has been tried and tested to create high-quality applications that lead to fewer information requests and a quicker path ahead. This process includes a kickoff meeting, requests for information from key staff, grant application development to ensure that each proposed project meets target goals, ensuring compliance with application requirements, environmental and historic preservation reviews to assess potential concerns, stakeholder coordination, and a benefit-cost analysis.

J. Report Deliverables

Metric is committed to delivering LADOTD's ITS Section with electronic format and/or hard copies for all items. These items include, but are not limited to copies of meeting minutes, workshops, and research materials, feasibility studies, reports, etc. Metric is able to provide electronic documents in any format desired by the LADOTD's PM.

Section 19

Workload

19. Workload:

Firm(s) ALL FIRMS MUST BE REPRESENTED IN THIS TABLE	Past Performance Evaluation Discipline(s) *	Contract Number and State Project Number	Project Name	Remaining Unpaid Balance**
Metric Engineering, Inc.	OTHER - Emergency Management Services	Contract No. 4400023722	IDIQ Contract for Debris Monitoring Statewide	No remaining unpaid balance "as needed services"
Intelligent Transportation Systems LLC	ITS	H.013256.6	I-10 ITS Scott to Lake Charles - Construction	$13,679
	ITS	H.014515	511 & ATMS SEA	$4,315
	ITS	H.013710.6	I-10: US61 to LaPlace Deployment	$26,808
	ITS	H.011152	I-12- US 190 to LA 59	$49,382
	ITS	H.007160	EBR Computerized Signal Phase VB	$19,995
	ITS	H.001234.6	LA1 Port Allen Canal BR Replacement	$14,291
	ITS	H.013868.6(A)	ITS Routine Maintenance Engineering and Inspection (ME&I)	$83,853
	ITS	H.013868.6 (B)	ITS Responsive/Emergency ME&I Statewide	$75,196
	ITS	H.013868.5	ITS Maintenance Program Management and Operations	$17,029
	ITS	H.011504	Alexandria Phase 2	$83,043
	ITS	H.012676	I-10 Ramps at LA 3019 Interstate Improvements	$4,970
	ITS	H.002424.6	LA 70: Sunshine Bridge – LA 22	$19,734
	ITS	H.003047	Pecue Lane/I10 Interchange Phase III	$25,364
	Traffic	44-24461	LA 385 – Ryan St Intersection Improvements	$180,000
	Traffic	44-21887	Replacement of Fifteen Bridges	$79,573

Firm(s) ALL FIRMS MUST BE REPRESENTED IN THIS TABLE	Past Performance Evaluation Discipline(s) *	Contract Number and State Project Number	Project Name	Remaining Unpaid Balance**
Grey Engineering, LLC (DBE)	Traffic	4400023690	IDIQ Contract for Safety Studies Statewide	$9,414
Bonton Associates, LLC (DBE)	Road	H.010116.5	LA 1088: Soult and Trinity Roundabouts	$27,606
	Road	H.013429.5	Downtown Thibodaux Sidewalks Entity Contract	$65,631
Franklin Associates, LLC	OTHER – Public Involvement	N/A	I-10: LA 415 to I-10 at Essen Lane	$131,526
	OTHER – Public Involvement	N/A	Mississippi River Bridge: LA 1 to LA 30 Connector	$169,382

Section 20

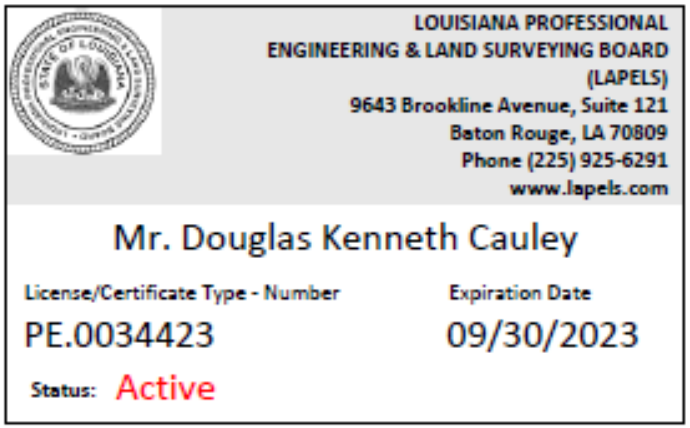
Certifications/Licenses

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

metric

20. Certifications/Licenses

Douglas Cauley, PE



LOUISIANA PROFESSIONAL
ENGINEERING & LAND SURVEYING BOARD
(LAPELS)
9643 Brookline Avenue, Suite 121
Baton Rouge, LA 70809
Phone (225) 925-6291
www.lapels.com

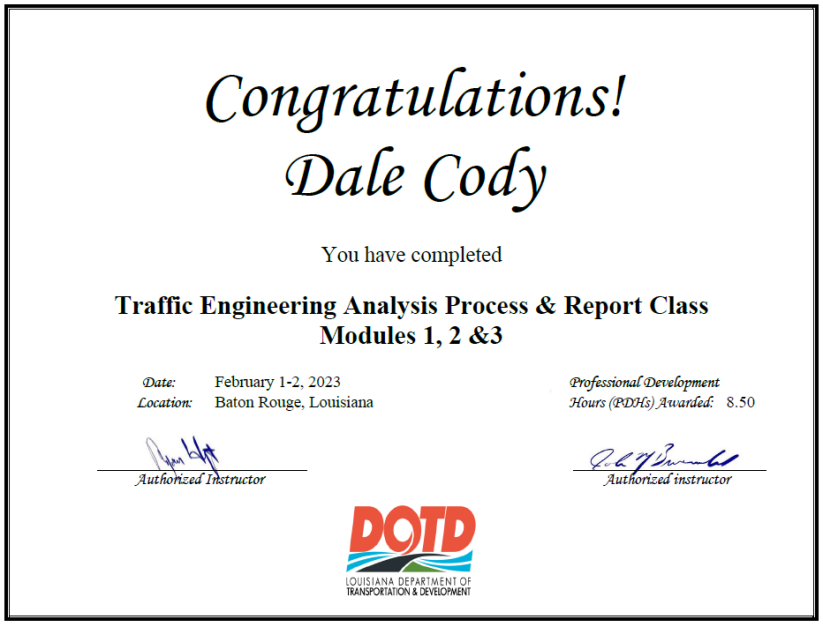
Mr. Douglas Kenneth Cauley

License/Certificate Type - Number	Expiration Date
PE.0034423	09/30/2023

Status: Active

20. Certifications/Licenses

Dale Cody, PE, PTOE



Congratulations!
Dale Cody

You have completed

Traffic Engineering Analysis Process & Report Class
Modules 1, 2 &3

Date: February 1-2, 2023
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 8.50

Authorized Instructor

Authorized instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Transportation Professional Certification Board, Inc.

certifies that

Dale W. Cody

has met all of the requirements established by the Certification Board to use the title of

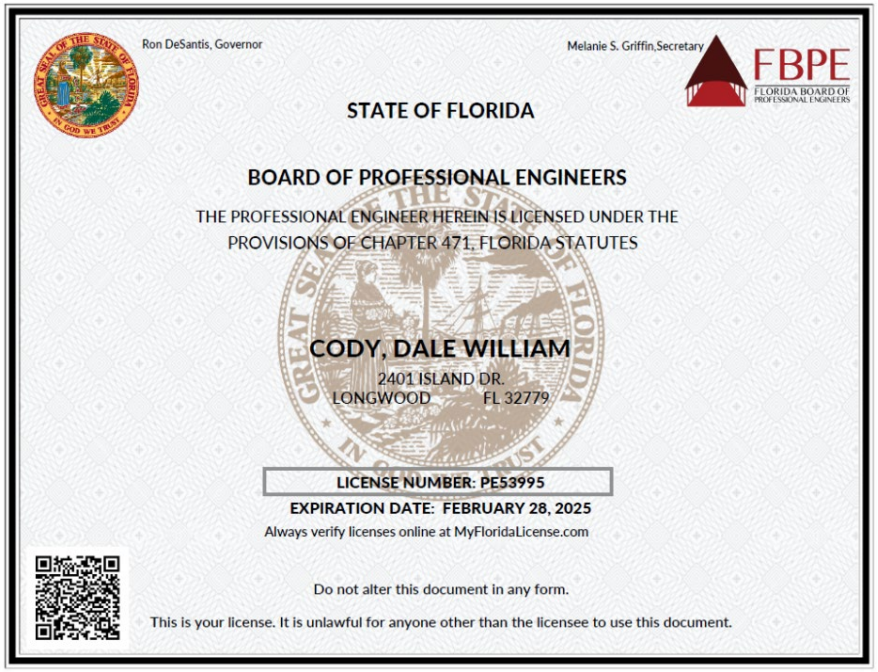
PROFESSIONAL TRAFFIC OPERATIONS ENGINEER

Unless withdrawn by the Certification Board this certificate number 1206 issued in Washington, D.C. will remain valid for three years from November 19, 2006

Steven D. Hofener
Chair

PROFESSIONAL TRAFFIC OPERATIONS ENGINEER

Executive Director



Ron DeSantis, Governor

Melanie S. Griffin, Secretary

FBPE
FLORIDA BOARD OF PROFESSIONAL ENGINEERS

STATE OF FLORIDA

BOARD OF PROFESSIONAL ENGINEERS

THE PROFESSIONAL ENGINEER HEREIN IS LICENSED UNDER THE PROVISIONS OF CHAPTER 471, FLORIDA STATUTES

CODY, DALE WILLIAM
2401 ISLAND DR.
LONGWOOD FL 32779

LICENSE NUMBER: PE53995
EXPIRATION DATE: FEBRUARY 28, 2025
Always verify licenses online at MyFloridaLicense.com

Do not alter this document in any form.

This is your license. It is unlawful for anyone other than the licensee to use this document.

Prime Firm: Metric Engineering, Inc.

metric

20. Certifications/Licenses

Dale Cody, PE, PTOE

FDOT

CERTIFICATE OF QUALIFICATION

Dale Cody

Has met the requirements for the Florida Department of Transportation qualification on:

Final Estimates - Level 1

10/06/2021	10/06/2026	3007288
Valid from	Expires	Certificate No.

Provider: Metric Engineering

This certificate's validity can be verified at: www.ctqpflorida.com

CTQP Construction Training Qualification Program

FDOT

CERTIFICATE OF QUALIFICATION

Dale Cody

Has met the requirements for the Florida Department of Transportation qualification on:

Final Estimates - Level 2

10/08/2021	10/08/2026	3007297
Valid from	Expires	Certificate No.

Provider: Metric Engineering

This certificate's validity can be verified at: www.ctqpflorida.com

CTQP Construction Training Qualification Program

FDOT

This Certifies that
DALE CODY

Has Completed a Florida Department of Transportation Approved Temporary Traffic Control (TTC) Advanced (Refresher) Course.

Date Expires: 01/13/2024 Certificate # 59217
Instructor: Juan Morales FDOT Provider # 37

ATSSA
Phone: 540-368-1701
15 Riverside Parkway Ste.100
Fredericksburg, VA,
www.atssa.com
donna.clark@atssa.com

ATSSA
SAFER ROADS SAVE LIVES

20. Certifications/Licenses

Dale Cody, PE, PTOE

STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
State Board of Registration for Professional Engineers and Land Surveyors
LICENSE NO. PE032804
Dale William Cody
2401 Island Drive
Longwood FL 32779
Professional Engineer

EXP DATE - 12/31/2023 Status: Active
Issue Date: 01/16/2008

South Carolina Department of Labor, Licensing and Regulation
Board of Registration for Professional Engineers and Surveyors

CERTIFIES THAT:
MR DALE W CODY
IS AUTHORIZED TO PRACTICE
Engineering

LICENSE NO.
ELS.26838 E

EXPIRATION DATE: 06/30/2024

To verify current license status, go to http://verify.llronline.com/LicLookup/LookupMain.aspx

STATE OF ALABAMA
BOARD OF LICENSURE FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS
2022|2023

DALE WILLIAM CODY

Is duly licensed as a
PROFESSIONAL ENGINEER

License Number: PE29754
Status: Active
Expire Date
12/31/2023

William R. Huett
Executive Director

Colorado Department of Regulatory Agencies
Division of Professions and Occupations

State Board of Licensure for Architects, Professional Engineers and Professional Land Surveyors

Dale William Cody
Professional Engineer

PE.0052759 — Number
11/01/2021 — Issue Date
Active — Credential Status
10/31/2023 — Expire Date

Verify this credential at: dpo.colorado.gov

Division Director: Ronne Hines — Credential Holder Signature

North Carolina Board of Examiners for Engineers and Surveyors

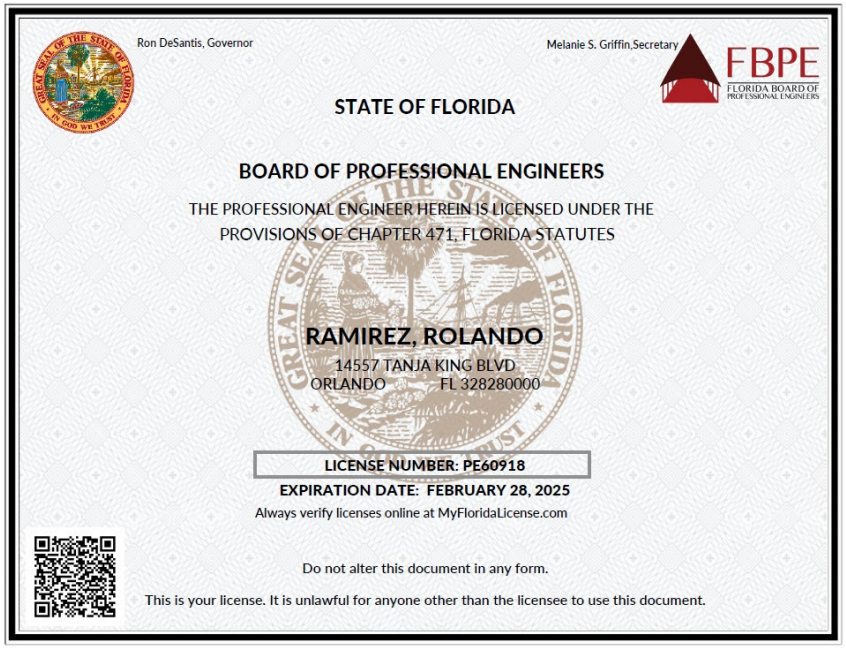
This is to certify that
Dale W. Cody
is duly licensed and entitled to practice
Engineering
until December 31, 2023 when this certificate expires.
License Number: 030761 Status: CURRENT

Jonathan S. Care, Chair

Cedric D. Fairbanks, Secretary

20. Certifications/Licenses

Rolando Ramirez, PE



Ron DeSantis, Governor

Melanie S. Griffin, Secretary

FBPE
FLORIDA BOARD OF PROFESSIONAL ENGINEERS

STATE OF FLORIDA

BOARD OF PROFESSIONAL ENGINEERS

THE PROFESSIONAL ENGINEER HEREIN IS LICENSED UNDER THE PROVISIONS OF CHAPTER 471, FLORIDA STATUTES

RAMIREZ, ROLANDO
14557 TANJA KING BLVD
ORLANDO FL 328280000

LICENSE NUMBER: PE60918
EXPIRATION DATE: FEBRUARY 28, 2025
Always verify licenses online at MyFloridaLicense.com

Do not alter this document in any form.

This is your license. It is unlawful for anyone other than the licensee to use this document.

Certificate of Completion

Rolando Ramirez

Has Completed a Florida Department of Transportation Approved Temporary Traffic Control (TTC) Advanced Course.

