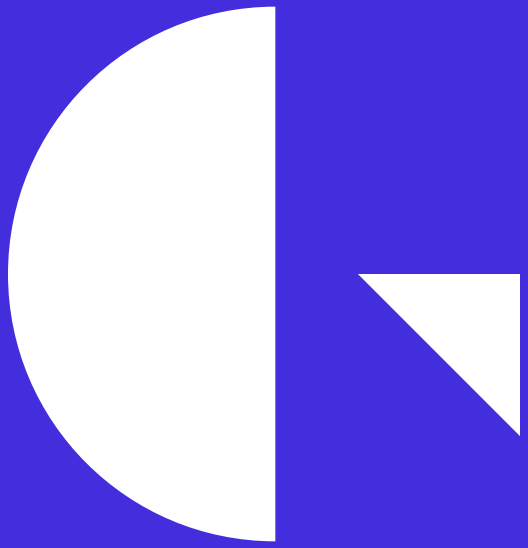
Gresham Smith



# LADOTD

Entity Contract for Cong Relief Winfield Road | Contract No. 4400027600 | State Project No. H.003855.5
Bossier Parish, LA | August 17, 2023

**Genuine Ingenuity**

10000 Perkins Rowe
Suite 280
Baton Rouge, LA 70810

225.757.5849
GreshamSmith.com

August 17, 2023

Ms. Paulette Territo
Consultant Contract Services Administrator
Department of Transportation and Development
1201 Capitol Access Road, Room 405-E
Baton Rouge, LA 70802

Re: Advertisement for Engineering and Related Services
Contract Nos. 4400027600 / State Project No. H.003855.5
Entity Contract for Congestion Relief Winfield Road – Bossier Parish

Ms. Territo,

Gresham Smith has had the distinct honor of providing a wide range of quality design services for LADOTD through numerous IDIQ contracts. Over the past 5 years, we have completed numerous quality projects under the following IDIQ contracts:

- ITS Design and Integration
- Complex Bridge Inspections
- Traffic Engineering
- Stage Zero Studies
- Local Road Safety/Safe Routes to Public Places

We look forward to blending this range of quality experience into a major new transportation project, utilizing many of the skills and experiences our team has refined on these IDIQ contracts and individual task orders. Our team provides the maximum qualifications and proven experience for:

## Team and Staff Qualifications

Our team is led by **Project Manager Richard Savoie, P.E.** Richard has 40 years of experience, primarily in DOTD roadway design projects. Richard previously served as DOTD Roadway Unit Supervisor and eventually DOTD Chief Engineer. **John Weres, P.E.**, our Deputy PM and Bridge Team Lead has over 40 years of experience, all involving bridges, including leading our Baton Rouge Louisiana based bridge team over the past 7 years. Our roadway design team includes former DOTD engineers **Brennon Hughes, P.E.** and **Ronnie Robinson, P.E.** Our traffic team is led by **Herbert "Bert" Moore, II, PE, PLS, PTOE**, a former District 61 Traffic Operations Engineer. Our team is supported by our talented subs **Michael Baker International**, who performed the Environmental Impact Study for this project and will support the roadway, bridge, and hydraulics designs, **Raley and Associates**, who have surveyed large tracts of property along the project alignment and will perform the topographic and ROW surveying for this project, and **APS Engineering and Testing**, who has performed geotechnical engineering duties for a

number of similar projects in the past.

### Local Knowledge and Experience

Our team provides the local knowledge and experience required to successfully complete this project. Through our various IDIQ contracts and utilization of key teaming partners, our team has successfully completed the following projects in northern Louisiana. Michael Baker completed the original environmental clearance for this project, named East-West Corridor Environmental Assessment, EA/FONSI.

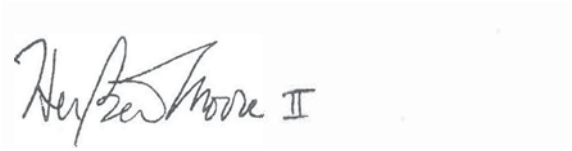
- US 71, Spring Street Bridge, Emergency Repairs – Shreveport, LA (GS)
- Endom Bridge, Preliminary and Final Intersection Design, Monroe LA (GS)
- State and Local Road Traffic Study, Farmerville, LA (GS)
- Barksdale AFB Entrance Roads, Bossier Parish, LA (MBI)
- US 371 KCS RR Overpass, Webster Parish, LA (MBI)
- Innovation Drive Extension and Benoit Bayou Lateral Improvements, Bossier City, LA (Raley)
- Rosedale Subdivision design, Bossier Parish, LA (Raley)

### Solid Project Approach

Gresham Smith has detailed a sound project approach in this proposal. Our team will effectively utilize the past designs and environmental approvals; and efficiently transform the design to meet the current scope and design requirements. We have not only identified a few potential issues with the previous design; but have recommended potential solutions that improve on the original design while providing cost-effective solutions. Our team fully understands the DOTD submittal and review process for both preliminary and final design. One of our goals is to always provide thorough and quality interim and final submissions, freeing the DOTD staff to concentrate on other key roles, rather than performing their own quality checks.

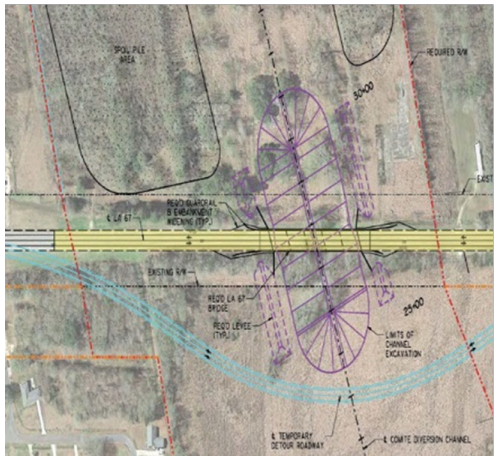
The Gresham Smith team is eager, enthusiastic and available to start work immediately on this project. We respectfully ask for your consideration and appreciate the opportunity to present this proposal. Please feel free to contact me with any questions at 225.282.2101 or by email at bert.moore@greshamsmith.com or our proposed Project Manager, Richard Savoie at 225.960.5483 or by email at richard.savoie@greshamsmith. com.

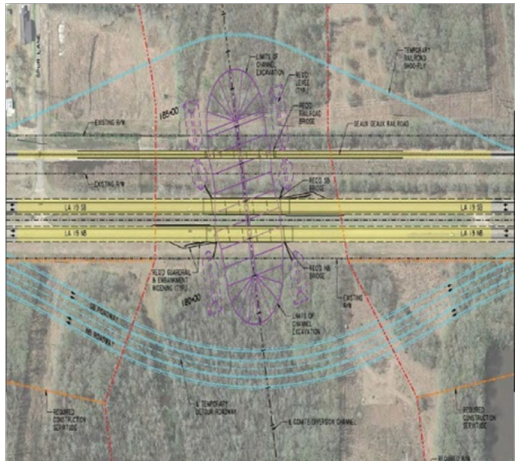
Sincerely,



Herbert “Bert” Moore II, P.E., PLS, PTOE
State Transportation Leader - Louisiana

Gresham
Smith




24-102

# Sections 1-15

# 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. Prime consultant should enter the firm name in the footer at the bottom of this page. (It will carry over to subsequent pages.)

| | |
|---|---|
| **1.** Contract title as shown in the advertisement | Entity Contract for Cong Relief Winfield Road – Bossier Parish |
| **2.** Contract number(s) as shown in the advertisement | 4400027600 |
| **3.** State Project Number(s), if shown in the advertisement | H.003855.5 |
| **4.** Prime consultant name (name must match as registered with the Louisiana Secretary of State where such registration is required by law) | Gresham Smith |
| **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.0003429<br>DUNS number: 059153676 |
| **6.** Prime consultant mailing address | 10000 Perkins Rowe, Suite 280, Baton Rouge, LA 70810 |
| **7.** Prime consultant physical address (existing or to be established, if location is used as an evaluation criteria) | 10000 Perkins Rowe, Suite 280, Baton Rouge, LA 70810 |
| **8.** Name, title, phone number, and email address of prime consultant's contract point of contact | Richard Savoie, P.E., Senior Roadway Engineer<br>225.960.5483 / richard.savoie@greshamsmith.com |
| **9.** Name, title, phone number, and email address of the official with signing authority for this proposal | Herbert "Bert" Moore, II, P.E., PLS, PTOE<br>State Transportation Leader - Louisiana<br>225.757.5849 / bert.moore@greshamsmith.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. |  <br>Signature above shall be the same person listed in Section 9:<br><br>Date: August 17, 2023 |
| **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): APS Engineering and Testing, LLC<br>Firm(s)' %: 5 |

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

| Past Performance Evaluation Disciplines | % of Overall Contract | Gresham Smith (Prime) | Michael Baker International (Sub) | Raley and Associates, Inc. (Sub) | APS Engineering and Testing, LLC (DBE) (Sub) | Each Discipline must total to 100% |
|---|---|---|---|---|---|---|
| **Roadway** | **45%** | **70%** | **30%** | **0%** | **0%** | **100%** |
| **Bridge** | **25%** | **65%** | **35%** | **0%** | **0%** | **100%** |
| **Survey** | **15%** | **0%** | **0%** | **100%** | **0%** | **100%** |
| **Traffic** | **5%** | **100%** | **0%** | **0%** | **0%** | **100%** |
| **Geotech** | **5%** | **0%** | **0%** | **0%** | **100%** | **100%** |
| **Other (Hydraulics)** | **3%** | **0%** | **100%** | **0%** | **0%** | **100%** |
| **Environmental** | **2%** | **0%** | **100%** | **0%** | **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%** | **53%** | **27%** | **15%** | **5%** | **100%** |