11/15/2023	15	Michael A. Hard	57262
Date Expires	FDOT Provider #	Instructor	Certificate #

United Safety Council
1505 E. Colonial Drive
Orlando, FL 32803
unitedsafetycouncil.com
gvictor@floridasafety.org

FDOT

For more information about Temporary Traffic Control (TTC) or to verify this certificate
www.motadmin.com

Effective Presentations

This is to certify that

Rolando Ramirez

Has successfully completed Effective Presentation Skills

This communicator has effectively demonstrated the fundamental skills necessary to complete the Effective Presentation's Skills Training Program. This professional has exemplified those aptitudes utilizing each of the Verbal Aptitudes, Non-Verbal Aptitudes and Techniques for Results in this intensive "Drill for Skill" workshop environment.

Matt Penov
Matt Penov

March 29, 2016
Date

We are passionate about revolutionizing the culture of communication in today's marketplace.

20. Certifications/Licenses

Charles B. Stratton III

FDOT

CERTIFICATE OF QUALIFICATION

Charles Stratton

Has met the requirements for the Florida Department of Transportation qualification on:

Final Estimates - Level 1

11/30/2021	11/30/2026	3008194
Valid from	Expires	Certificate No.

Provider: Metric Engineering

This certificate's validity can be verified at: www.ctqpflorida.com

CTQP Construction Training Qualification Program

FDOT

CERTIFICATE OF QUALIFICATION

Charles Stratton

Has met the requirements for the Florida Department of Transportation qualification on:

Final Estimates - Level 2

01/12/2022	01/12/2027	3008915
Valid from	Expires	Certificate No.

Provider: A&SW Consultants, Inc.

This certificate's validity can be verified at: www.ctqpflorida.com

CTQP Construction Training Qualification Program

Certificate of Completion

CHARLES STRATTON

Has Completed a Florida Department of Transportation Approved Temporary Traffic Control (TTC) Advanced (Refresher) Course.

06/26/2024	15	Michael A. Hard	63211
Date Expires	FDOT Provider #	Instructor	Certificate #

United Safety Council

United Safety Council
1505 E. Colonial Drive
Orlando, FL 32803
unitedsafetycouncil.com
gvictor@floridasafety.org

FDOT

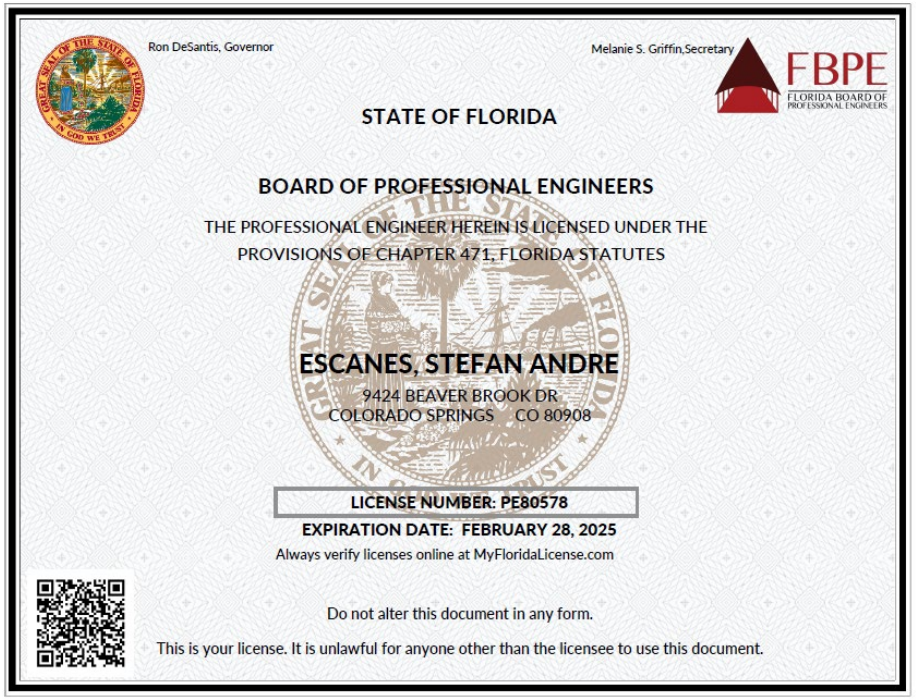
For more information about Temporary Traffic Control (TTC) or to verify this certificate
www.motadmin.com

Prime Firm: Metric Engineering, Inc.

metric

20. Certifications/Licenses

Stefan Escanes, PE, PTOE



Ron DeSantis, Governor

Melanie S. Griffin,Secretary

FBPE
FLORIDA BOARD OF PROFESSIONAL ENGINEERS

STATE OF FLORIDA

BOARD OF PROFESSIONAL ENGINEERS

THE PROFESSIONAL ENGINEER HEREIN IS LICENSED UNDER THE PROVISIONS OF CHAPTER 471, FLORIDA STATUTES

ESCANES, STEFAN ANDRE

9424 BEAVER BROOK DR
COLORADO SPRINGS CO 80908

LICENSE NUMBER: PE80578

EXPIRATION DATE: FEBRUARY 28, 2025

Always verify licenses online at MyFloridaLicense.com

Do not alter this document in any form.

This is your license. It is unlawful for anyone other than the licensee to use this document.

Transportation Professional Certification Board, Inc.

certifies that

Stefan Andre Escanes

has met all of the requirements established by the Certification Board to use the title of

Professional Traffic Operations Engineer

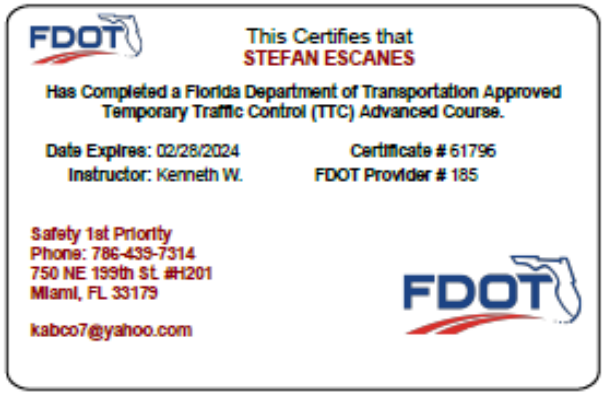
unless withdrawn by the Certification Board and subject to the provisions for renewal.
Certificate number 4502 issued in Washington, DC, USA

03/26/2020

Diane W. Morabito
Chair

PTOE PROFESSIONAL TRAFFIC OPERATIONS ENGINEER

Jeffrey F. Paniati
Executive Director



FDOT

This Certifies that
STEFAN ESCANES

Has Completed a Florida Department of Transportation Approved Temporary Traffic Control (TTC) Advanced Course.

Date Expires: 02/28/2024 Certificate # 61796
Instructor: Kenneth W. FDOT Provider # 185

Safety 1st Priority
Phone: 786-439-7314
750 NE 199th St. #H201
Miami, FL 33179

kabco7@yahoo.com

FDOT

Prime Firm: Metric Engineering, Inc.

metric

Stefan Escanes, PE, PTOE

FLORIDA DEPARTMENT OF TRANSPORTATION
STATE ENVIRONMENTAL MANAGEMENT OFFICE

FDOT

This certifies that

Stefan Escanes

Has satisfactorily completed 24 hours of

Traffic Noise Analysis

Course Number: BT-19-0005

October 13-15, 2015
Miami, Florida

State Environmental Management Office

Ken Morefield
State Environmental Management Office
FBPE Provider number: CEP 0003533

Certificate of Continuing Education

This is to certify that

Stefan Escanes

has satisfactorily completed 30 hours of training on

FHWA TRAFFIC NOISE MODEL 2.5

And 8 hours of training on

TRAFFIC NOISE FUNDAMENTALS

conducted by

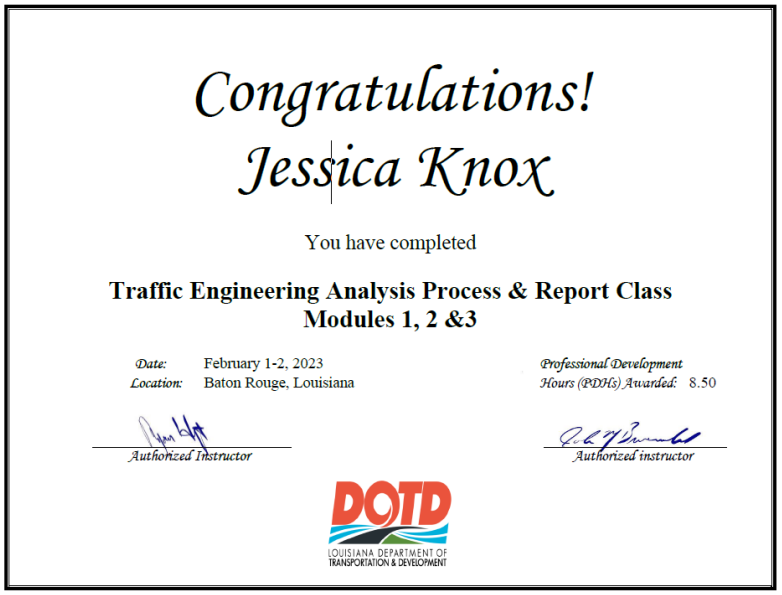
Bowlby & Associates, Inc.

Franklin, Tennessee
April 25-29, 2016

William Bowlby, Ph.D., P.E.
Bowlby & Associates, Inc.

Darlene Reiter, Ph.D., P.E.
Bowlby & Associates, Inc.

Jessica Knox, PE, PTOE



Congratulations!

Jessica Knox

You have completed

Traffic Engineering Analysis Process & Report Class
Modules 1, 2 &3

Date: February 1-2, 2023
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 8.50

Authorized Instructor

Authorized instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

LOUISIANA PROFESSIONAL
ENGINEERING & LAND SURVEYING BOARD
(LAPELS)
9643 Brookline Avenue, Suite 121
Baton Rouge, LA 70809
Phone (225) 925-6291
www.lapels.com

Mrs. Jessica Knox

License/Certificate Type - Number
PE.0047713

Expiration Date
09/30/2023

Status: Active

Transportation Professional Certification Board, Inc.

certifies that

Jessica Ashley Renfrow

has met all of the requirements established by the Certification Board to use the title of

Professional Traffic Operations Engineer

unless withdrawn by the Certification Board and subject to the provisions for renewal.
Certificate number 4353 issued in Washington, DC, USA

11/20/17

Michael K. Park
Chair

PTOE
PROFESSIONAL TRAFFIC OPERATIONS ENGINEER

Jeffrey F. Paniati
Executive Director

FDOT

This certifies that

Jessica A. Renfrow

has successfully completed the

Specifications Package Preparation Training for Consultants

DOT Course Code: PE-05-0004

Presented on April 29 & 30, 2015

Instructor: Frances Thomas
FBPE Provider Number: CEP 0004094

20. Certifications/Licenses

Jessica Knox, PE, PTOE

Effective Presentations

This is to certify that

Jessica Renfrow

Has successfully completed Effective Presentation Skills

This communicator has effectively demonstrated the fundamental skills necessary to complete the Effective Presentation's Skills Training Program. This professional has exemplified those aptitudes utilizing each of the Verbal Aptitudes, Non-Verbal Aptitudes and Techniques for Results in this intensive "Drill for Skill" workshop environment.

Matt Penov
Matt Penov

March 29, 2016
Date

We are passionate about revolutionizing the culture of communication in today's marketplace.

Christopher R. Dew, PE, PTOE

LOUISIANA PROFESSIONAL
ENGINEERING & LAND SURVEYING BOARD
(LAPELS)
9643 Brookline Avenue, Suite 121
Baton Rouge, LA 70809
Phone (225) 925-6291
www.lapels.com

Mr. Christopher Robert Dew

License/Certificate Type - Number	Expiration Date
PE.0047612	09/30/2023

Status: Active

Transportation Professional Certification Board, Inc.

certifies that

Christopher Robert Dew

has met all of the requirements established by the Certification Board to use the title of

Professional Traffic Operations Engineer

unless withdrawn by the Certification Board and subject to the provisions for renewal.
Certificate number 4310 issued in Washington, DC, USA

7/19/17

Michael K. Park
Chair

PTOE PROFESSIONAL TRAFFIC OPERATIONS ENGINEER

Jeffrey F. Paniati
Executive Director

FDOT

Christopher Dew

Has Completed a FDOT Approved Temporary Traffic Control: Advanced - Refresher Course.

Certificate: 607654

Issued: 03/31/2023

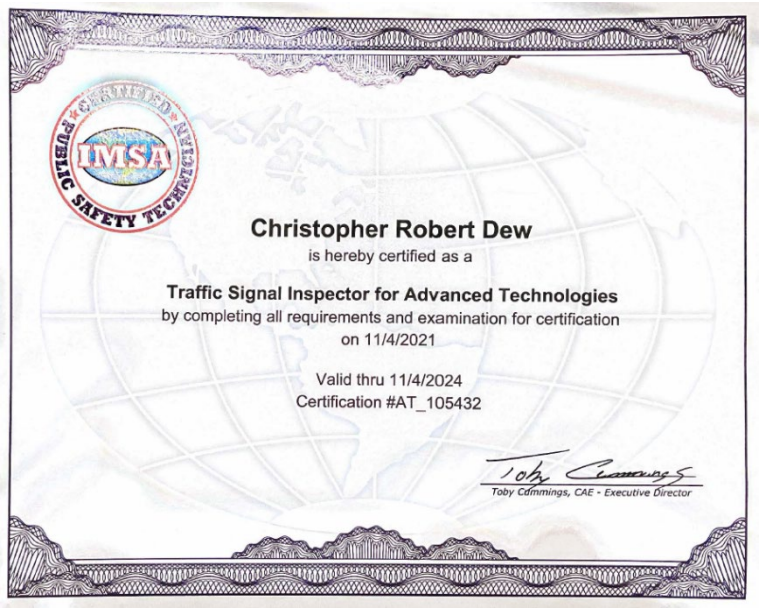
Expires: 03/20/2027

Instructor: R. A

Training Provider:

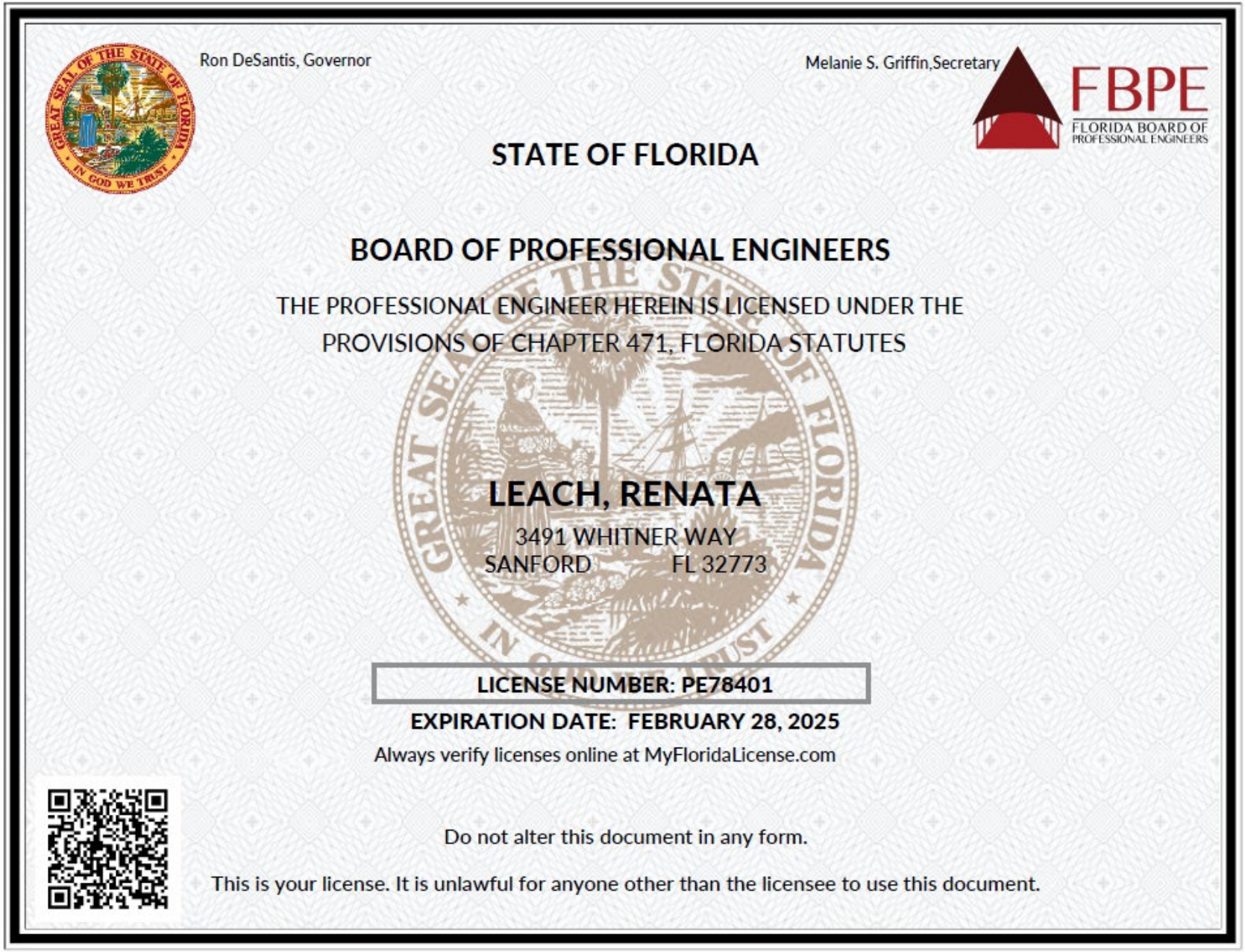
A&SW Consultants, Inc.
5545 Benchmark Lane
Sanford, FL 32773
Ph: 386-788-9899

Verify this Certificate at www.motadmin.com.



20. Certifications/Licenses

Renata Leach, PE, EE



Ron DeSantis, Governor

Melanie S. Griffin,Secretary

FBPE
FLORIDA BOARD OF PROFESSIONAL ENGINEERS

STATE OF FLORIDA

BOARD OF PROFESSIONAL ENGINEERS

THE PROFESSIONAL ENGINEER HEREIN IS LICENSED UNDER THE
PROVISIONS OF CHAPTER 471, FLORIDA STATUTES

LEACH, RENATA

3491 WHITNER WAY
SANFORD FL 32773

LICENSE NUMBER: PE78401

EXPIRATION DATE: FEBRUARY 28, 2025

Always verify licenses online at MyFloridaLicense.com

Do not alter this document in any form.

This is your license. It is unlawful for anyone other than the licensee to use this document.

20. Certifications/Licenses

Renata Leach, PE, EE

TEXAS BOARD OF PROFESSIONAL ENGINEERS

BE IT KNOWN THAT

Renata Leach

HAVING GIVEN SATISFACTORY EVIDENCE OF QUALIFICATIONS REQUIRED UNDER THE TEXAS ENGINEERING PRACTICE ACT, TEXAS CIVIL STATUTES, ARTICLE 3271a, IS GRANTED THIS

LICENSE TO PRACTICE AS A

PROFESSIONAL ENGINEER

IN THE STATE OF TEXAS
PROVIDED THIS LICENSE IS NOT REVOKED AND IS RENEWED ACCORDING TO LAW

TEXAS BOARD OF PROFESSIONAL ENGINEERS

IN WITNESS WHEREOF,

We have hereunto set our hands and affixed the seal of the Board at the City of Austin, this 16th day of August, 2016.

BOARD CHAIR

BOARD SECRETARY

SERIAL NUMBER **124061**

STATE OF ALABAMA
BOARD OF LICENSURE FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS

2022|2023

RENATA LEACH

Is duly licensed as a
PROFESSIONAL ENGINEER

BELS

License Number: **PE37463**
Status: **Active**
Expire Date
12/31/2023

William R. Huett
Executive Director

EffectivePresentations

This is to certify that

Renata Caetano

Has successfully completed Effective Presentation Skills

This communicator has effectively demonstrated the fundamental skills necessary to complete the Effective Presentation's Skills Training Program. This professional has exemplified those aptitudes utilizing each of the Verbal Aptitudes, Non-Verbal Aptitudes and Techniques for Results in this intensive "Drill for Skill" workshop environment.

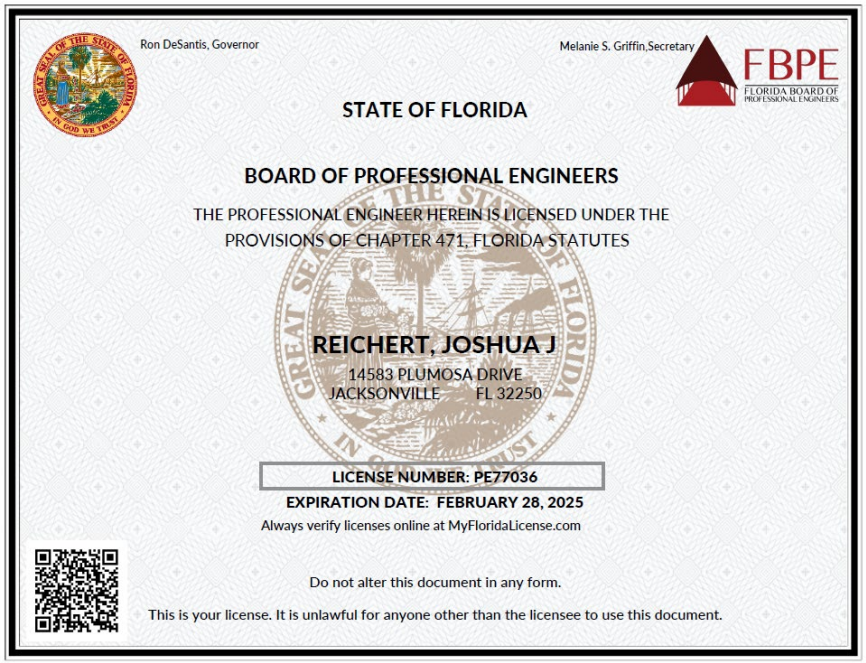
Matt Penov
Matt Penov

March 29, 2016
Date

We are passionate about revolutionizing the culture of communication in today's marketplace.

20. Certifications/Licenses

Josh Reichert, PE



Ron DeSantis, Governor

Melanie S. Griffin, Secretary

FBPE
FLORIDA BOARD OF PROFESSIONAL ENGINEERS

STATE OF FLORIDA

BOARD OF PROFESSIONAL ENGINEERS

THE PROFESSIONAL ENGINEER HEREIN IS LICENSED UNDER THE PROVISIONS OF CHAPTER 471, FLORIDA STATUTES

REICHERT, JOSHUA J

14583 PLUMOSA DRIVE
JACKSONVILLE FL 32250

LICENSE NUMBER: PE77036

EXPIRATION DATE: FEBRUARY 28, 2025

Always verify licenses online at MyFloridaLicense.com

Do not alter this document in any form.

This is your license. It is unlawful for anyone other than the licensee to use this document.

FDOT

This Certifies that
JOSHUA REICHERT

Has Completed a Florida Department of Transportation Approved Temporary Traffic Control (TTC) Advanced (Refresher) Course.

Date Expires: 10/07/2024 Certificate # 66381

Instructor: James Ellzey FDOT Provider # 134

A&SW Consultants, Inc.
Phone: 386-788-9899
5545 Benchmark Lane
Sanford , FL 32773
www.FloridaMOT.com
nicolle@aswconsultants.com

A&SW

20. Certifications/Licenses

Kevin Boston

FLORIDA DEPARTMENT OF TRANSPORTATION

Certificate of Completion

Kevin Boston

has successfully completed the FDOT District 7, 2½ day (20-hour)

INTELLIGENT TRANSPORTATION SYSTEMS
FACILITY MANAGEMENT SYSTEM
(ITSFM) Ver. 3.3
MAINTAINER TRAINING

FDOT

Awarded: July 1, 2016

SUNGUIDE

Randy Pierce

Randy Pierce, Telecommunications Administrator, FDOT

CERTIFICATE
OF COMPLETION

Kevin Boston

Has Completed a FDOT Approved Temporary Traffic Control (TTC): Advanced - Refresher Course

Training Provider:

A&SW Consultants, Inc.
5545 Benchmark Lane
Sanford FL 32773
Phone: 386-788-9899

Verify this Certificate by visiting www.motadmin.com

03/31/2023	03/28/2027	R. A	607664
Issue Date	Expiration Date	Instructor	Certificate No.

FDOT

SEE the LIGHT
FIBER OPTIC TRAINING

CORNING
LANscape® Solutions

Corning Cable Systems recognizes

Kevin Boston
for completing the

***See the Light* Training Series**
on Termination Technology
for 3 **BICSI** Continuing Education Credits

July 22, 2011
Month Date, Year

Instructor

3 BICSI Continuing Education Credits: BICSI CECs are only issued to BICSI credential holders.

PUBLIC SAFETY TECHNICIAN
CERTIFIED
IMSA

Kevin R. Boston
is hereby certified as a

Traffic Signal Field Technician Level II
by completing all requirements and examination for certification
on 5/18/2022

Valid thru 5/18/2025
Certification #BE_100811

Toby Cummings, CAE - Executive Director

CERTIFICATE

OF COMPLETION

Fiber Optic Design, Installation and Maintenance Course

This is to Certify that

Kevin Boston

has completed a four-day seminar on design, installation and maintenance of fiber optic communications systems that consisted of twelve hours of classroom instruction on physical plant, four hours on system design and sixteen hours of hands-on training. Fiber, cable, and patch panel preparation, connectorization of ST and SC connectors, splicing, OTDR and optical loss testing were accomplished in the hands-on labs.

CERTIFIED FIBER OPTIC TRAINING
LIGHT BRIGADE
CERTIFICATE OF COMPLETION

INSTRUCTOR

14051204 — COURSE NUMBER

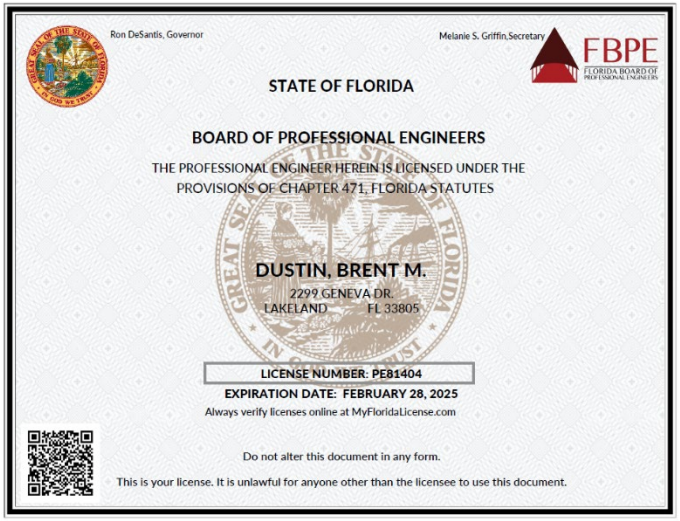
May 20-23, 2014 — COMPLETION DATE

Prime Firm: Metric Engineering, Inc.

metric

20. Certifications/Licenses

Brent Dustin, PE



Ron DeSantis, Governor

Melanie S. Griffin, Secretary

FBPE
FLORIDA BOARD OF PROFESSIONAL ENGINEERS

STATE OF FLORIDA

BOARD OF PROFESSIONAL ENGINEERS

THE PROFESSIONAL ENGINEER HEREIN IS LICENSED UNDER THE PROVISIONS OF CHAPTER 471, FLORIDA STATUTES

DUSTIN, BRENT M.
2299 GENEVA DR.
LAKELAND FL 33805

LICENSE NUMBER: PE81404
EXPIRATION DATE: FEBRUARY 28, 2025
Always verify licenses online at MyFloridaLicense.com

Do not alter this document in any form.

This is your license. It is unlawful for anyone other than the licensee to use this document.

AMERICAN CONCRETE INSTITUTE

This is to certify that

BRENT M DUSTIN

has demonstrated knowledge and ability by successfully completing the ACI Certification requirements and is hereby recognized as an

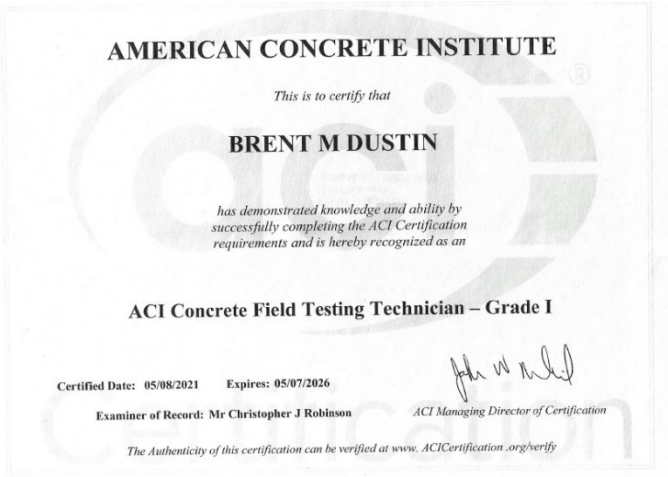
ACI Concrete Transportation Construction Inspector In-Training

Certified Date: 10/11/2021 Expires: 10/10/2026

Examiner of Record: Mr Christopher J Robinson

ACI Managing Director of Certification

The Authenticity of this certification can be verified at www. ACICertification .org/verify



AMERICAN CONCRETE INSTITUTE

This is to certify that

BRENT M DUSTIN

has demonstrated knowledge and ability by successfully completing the ACI Certification requirements and is hereby recognized as an

ACI Concrete Field Testing Technician – Grade I

Certified Date: 05/08/2021 Expires: 05/07/2026

Examiner of Record: Mr Christopher J Robinson

ACI Managing Director of Certification

The Authenticity of this certification can be verified at www. ACICertification .org/verify

FDOT

CERTIFICATE OF QUALIFICATION

Brent Dustin

Has met the requirements for the Florida Department of Transportation qualification on:

Asphalt Paving Level 1

11/9/2020	11/9/2025	2006703
Valid from	Expires	Certificate No.

Provider: A&SW Consultants, Inc.

This certificate's validity can be verified at: www.ctqpflorida.com

CTQP
Construction Training Qualification Program

FDOT

CERTIFICATE OF QUALIFICATION

Brent Dustin

Has met the requirements for the Florida Department of Transportation qualification on:

Asphalt Paving Level 2

11/12/2020	11/12/2025	2006747
Valid from	Expires	Certificate No.

Provider: A&SW Consultants, Inc.