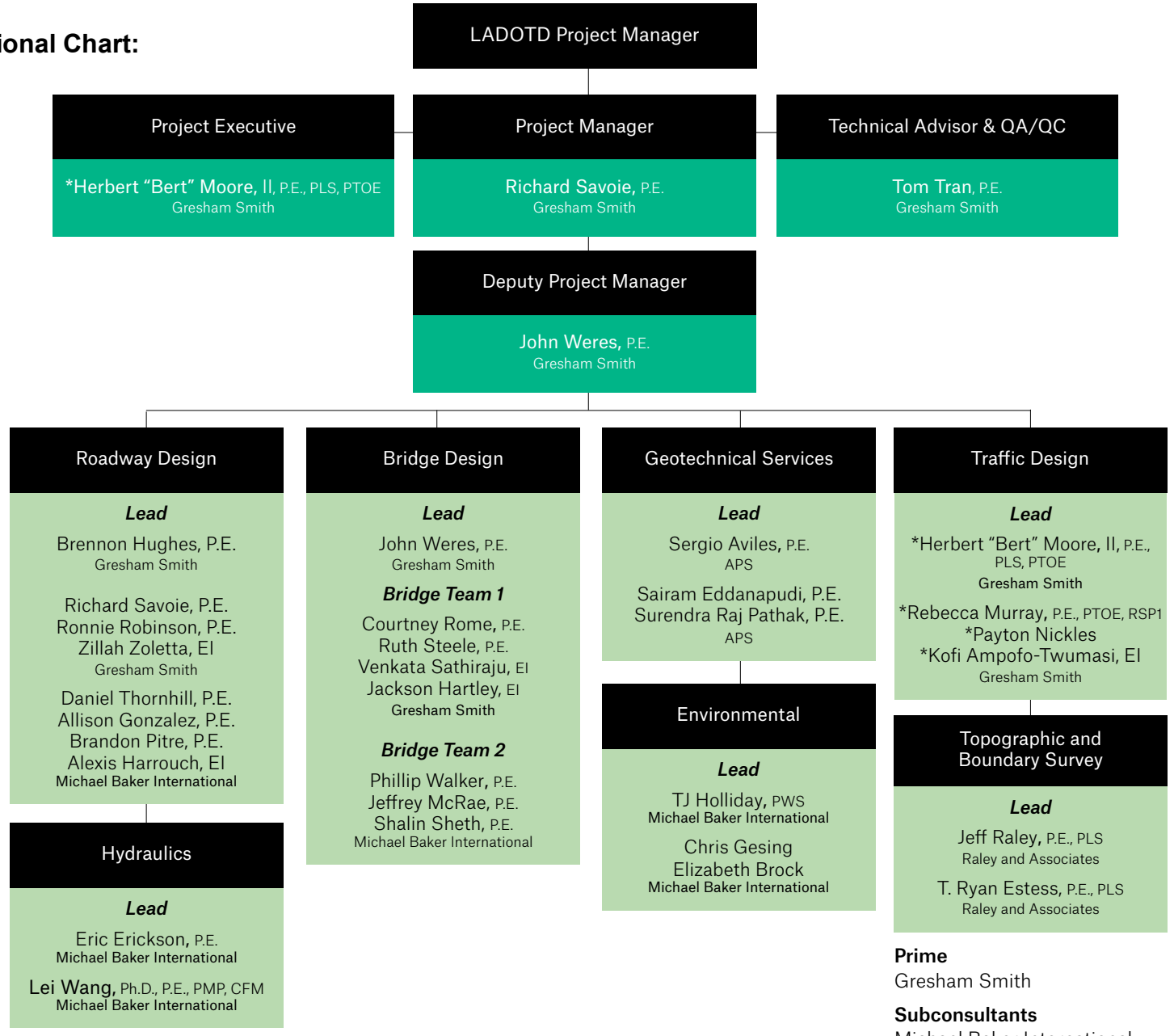
**13. Firm Size:**

| Firm Name | DOTD Job Classification | Number of personnel committed to this contract | Total number of personnel available in this DOTD Job Classification (if needed) |
|---|---|---|---|
| Gresham Smith | Principal | 1 | 1 |
| Gresham Smith | Supervisor-Engineer | 4 | 6 |
| Gresham Smith | Supervisor-Other | 2 | 4 |
| Gresham Smith | Engineer | 4 | 8 |
| Gresham Smith | Engineer-Other | 2 | 4 |
| Gresham Smith | Engineer Intern | 1 | 8 |
| Gresham Smith | Senior Technician | 1 | 6 |
| Gresham Smith | Clerical | 1 | 1 |
| Michael Baker International, Inc. | Principal | 1 | 2 |
| Michael Baker International, Inc. | Supervisor – Engineer | 1 | 3 |
| Michael Baker International, Inc. | Supervisor – Other (Civil) | 1 | 3 |
| Michael Baker International, Inc. | Engineer | 2 | 5 |
| Michael Baker International, Inc. | Engineer Intern | 2 | 5 |
| Michael Baker International, Inc. | Engineer Other (Civil) | 2 | 5 |
| Michael Baker International, Inc. | Environmental Pro | 1 | 3 |
| Michael Baker International, Inc. | Biologist/Wetlands | 2 | 2 |
| Michael Baker International, Inc. | GIS Analyst | 1 | 3 |
| Michael Baker International, Inc. | Surveyor | 0 | 1 |
| Michael Baker International, Inc. | Senior Technician | 1 | 5 |
| Michael Baker International, Inc. | Technician | 1 | 5 |
| Michael Baker International, Inc. | Administrative | 1 | 2 |
| Raley and Associates, Inc. | Principal | 1 | 3 |
| Raley and Associates, Inc. | Supervisor - Engineer | 1 | 3 |
| Raley and Associates, Inc. | Supervisor – Other | 1 | 3 |
| Raley and Associates, Inc. | Engineer – Civil | 2 | 4 |
| Raley and Associates, Inc. | Engineer Intern | 1 | 1 |
| Raley and Associates, Inc. | Technician | 1 | 1 |
| Raley and Associates, Inc. | CADD Technician | 1 | 1 |
| Raley and Associates, Inc. | Surveyor | 1 | 1 |
| Raley and Associates, Inc. | Accountant | 1 | 2 |

| | | | |
|---|---|---|---|
| Raley and Associates, Inc. | Clerical | 2 | 2 |
| APS Engineering and Testing, LLC | Engineer | 5 | 5 |
| APS Engineering and Testing, LLC | Driller | 8 | 8 |
| APS Engineering and Testing, LLC | Technician | 12 | 12 |

(Add rows as needed)

## 14. Organizational Chart:




**Prime**
Gresham Smith

**Subconsultants**
Michael Baker International
APS Engineering and Testing (APS)
Raley and Associates, Inc.

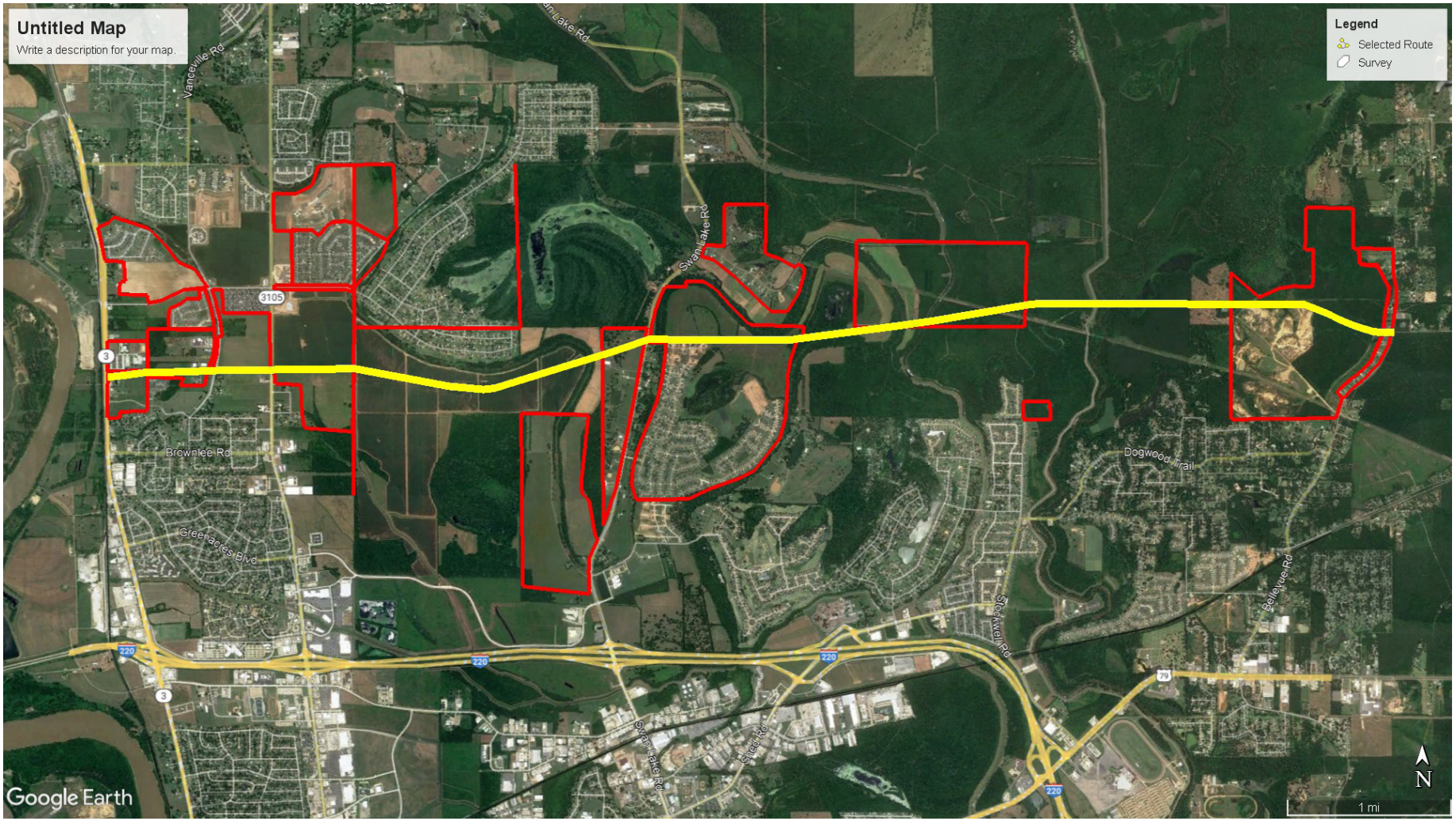
**Certificates of completed required traffic training included in Section 20.*

**15. Minimum Personnel Requirements:**

| MPR (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. | Herbert "Bert" Moore, II, P.E., PLS, PTOE | Gresham Smith | P.E. LA 31065 - Civil | Louisiana | P.E., LA 31065 Exp. 9/30/2024 |
| | | | PLS LA 5043 | Louisiana | PLS, LA 5043 Exp. 9/30/2024 |
| | | | PTOE 2728 | International | PTOE, 2728 Exp. 9/30/2024 |
| 2. | Herbert "Bert" Moore, II, P.E., PLS, PTOE | Gresham Smith | P.E. LA 31065 - Civil | Louisiana | P.E., LA 31065 Exp. 9/30/2024 |
| | | | PLS LA 5043 | Louisiana | PLS, LA 5043 Exp. 9/30/2024 |
| | | | PTOE 2728 | International | PTOE, 2728 Exp. 9/30/2024 |
| 3. | Richard Savoie, P.E. | Gresham Smith | P.E. LA 20936 – Civil | Louisiana | P.E., LA 20936 Exp 9/30/2024 |
| | Brennon Hughes, P.E. | Gresham Smith | P.E. LA 39985 – Civil | Louisiana | P.E., LA 39985 Exp 3/31/2024 |
| 4. | John Weres, P.E. | Gresham Smith | P.E. LA 36429 - Civil | Louisiana | P.E., LA 36429 Exp 9/30/2023 |
| | Phillip Walker, P.E. | Michael Baker International | P.E. LA - 46394 Civil | Louisiana | P.E., LA 46394 Exp 9/30/2024 |
| 5. | Courtney Rome, P.E. | Gresham Smith | P.E. LA 43355 - Civil | Louisiana | P.E., LA 43355 Exp 9/30/2023 |
| | Jeffrey McRae, P.E. | Michael Baker International | P.E. LA 34554 - Civil | Louisiana | P.E., LA 34554 Exp 9/30/2023 |
| 6. | Sergio Aviles, P.E. | APS Engineering and Testing, LLC | P.E. LA 33571 - Civil | Louisiana | P.E., LA 33571 Exp 3/31/2024 |
| 7. | Jeff Raley, P.E., PLS | Raley and Associates, Inc | P.E. LA 22831 - Civil | Louisiana | P.E., LA 22831 Exp 9/30/2023 |
| | | | PLS LA 4630 | | PLS, LA 4630 Exp 9/30/2023 |

| | | | | |
|---|---|---|---|---|
| Travis Ryan Estess, PE, PLS | Raley and Associates, Inc | P.E. LA 39033 - Civil | Louisiana | Exp 9/30/2024 |
| | | PLS LA 5074 | | Exp 9/30/2024 |

| | | | | |
|---|---|---|---|---|
| Travis Ryan Estess, PE, PLS | Raley and Associates, Inc | P.E. LA 39033 - Civil | Louisiana | Exp 9/30/2024 |
| | | PLS LA 5074 | | Exp 9/30/2024 |