This certificate's validity can be verified at: www.ctqpflorida.com

CTQP
Construction Training Qualification Program

20. Certifications/Licenses

Brent Dustin, PE

FDOT

CERTIFICATE OF QUALIFICATION

Brent Dustin

Has met the requirements for the Florida Department of Transportation qualification on:

Final Estimates - Level 1

12/12/2022	12/12/2027	3016327
Valid from	Expires	Certificate No.

Provider: Non-CTQP Certifications

This certificate's validity can be verified at: www.ctqpflorida.com

CTQP Construction Training Qualification Program

FDOT

CERTIFICATE OF QUALIFICATION

Brent Dustin

Has met the requirements for the Florida Department of Transportation qualification on:

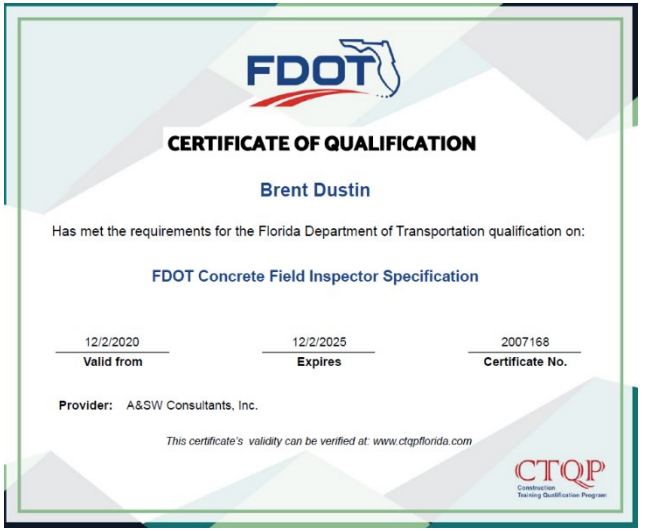
Final Estimates - Level 2

12/12/2022	12/12/2027	3016326
Valid from	Expires	Certificate No.

Provider: Metric Engineering

This certificate's validity can be verified at: www.ctqpflorida.com

CTQP Construction Training Qualification Program



FDOT

CERTIFICATE OF QUALIFICATION

Brent Dustin

Has met the requirements for the Florida Department of Transportation qualification on:

FDOT Concrete Field Inspector Specification

12/2/2020	12/2/2025	2007168
Valid from	Expires	Certificate No.

Provider: A&SW Consultants, Inc.

This certificate's validity can be verified at: www.ctqpflorida.com

CTQP Construction Training Qualification Program

FDOT

CERTIFICATE OF QUALIFICATION

Brent Dustin

Has met the requirements for the Florida Department of Transportation qualification on:

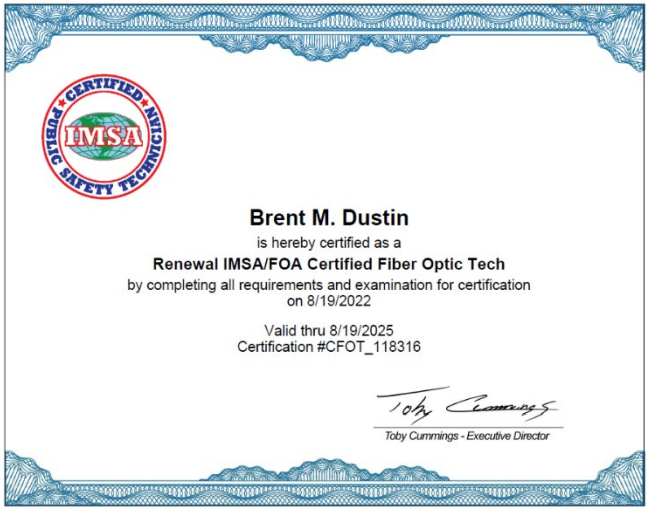
Drilled Shaft Inspection

05/05/2022	05/05/2027	3008557
Valid from	Expires	Certificate No.

Provider: A&SW Consultants, Inc.

This certificate's validity can be verified at: www.ctqpflorida.com

CTQP Construction Training Qualification Program



IMSA CERTIFIED PUBLIC SAFETY TECHNICIAN

Brent M. Dustin

is hereby certified as a

Renewal IMSA/FOA Certified Fiber Optic Tech

by completing all requirements and examination for certification on 8/19/2022

Valid thru 8/19/2025
Certification #CFOT_118316

Toby Cummings - Executive Director

IMSA CERTIFIED PUBLIC SAFETY TECHNICIAN

Brent M. Dustin

is hereby certified as a

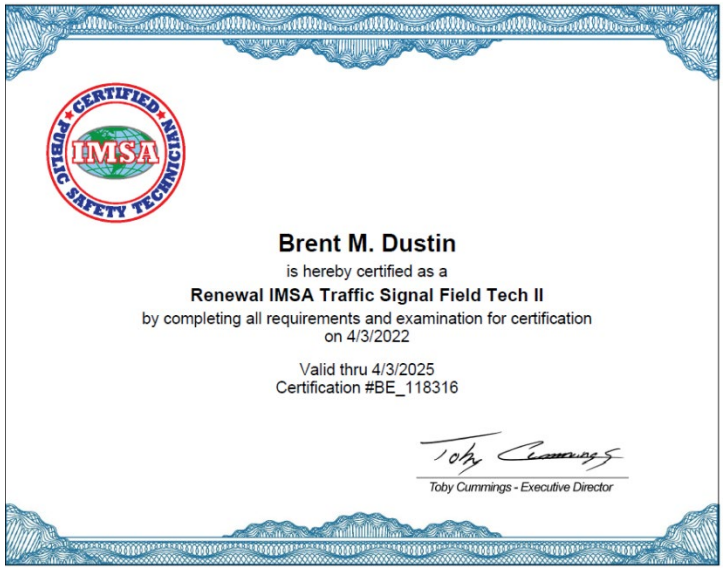
Renewal IMSA Traffic Signal Technician I

by completing all requirements and examination for certification on 4/3/2022

Valid thru 4/3/2025
Certification #AA_118316

Toby Cummings - Executive Director

Brent Dustin, PE



CERTIFIED PUBLIC SAFETY TECHNICIAN
IMSA

Brent M. Dustin
is hereby certified as a
Renewal IMSA Traffic Signal Field Tech II
by completing all requirements and examination for certification
on 4/3/2022

Valid thru 4/3/2025
Certification #BE_118316

Toby Cummings - Executive Director

FDOT

This Certifies that
Brent Dustin

Has Completed a Florida Department of Transportation Approved Temporary Traffic Control (TTC) Advanced (Refresher) Course.

Date Expires: 12/13/2023 Certificate # 58256
Instructor: Victor LoPiccolo FDOT Provider # 165

Race to Safety Training
Phone: 386-846-0545
PO Box 290464
Port Orange, FL 32129
www.racetosafety.com
sherrie@racetosafety.com

CERTIFIED PUBLIC SAFETY TECHNICIAN
IMSA

Brent M. Dustin
is hereby certified as a
Traffic Signal Technician Level I
by completing all requirements and examination for certification
on 4/3/2022

Valid thru 4/3/2025
Certification #AA_118316

Toby Cummings, CAE - Executive Director

QUALIFIED
STORMWATER MANAGEMENT
INSPECTOR

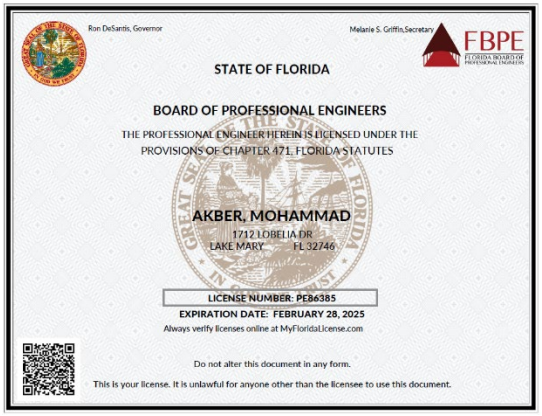
The undersigned hereby acknowledges that
Brent Dustin

has successfully met all requirements necessary to be fully qualified through the Florida Department of Environmental Protection Stormwater Erosion and Sedimentation Control Inspector Training Program

Hal Lunsford
January 11, 2012
Inspector Number 26594
Kristine Jones

20. Certifications/Licenses

Mohammad Akber, PE



Ron DeSantis, Governor — Melanie S. Griffin, Secretary

FBPE — FLORIDA BOARD OF PROFESSIONAL ENGINEERS

STATE OF FLORIDA

BOARD OF PROFESSIONAL ENGINEERS

THE PROFESSIONAL ENGINEER HEREIN IS LICENSED UNDER THE PROVISIONS OF CHAPTER 471, FLORIDA STATUTES

AKBER, MOHAMMAD
1712 LOBELIA DR
LAKE MARY FL 32746

LICENSE NUMBER: PE86385
EXPIRATION DATE: FEBRUARY 28, 2025
Always verify licenses online at MyFloridaLicense.com

Do not alter this document in any form.
This is your license. It is unlawful for anyone other than the licensee to use this document.

Certificate of Completion

MOHAMMAD AKBER

Has Completed a Florida Department of Transportation Approved Temporary Traffic Control (TTC) Advanced Course.

12/04/2023	15	Michael A. Hard	57944
Date Expires	FDOT Provider #	Instructor	Certificate #

United Safety Council
1506 E. Colonial Drive
Orlando, FL 32803
unitedsafetycouncil.com
gvictor@floridasafety.org

FDOT
For more information about Temporary Traffic Control (TTC) or to verify this certificate www.motadmin.com

FDOT

CERTIFICATE OF QUALIFICATION

Mohammad Akber

Has met the requirements for the Florida Department of Transportation qualification on:

Final Estimates - Level 1

01/05/2022	01/05/2027	3008755
Valid from	Expires	Certificate No.

Provider: Metric Engineering

This certificate's validity can be verified at: www.ctqpflorida.com

CTQP

FDOT

CERTIFICATE OF QUALIFICATION

Mohammad Akber

Has met the requirements for the Florida Department of Transportation qualification on:

Final Estimates - Level 2

01/12/2022	01/12/2027	3008926
Valid from	Expires	Certificate No.

Provider: A&SW Consultants, Inc.

This certificate's validity can be verified at: www.ctqpflorida.com

CTQP

IMSA CERTIFIED PUBLIC SAFETY TECHNICIAN

Mohammad Akber
is hereby certified as a
Traffic Signal Technician Level I
by completing all requirements and examination for certification
on 12/21/2020

Valid thru 12/21/2023
Certification #AA_127737

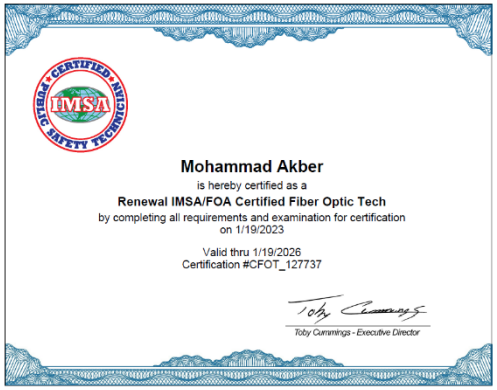
Toby Cummings, CAE - Executive Director

IMSA CERTIFIED PUBLIC SAFETY TECHNICIAN

Mohammad Akber
is hereby certified as a
Traffic Signal Field Technician Level II
by completing all requirements and examination for certification
on 3/17/2021

Valid thru 3/17/2024
Certification #BE_127737

Toby Cummings, CAE - Executive Director



IMSA CERTIFIED PUBLIC SAFETY TECHNICIAN

Mohammad Akber
is hereby certified as a
Renewal IMSA/FOA Certified Fiber Optic Tech
by completing all requirements and examination for certification
on 1/19/2023

Valid thru 1/19/2026
Certification #CFOT_127737

Toby Cummings - Executive Director

Prime Firm: Metric Engineering, Inc.

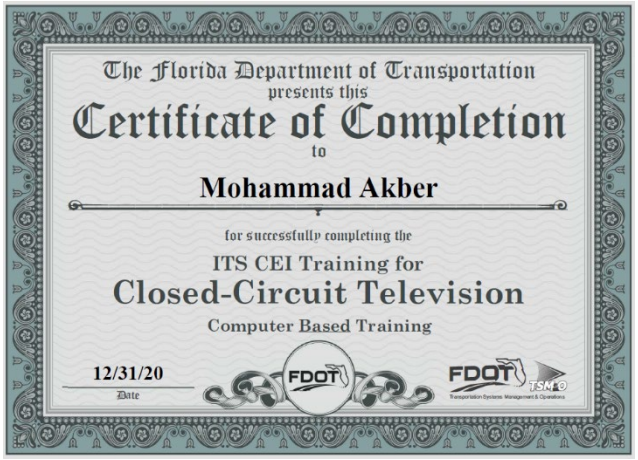
metric

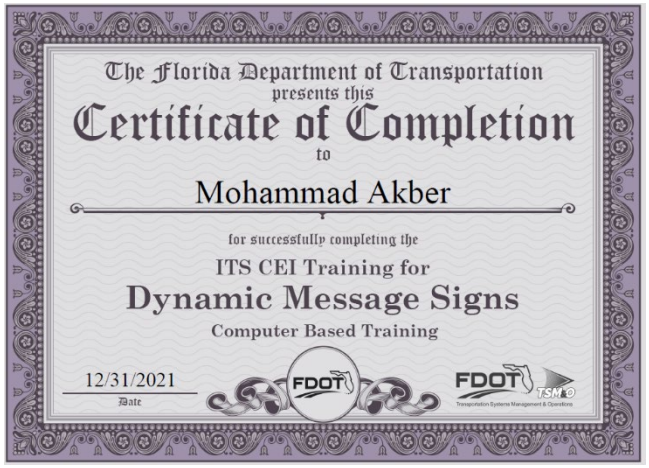
20. Certifications/Licenses

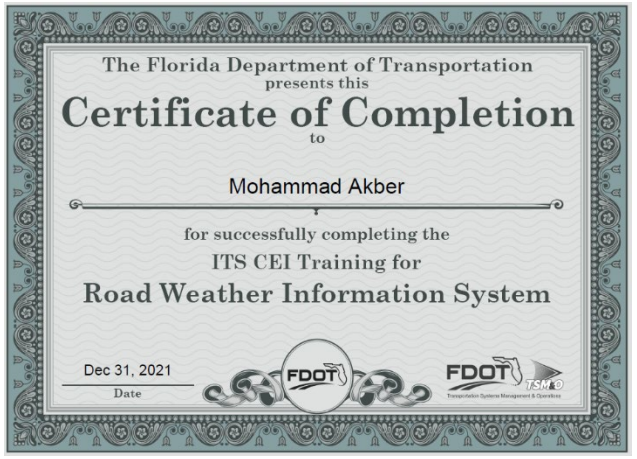
Mohammad Akber, PE


The Florida Department of Transportation
presents this
Certificate of Completion
to
Mohammad Akber
for successfully completing the
ITS CEI Training for
Managed Field Ethernet Switch
Computer Based Training
12/30/2021
Date


The Florida Department of Transportation
presents this
Certificate of Completion
to
Mohammad Akber
for successfully completing the
ITS CEI Training for
Microwave Vehicle Detection System
Computer Based Training
12/31/21
Date

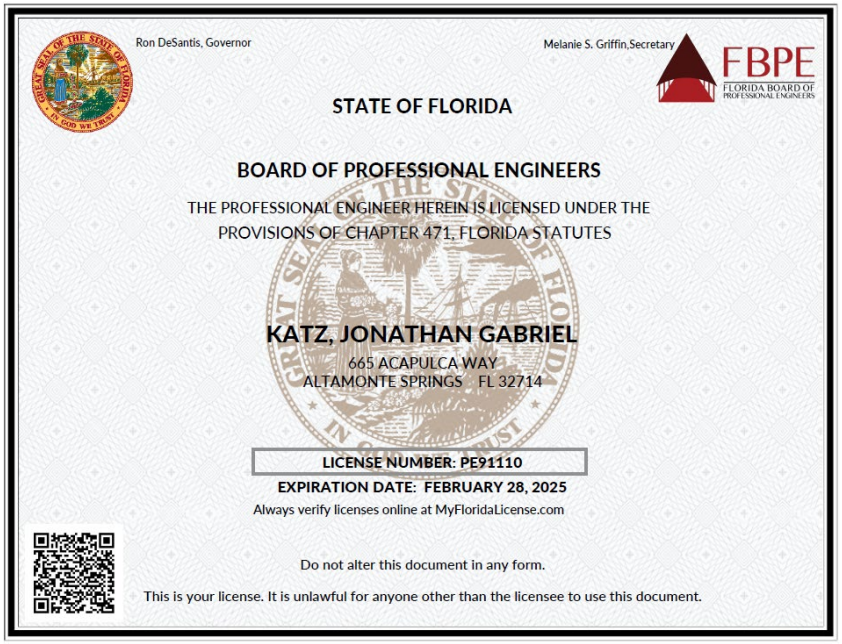

The Florida Department of Transportation
presents this
Certificate of Completion
to
Mohammad Akber
for successfully completing the
ITS CEI Training for
Closed-Circuit Television
Computer Based Training
12/31/20
Date


The Florida Department of Transportation
presents this
Certificate of Completion
to
Mohammad Akber
for successfully completing the
ITS CEI Training for
Dynamic Message Signs
Computer Based Training
12/31/2021
Date


The Florida Department of Transportation
presents this
Certificate of Completion
to
Mohammad Akber
for successfully completing the
ITS CEI Training for
Road Weather Information System
Dec 31, 2021
Date

20. Certifications/Licenses

Jonathan Katz, PE



Ron DeSantis, Governor

Melanie S. Griffin, Secretary

FBPE
FLORIDA BOARD OF PROFESSIONAL ENGINEERS

STATE OF FLORIDA

BOARD OF PROFESSIONAL ENGINEERS

THE PROFESSIONAL ENGINEER HEREIN IS LICENSED UNDER THE PROVISIONS OF CHAPTER 471, FLORIDA STATUTES

KATZ, JONATHAN GABRIEL

665 ACAPULCA WAY
ALTAMONTE SPRINGS FL 32714

LICENSE NUMBER: PE91110

EXPIRATION DATE: FEBRUARY 28, 2025

Always verify licenses online at MyFloridaLicense.com

Do not alter this document in any form.

This is your license. It is unlawful for anyone other than the licensee to use this document.

Certificate of Completion

Jonathan G. Katz

Has Completed a Florida Department of Transportation Approved Temporary Traffic Control (TTC) Advanced Course.

11/15/2023	15	Michael A. Hard	57259
Date Expires	FDOT Provider #	Instructor	Certificate #

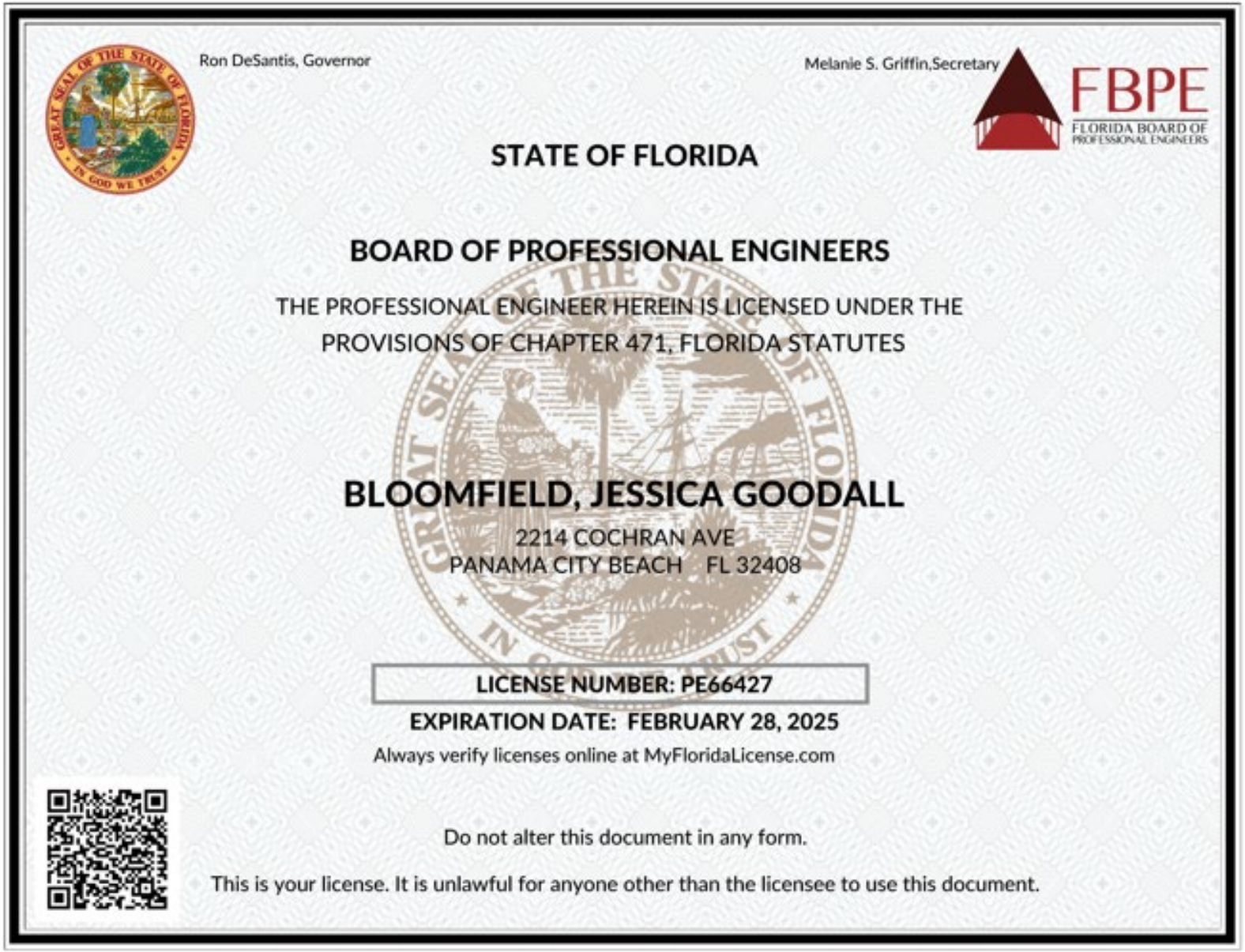
United Safety Council
1505 E. Colonial Drive
Orlando, FL 32803
unitedsafetycouncil.com
gvictor@floridasafety.org

FDOT

For more information about Temporary Traffic Control (TTC) or to verify this certificate
www.motadmin.com

20. Certifications/Licenses

Jessica Bloomfield, PE



Ron DeSantis, Governor

Melanie S. Griffin,Secretary

FBPE
FLORIDA BOARD OF PROFESSIONAL ENGINEERS

STATE OF FLORIDA

BOARD OF PROFESSIONAL ENGINEERS

THE PROFESSIONAL ENGINEER HEREIN IS LICENSED UNDER THE PROVISIONS OF CHAPTER 471, FLORIDA STATUTES

BLOOMFIELD, JESSICA GOODALL

2214 COCHRAN AVE
PANAMA CITY BEACH FL 32408

LICENSE NUMBER: PE66427

EXPIRATION DATE: FEBRUARY 28, 2025

Always verify licenses online at MyFloridaLicense.com

Do not alter this document in any form.

This is your license. It is unlawful for anyone other than the licensee to use this document.

20. Certifications/Licenses

Eric Wyllins

Certificate of Completion

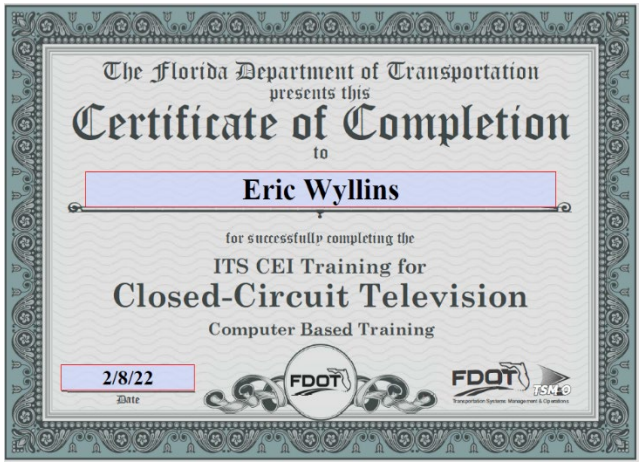
ERIC WYLLINS

Has Completed a Florida Department of Transportation Approved Temporary Traffic Control (TTC) Advanced (Refresher) Course.

06/26/2024	15	Michael A. Hard	63212
Date Expires	FDOT Provider #	Instructor	Certificate #

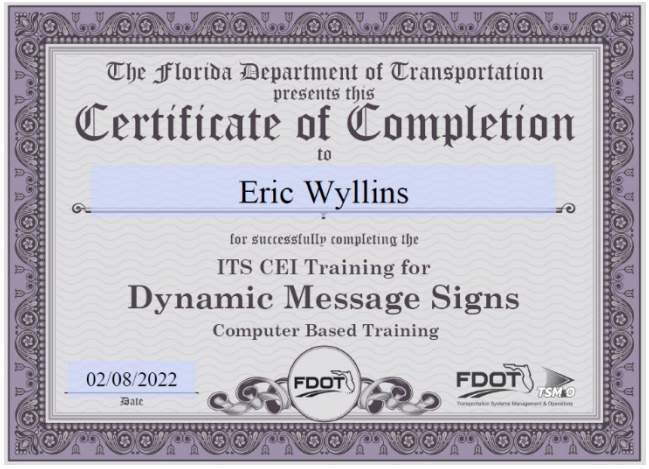
United Safety Council
1505 E. Colonial Drive
Orlando, FL 32803
unitedsafetycouncil.com
gvictor@floridasafety.org

For more information about Temporary Traffic Control (TTC) or to verify this certificate
www.motadmin.com

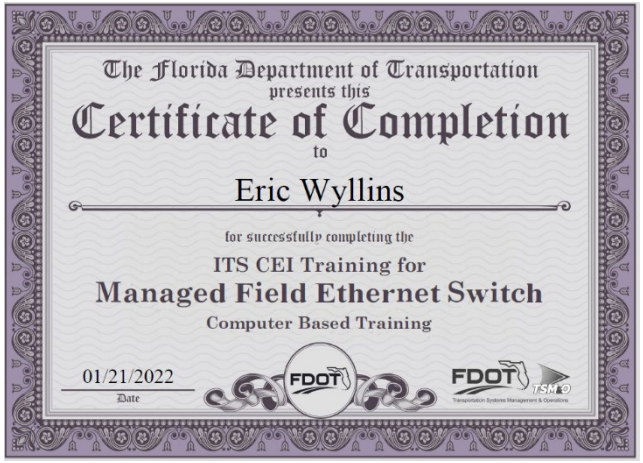


The Florida Department of Transportation presents this
Certificate of Completion
to
Eric Wyllins
for successfully completing the
ITS CEI Training for
Closed-Circuit Television
Computer Based Training
2/8/22
Date

The Florida Department of Transportation presents this
Certificate of Completion
to
Eric Wyllins
for successfully completing the
ITS CEI Training for
Microwave Vehicle Detection System
Computer Based Training
2/8/22
Date



The Florida Department of Transportation presents this
Certificate of Completion
to
Eric Wyllins
for successfully completing the
ITS CEI Training for
Dynamic Message Signs
Computer Based Training
02/08/2022
Date



The Florida Department of Transportation presents this
Certificate of Completion
to
Eric Wyllins
for successfully completing the
ITS CEI Training for
Managed Field Ethernet Switch
Computer Based Training
01/21/2022
Date

ASCO®
CERTIFICATE OF ATTENDANCE
December 10, 2018
Surge Protective Devices
Surge Protection Training
Eric Wyllins
ph: 800.800.2726
50 Hanover Road
Florham Park, NJ 07932
www.ascopower.com
Presented By: Dave Snelling

Joshua Tibbs, EI

LICENSEE DETAILS *9:58:41 AM 4/11/2023*

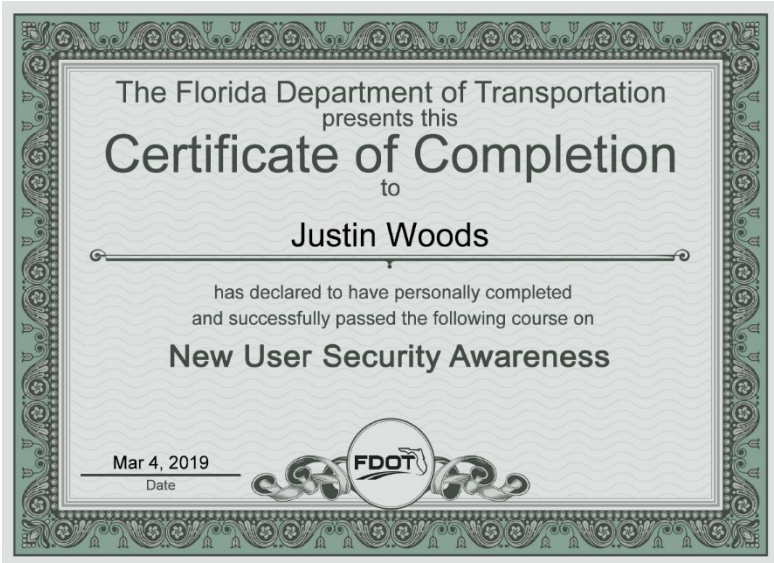
Licensee Information

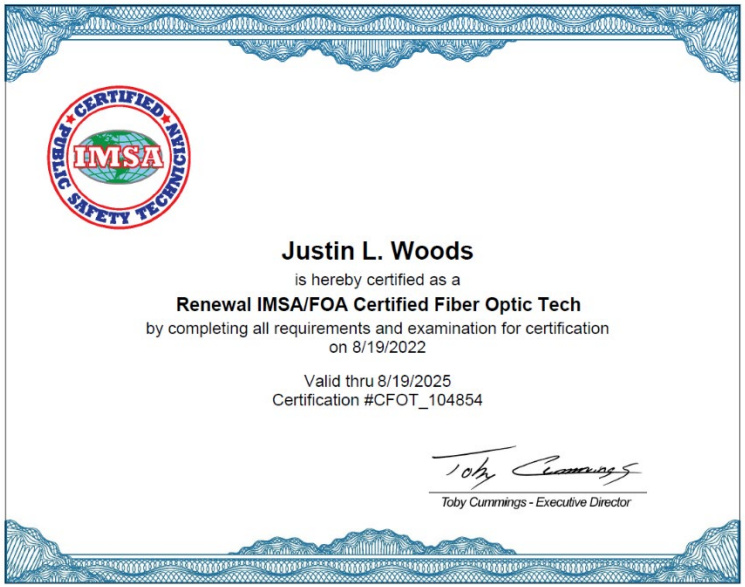
Name:	TIBBS, JOSHUA DAVID (Primary Name)
Main Address:	931 LEEWARD DR DELTONA Florida 32738
County:	VOLUSIA