24-102

# Section 16

**16. Staff Experience:**

**Gresham Smith**

## Herbert "Bert" Moore, II, P.E., PLS, PTOE

Lead Traffic Engineer

| | |
|---|---|
| **Years of experience with this firm/employer** | 9 |
| **Years of experience with other firm(s)/employer(s)** | 16 |

| | | | |
|---|---|---|---|
| **Degree(s) / Years / Specialization** | Bachelor of Science / 1999 / Civil Engineering, Louisiana State University | | |
| **Active registration number / state / expiration date** | P.E.0031065 / LA / Exp. 9/30/24 \| PTOE 2728 / Exp. 9/30/24 \| PLS 5043 / LA / Exp. 9/30/24 | | |
| **Year registered** | 2004(PE); 2009(PTOE); 2010(PLS) | **Discipline** | P.E./Civil, PLS, PTOE |
| **Contract role(s) / brief description of responsibilities** | Project Executive / Bert will lead traffic, design, and analysis / engineering tasks for this 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). |
|---|---|
| Career | Bert is a professional engineer with more than 24 years of experience designing and managing projects in the fields of traffic and transportation engineering. He previously spent six years as the district traffic operations engineer for LADOTD where he was responsible for the daily maintenance and operation of signs, striping and traffic equipment for 2,000 miles of roadway and over 600 traffic signals in the Department's Baton Rouge district. His experience is in traffic operations, traffic control, signal warrants, traffic signal timing and design, safety studies, the implementation of access management principles, temporary traffic control for work zones, Transportation Management Plans (TMP), and addressing bicycle and pedestrian needs within the roadway network. Bert has completed the LADOTD Traffic Analysis Process and Report Training. |
| 04/20 – 12/22 | **City of Central (LA), Hooper Road (LA 408) at Sullivan Road (LA 3034) Roundabout Design \| *Senior Transportation Engineer*.** Gresham Smith was tasked with the full roundabout design to be in accordance with LADOTD's Roadway Design Manual geometric requirements and LADOTD's Complete Streets Policy to accommodate both pedestrians and bicycles through this intersection. Bert has assisted the team with roundabout analysis, temporary traffic control and sequencing of construction. |
| 02/17 – Ongoing | **LADOTD, SRTS/LRSP Task Order 6 & 21: Endom Bridge, West Monroe, LA \| *Project Executive.*** Bert is responsible for overseeing the data collection, analyzing the traffic counts to determine appropriate lane configuration and geometry, and support and coordination of overall design. |
| 03/21 – Ongoing | **MSY, Task 4: Entrance Road Capacity, Kenner, LA \| *Project Executive*.** Gresham Smith is currently providing design and project management for the City of New Orleans to widen the main exit road at Louis Armstrong New Orleans International Airport (MSY) from 2 lanes to 3 lanes. The project includes widening of approximately 1/4-mile of roadway, extending the roundabout slip lane exit from the roundabout and tying into the design-build flyover project currently under construction (S.P. H.011670). The completed widened road will connect the design-build freeway operated by LADOTD to the existing roundabout on the airport property, improving the flow of traffic from MSY. |
| 07/18 – 12/21 | **LADOTD, LA 37: Sullivan Road to Liberty Road Stage 0 Feasibility Study, Baton Rouge, LA \| *Project Executive*.** Collected and reviewed over 580 crash reports over a span of three years from the state highway crash database and collected ADT data on 21 segments of LA 37 and intersecting streets, peak hour turning movement counts at 12 significant intersections and 15- |

| | |
|---|---|
| | minute counts along 38 driveways and insignificant side streets. The reports were reviewed and evaluated using the safety triage safety tool box. Traffic analysis will be performed using HCS and Synchro and other software tools as needed. We reviewed historic traffic volume counts and TransCAD models and performed count analyses to develop regional growth rates for the study area. Bert was responsible for the review of traffic counts and traffic and safety analyses. |
| 04/18 – 05/19 | **LADOTD, I-10 TMP West of LA 108 to I-210 Interchange TMP, Lake Charles, LA \| *Project Executive.*** Gresham Smith developed a TMP for the Rubbelization and Overlay on I-10 between I-210 and the LA 108 Interchange in Lake Charles, LA. This project included the mill and overlay of I-10, widening two flat deck bridges on I-10 to add a lane, and replacing all of the concrete panels on I-10 through the LA 108 interchange. In order to replace the concrete panels on I-10, traffic was moved to a C/D road within the interchange and cloverleaf ramps were closed during construction. Two temporary traffic signals were designed to facilitate traffic at this interchange. This project included data collection and queue and safety analyses and traffic signal design. Bert was responsible for the overall study including overseeing the data collection review, conducting the queue and safety analysis, implementing the proper traffic control plans, development of the TMP report, the design of two temporary traffic signals and QA/QC. |
| 10/17 – 04/18 | **LADOTD, US 90 Bridge Maintenance over I-10 Ramps, Transportation Management Plan (TMP), Lake Charles, LA \| *Project Executive.*** Gresham Smith was selected to develop a TMP for the replacement of the bridge deck of the US 90 overpass over I-10 in Lake Charles, LA. The project included working with the design engineers to determine the required lane closures for the construction, data collection and queue and safety analyses. Bert was responsible for the overall study including overseeing the data collection review, conducting the queue and safety analysis, implementing the proper traffic control plans and development of the TMP report. |
| 05/17 – 03/19 | **LADOTD, I-210 at LA 1138-2 (Nelson Road) Interchange Modification Re-Evaluation Study, Lake Charles, LA \| *Project Executive.*** Gresham Smith was selected to develop a calibrated VISSIM model to model existing conditions and the future proposed diverging diamond interchange at I-210 at Nelson Road in order to evaluate the proposed interchange design. The project included data collection, development of growth rates, lead the Road Safety Assessment, developing and calibrating an existing VISSIM model and evaluation of the proposed alternative. Bert was responsible for the overall study, overseeing data collection, conducting safety analysis, development of VISSIM models, development of alternatives and the report. |
| 04/20 – 09/20 | **LADOTD, Complex Bridge Inspections, Statewide, LA \| Task Order 2 - Emergency Bridge Repairs, US 71 in Downtown Shreveport, LA \| *Project Executive*.** In April 2020, a train derailment damaged Bent 3 of the Spring Street Bridge forcing the roadway closure. Gresham Smith was selected to perform the bridge repairs to open the bridge. Working with the selected contractor, helical piles were designed to support the new column foundations and crash wall. Bert served as Project Executive (Principal) and assisted with DOTD coordination. |
| 11/08 – 11/14 | **LADOTD, Baton Rouge, LA \| *District Traffic Operations Engineer*.** While at LADOTD, Bert was responsible for reviewing, approving and developing plans for all signing, stripping and traffic signals as well as plans for all construction and maintenance work on the state highway system within District 61. Bert was also responsible for Transportation Management Plans (TMPs) for construction and maintenance activities. |
| Certifications (See section 20) | • DOTD Traffic Engineering Analysis Process & Report – Modules 1, 2 and 3<br>• U.S. Department of Transportation Federal Highway Administration – DPFA Certification<br>• LADOTD – Highway Safety Manual Workshop NCHRP 17-38<br>• Louisiana Local Technical Assistance Program – Regional Crash Data Workshop<br>American Traffic Safety Services Association –Traffic Control Supervisor, LA State Specific |

**16. Staff Experience:**

**Gresham Smith**

## Richard Savoie, P.E.

Project Manager, Senior Roadway Engineer

| | |
|---|---|
| **Years of experience with this employer** | 5 |
| **Years of experience with other employer(s)** | 40 |

| | | | |
|---|---|---|---|
| **Degree(s) / Years / Specialization** | Bachelor of Science / 1978 / Civil Engineering, McNeese State University | | |
| **Active registration number / state / expiration date** | P.E.0020936 / LA / 9/30/2024 | | |
| **Year registered** | 1983 | **Discipline** | P.E./Civil |
| **Contract role(s) / brief description of responsibilities** | Project Manager. Richard will lead the overall management and support roadway design. | | |

| 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).** |
|---|---|
| 04/20 – 12/22 | **City of Central (LA), Hooper Road (LA 408) at Sullivan Road (LA 3034) Roundabout Design \| *Senior Engineer.*** Gresham Smith was tasked with the full roundabout design to be in accordance with LADOTD's Roadway Design Manual geometric requirements and LADOTD's Complete Streets Policy to accommodate both pedestrians and bicycles through this intersection. Richard was responsible for overall Quality Control on the project. He mentored the engineering staff on the field evaluation requirements, reviewing all potential improvements, and was responsible for QC reviews on the preliminary and final design plan submissions. |
| 09/18 – 12/20 | **LADOTD, SRTS/LRSP Task Order 6 and 21: Endom Bridge Preliminary and Final Design, West Monroe, LA \| *Senior Engineer.*** The project consisted of roadway realignment at the bridge approach to improve roadway geometry and safety. Right-of-way is being acquired at one quadrant of the intersection and Richard is assisting with the coordination between the right-of-way plans and the roadway requirements. Richard performed Quality Control reviews on the final preliminary design submission and was responsible for Quality Control on the final design process. |
| 09/18 – 12/19 | **LADOTD, SRTS/LRSP Task Order 14: Farmerville Design, Union Parish, Farmerville, LA \| *Senior Engineer.*** Richard provided quality control review for the Final Plan submission for this Safe Routes to Public Places Project. The review was to ensure that the plans were developed in accordance with standard LADOTD policy and procedure. Plans included installation of sidewalks along various local roadways, driveway adjustments to ensure ADA compliance and utility relocation avoidance. |
| 02/09 – 03/14 | **LADOTD, Project and Program Delivery \| *Project Manager.*** Richard was the Project Manager for the I-49 North project in Caddo Parish, from I-220 to the Arkansas State Line. The project started with the Corridor Selection Study and progressed to the Environmental Impact Study. Once the alignment was selected plan development began and thence project delivery for this $670 million project. As the Deputy Chief and Chief Engineer, Richard participated in many partnering sessions for the Huey P. Long Bridge widening, John James Audubon Bridge and the cable replacement for the I-310 Luling Bridge with contractors and designers. He was the first Director of **Value Engineering** when the department started their **Value Engineering** program in 1998. He participated in multiple **Value Engineering** sessions and led the **Value Engineering** study for the pavement replacement for I-10 thru Lake Charles. |
| Career | Richard's 40+-year career includes 34 years with LADOTD in increasing roles culminating as the Chief Engineer. Richard was responsible for establishing engineering directives and standards, policies, budgets, expenditures, programs and procedures that guided project and program delivery, construction, and preservation of all transportation-related projects and systems. |

**16. Staff Experience:**

**Gresham Smith**

## Brennon Hughes, P.E.

Lead Roadway Design Engineer

| | |
|---|---|
| **Years of experience with this firm/employer** | 6 |
| **Years of experience with other firm(s)/employer(s)** | 6.5 |

| | | | |
|---|---|---|---|
| **Degree(s) / Years / Specialization** | Bachelor of Science / 2011 / Civil Engineering, Louisiana State University | | |
| **Active registration number / state / expiration date** | P.E.0039985 / LA / 3/31/24 | | |
| **Year registered** | 2015 | **Discipline** | P.E./Civil |
| **Contract role(s) / brief description of responsibilities** | Lead Roadway / Design Engineer / Brennon will lead all roadway design details, including bridge approach details. | | |

| **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).** |
|---|---|
| 04/20 – 12/22 | **City of Central (LA), Hooper Road (LA 408) at Sullivan Road (LA 3034) Roundabout Design | *Lead Roadway/Roundabout Design Engineer.*** Gresham Smith was tasked with the full roundabout design to be in accordance with LADOTD's Roadway Design Manual geometric requirements and LADOTD's Complete Streets Policy to accommodate both pedestrians and bicycles through this intersection. Brennon led the design and preparation of preliminary plans and cost estimates. This project underwent scope changes for final design, and let in December 2022. |
| 03/21 – Ongoing | **MSY Airport: Entrance Road Capacity Design | *Lead Roadway Design*.** Brennon was responsible for planning and coordinating staffing, scheduling, and budgeting for this project. He also led the design and the preparation of preliminary and final plans and cost estimates. He worked closely with Airport officials along with the consultant for the adjacent design-build project to coordinate the widening of the entrance road to the MSY Airport. This project is scheduled for letting in 2023. |
| 08/17 – 12/20 | **LADOTD, SRTS/LRSP Task Order 6 and 21: Endom Bridge Preliminary and Final Design, West Monroe, LA | *Lead Roadway Design Engineer.*** Brennon led the design and the preparation of preliminary and final plans and cost estimates. This project involved safety and operations improvements for the intersection realignment, curb and gutter drainage design, sidewalks, truck islands and turnouts. |
| 10/15 – 08/17 | **LADOTD, Multilane Roundabout LA 22 at LA 70 and LA 22 Geometric Improvements near I-10, Ascension Parish, LA | *Lead Roadway Design*.** This was a widening and intersection improvement project located at the intersection of LA 22 and LA 70 in Ascension Parish to north of I-10. This project included widening of LA 22, a double lane roundabout at LA 22 and LA 70 with a slip lane, along with two J-Turns north of I-10 and two J-Turns south of I-10 along LA 22. Brennon's role was to lead the design and the preparation of preliminary and final plans and cost estimates. He developed these plans from initial survey request up to 60% final plans. |
| 09/11 – 07/17 | **LADOTD Roadway Group. | *Project Engineer*.** Prior to joining Gresham Smith, Brennon served with the LADOTD Roadway Group as a designer on various roadway projects including a new roundabout, widening projects, overlay projects, and intersection improvements. |
| Certifications (See section 20) | • DOTD FHWA-NHI-380096V Modern Roundabouts: Intersections Designed for Safety<br>American Traffic Safety Services Association –Traffic Control Supervisor, LA State Specific |