License Information

License Type:	Engineering Intern
Rank:	Eng Intern
License Number:	1100023026
Status:	Current
Licensure Date:	09/23/2019
Expires:	

Justin Woods





20. Certifications/Licenses

Justin Woods

Certificate of Completion

360training.com™

This Certifies That

Justin Woods

is awarded this certificate for

Confined Space Entry Training

Complying with OSHA Standard 29 CFR 1910.146, Entrant, Attendant, Supervisor

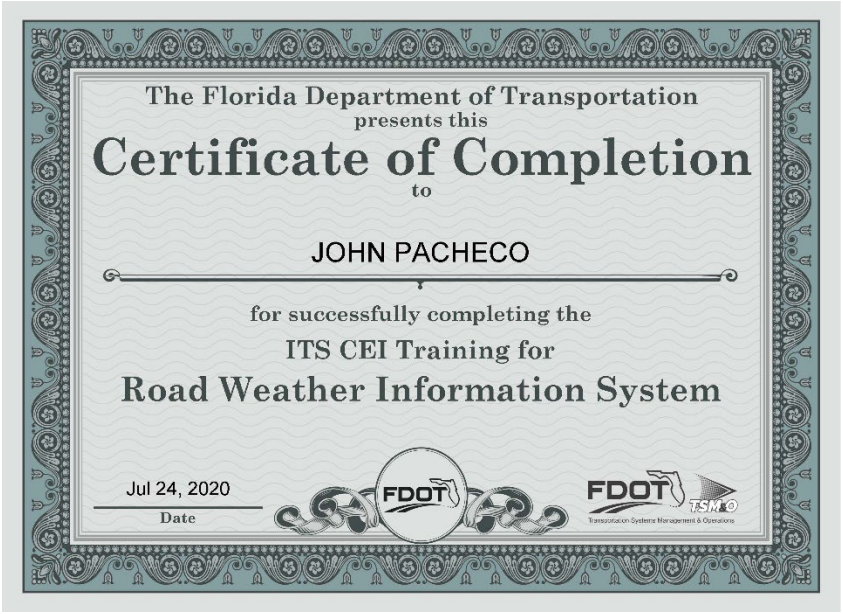
Credit Hours: 8

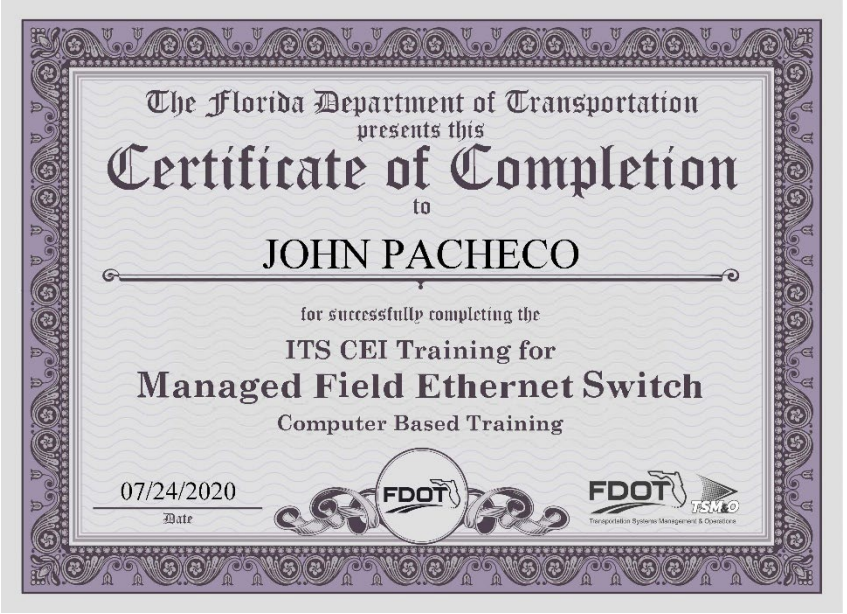
Completion Date: 11/08/2019

Marie Athey, OSHA Trainer

360training.com ♦ 13801 Burnet Rd., Suite 100 ♦ Austin, TX 78727 ♦ 888-360-TRNG ♦ www.360training.com

John Pacheco

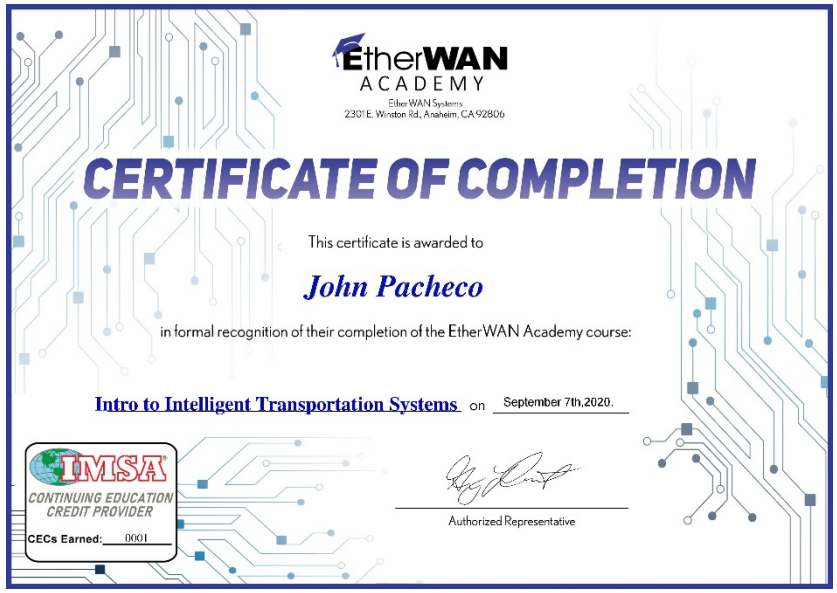




Prime Firm: Metric Engineering, Inc.

metric

John Pacheco



20. Certifications/Licenses

John Pacheco

Certificate of Completion

John Pacheco

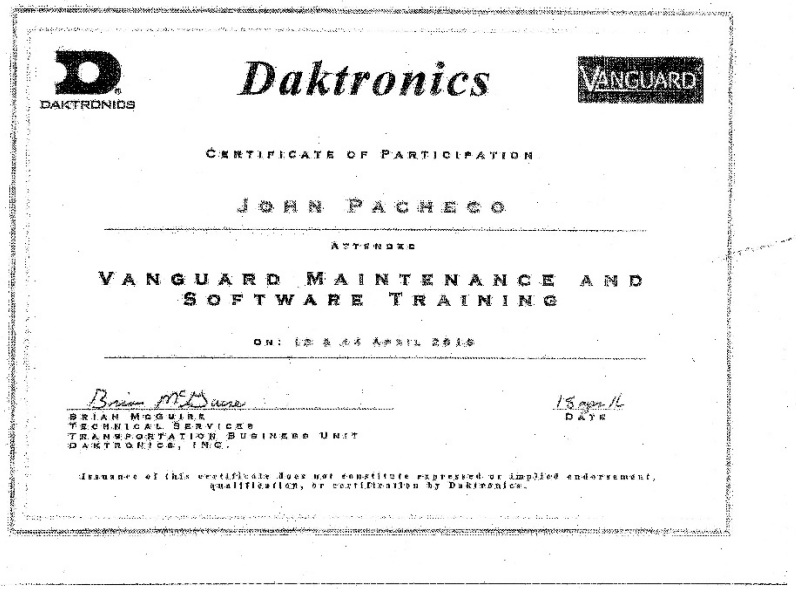
Has Completed a Florida Department of Transportation Approved Temporary Traffic Control (TTC) Advanced Course.

02/28/2024	15	Michael A. Hard	61127
Date Expires	FDOT Provider #	Instructor	Certificate #

United Safety Council
1505 E. Colonial Drive
Orlando, FL 32803
unitedsafetycouncil.com
gvictor@floridasafety.org

FDOT

For more information about Temporary Traffic Control (TTC) or to verify this certificate
www.motadmin.com



Daktronics

VANGUARD

DAKTRONICS

CERTIFICATE OF PARTICIPATION

JOHN PACHECO

ATTENDED

VANGUARD MAINTENANCE AND SOFTWARE TRAINING

ON: 13 & 14 APRIL 2016

Brian McGuire
BRIAN MCGUIRE
TECHNICAL SERVICES
TRANSPORTATION BUSINESS UNIT
DAKTRONICS, INC.

15 April 16
DATE

Issuance of this certificate does not constitute expressed or implied endorsement, qualification, or certification by Daktronics.

Certificate of Completion

THIS DOCUMENT IS PROOF THAT

John Pacheco

HAS SUCCESSFULLY COMPLETED THE

TS-LAN-500

Hands-On Comprehensive Installation Technology Course for Multimode and Single-mode Optical Local Area Networks

ON

April 15, 2011

COURSE INSTRUCTOR

MANAGER, TRAINING SERVICES

WAVETRONIX CONTINUING EDUCATION PROGRAM

CERTIFICATE OF COMPLETION

This certificate is awarded to

Traffic Control Devices

John Pacheco

to certify that all training requirements have been successfully completed for

SmartSensor Matrix

Richard Allen- Instructor - Credit Hours: 8

WAVETRONIX CERTIFIED

John Benson
Wavetronix Technical Training Manager

September 2019
Date

WAVETRONIX

Prime Firm: Metric Engineering, Inc.

metric

20. Certifications/Licenses

John Pacheco

USA SAFETY & TRAINING

ACKNOWLEDGMENT OF COMPLETION

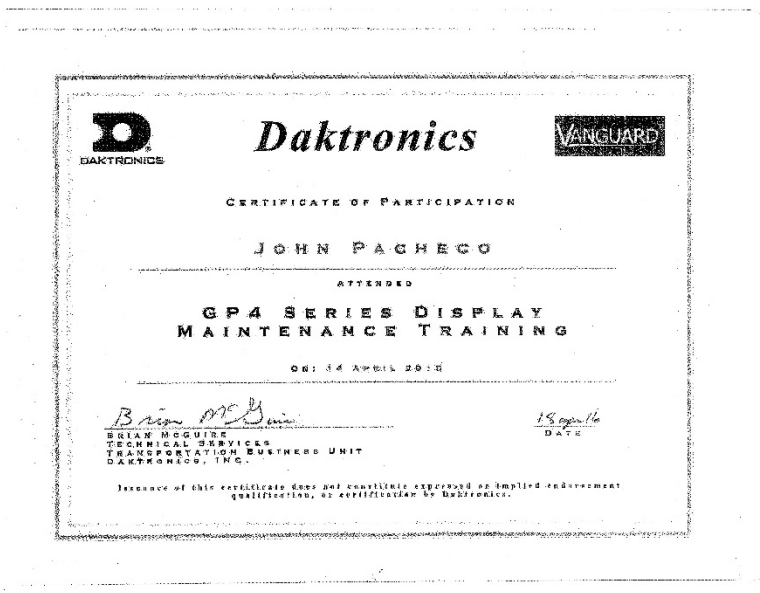
John Pacheco

Has successfully completed Safety & Training and Demonstrated Skills entitled:

Confined Space

Awarded this 12th day of February, 2018

Tony Turner, L.S.P.



DAKTRONICS

Daktronics

VANGUARD

CERTIFICATE OF PARTICIPATION

JOHN PACHECO

ATTENDED

GP4 SERIES DISPLAY MAINTENANCE TRAINING

ON: 14 April 2015

BRIAN MCGUIRE
TECHNICAL SERVICES
TRANSPORTATION BUSINESS UNIT
DAKTRONICS, INC.

DATE

Issuance of this certificate does not constitute expressed or implied endorsement qualification, or certification by Daktronics.

The Florida Department of Transportation
presents this

Certificate of Completion

to

JOHN PACHECO

for successfully completing the

ITS CEI Training for
Microwave Vehicle Detection System
Computer Based Training

7/24/20
Date

FDOT

FDOT TSM&O
Transportation Systems Management & Operations

Prime Firm: Metric Engineering, Inc.

metric

John Pacheco

Bechise Dyl

CERTIFICATE
OF COMPLETION

BECHISE DYL

Has Completed a FDOT Approved Temporary Traffic Control (TTC): Advanced Course

.

Training Provider:

Race to Safety Training
3817 S. Nova Rd. #104-173
Port Orange FL 32127
Phone: 386-846-0545

Verify this Certificate by visiting www.motadmin.com

02/03/2023	01/27/2027	C. F	605480
Issue Date	Expiration Date	Instructor	Certificate No.

FDOT

Jovanny Varela

Certificate of Completion

Jovanny Varela

Has Completed a Florida Department of Transportation Approved Temporary Traffic Control (TTC) Intermediate Course.

07/30/2023	15	Michael A. Hard	54100
Date Expires	FDOT Provider #	Instructor	Certificate #

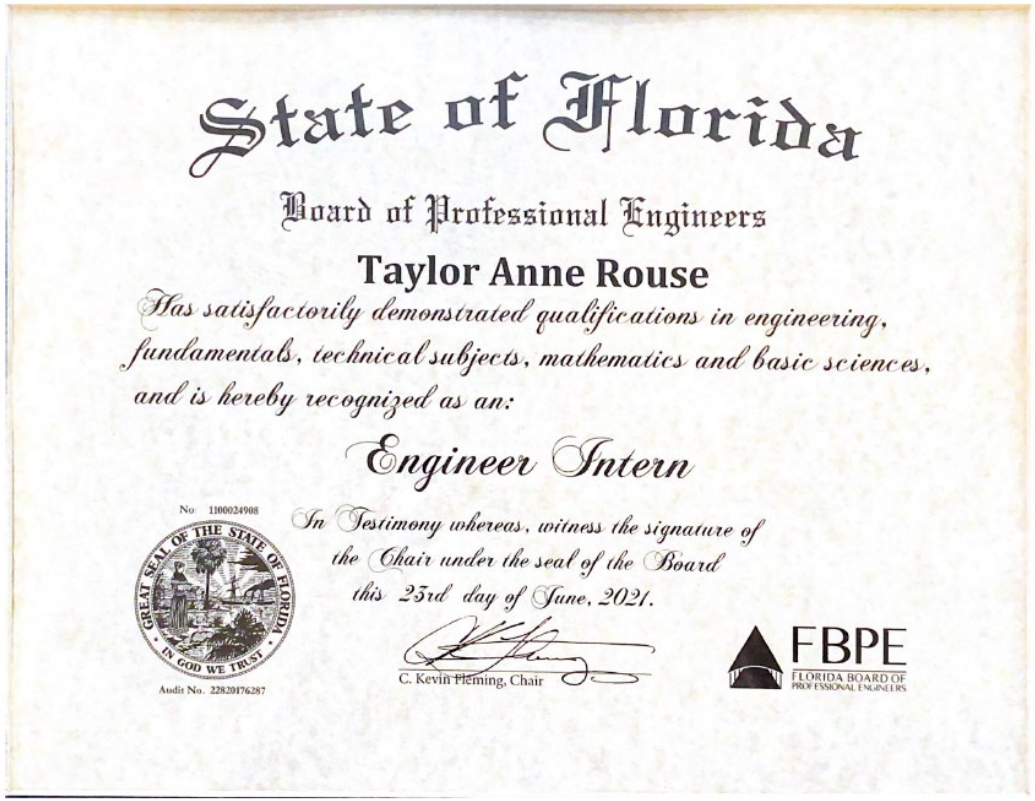
United Safety Council
1505 E. Colonial Drive
Orlando, FL 32803
unitedsafetycouncil.com
gvictor@floridasafety.org

For more information about Temporary Traffic Control (TTC) or to verify this certificate

www.motadmin.com

20. Certifications/Licenses

Taylor Rouse, EI



State of Florida

Board of Professional Engineers

Taylor Anne Rouse

Has satisfactorily demonstrated qualifications in engineering, fundamentals, technical subjects, mathematics and basic sciences, and is hereby recognized as an:

Engineer Intern

No: 1100024908

GREAT SEAL OF THE STATE OF FLORIDA · IN GOD WE TRUST ·

Audit No. 22820176287

In Testimony whereas, witness the signature of the Chair under the seal of the Board this 25rd day of June, 2021.

C. Kevin Fleming, Chair

FBPE FLORIDA BOARD OF PROFESSIONAL ENGINEERS

Prime Firm: Metric Engineering, Inc.

metric

Christopher Dodt

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Christopher Dodt
has attended
Traffic Control Technician-LA State Specific
Training Course

2/7/2023 to 2/7/2027
Training Valid Through

Baton Rouge, LA
Location

Vice President of Education and Technical Services

President, CEO

ATSSA provides training and certification but neither constitutes employment by ATSSA.

American Traffic Safety Services Association ATSSA.com

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Christopher Dodt
has attended
Traffic Control Supervisor-LA State Specific
Training Course

2/8/2023 to 2/8/2027
Training Valid Through

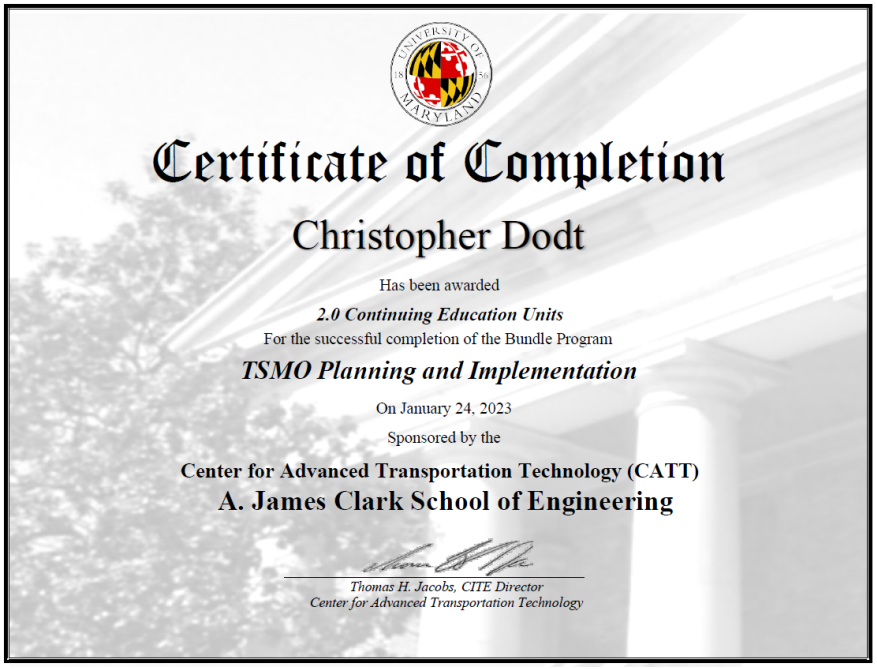
Baton Rouge, LA
Location

Vice President of Education and Technical Services

President, CEO

ATSSA provides training and certification but neither constitutes employment by ATSSA.

American Traffic Safety Services Association ATSSA.com



Certificate of Completion

Christopher Dodt

Has been awarded

2.0 Continuing Education Units

For the successful completion of the Bundle Program

TSMO Planning and Implementation

On January 24, 2023

Sponsored by the

Center for Advanced Transportation Technology (CATT)
A. James Clark School of Engineering

Thomas H. Jacobs, CITE Director
Center for Advanced Transportation Technology

Clarke Chauvin, PE, PTOE, PMP

LOUISIANA PROFESSIONAL
ENGINEERING & LAND SURVEYING BOARD
(LAPELS)
9643 Brookline Avenue, Suite 121
Baton Rouge, LA 70809
Phone (225) 925-6291
www.lapels.com

Mr. Clarke Phillip Chauvin

License/Certificate Type - Number: PE.0041770
Expiration Date: 09/30/2023
Status: Active

Project Management Institute

THIS IS TO CERTIFY THAT

Clarke Chauvin

HAS BEEN FORMALLY EVALUATED FOR DEMONSTRATED EXPERIENCE, KNOWLEDGE AND PERFORMANCE IN ACHIEVING AN ORGANIZATIONAL OBJECTIVE THROUGH DEFINING AND OVERSEEING PROJECTS AND RESOURCES AND IS HEREBY BESTOWED THE GLOBAL CREDENTIAL

Project Management Professional (PMP)®

IN TESTIMONY WHEREOF, WE HAVE SUBSCRIBED OUR SIGNATURES UNDER THE SEAL OF THE INSTITUTE

Tony Appleby
Chair, Board of Directors

Sunil Prashara
President and Chief Executive Officer

PMP® Number: 2858208
PMP® Original Grant Date: 12 November 2020
PMP® Expiration Date: 11 November 2023

Project Management Institute.

Transportation Professional Certification Board, Inc.

certifies that

Clarke Phillip Chauvin

has met all of the requirements established by the Certification Board to use the title of

Professional Traffic Operations Engineer

unless withdrawn by the Certification Board and subject to the provisions for renewal. Certificate number 4387 issued in Washington, DC, USA

11/20/17

Michael K. Park
Chair

Jeffrey F. Paniati
Executive Director

Certificate of Completion

presented to

Clarke Chauvin

for completing the

Traffic Engineering Analysis Process & Report
Module 1

Date: July 16, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 2

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Clarke Chauvin

for completing the

Traffic Engineering Analysis Process & Report
Module 2

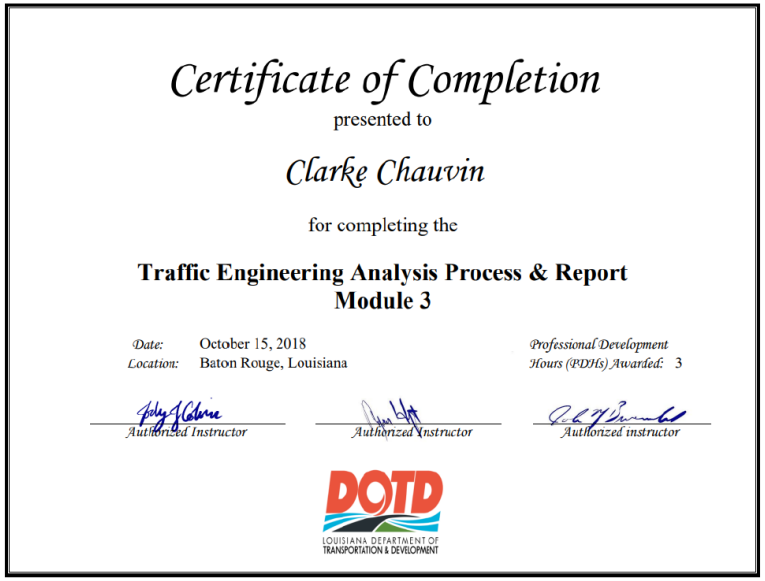
Date: July 23, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Clarke Chauvin, PE, PTOE, PMP



Certificate of Completion

presented to

Clarke Chauvin

for completing the

Traffic Engineering Analysis Process & Report
Module 3

Date: October 15, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized Instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Clarke Chauvin
has attended
Traffic Control Supervisor Refresher-LA State Specific
Training Course

1/25/2022 to 1/25/2026
Training Valid Through

Director of Training

Baton Rouge, LA
Location

President, CEO

ATSSA provides training and certification but neither constitutes employment by ATSSA.
This certificate provides proof of training, not certification.

ATSSA American Traffic Safety Services Association ATSSA.com

The American Traffic Safety Services Association

Hereby recognizes that

Clarke Chauvin
has attended
Traffic Control Technician-LA State Specific
Training Course

10/14/2014
Date

Baton Rouge, LA
Location

ATSSA
SAFER ROADS SAVE LIVES

Training & Products Dept. Director

President, CEO

Erik Smith, PE

LOUISIANA PROFESSIONAL
ENGINEERING & LAND SURVEYING BOARD
(LAPELS)
9643 Brookline Avenue, Suite 121
Baton Rouge, LA 70809
Phone (225) 925-6291
www.lapels.com

Mr. Erik Thomas Smith

License/Certificate Type - Number	Expiration Date
PE.0029085	09/30/2024

Status: Active

ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Erik Smith
has attended
Traffic Control Technician-LA State Specific
Training Course

2/7/2023 to 2/7/2027
Training Valid Through

Vice President of Education and Technical Services

Baton Rouge, LA
Location

President, CEO

ATSSA provides training and certification but neither constitutes employment by ATSSA.

ATSSA American Traffic Safety Services Association ATSSA.com

ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Erik Smith
has attended
Traffic Control Supervisor-LA State Specific
Training Course

2/8/2023 to 2/8/2027
Training Valid Through

Vice President of Education and Technical Services

Baton Rouge, LA
Location

President, CEO

ATSSA provides training and certification but neither constitutes employment by ATSSA.

ATSSA American Traffic Safety Services Association ATSSA.com

CERTIFICATE of ACHIEVEMENT

This is to certify that

Erik Smith

has completed the course

TSMO 101 - What Is This TSMO Thing Anyway?

Kathleen Frankle
CITE Program Manager

UNIVERS MARYL

Center for Advanced Transportation Technology
Bldg. 806 Myers Bldg. Suite 2213 College Park, MD 20742-6011
301-405-6323 TEL | 301-405-5959 FAX | www.catt.umd.edu WEB

GLENN L. MARTIN INSTITUTE OF TECHNOLOGY
A. JAMES CLARK SCHOOL OF ENGINEERING
Department of Civil & Environmental Engineering

Certificate of Completion

Erik Smith

Has been awarded

1.4 Continuing Education Units

For the successful completion of the Certificate Program

TSMO Basics

On March 9, 2023

Sponsored by the

Center for Advanced Transportation Technology (CATT)
A. James Clark School of Engineering

Thomas H. Jacobs, CITE Director
Center for Advanced Transportation Technology

UNIVERSITY OF MARYLAND
GLENN L. MARTIN INSTITUTE OF TECHNOLOGY
A. JAMES CLARK SCHOOL OF ENGINEERING
Department of Civil & Environmental Engineering

Center for Advanced Transportation Technology

Bldg. 806 Myers Bldg. Suite 2213
College Park, MD 20742-6011
301-405-6323 TEL 301-405-5959 FAX
www.catt.umd.edu

March 9, 2023

To Whom It May Concern:

This is to certify that **Erik Smith** has successfully fulfilled the requirements for the TSMO Basics Certificate Program offered through the Consortium for Innovative Transportation Education (CITE):

	CEUs	Grade	Completed
• Communicating the Value of TSMO	0.2	100	01/24/23
• Integrating TSMO Into Your Agency	0.2	93.8	01/24/23
• Introduction to Operations Performance Measures And Management	0.4	85.6	03/02/23
• National Traffic Incident Management Responder Training	0.0	Complete	01/23/23
• Telecommunications and Networking Fundamentals	0.4	87.5	03/02/23
• TSMO 101: What Is This TSMO Thing Anyway?	0.2	100	03/07/23

Total hours of instruction: 14
Total CEU's (continuing education units): 1.4

Please feel free to contact CITE directly if you need anything further.

Signed: Kathleen Frankle
CITE Program Manager
kfrankle@umd.edu
301-405-8271

Jonathan Fox, PE, PTOE, PMP

LOUISIANA PROFESSIONAL
ENGINEERING & LAND SURVEYING BOARD
(LAPELS)
9643 Brookline Avenue, Suite 121
Baton Rouge, LA 70809
Phone (225) 925-6291
www.lapels.com

Mr. Jonathan Nicolas Fox

License/Certificate Type - Number: PE.0033277
Expiration Date: 09/30/2023
Status: Active

Transportation Professional Certification Board Inc.

certifies that

Jonathan Nicolas Fox

has met all of the requirements established by the Certification Board to use the title of

PROFESSIONAL TRAFFIC OPERATIONS ENGINEER

unless withdrawn by the Certification Board and subject to the provisions for renewal. Certificate number 2329 issued in Washington, D.C. U.S.A.

November 7, 2007

Steven D. Hofener, Chair
Executive Director

Project Management Institute

THIS IS TO CERTIFY THAT

Jonathan N. Fox

HAS BEEN FORMALLY EVALUATED FOR DEMONSTRATED EXPERIENCE, KNOWLEDGE AND PERFORMANCE IN ACHIEVING AN ORGANIZATIONAL OBJECTIVE THROUGH DEFINING AND OVERSEEING PROJECTS AND RESOURCES AND IS HEREBY BESTOWED THE GLOBAL CREDENTIAL

Project Management Professional (PMP)®

IN TESTIMONY WHEREOF, WE HAVE SUBSCRIBED OUR SIGNATURES UNDER THE SEAL OF THE INSTITUTE

Tony Appleby
Chair, Board of Directors

Sunil Prashara
President and Chief Executive Officer

PMP® Number: 1812148
PMP® Original Grant Date: 28 April 2015
PMP® Expiration Date: 27 April 2024

Project Management Institute.

ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Jonathan Fox
has attended
Traffic Control Supervisor Refresher-LA State Specific
Training Course

1/25/2022 to 1/25/2026
Training Valid Through

Director of Training

Baton Rouge, LA
Location

President, CEO

ATSSA provides training and certification but neither constitutes employment by ATSSA.
This certificate provides proof of training, not certification.