**16. Staff Experience:**

**Gresham Smith**

## Ronnie Robinson, P.E.

Senior Transportation Engineer

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|---|---|
| **Years of experience with this firm/employer** | 7 |
| **Years of experience with other firm(s)/employer(s)** | 33 |

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|---|---|---|---|
| **Degree(s) / Years / Specialization** | Bachelor of Science / 1982 / Civil Engineering, Louisiana State University | | |
| **Active registration number / state / expiration date** | P.E.0024040 / LA / 3/31/24 | | |
| **Year registered** | 1988 | **Discipline** | P.E./Civil |
| **Contract role(s) / brief description of responsibilities** | Senior Transportation Engineer / Ronnie will assist with all aspects of roadway design development and retrieval of plans from DOTD files. | | |

| **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).** |
|---|---|
| 04/20 – 12/22 | **City of Central (LA), Hooper Road (LA 408) at Sullivan Road (LA 3034) Roundabout Design | *Senior Transportation Engineer*.** Gresham Smith was tasked with the full roundabout design to be in accordance with LADOTD's Roadway Design Manual geometric requirements and LADOTD's Complete Streets Policy to accommodate both pedestrians and bicycles through this intersection. Ronnie provided quality control for the preliminary design phase, participated in the plan-in-hand meeting, and provided design assistance for the development of the final design plans. |
| 02/17 – 12/20 | **LADOTD, SRTS/LRSP Task Order 6 and 21: Endom Bridge Preliminary and Final Design, West Monroe, LA | *Senior Transportation Engineer.*** Ronnie's responsibilities included assisting in the development of preliminary and final plans and construction cost estimates. His efforts included coordination of the contaminated waste investigation, drainage layout and quality control for the preliminary design. |
| 07/17 – 06/19 | **LADOTD, SRTS/LRSP Task Order 7: McMillan at Blanchard Intersection Improvements Design, West Monroe, LA | *Senior Engineer.*** Ronnie's responsibilities included conducting field traffic observations and collecting field data for the study portion. For the design portion, his responsibilities included developing conceptual designs, preliminary and final plans and construction cost estimates. |
| 03/16 – 10/17 | **LADOTD, Farmerville State and Local Road Traffic Study, Farmerville, LA | *Senior Engineer.*** Gresham Smith was selected to perform a formal traffic study of all the intersections (57) within and around the City of Farmerville on both state and local routes. The project included data collection, safety/crash review, developing alternatives, analysis of existing and proposed conditions and benefit/cost analysis. Ronnie assisted with the development of alternatives and was responsible for developing construction cost estimates for various alternatives. |
| Career | Ronnie has 33 years of experience with the Louisiana Department of Transportation and Development. He worked 11 of his 16 years in construction as a project engineer, eight years as manager of the design and permit sections and nine years as administrator for the design, water resources, permit and materials testing sections. |

**16. Staff Experience:**

**Gresham Smith**

## Zillah Zoletta, EI

Engineering Intern

| | |
|---|---|
| **Years of experience with this employer** | 1 |
| **Years of experience with other employer(s)** | 0 |

| | | | |
|---|---|---|---|
| **Degree(s) / Years / Specialization** | Bachelor of Civil Engineering / 2022 / Civil Engineering, Louisiana State University | | |
| **Active registration number / state / expiration date** | EI. 0035238 / LA / 3/31/2025 | | |
| **Year registered** | N/A | **Discipline** | E.I. |
| **Contract role(s) / brief description of responsibilities** | Engineering Intern / Zillah will support all roadway related services. | | |

| 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 – Ongoing | **MOVEBR, Nicholson Drive Segment 2 \| *Engineer Intern.*** Gresham Smith is performing a traffic study for capacity improvements along Nicholson Drive in Baton Rouge, LA. The project includes data collection, safety analysis, and existing and future analysis. Zillah assisted the design engineer with the safety analysis by reviewing crashes and using spreadsheets to track crash trends. She also created collision diagrams using Microstation. |
| 05/21 – Ongoing | **MOVEBR, Sherwood Forest Boulevard Multi-Use Path \| *Engineer Intern*.** Gresham Smith is performing a traffic study for pedestrian improvements along Sherwood Forest Boulevard in Baton Rouge, LA. The project includes data collection, safety analysis, and existing and future analysis. Zillah assisted the design engineer with the safety analysis by reviewing crashes and using spreadsheets to track crash trends. She also created collision diagrams using Microstation. |
| 05/21 – Ongoing | **LADOTD, FOMM-Lafayette/US 190/Alexandria \| *Engineer Intern*.** In support of GIS services, Gresham Smith was selected by LADOTD to assist inputting field data into the ITS Field Asset Management System. Tasks include collecting data from LADOTD's fiber and communications system and field site equipment; recording data into the system; and mapping of the fiber system. Zillah has assisted on this project by inputting data into the NexusWorx system and performing QA/QC on the data collected in the field. |
| 06/21– Ongoing | **LADOTD, Complex Bridge Inspections Task Orders 3, 4, 5 and 6, Statewide, LA \| *Engineer Intern*.** Zillah assisted in the development of the traffic control plans for various bridge inspection projects. The traffic control plans included single lane closures with alternating traffic with flaggers for projects in urbanized areas. Zillah worked closely with the bridge inspection team to develop the parameters for the lane closures to ensure that adequate protection was provided to the field inspection team while meeting requirements from LA DOTD's traffic control standards. |
| 06/21 – Ongoing | **EBR DTD, MovEBR-Plank Road Corridor Enhancement, Baton Rouge, LA \| *Engineer Intern.*** This project is a design study/final design along a portion of the Plank Road corridor between Dawson Drive and Harding Blvd. Zillah's responsibilities include assisting the design engineer with the development of Typical Sections and Plan and Profile Sheets. She is also responsible for addressing general markups in MicroStation. |

**16. Staff Experience:**

**Gresham Smith**

## John Weres, P.E.

Deputy Project Manager, Senior Bridge Engineer

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|---|---|
| **Years of experience with this employer** | 6 |
| **Years of experience with other employer(s)** | 37 |

| | | | |
|---|---|---|---|
| **Degree(s) / Years / Specialization** | Bachelor of Science / 1980 / Civil Engineering, University of Pittsburgh | | |
| **Active registration number / state / expiration date** | PE.0036429 / LA / Exp. 9/30/23 | | |
| **Year registered** | 2011 (LA)<br>1985 (PA) | **Discipline** | P.E./Civil |
| **Contract role(s) / brief description of responsibilities** | Deputy Project Manager. John will assist Richard with project management tasks, will serve as the overall bridge design lead, and will oversee the design of the bridge structures. | | |

| 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).** |
|---|---|
| Career | John's 40+-year career includes diverse structure related activities including inspection, alternatives analysis, final design and construction management and program management. Experience includes multi-level interchanges, complex geometry, truss rehabilitations and suspension bridge rehabilitations, phased construction, deep foundations, complex pier geometry, and movable bridge inspection and design. John served as Team Leader on several LADOTD complex bridge inspections and as Project Manager for underwater bridge inspections for TDOT. NHI Certified 130055 (Team Leader), 130078 (Fracture Critical Steel), and 135048 (Countermeasure Design). Also, FAA Part 107 USAS (drone) licensed pilot. |
| 04/12 – 11/12 | **PennDOT District 12-0, Keystone Lake Bridge Emergency Replacement, Westmoreland County, PA \| *Project Manager.*** John served as project manager for the $1.2 million emergency replacement utilizing design/build concepts for an 80' concrete box structure. Following an emergency closing of the bridge, PennDOT selected Mr. Weres' firm to perform the emergency design based on a history of quick resolutions. The design was coordinated with a contractor hired to perform the emergency replacement, therefore, design-build principals were utilized and the design was based on readily available precast concrete beams. The design was coordinated with the state park personnel to reduce impacts on the patrons. Environmental concerns included the relocation of mussels at the bridge site and the construction equipment utilized mineral oil rather that diesel fuel for the pile driving equipment to avoid overspray into Keystone Lake. Form liners and stained concrete were utilized to meet context sensitive design requirements. |
| 01/09 – 12/11 | **PennDOT District 1-0, Cooperstown Bridge Replacement \| *Project Manager.*** $2.2 million offline replacement of a 2-span, 135' concrete box structure founded on steel pile foundations. John served as project manager for the preliminary and final design phases. An extensive public communications process was coordinated with the engineering analysis to determine the preferred location of the new structure and to maintain traffic on the existing structure during construction. Coordination with the PA Fish & Boat Commission was conducted to install a new parking lot for fisherman within the footprint of the existing bridge approach roadway. |
| 06/11 - 12/13 | **PennDOT District 10-0, Kimmel School Bridge \| *Project Manager.*** John served as project manager for this $3 million project that included design of a 220' superstructure replacement project using phased construction. The bridge carried US 22 on four lanes of heavily traveled roadway. The superstructure was replaced in phases to maintain traffic at all times. |

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|---|---|
| 01/12 – 01/14 | **North Carolina DOT, Division 9 Group J Bridge Replacements \| *Lead Structure Engineer.*** John served as lead structure engineer for the replacement of six stream crossing structures using NCDOT Low Impact Bridge Replacement guidelines for Sub-Regional Tier structures. Plan development for final design includes one, two, and three-span structures utilizing standard cored-slab design plans. Span arrangement development required coordination with hydrology evaluation and environmental agency oversight. Foundation details include both drilled shafts and driven steel piles. |
| 6/19 – 03/20 | **LADOTD, Complex Bridge Inspections, Statewide, LA \| *Project Manager*. Task Order 1 -** Retainer project for various bridge inspections of major river crossings. Completed hands-on inspection of fracture critical elements on several structures including the LA1 Truss over Atchafalaya River at Simmesport, LA8 Segmental Bridge over Red River at Boyce and the US165 Vertical Lift Bridge over Red River. Gresham Smith was able to complete the inspection of Bridge 005860, in Jeanerette, a steel swing truss and Bridge 009130, in Charenton, a steel swing truss – within the original budget for the initial three bridges. |
| 04/20 – 9/20 | **LADOTD, Complex Bridge Inspections, Statewide, LA \| Task Order 2 - Emergency Bridge Repairs, US 71 in Downtown Shreveport, LA \| *Project Manager*.** In April 2020, a train derailment damaged Bent 3 of the Spring Street Bridge forcing the roadway closure. Gresham Smith was selected to perform the bridge repairs to open the bridge. Working with the selected contractor, helical piles were designed to support the new column foundations and crash wall. John served as the design coordinator and facilitated the repairs. |
| 07/20 - Ongoing | **LADOTD, Complex Bridge Inspections, Statewide, LA \| *Project Manager*. Task Order 3 -** Retainer project for various movable bridge inspections. Completed hands-on inspection of fracture critical elements on several structures and coordinated the efforts of mechanical and electrical staff and served as EOR for the reports including the Bridge 006210 Vertical Lift Bridge at Loreauville, LA, Bridge 054360 Gross Tete Steel Swing Bridge and Bridge 054472 Indian Village Steel Swing Bridge in Iberville Parish. Due to cost savings on the initial 3 bridges in Task Order 2, we were able to complete the inspection of Bridge 006306, Bayside Bridge in Jeanerette, a steel swing bridge – within the original budget. |
| 03/21 – Ongoing | **MDOT, SR 149 Simpson County Bridge Replacements, MS \| *Lead Structure Engineer.*** Gresham Smith is partnering with MDOT for Phase B (Final Design) for the reconstruction of S.R. 149 near D'Lo, Simpson County, Mississippi. Gresham Smith is designing the two longer structures (Bridge 128.2 and Bridge 128.6). This is the first instance of partial depth deck panels utilized for MDOT as a pilot to verify the ease of construction and as an accelerated (ABC) time condition. |
| 11/17 – 12/20 | **MDOT, MS-178 Benton County Bridges, Benton County, MS \| *Lead Structure Engineer.*** John served as the Lead Design Engineer for the final design of a 2-cell box culvert and two prestressed concrete girder structures in northern Mississippi. These water crossings improved the hydraulic conditions at the sites and incorporated low-maintenance details such as jointless bridges. |
| 07/19 – Ongoing | **TDOT, Complex Bridge Load Ratings, Statewide, TN \| *Senior Structural Engineer.*** Gresham Smith load rated 23 continuous and curved steel tub girders and two steel arch bridges with the roadway suspended from the arches by steel cables supporting a floor beam-stringer deck support system for WO#5. Based on our performance on WO #5, we were entrusted with a second work order, WO11-System Bridges and WO12-Off System Bridges, to load rate a total of 41 complex bridges within a 2-3-month time frame to help the State meet a critical FHWA Deadline. |

**16. Staff Experience:**

**Gresham Smith**

## Tom Tran, P.E.

Senior Bridge Engineer

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|---|---|
| **Years of experience with this employer** | 11 |
| **Years of experience with other employer(s)** | 22 |

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|---|---|---|---|
| **Degree(s) / Years / Specialization** | Bachelor of Science / 1991 / Civil Engineering, University of Central Florida | | |
| **Active registration number / state / expiration date** | PE.0032072 / LA / Exp. 3/31/24 | | |
| **Year registered** | 2005 (LA) | **Discipline** | P.E./Civil |
| **Contract role(s) / brief description of responsibilities** | Senior Bridge Engineer / Tom will lead the bridge-related QA/QC efforts. | | |

| 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). |
|---|---|
| 6/19 – 03/20 | **LADOTD, Complex Bridge Inspections, Statewide, LA \| *QA/QC*. Task Order 1 -** Retainer project for various bridge inspections of major river crossings. Completed hands-on inspection of fracture critical elements on several structures including the LA1 Truss over Atchafalaya River at Simmesport, LA8 Segmental Bridge over Red River at Boyce and the US165 Vertical Lift Bridge over Red River. Gresham Smith was able to complete the inspection of Bridge 005860, in Jeanerette, a steel swing truss and Bridge 009130, in Charenton, a steel swing truss – within the original budget for the initial three bridges. |
| 04/20 – 9/20 | **LADOTD, Complex Bridge Inspections, Statewide, LA \| Task Order 2 - Emergency Bridge Repairs, US 71 in Downtown Shreveport, LA \| *QA/QC.*** In April 2020, a train derailment damaged Bent 3 of the Spring Street Bridge forcing the roadway closure. Gresham Smith was selected to perform the bridge repairs to open the bridge. Working with the selected contractor, helical piles were designed to support the new column foundations and crash wall. |
| 07/20 - Ongoing | **LADOTD, Complex Bridge Inspections, Statewide, LA \| *QA/QC*. Task Order 3 -** Retainer project for various movable bridge inspections. Completed hands-on inspection of fracture critical elements on several structures and coordinated the efforts of mechanical and electrical staff and served as EOR for the reports including the Bridge 006210 Vertical Lift Bridge at Loreauville, LA, Bridge 054360 Gross Tete Steel Swing Bridge and Bridge 054472 Indian Village Steel Swing Bridge in Iberville Parish. Due to cost savings on the initial 3 bridges in Task Order 2, we were able to complete the inspection of Bridge 006306, Bayside Bridge in Jeanerette, a steel swing bridge – within the original budget. |
| 6/14 – 03/17 With another firm | **LADOTD, Complex Bridge Inspections, Statewide, LA \| *QA/QC*.** Retainer project for various bridge inspections of major river crossings. Completed hands-on inspection of fracture critical elements on several structures including the Louisa Bascule Bridge in St. Mary's Parish. John served on the field inspection teams for the I-20 Mississippi River Bridge in Vicksburg and the LA 47 Bridge over the Mississippi River Gulf Outlet. The study was to determine the structural adequacy of the bridge with the addition of a center median. |
| 06/21 – 08/21 | **FLDOT, Florida DEP, Florida Keys Overseas Heritage Trail Historic Bridge Evaluation, Marathon, FL \| *QA/QC.*** Florida DEP selected Gresham Smith to inspect and evaluate two historic bridges, the Seven Mile Bridge and the Bahia-Honda Historic Truss. Both structures are closed to traffic. |
| 07/19 – Ongoing | **TDOT, Complex Bridge Load Ratings, Statewide, TN \| *Senior Bridge Engineer.*** Complex structures were analyzed utilizing finite element methods and CSi Bridge software. The structures load rated consisted of curved steel tub girders, steel arches with steel cables supporting steel floor beam – stringer systems, deck trusses, bascule arched steel truss, steel girder-floor beam- |

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| | stringer system bridges, steel rigid K-frame bridges, and reinforced concrete rigid k-frames with spliced prestressed girders for center span bridges. The standard structures were analyzed using the AASHTOWare BrR software. Tom provided quality control review for the complex arch structures. |
| 08/20 – Ongoing | **GDOT, Statewide Engineering On-Call for Bridge Repair, Statewide, GA \| *Project Manager*.** This contract includes, Inspection, load rating and repair of problematic bridges thru out the state of Georgia. Typical scope includes inspection of bridge, verification of repair needed, development of repair plans, development of special provision, advertisement of project, review of shop drawings and post construction services as needed. |
| 11/14 – 10/17 | **MDOT, MS-309 Bridge Replacements, Marshall County MS \| Lead Bridge Engineer.** Tom served as the EOR for this project. The design included replacing full timber structures with AASHTO beam structures supported by either concrete piles or pipe piles. Span lengths ranged from 41' to 140'. Structure arrangements varied from 3-span to 6-span structures. Work included Services During Construction, scheduled for completion Fall 2021. |
| 11/13 – 10/14 | **MDOT, Roadway WA #4: US 82 Underpass Bridge Removal at Leland, Leland, MS \| *Lead Bridge Engineer*.** Gresham Smith was tasked with the US 82 Underpass Bridge Removal projects to provide a feasibility study and engineering design services as required to prepare Phase A (preliminary design) plans for removal of an abandoned railroad under-pass bridge and reconstruction of approximately 1,000 linear feet of US 82 near the Old Hwy. intersection in Leland. |
| 08/07 – 01/12 | **GDOT, SR 10/US 78 Bridge Replacement at Apalachee River, Walton, GA \| *Senior Bridge Engineer*.** This project consists of replacing the existing SR 10/US 78 bridge over the Apalachee River at the Walton/Oconee County line. The existing 418-foot-long historic westbound bridge is to be replaced with a 410-foot-long bridge located north of the existing bridge. The historic bridge will remain in place. The existing 397-foot-long east bound bridge will remain. The contributing basin is 136.16 square miles. The existing bridge has a studied flood plain and floodway. |
| 1/13 – 6/14 | **LADOTD, ITS Design and Implementation Services, WO#4: I-10 Twin Span ITS-Orleans & St. Tammany Parishes, Statewide, LA \| *Structures Design Lead*.** Tom led the detailed structural analyses of new camera poles and the DMS poles could be installed on the existing foundations within the bridge structure. The DMS pole required a butterfly cantilever to support the new front access LED DMS enclosure. This was the first of each to be installed along the interstate system in Louisiana. |

**16. Staff Experience:**

**Gresham Smith**

## Courtney Rome, P.E.

Bridge Engineer

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|---|---|
| **Years of experience with this employer** | 5 |
| **Years of experience with other employer(s)** | 7 |

| | | | |
|---|---|---|---|
| **Degree(s) / Years / Specialization** | Bachelor of Science / 2009 / Civil Engineering, Southern University and A&M College | | |
| **Active registration number / state / expiration date** | PE.0043355 / LA / Exp. 9/30/23 | | |
| **Year registered** | 2019 (LA) | **Discipline** | P.E./Civil |
| **Contract role(s) / brief description of responsibilities** | Bridge Engineer / Courtney will support the bridge design. | | |

| 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). |
|---|---|
| 06/19 – Ongoing | **LADOTD, Complex Bridge Inspections, Statewide, LA \| *Engineer.*** As an NHI Certified Bridge Inspector, Courtney is performing bridge inspections for various complex bridge structures throughout Louisiana, including steel trusses, concrete structures and moveable bridges. |
| 07/19 – Ongoing | **TDOT, Complex Bridge Load Ratings, Statewide, TN \| *Project Engineer*.** Complex structures were analyzed utilizing finite element methods and CSi Bridge software. The structures load rated consisted of curved steel tub girders, steel arches with steel cables supporting steel floor beam – stringer systems, deck trusses, bascule arched steel truss, steel girder-floor beam-stringer system bridges, steel rigid K-frame bridges, and reinforced concrete rigid k-frames with spliced prestressed girders for center span bridges. The standard structures were analyzed using the AASHTOWare BrR software. Courtney performed QC reviews on the load rating analysis and reports. |
| 06/21 – 08/21 | **FLDOT, Florida DEP, Florida Keys Overseas Heritage Trail Historic Bridge Evaluation, Marathon, FL \| *QA/QC.*** Florida DEP selected Gresham Smith to inspect and evaluate two historic bridges, the Seven Mile Bridge and the Bahia-Honda Historic Truss. Both structures are closed to traffic. |
| 11/17 – 01/18 | **TDOT, Off-System Underwater Bridge Inspections, Statewide, TN \| *QC Reviewer*.** Courtney provided quality control reviews for the inspection reports and graphics. The project included over 50 bridges throughout Tennessee. |
| 11/17 – 12/20 | **MDOT, SR 178 Benton County Bridge Replacements, MS \| *Engineer.*** Gresham Smith provided final design (Phase B) services for the replacement of two water crossings on parallel alignment. Both bridges include utilization of prestressed Florida I-Beams (FIB) to maximize span lengths while minimizing structure depths. Courtney performed the deck design and beam design services for a one-span (135-foot) and three-span (80- x 100- x 80-foot) structure and also completed the design of pipe piles for the pier bents. |
| 07/18 – Ongoing | **MDOT, SR 149 Simpson County Bridge Replacements, MS \| *Engineer.*** Gresham Smith is partnering with MDOT for Phase B (Final Design) for the reconstruction of S.R. 149 near D'Lo, Simpson County, Mississippi. Courtney served as Engineer-of-Record for the two longer structures (Bridge 128.2 and Bridge 128.6). This is the first instance of partial depth deck panels utilized for MDOT as a pilot to verify the ease of construction and as an accelerated (ABC) time condition. |

**16. Staff Experience:**

**Gresham Smith**

## Ruth Steele, P.E.

Bridge Engineer

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|---|---|
| **Years of experience with this employer** | 6 |
| **Years of experience with other employer(s)** | 0 |

| | | | |
|---|---|---|---|
| **Degree(s) / Years / Specialization** | Bachelor of Science / 2018 / Civil Engineering / Lipscomb University | | |
| **Active registration number / state / expiration date** | 126968 / TN / 10/31/2024 | | |
| **Year registered** | 2022 | **Discipline** | P.E. / Civil |
| **Contract role(s) / brief description of responsibilities** | Bridge Design / Ruth will support the bridge related tasks. | | |

| 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 – 06/22 | **LADOTD, Complex Bridge Inspections, Statewide, LA \| *Engineer Intern*.** Retainer project for various bridge inspections of major river crossings. Ruth assisted with the bridge inspection of the I-10 Vicksburg Bridge for DOTD. Task included field inspection of the mile-long approach spans utilizing boat as access in the flooded areas inside the levee. |
| 07/19 – Ongoing | **TDOT, Complex Bridge Load Ratings, Statewide, TN \| *Engineer Intern.*** Ruth provided support for the bridge load ratings on approximately 115 complex structures and 35 standard structures across the state of Tennessee. Complex structures were analyzed utilizing finite element methods and CSi Bridge software. The structures load rated consisted of curved steel tub girders, steel arches with steel cables supporting steel floor beam – stringer systems, deck trusses, bascule arched steel truss, steel girder-floor beam-stringer system bridges, steel rigid K-frame bridges, and reinforced concrete rigid k-frames with spliced prestressed girders for center span bridges. The standard structures were analyzed using the AASHTOWare BrR software. |
| 06/17 – 1/18 | **TDOT, I-40 Interchange at SR 255, Davidson County, TN \| *Engineer Intern*.** The proposed structure is a two-span steel welded plate girder bridge. Additionally, this project has two other bridge structures along SR 255 crossing MNAA East-West Road and McCrory Creek. The geometric layout and preliminary design were also developed for these structures. The MNAA bridge structure proposes a single-span prestressed concrete girder structure that utilizes uniquely modified bulb-tee beams to meet the tight vertical alignment and clearance constraints. The McCrory Creek bridge structure is a three-span traditional prestressed concrete bulb-tee girder bridge. |
| 06/17 – Ongoing | **TDOT, SR 171 over I-40 Bridge Widening, Wilson County, TN \| *Engineer Intern*.** Engineer Intern. Gresham Smith was hired by the City to widen SR 171 to add an additional lane across the bridge and carry the project through the TDOT Local Programs process. The project widened the roadway for 0.70 miles to add another lane, bike lanes and sidewalks through the interchange with landscaping features to create an entrance into the City. The design consisted of revised drainage systems, decorative lighting and decorative bridge rails, retaining walls to minimize impacts to the property owners, signal design, bridge design and signing. Ruth's role on this projected included drawing the approach slab and prestressed box beams as well as calculating quantities for the box beams, superstructure, abutments, excavation, backfill, and pipe underdrain. |