ATSSA American Traffic Safety Services Association ATSSA.com

Certificate of Completion

presented to

Jonathan Fox

for completing the

Traffic Engineering Analysis Process & Report
Module 1

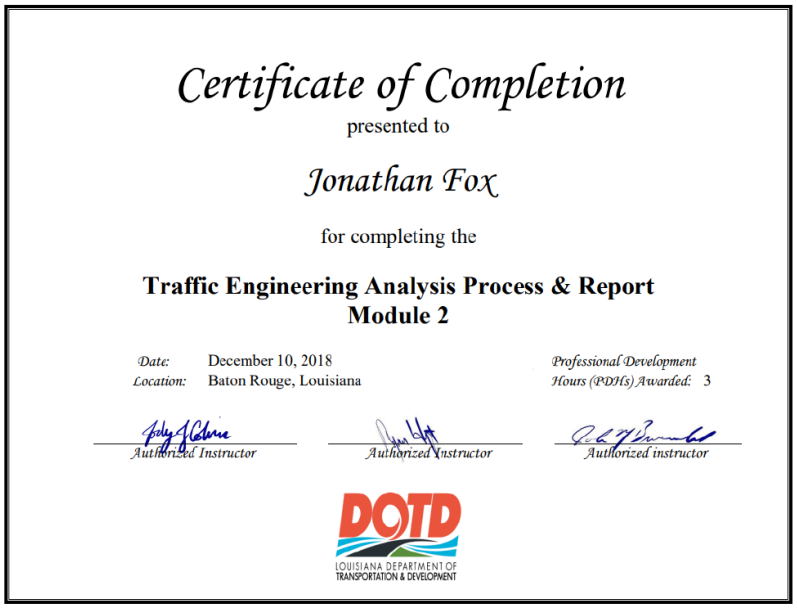
Date: October 1, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 2.5

Authorized Instructor
Authorized Instructor
Authorized Instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Jonathan Fox, PE, PTOE, PMP



Certificate of Completion

presented to

Jonathan Fox

for completing the

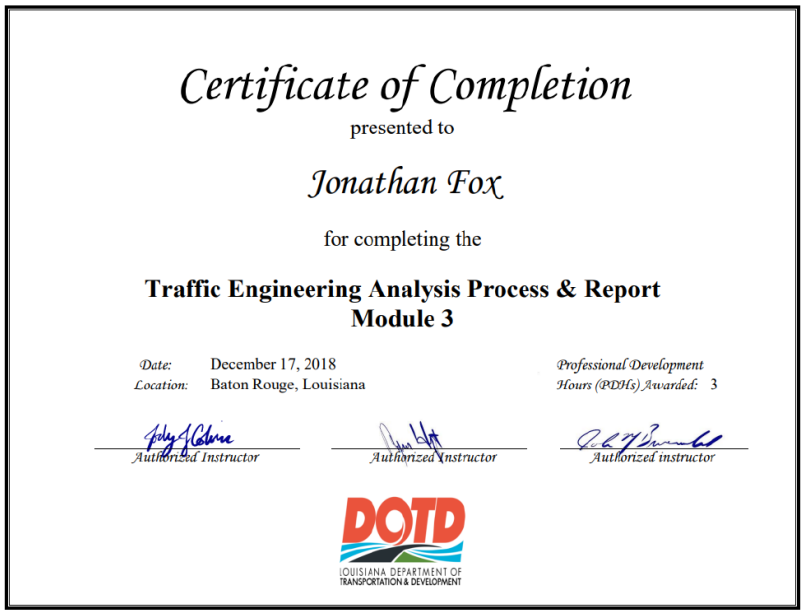
Traffic Engineering Analysis Process & Report
Module 2

Date: December 10, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized Instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Jonathan Fox

for completing the

Traffic Engineering Analysis Process & Report
Module 3

Date: December 17, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized Instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

The American Traffic Safety Services Association

Hereby recognizes that

Jonathan Fox
has attended
Traffic Control Design Specialist - 1 day
Training Course

06/22/2015
Date
Baton Rouge, LA
Location

ATSSA
SAFER ROADS SAVE LIVES

Training & Products Dept. Director
President, CEO

The American Traffic Safety Services Association

Hereby recognizes that

Jonathan Fox
has attended
Traffic Control Technician-LA State Specific
Training Course

08/07/2014
Date
Baton Rouge, LA
Location

ATSSA
SAFER ROADS SAVE LIVES

Training & Products Dept. Director
President, CEO

Kimberly McDaniel, PE, PTOE, PTP

LOUISIANA PROFESSIONAL
ENGINEERING & LAND SURVEYING BOARD
(LAPELS)
9643 Brookline Avenue, Suite 121
Baton Rouge, LA 70809
Phone (225) 925-6291
www.lapels.com

Mrs. Kimberly Dawn McDaniel

License/Certificate Type - Number	Expiration Date
PE.0032973	09/30/2023

Status: Active

Transportation Professional Certification Board Inc.

certifies that

Kimberly D. McDaniel

has met all of the requirements established by the Certification Board to use the title of

PROFESSIONAL TRAFFIC OPERATIONS ENGINEER

unless withdrawn by the Certification Board and subject to the provisions for renewal.
Certificate number 2072 issued in Washington, D.C. U.S.A.
October 2, 2007

Steven O. Hofener, Chair — PTOE Professional Traffic Operations Engineer — Executive Director

---

Transportation Professional Certification Board, Inc.

certifies that

Kimberly McDaniel

has met all of the requirements established by the Certification Board to use the title of

Professional Transportation Planner

unless withdrawn by the Certification Board and subject to the provisions for renewal.
Certificate number 802 issued in Washington, DC, USA
3/11/2022

Deborah Snyder, Chair — PTP Professional Transportation Planner — Jeffrey F. Paniati, Executive Director

---

Certificate of Completion

presented to

Kimberly McDaniel

for completing the

Traffic Engineering Analysis Process & Report
Module 1

Date: June 4, 2018
Location: Baton Rouge, Louisiana
Professional Development Hours (PDHs) Awarded: 4

Authorized Instructor — Authorized Instructor — Authorized Instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Kimberly McDaniel

for completing the

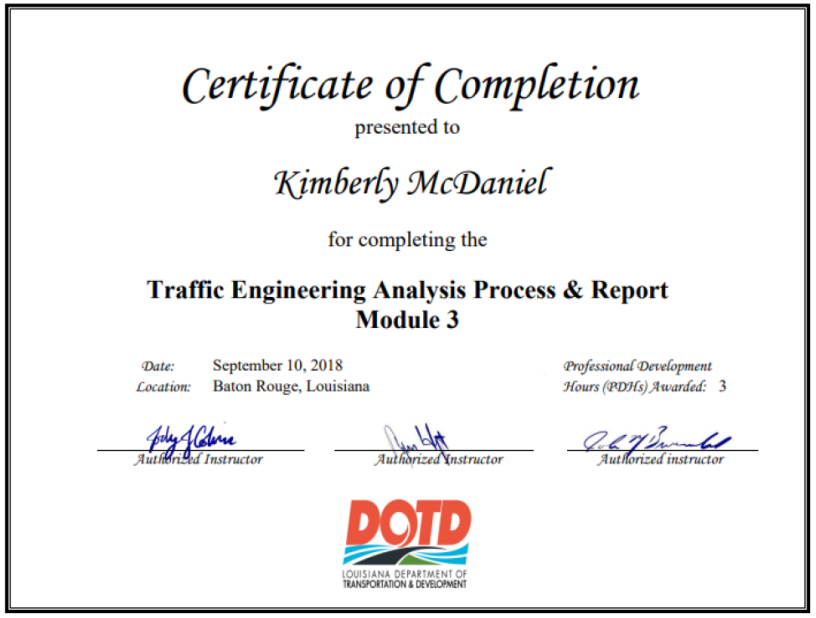
Traffic Engineering Analysis Process & Report
Module 2

Date: June 11, 2018
Location: Baton Rouge, Louisiana
Professional Development Hours (PDHs) Awarded: 4

Authorized Instructor — Authorized Instructor — Authorized Instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Kimberly McDaniel, PE, PTOE, PTP



Certificate of Completion

presented to

Kimberly McDaniel

for completing the

Traffic Engineering Analysis Process & Report
Module 3

Date: September 10, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

April Renard, PE, PTOE, RSP21

LOUISIANA PROFESSIONAL
ENGINEERING & LAND SURVEYING BOARD
(LAPELS)
9643 Brookline Avenue, Suite 121
Baton Rouge, LA 70809
Phone (225) 925-6291
www.lapels.com

Ms. April Cher'ree Renard

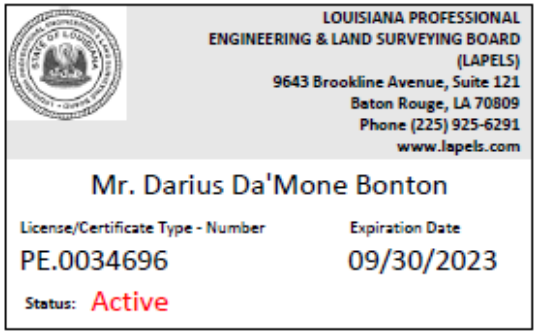
License/Certificate Type - Number	Expiration Date
PE.0035660	09/30/2024

Status: Active

Next Expiration Date: 7/21/24

20. Certifications/Licenses

Darius Bonton, PE



LOUISIANA PROFESSIONAL
ENGINEERING & LAND SURVEYING BOARD
(LAPELS)
9643 Brookline Avenue, Suite 121
Baton Rouge, LA 70809
Phone (225) 925-6291
www.lapels.com

Mr. Darius Da'Mone Bonton

License/Certificate Type - Number	Expiration Date
PE.0034696	09/30/2023

Status: Active

LaDarien Beene, PE, PTOE

LOUISIANA PROFESSIONAL
ENGINEERING & LAND SURVEYING BOARD
(LAPELS)
9643 Brookline Avenue, Suite 121
Baton Rouge, LA 70809
Phone (225) 925-6291
www.lapels.com

Mr. LaDarien C. Beene

License/Certificate Type - Number	Expiration Date
PE.0045333	09/30/2023

Status: Active

Transportation Professional Certification Board, Inc.

certifies that

LaDarien C. Beene

has met all of the requirements established by the Certification Board to use the title of

Professional Traffic Operations Engineer

unless withdrawn by the Certification Board and subject to the provisions for renewal.
Certificate number 5062 issued in Washington, DC, USA

8/3/2021

Deborah Snyder
Chair

PTOE PROFESSIONAL TRAFFIC OPERATIONS ENGINEER

Jeffrey F. Paniati
Executive Director

Certificate of Completion

presented to

LaDarien Beene

for completing the

Traffic Engineering Analysis Process & Report
Module 1

Date: April 19, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 2

Authorized Instructor

Authorized Instructor

Authorized Instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

LaDarien Beene

for completing the

Traffic Engineering Analysis Process & Report
Module 2

Date: May 21, 2018
Location: Alexandria, Louisiana

Professional Development Hours (PDHs) Awarded: 2

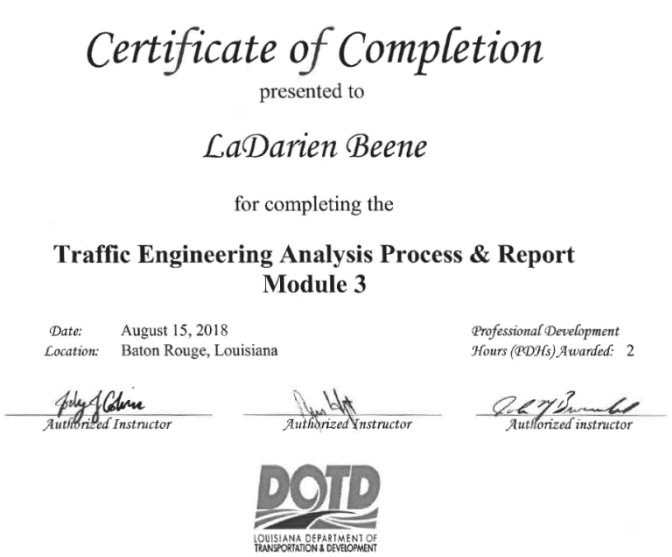
Authorized Instructor

Authorized Instructor

Authorized Instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

LaDarien Beene, PE, PTOE



Certificate of Completion

presented to

LaDarien Beene

for completing the

Traffic Engineering Analysis Process & Report
Module 3

Date: August 15, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 2

Authorized Instructor *Authorized Instructor* *Authorized Instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

LaDarien Beene
has attended
Traffic Control Supervisor-LA State Specific
Training Course

4/27/2022 to 4/27/2026
Training Valid Through

Director of Training

Baton Rouge, LA
Location

President, CEO

ATSSA provides training and certification but neither constitutes employment by ATSSA.
This certificate provides proof of training, not certification.

ATSSA American Traffic Safety Services Association ATSSA.com

ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

LaDarien Beene
has attended
Traffic Control Technician-LA State Specific
Training Course

4/26/2022 to 4/26/2026
Training Valid Through

Director of Training

Baton Rouge, LA
Location

President, CEO

ATSSA provides training and certification but neither constitutes employment by ATSSA.
This certificate provides proof of training, not certification.

ATSSA American Traffic Safety Services Association ATSSA.com

20. Certifications/Licenses

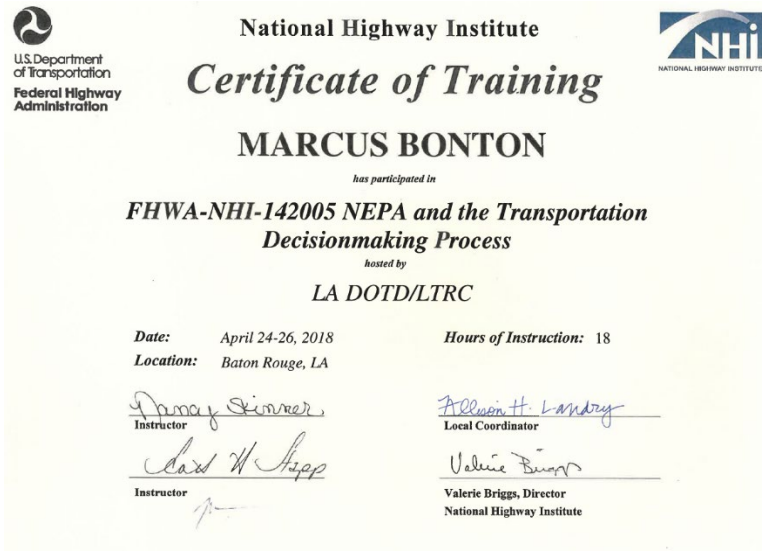
Marcus Bonton, PE

LOUISIANA PROFESSIONAL
ENGINEERING & LAND SURVEYING BOARD
(LAPELS)
9643 Brookline Avenue, Suite 121
Baton Rouge, LA 70809
Phone (225) 925-6291
www.lapels.com

Mr. Marcus Samuel Bonton

License/Certificate Type - Number	Expiration Date
PE.0040389	09/30/2024

Status: Active



20. Certifications/Licenses

Marcus Bonton, PE

Certificate of Completion

presented to

Marcus Bonton

for completing the

Traffic Engineering Analysis Process & Report
Module 2

Date: August 6, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Marcus Bonton

for completing the

Traffic Engineering Analysis Process & Report
Module 3

Date: December 3, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Marcus Bonton
has attended
Traffic Control Supervisor Refresher-LA State Specific
Training Course

4/29/2022 to 4/29/2026
Training Valid Through

Director of Training

Baton Rouge, LA
Location

President, CEO

ATSSA provides training and certification but neither constitutes employment by ATSSA.
This certificate provides proof of training, not certification.

ATSSA American Traffic Safety Services Association ATSSA.com

Prime Firm: Metric Engineering, Inc.

metric

Section 21

QA/QC Plan and/or Work Plan

21. QA/QC Plan: If the advertisement requires submission of a QA/QC plan, include it here. **Otherwise, leave this section blank.**

No evaluation criterion was noted in this advertisement; therefore, we are leaving this section blank.

Section 22

Sub-consultant Information

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

metric

22. Sub-consultant information:

Firm Name (as registered with Louisiana's Secretary of State)	Address	Point of Contact and email address	Phone Number
Intelligent Transportation Systems LLC	20405 Highland Road Baton Rouge, LA 70817	Kimberly D. McDaniel, P.E., PTOE, PTP kimberly@itsanswers.com	(225) 751-9300
Grey Engineering, LLC (DBE)	7146 Landmor Drive, Greenwell Springs, LA 70739	April Renard april@greyeng.com	(225) 773-6272
Bonton Associates, LLC (DBE)	232 3RD Street, Suite100 Baton Rouge, LA 70801	Marcus Bonton, P.E. Marcus@bontonassociates.com	(225) 706-0975
Franklin Associates, LLC (MBE)*	250 S. Foster Drive Baton Rouge, LA 70806	Risa R. Mueller, PMP risa@franklinassociates.com	(225) 768-9060

** Minority Business Enterprise Certified through the Southern Region Minority Supplier Development Council*

Section 23

Location

23.	**Location:** If location is an evaluation criterion for this advertisement and the prime consultant intends to establish a local presence, describe the plan for doing so. **Otherwise, leave this section blank.**

No evaluation criterion was noted in this advertisement; therefore, we are leaving this section blank.

DOTD

LOUISIANA DEPARTMENT OF
TRANSPORTATION & DEVELOPMENT

metric

metriceng.com