**16. Staff Experience:**

**Gresham Smith**

## Venkata Sai Surya Praneeth Sathiraju, EI

Bridge Engineer

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|---|---|
| **Years of experience with this employer** | <1 |
| **Years of experience with other employer(s)** | 3.5 |

| | | | |
|---|---|---|---|
| **Degree(s) / Years / Specialization** | Masters / 2019 / Structural Engineering, University of Cincinnati<br>Bachelors / 2016 / Civil Engineering, Indian Institute of Technology, Hyderabad, India | | |
| **Active registration number / state / expiration date** | EI. 0035419 / LA / Exp. 9/30/2025 | | |
| **Year registered** | 2023 | **Discipline** | E.I. / Civil |
| **Contract role(s) / brief description of responsibilities** | Bridge Engineer / Venkata will support the bridge team by working on bridge design, load rating and plan production tasks. | | |

| 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).** |
|---|---|
| 03/23 – Ongoing | **LADOTD, Complex Bridge Inspections, Statewide, LA \| *Engineer Intern*.** As an NHI Certified Bridge Inspection, Venkata is involved in performing bridge inspections and completing bridge inspection reports for a couple of bridges under the contract. The following are the bridge inspections Venkata was part of under this contract - US 11 over Norfolk Southern, in Slidell, LA; Old US 51 over Pass Manchac, Manchac, LA |
| 07/23 – Ongoing | **Florida DEP, Lover's Key State Park Rehabilitation, FL \| *Engineer Intern*.** Venkata is involved in design and plan production of a 400' timber boardwalk replacement in Lover's Key State Park, Fort Myers, FL. |
| 11/22 – 03/23<br>With another firm | **LADOTD, Vertical Lift Bridge Rehabilitation, Perry, LA (H.014465.5) \| *Engineer Intern*.** The existing structure is a lift span with 10 adjacent approach spans. Venkata was involved in the design of rehabilitation work on vertical lift bridge along with the approach spans in Vermillion parish of Louisiana. Venkata designed reinforced concrete deck, steel stringers for the approach spans and have worked on portal modifications for the lift span. Load rating of the proposed work and plan production followed. |
| 11/20 – 09/22<br>With another firm | **INDOT, Northsplit Reconstruction Project, IN \| *Engineer Intern*.** North Split Reconstruction Project is in downtown Indianapolis. BF&S was a subconsultant to the lead design engineering firm for this design build project. As a part of the project, BF&S was tasked to work on bridge replacements on New York St., E. Ohio St., E. Michigan St. St. Clair St. among others. Venkata was involved in the design of superstructure and substructure elements whole throughout this project. |
| 02/20 – 03/20<br>With another firm | **SR 13 over Plunge Creek \| *Engineer Intern*.** Venkata was involved in the design of a multi-span slab bridge on SR 13 in Indiana. Design responsibilities included design of RC slab, design of substructure elements. |

**16. Staff Experience:**

**Gresham Smith**

## Jackson Hartley, EI

Bridge Engineer Intern

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| **Years of experience with this employer** | 1 |
| **Years of experience with other employer(s)** | 0 |

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| **Degree(s) / Years / Specialization** | B.S. Civil Engineering, Louisiana State University, 2021 | | |
| **Active registration number / state / expiration date** | EI. 35058 9/30/2024 | | |
| **Year registered** | N/A | **Discipline** | E.I. |
| **Contract role(s) / brief description of responsibilities** | Bridge Engineer Intern / Jackson will support the bridge design. | | |

| 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 – Ongoing | **LADOTD, Complex Bridge Inspections, Statewide, LA \| *Bridge Engineer Intern*.** Task Order 6 - Retainer project for various movable bridge inspections. Jackson began his career assisting with site inspections of movable bridges including Bridge 009130, Charington Swing Bridge, Bridge 005860 Jeanerette Swing Bridge, and Bridge 003450 Boudreaux Canal. Following graduation from LSU, Jackson has performed photo log preparation and stream bed analysis for the Boudreaux Canal Bridge. Jackson participated in the site inspections and photo documentation as a summer intern and has progressed. |
| 11/22 – Ongoing | **LADOTD, Complex Bridge Inspections, Statewide, LA \| *Bridge Engineer Intern*. Task Order 6** - Retainer project for various movable bridge inspections. Jackson provides support and performs site assessments for the partial re-inspection of bridges throughout LADOTD District 62. |
| 09/21 – 11/21 | **MDOT, MS-493 Bridge Replacements, Lauderdale County, MS \| *Bridge Engineer Intern***. Jackson is assisting bridge services during construction (Phase C) work for the replacement of two stream crossing bridges in Lauderdale County, MS. The design includes a curved structure alignment and a sharply skewed bridge alignment. Modified FIB concrete beams, similar to DOTD's LG-25 girders, were utilized to minimize the structure depth in order to meet hydraulic requirements. |
| 06/21 – 08/21 | **Florida DEP, Florida Keys Overseas Heritage Trail Historic Bridge Evaluation, Marathon, FL \| *Bridge Engineer Intern.*** Florida DEP selected Gresham Smith to inspect and evaluate two historic bridges, the Seven Mile Bridge and the Bahia-Honda Historic Truss. Both structures are closed to traffic. Jackson assisted with cataloging the drone videos and photographs and also assisted with the report formatting. |
| 02/22 - Ongoing | **Florida DOT District 2, SR A1A Trail from Marineland to Fort Matanzas, St. Johns and Flagler Counties, FL \| *Bridge Engineer Intern.*** Jackson is preparing bridge design CADD plans including the bridge typical section. This 2.7 mile trail project from Marineland to Ft. Matanzas includes an alignment study, trail design, drainage design, stormwater permitting, re-decking of two existing bridges to accommodate the new trail, 2000' of retaining walls, coastal modeling, and public involvement. |

**16. Staff Experience:**

**Gresham Smith**

## Rebecca Murray, P.E., PTOE, RSP1

Traffic Engineer

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|---|---|
| **Years of experience with this employer** | 8 |
| **Years of experience with other employer(s)** | 0 |

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|---|---|---|---|
| **Degree(s) / Years / Specialization** | Bachelor of Science / 2015 / Civil Engineering, Louisiana State University | | |
| **Active registration number / state / expiration date** | P.E.0043788 / LA / 3/31/24 \| PTOE 4861 / 3/26/26 \| RSP1 611 / 4/5/2024 | | |
| **Year registered** | 2019 (LA)<br>2020 (PTOE)<br>2021 (RSP1) | **Discipline** | P.E./Civil; PTOE; RSP1 |
| **Contract role(s) / brief description of responsibilities** | Traffic Engineer / Rebecca will provide all traffic related services, including development of Traffic Control Plans. | | |

| 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).** |
|---|---|
| 10/16 – 03/17 | **LADOTD, SRTS/LRSP Task Order 2: McMillan Street Traffic Study, Monroe, LA \| *Pre-Professional.*** Rebecca's role on the project was to review and analyze traffic count data, distribute trips throughout the study area, evaluate crash data and analyze proposed improvement alternatives. |
| 05/21 – Ongoing | **MovEBR, Sherwood Forest Blvd MUP, C-P Project No. 20-EN-HC-0027, Baton Rouge, LA \| *Engineer.*** Gresham Smith was selected to perform a traffic study and design of the pedestrian signal accommodations and crosswalks along Sherwood Forest Boulevard between South Harrell's Ferry Road and Old Hammond Highway in support of the Sherwood Forest Boulevard Multi-Use Path design project. Design plans will be developed to add pedestrian signals to the existing traffic signals with the goal of upgrading existing intersections up to current ADA requirements for pedestrians. |
| 10/28 – Ongoing | **LADOTD, LCG Adaptive Traffic Signal System, Lafayette, LA \| *Traffic Engineer.*** Gresham Smith was selected to develop an Adaptive Traffic Signal network for the Lafayette Consolidated Government, which involved upgrading 190 traffic signal controllers. In addition, 78 traffic signals will be upgraded to become adaptive traffic signals. This will be the largest adaptive traffic signal system installed within the state of Louisiana. This project includes field inspection of 190 traffic signals, design plans for 78 adaptive signals, implementation of a new EVP system, integration support, and before travel studies. Rebecca is responsible for coordinating field data collection, travel time studies and developing design of traffic signals. |
| 05/17 – 03/19 | **LADOTD, I-210 at LA 1138-2 (Nelson Road) Interchange Modification Re-Evaluation Study, Lake Charles, LA \| *Pre-Professional.*** Gresham Smith was selected to develop a calibrated VISSIM model to model existing conditions and the future proposed diverging diamond interchange at I-210 at Nelson Road in order to evaluate the proposed interchange design. Rebecca was responsible for overseeing data collection, participated on the RSA team, conducting safety analysis, development of VISSIM models, development of alternatives and development of the report. |

**16. Staff Experience:**

**Gresham Smith**

## Payton Nickles

Traffic Designer

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|---|---|
| **Years of experience with this employer** | 2 |
| **Years of experience with other employer(s)** | 0 |

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|---|---|---|---|
| **Degree(s) / Years / Specialization** | Bachelor of Civil Engineering / 2021 / Civil Engineering, Louisiana State University | | |
| **Active registration number / state / expiration date** | N/A | | |
| **Year registered** | N/A | **Discipline** | Civil |
| **Contract role(s) / brief description of responsibilities** | Traffic Designer / Payton will support all traffic related services. | | |

| 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).** |
|---|---|
| 03/21 – Ongoing | **LADOTD, Complex Bridge Inspections Task Orders 3, 4, and 5 Statewide, LA \| *Professional*.** Payton assisted in the development of the traffic control plans for various bridge inspection projects. The traffic control plans included single lane closures with alternating traffic with flaggers for projects in urbanized areas. Projects included the Charenton Truss Swing Bridge in St. Mary's Parish and the Jeanerette Truss Swing Bridge in Iberia Parish. Peyton worked closely with the bridge inspection team to develop the parameters for the lane closures to ensure that adequate protection was provided to the field inspection team while meeting requirements from LA DOTD's traffic control standards. |
| 03/21 – 04/21 | **Edinburg Regional Medical Center, Traffic Impact Analysis, Edinburg, TX \| *Professional*.** Payton assisted in the development of the traffic impact letter by performing analysis and preparing figures to support the traffic impact analysis for roadway expansion associated with the buildout of a regional medical center. Payton worked under the supervision of the lead traffic engineer to develop roadway capacity analysis and documentation of existing conditions to support the proposed roadway build outs. |
| 06/21 – Ongoing | **LADOTD, Present LADOTD, LRSP Task Order #1: Vernon and Sabine Signing & Striping, LA \| *Professional.*** This project includes preliminary and final design for proposed signing and striping improvements throughout several routes within Sabine and Vernon Parish. Payton is responsible for preparing the line diagrams for each of the routes. She is also responsible for importing aerial images and developing intersection detail sheets. |
| 06/21 – Ongoing | **EBR DTD, MovEBR-Plank Road Corridor Enhancement, Baton Rouge, LA \| *Professional.*** This project is a design study along a portion of the Plank Road corridor between Dawson Drive and Harding Blvd. Payton's responsibilities include assisting the design engineer with the development of Typical Sections and Plan and Profile Sheets. She is also responsible for addressing general markups in MicroStation. |

**16. Staff Experience:**

**Gresham Smith**

## Kofi Ampofo-Twumasi, E.I.

Engineer Intern

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| **Years of experience with this employer** | 1 |
| **Years of experience with other employer(s)** | 0 |

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| **Degree(s) / Years / Specialization** | Master of Science / 2022 / Civil Engineering / University of Louisiana | | |
| **Active registration number / state / expiration date** | E.I. 0035386 / LA / 9/30/2023 | | |
| **Year registered** | 2022 | **Discipline** | Civil |
| **Contract role(s) / brief description of responsibilities** | Engineer Intern / Kofi will support the traffic and safety related tasks. | | |

| 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 specified in the applicable MPR(s). |
|---|---|
| 08/01 – Ongoing | **LADOTD, LRSP TO #6 (LA-14: US 90 to Power Center Pkwy) Traffic Report, Lake Charles, LA \| *Engineer Intern*.** Gresham Smith is preparing and coordinating a traffic report to analyze no build and future conditions to identify possible pedestrian mitigation alternatives along LA 14 from US 90 (Fruge Street) to Power Centre Pkwy. This traffic report is being prepared in conjunction with the DOTD Engineering Directives and Standards Manual (EDSM). |
| 11/22 – Ongoing | **MovEBR, Airline Hwy, North (Florida Blvd - Interstate I-110)(HUVAL) \| *Engineer Intern*.** Gresham Smith is preparing a traffic study which includes US 61 (Airline Highway) from the Interstate-110 interchange to the Florida Boulevard interchange. The traffic study is evaluating the widening of US 61 from 2-lanes to 3-lanes in each direction in addition to other capacity, safety, and access management improvements that aim to maximize project benefits. |
| 10/20 – Ongoing | **Ascension Parish, TO #2-LA 621 Realignment Mitigation, Gonzales, LA \| *Engineer Intern*.** Gresham Smith is preparing and coordinating a traffic study to analyze existing and future conditions along LA 73 from the I-10 westbound terminal to near Norris Trail and LA 621 corridor from LA 73 to east of L Landy Rd to ensure that the mitigation of the realignment of LA 621 will cause no adverse effects to the study area. |
| 04/22 – Ongoing | **MovEBR, Contract for Signal Rebuild Phase 2, Group 2 Design Services Parish Synchronization & Communication, Baton Rouge, LA \| *Engineer Intern*.** Gresham Smith is providing services through a Master Contract: 43075.00 LADOTD-Retainer-ITS CE&I Services-Statewide (Contract 44-11253, T.O. #011513) to Implement the Fiber Optic Mapping & Management system in Lake Charles, New Orleans and Monroe. Our team is providing management throughout the duration of the project for all tasks. |

**16. Staff Experience:**

**Michael Baker International**

## Daniel Thornhill, P.E.

Office Executive

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| **Years of experience with this firm/employer** | 2 |
| **Years of experience with other firm(s)/employer(s)** | 22 |

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|---|---|---|---|
| **Degree(s) / Years / Specialization** | BS / 1997 / Civil Engineering, Louisiana State University | | |
| **Active registration number / state / expiration date** | P.E.0032367 / LA / 9/30/2024<br>P.E.25136 / AL / 12/31/2023 | | |
| **Year registered** | 2006 \| 2002 | **Discipline** | P.E./Civil |
| **Contract role(s) / brief description of responsibilities** | Daniel will serve as Michael Baker Project Manager for all efforts for roadway/hydraulics/bridge design. | | |

| 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).** |
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| 11/21 – Ongoing | **US 371: KCS RR Overpasses HBI, Webster Parish, Louisiana \| *Principal/Project Manager*.** Responsible for the design and development of construction plans for the replacement of 3 bridges at two locations along US 371. First location is the replacement of a 3 span bridge over KCS Railroad in Sibley, LA. Project entails the development of new bridge alignment following DOTD and KCS Railroad requirements along with modifications of the existing road to accommodate the new bridge vertical alignment. Additional site requirements include developing a detour road/bridge alignment to construct the new bridge under traffic along with reconstruction of LA 164/US 371 intersection. Second location is the replacement of parallel bridges along US 371 at the Minden/I-20 interchange. Bridges will be replaced in phase construction to maintain traffic. Two new 3-span bridges will be construction over KCS railroad meeting all the required DOTD and KCS design requirements as required at the Sibley bridge site. |
| 08/22 – 05/23 | **Barksdale AFB Entrance Roads, Bossier Parish, Louisiana \| *Transportation Design Lead*.** Responsible for the development of construction plans for new entrance roads for Barksdale AFB. The project includes a new roundabout at the Air Force Base gates along with new 4-lane divided highway to tie into the new LA 1267 highway constructed by DOTD under the I-20/I-220 Design Build interchange improvements. Additional responsibilities include coordination with the DOTD I-20/I-220 Project Manager and Design Build Owner Verification Managers along with overseeing new roadway design that meets DOTD Design requirements. Plans were broken into two separate construction plans (Rough Grade and Final Design). The new roundabout is designed to be a multi-lane roundabout that accommodates the new LA 1267 spur of the I-20/220 interchange. |
| 04/22 – Ongoing | **LA 30: EBR PL – I-10, East Baton Rouge, Iberville, and Ascension Parishes, Louisiana \| *Principal/Project Manager*.** Responsible for the oversight of the Environmental Assessment (EA) of the widening of LA 30 from a 2-lane roadway to 4-lane roadway. Project is currently in Part 1 of the EA which main focus on traffic count/study/analysis along with some early environmental field screening, initial geometric improvements at existing 5 intersections, SUE services, and development of existing hydraulic flows for existing 6 bridge/culvert structures. Additional responsibilities include oversight of existing alignments along with existing right-of-way lines. Additional coordination required is with DOTD new Mississippi River Bridge Environmental on-going project. |
| 10/22 – Ongoing | **Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program – District 07 \| *Principal*.** Responsible for the oversight of the development of a Preliminary Bridge Matrix and Final Structure Recommendation for the off-system bridge program for five parishes in District 07 for Initial Services. Project is broken into Initial Phase and Final Design Phase. Matrix developments |

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| | were part of the initial phase that started in October 2022 and was finished and submitted in December 2022. District 07 was given $30.3 million dollars with allocations for each parish. Final Design Phase includes the design of both bridge replacement and roadway for 12 bridges in the five (5) parishes of District 07. Responsibilities for Final Design Phase include overseeing the design and development of construction plans along with the hydraulics/hydrology to determine bridge openings, final row taking lines, and assisting with bid documents. |
| 08/16 – 06/17 | **East Baton Rouge Department of Transportation and Drainage, W. Parker Blvd Intersection Improvement, East Baton Rouge Parish, Louisiana. East Baton Rouge Parish \| *Project Manager.*** Responsible for the addition of a left turn from W. Parker Blvd onto Burbank Dr. Project included the removal and replacement of existing sidewalks to adhere to ADA standard. Project tied to DOTD maintained LA 42 (Burbank Dr). Project included the addition of catch basins to capture the flow for the new turn lane, replacement of existing clay sub-surface drainage with reinforced concrete pipe, along with grading behind the curb to drain the neighboring properties. |
| 05/16 – 01/18 | **Ham Reid Road at Lake Street (LA 3092) Intersection Improvement Project for Calcasieu Parish Police Jury** \| ***Project Manager/Lead Design Engineer.*** Responsibilities included the development of construction plans for a new single lane roundabout at the intersection of Ham Reid Road and Lake Street (LA 3092). The new roundabout would be a 4-leg roundabout that would connect to Spanish Mission Trail roadway of Trails Subdivision with one of roundabout legs to provide seamless connectivity with Ham Reid Road to eliminate a possible Z-intersection configuration with only a 3-leg roundabout. Mr. Thornhill's responsibilities included coordination with both Calcasieu Parish Project Manager, LA DOTD District 7 Engineers, and LA DOTD Project Permit Specialist; development of geometric layouts both horizontally and vertically, development of right-of-way taking lines and coordination of right-of-way maps with surveyor, and hydraulic analysis for both subsurface and storm water flow. Project was being done as a permit project for Calcasieu Parish through LA DOTD District 7. |
| 03/14 – 08/15 | **I-12 Entrance Ramp at Millerville Road, East Baton Rouge Parish, Louisiana \| *Project Manager/Engineer*.** Responsible for the design and construction of a new westbound entrance ramp from Millerville Road to I-12. Project included widening of Millerville Road to accommodate new double left turn lanes at new intersection at new development. Project included developing construction plans to meet LADOTD and FHWA design guidelines and standards. Addition construction plan details involved development of traffic control plans for a lane shift of three (3) lanes along I-12 to provide protection for construction workers while the new entrance ramps were being constructed along with addition of new traffic signals and remove of an existing traffic signal. Project was issued a project permit through LADOTD District 61. |
| 08/12 – 01/18 | **Juban Road (LA 1026) Widening (I-12 to US 190), Livingston Parish, Louisiana \| *Project Manager/Lead Design Engineer.*** Responsible for the development of construction plans for the widening of Juban Road from a 2-lane roadway to a 4-lane boulevard from just north of the I-12 Interchange to US 190. Improvements included three (3) multi-lane roundabouts along Juban Road while including sidepaths on both sides of Juban Road to meet the LADOTD complete streets initiative. Access Management was a priority along this route therefore the median was reduced to 6' to 8' to discourage left turn movements and make all driveways right-in/right-out while utilizing the roundabouts for U-turn movements. The first roundabout was located at future driveway number 5 for the Juban Crossing Development. The second roundabout was located midway along project with addition of service roads to encourage Livingston Parish to extend during future development to reduce driveways along Juban Road. The third roundabout was located at the Juban Road at US 190 intersection. The roundabout would replace an existing signal that causes traffic congestion especially during peak afternoon traffic. Project included all necessary improvements along US 190 for the new roundabout and additional turn lane for the new Sanctuary Development |

**16. Staff Experience:**

**Michael Baker International**

## Alison Gonzalez, PE

Project Manager - Roadway

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| **Years of experience with this firm/employer** | 3 |
| **Years of experience with other firm(s)/employer(s)** | 15 |

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| **Degree(s) / Years / Specialization** | B.S. / 2007 / Civil Engineering / Georgia Institute of Technology | | |
| **Active registration number / state / expiration date** | P.E.0047215 / LA / Exp. 03/31/2025 | | |
| **Year registered** | 2022 | **Discipline** | Civil |
| **Contract role(s) / brief description of responsibilities** | Ms. Gonzalez will serve as a roadway engineer. | | |

| 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 specified in the applicable MPR(s). |
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| 05/23 - Ongoing | **US 371: KCS RR Overpasses HBI, Webster Parish, Louisiana \| *Project Engineer***. Responsible for the design and development of construction plans for the replacement of 3 bridges at two locations along US 371. First location is the replacement of a 3 span bridge over KCS Railroad in Sibley, LA. Project entails the development of new bridge alignment following DOTD and KCS Railroad requirements along with modifications of the existing road to accommodate the new bridge vertical alignment. Additional site requirements include developing a detour road/bridge alignment to construct the new bridge under traffic along with reconstruction of LA 164/US 371 intersection. Second location is the replacement of parallel bridges along US 371 at the Minden/I-20 interchange. Bridges will be replaced in phase construction to maintain traffic. Two new 3-span bridges will be construction over KCS railroad meeting all the required DOTD and KCS design requirements as required at the Sibley bridge site. |
| 05/23 - Ongoing | **LA 30: EBR PL – I-10, East Baton Rouge, Iberville, and Ascension Parishes, Louisiana** \| ***Project Engineer***. Responsible for the development of alternatives for the Environmental Assessment (EA) of the widening of LA 30 from a 2-lane roadway to 4-lane roadway. Project is currently in Part 1 of the EA which main focus on traffic count/study/analysis along with some early environmental field screening, initial geometric improvements at existing 5 intersections, SUE services, and development of existing hydraulic flows for existing 6 bridge/culvert structures. Additional responsibilities include development of existing alignments along with existing right-of-way lines. |
| 12/21 - Ongoing | **SR 25 @ Savannah & Middle River. Scott Bridge Company, Inc. \| *Lead Roadway Engineer***. Responsible for preparing all roadway submittals as required by the Design Build Agreement (DBA), including preliminary plans, final plans, release for construction (RFC) plans, and NPDES permitting plans. Michael Baker provided the Design-Build Services to replace two bridges along SR 25, one over the Savannah River (James P. Houlihan Bridge) and one over Middle River. Traffic will be maintained on the existing bridges while the proposed bridges are constructed parallel to the existing bridges. A Section 4(f) evaluation is required for impacts to historic resources and public recreational land, along with consultations with USFWS and NOAA fisheries due to the presence of federally protected aquatic species. |
| 04/20 - Ongoing | **Sea Island Road @ Dunbar Creek. Georgia Department of Transportation \| *Lead Roadway Engineer***. Responsible for concept design and report development, preliminary plans, right-of-way plans, and final plans for the replacement of an existing bridge located on CR 583/Sea Island Road over Dunbar Creek on St. Simons Island. The proposed bridge will be raised one foot to meet the 100-year flood elevation. An onsite detour will be utilized by constructing a temporary bridge to the north of the |

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| | existing bridge where traffic will be routed during construction. The roadway approaches were reconstructed to provide two 12-foot lanes with 8-foot rural shoulders. |
| 01/18 - Ongoing | **I-16/I-95 General Engineering Consultant Services, Savannah, Georgia. Georgia Department of Transportation | *Subject Matter Expert***. Responsible for reviewing roadway plans and design calculations to ensure that the design is in compliance with the Design-Build Agreement (DBA). Michael Baker is providing owner's representative post-let general engineering consultant services on the I-16 at I-95 interchange improvements and I-16 widening, as part of GDOT's MMIP program. Services include final design review, submittal review, and owner's verification of design-builder-provided construction engineering and inspection services. |
| 09/17 – 04/23 | **Bridge Bundle - SR 10 Loop EB & WB at Middle Oconee River (PI#0013715), SR 82 at Middle Oconee River (PI#0013819), Clarke and Barrow Counties, Georgia. Georgia Department of Transportation (GDOT) | *Assistant Project Manager*** for this 0.10-mile long bridge replacement project on the northwest side of the heavily travelled SR 10 loop. This bridge replacement project is a 4-lane divided rural freeway around the city of Athens, GA to replace the existing 288-foot long, twin steel beam bridges, with a 3-span 350-foot long PSC beam bridge over the river. Staged construction will be utilized by first building a portion of the new bridge in the median area while traffic is maintained on the existing bridges. SR 82 is a 0.30-mile long 2-lane rural bridge replacement project that will replace the existing 4-span 250-foot long steel beam bridge with a 270-foot long, 3-span PSC beam bridge on a curved roadway alignment over the river. ABC techniques and an off-site detour will be utilized by closing the roadway to minimize the construction schedule and disruption to the public. M&N is responsible for overall project management, concept design, public involvement, environmental, preliminary plans, right-of-way plans, final construction plans including full bridge design and bridge hydraulic studies on this bundle. |
| 06/16 - Ongoing | **Quacco Road Widening, Chatham County, Georgia. Chatham County | *Design engineer*** for the proposed Quacco Road Improvements project. The project includes roadway widening and operational improvements to intersections, drainage features, and pedestrian facilities along a 2.6-mile-long segment of this corridor beginning just east of the existing bridge over I-95 and terminating at the existing signalized intersection with US 17. In addition, ADA compliant sidewalks and a 10’ shared use path will contribute to the connectivity for the existing commuter bus route of Chatham Area Transit (CAT). The project deliverables will include completion of concept design, preliminary plans, stormwater management, right-of-way plans and final plans. |
| 05/14 – 04/19 | **Operational, Safety and Pedestrian Improvements along Maxham Road, Douglas County, Georgia. Douglas County | *Lead engineer*** for the construction of operational, safety and pedestrian improvements along Maxham Road from SR 6/Thornton Road to Tree Terrace Parkway. This project includes 0.5 miles of roadway improvement, stormwater management facilities, and sidewalks. The project deliverables include concept, preliminary and final construction plans, right of way plans and NPDES permitting. |
| 11/01 – 10/15 | **SR25CO/Bay Street Widening, Chatham County, Georgia. Chatham County | *Design engineer*** for the widening of 1.3 miles of an existing sub-standard four-lane facility to a four-lane section with raised median and urban shoulders. A high volume of pedestrian traffic and potentially historic properties along the project corridor complicates the project. One of the major purposes of this project was to improve pedestrian safety by providing accessible pedestrian facilities with connections to adjacent businesses, neighborhoods, parks, and bus facilities. The completed project will provide a safe and aesthetically pleasing gateway to Savannah from the west. The project deliverables include concept development and approval, preliminary and final construction plans, right of way plans and NPDES permitting. |

**16. Staff Experience:**

**Michael Baker International**

## Brandon Pitre, P.E.

Transportation Engineer

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| **Years of experience with this firm/employer** | 3 |
| **Years of experience with other firm(s)/employer(s)** | 7 |

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| **Degree(s) / Years / Specialization** | MS / 2012 / Civil Engineering / Texas A & M University<br>BS / 2010 / Civil Engineering / Louisiana State University | | |
| **Active registration number / state / expiration date** | P.E.0040975 / LA / 3/31/2025 | | |
| **Year registered** | 2016 | **Discipline** | Civil |
| **Contract role(s) / brief description of responsibilities** | Brandon will serve as roadway design engineer | | |

| 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 – Ongoing | **US 371: KCS RR Overpasses HBI, Webster Parish, Louisiana. LADOTD \| *Transportation Engineer/Project Manager*.** Brandon is the project manager of the project while also serving as the roadway design lead for the project who will oversee the delivery of the Preliminary and Final roadway and bridge design plans. The project consists of the design and replacement of three bridges which cross over a KCS railroad line at two different locations in Webster Parish (Sibley and Minden). The new bridges will be concrete girder-type and includes widening the two existing bridges in Minden to accommodate an additional travel lane for each bridge. A detour bridge will also be included for the Sibley location. Strict adherence to the KCS railroad design guidelines as well as adequate coordination with KCS will have to be maintained during all phases of design. |
| 08/22 – 05/23 | **Barksdale AFB Entrance Road and Gate Complex, Design-Build, Bossier Parish, Louisiana \| *Transportation Engineer*.** Brandon is responsible for the roadway design and construction plan development of this project. The project consists of the design and construction of an extension of an existing state-owned highway, LA 1267, along with a new multi-lane roundabout. The new roadway will be a 4-lane divided highway entrance into the Barksdale AFB. Brandon is mainly responsible for the development of the 3D roadway design model for the project as well as overseeing the delivery of the construction plans and obtaining the required project permit for the construction of the new roadway. |
| 04/22 – Ongoing | **LA 30: EBR P/L – I-10, Iberville and Ascension Parishes, Louisiana. LADOTD \| *Transportation Engineer/Project Manager.*** Brandon is the project manager of the project while also serving as the lead roadway design engineer for the project. The project is an environmental assessment (EA) which consists of widening approximately 14 miles of LA 30 from two lanes to at least four lanes. Brandon is responsible for generating the line-and-grade diagrams to evaluate the reasonable alternatives based on the traffic analysis and recommended improvements to the major intersections along the project limits. |
| 10/22 – Ongoing | **Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program – District 07 \| *Project Manager.*** Responsible for the development of Preliminary Bridge Matrix and Final Structure Recommendation Matrix for the off-system bridge program for five parishes in District 07. Project is broken into Initial Phase and Final Design Phase. Matrix developments were part of the initial phase that started in October 2022 and was finished and submitted in December 2022. District 07 was given $30.3 million dollars with allocations for each parish. Project is currently in the Final Design Phase for replacement of 12 bridges. Final Design Phase responsibilities include design of the roadway horizontal and vertical alignments along with setting final taking lines for any additional row along with the development of construction plans and coordination of any utility relocations. |

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| 08/19 – 12/19 | **Alphonse Forbes Road Bridge Replacement, Central, Louisiana. East Baton Rouge Parish, Louisiana \| *Transportation Engineer.*** Brandon assisted on this project by collecting relevant design data, as-built drawings, and similar go-by project drawings and documents. He was responsible for compiling preliminary hydraulics study reports, assembling roadway design standards, performing QC/QA reviews of roadway drawings and other project deliverables, and generating a preliminary construction cost estimate. |
| 06/18 – 12/19 | **US 90 Ramps at LA 88 Roundabouts, New Iberia, Louisiana / Highway Safety Design Retainer, LADOTD \| *Lead Roadway Designer***. Brandon served as lead Roadway Design Engineer for this project whose scope consisted of converting the eastbound and westbound U.S. 90 ramp terminals into two multi-lane roundabouts, along with making improvements to the existing drainage network (sub-surface and open ditch) to increase hydraulic capacity. Since the local project representatives expressed concerns for design solutions aimed at reducing flooding during intense rain events, many of the existing cross drains, side drains, and existing roadside ditches needed to be upsized. Other safety measures were implemented in this project by the following measures: safety end treatments on culvert ends adjacent to LA 88, guard rail improvements based on the latest DOTD design standards, flexible traffic delineators separating lanes of opposing traffic flow, and two U-turns (bulb-outs) added along LA 88 on each side of U.S. 90. Responsible for roadway design and construction plan production, completing the 100% Preliminary Plans based on comments from the client at the Plan-In-Hand meeting. This involved resolution of all the client's comments from the 100% Preliminary Plans submittal which involved items such as: modifying the typical pavement sections and details, adjusting the roadside ditch geometry, revising the construction sequencing layout, modifying the drainage design, and creating the permanent signing and pavement marking layout sheets. Responsible for developing and delivering the 100% Final Plans as the Engineer of Record which involved determining the required quantities of the required construction items and developing the accompanying construction cost estimate. Other work for this project included creating the existing and proposed drainage maps, hydraulics calculations utilizing DOTD's HYDRWIN program and preparation of the hydraulics report. |
| 12/17 – 07/18 | **U.S. 190B at Jefferson Avenue Roundabout Design for Highway Safety Design Retainer, Covington, Louisiana. LADOTD \| *Roadway Design Engineer.*** Responsible for design and construction plan production for this project, whose scope consisted of converting a four-way intersection into a single-lane roundabout in downtown Covington in an area of narrow right-of-way limits. Responsible for completing 100% Preliminary Plans based on comments from the client (DOTD) at the Plan-In-Hand meeting. This involved making several changes to the plans such as: revisions to the typical pavement section and details, plan and profile sheets, and construction sequencing sheets. Responsible for developing the 60% Final Plans which involved resolution of all the client's comments from the 100% Preliminary Plan submittal, determining the required construction items, and developing the accompanying construction cost estimate. Other work included hydraulics calculations utilizing DOTD's HYDRWIN drainage program and preparation of the hydraulics report. During the 60% Final Plans development stage, this project was halted by DOTD based on the significant real estate cost for acquisition of an adjacent property (gas station on intersection corner). |
| 11/15 – 06/17 | **Francis Road Extension, Covington, Louisiana. St. Tammany Parish Government \| *Transportation Engineer***. Assisted in design and construction plan production of a two-lane asphalt roadway extension project to better serve local community by providing better connectivity between the local subdivisions and a recreational facility. Responsible for conducting drainage analysis to compare pre- and post-development drainage design and to determine required culvert sizing for new, required cross drain, as well as nearby roadside drainage structures. Brandon's other responsibilities included assembling construction plans for the client, which highlighted the different roadway alignment alternatives. These options were presented to give the client an idea of what the impact financially and logistically would be. |
| 10/16 – 01/17 | **I-12 Widening, LA 21 to US 190, Covington, Louisiana. Louisiana Department of Transportation \|*Transportation Engineer***. Created typical section sheets for an interstate widening project. Performed hydraulic analysis to check adequacy of existing cross drains and created existing and design drainage maps. |

**16. Staff Experience:**

**Michael Baker International**

## Alexis Harrouch, E.I.

Engineer Intern

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| **Years of experience with this firm/employer** | <1 |
| **Years of experience with other firm(s)/employer(s)** | 1.5 |

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| **Degree(s) / Years / Specialization** | BS / 2020 / Civil Engineering | | |
| **Active registration number / state / expiration date** | E.I.0034742 / LA / 09/30/2023 | | |
| **Year registered** | 2021 | **Discipline** | Civil |
| **Contract role(s) / brief description of responsibilities** | Alexis will provide design support for roadway design and plans development. | | |

| 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 specified in the applicable MPR(s). |
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| 10/22 – Ongoing | **Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program – District 07 \| *Engineer Intern*.** Responsible for the research through existing bridge inspection reports for 62 bridges in poor condition and 11 bridges in fair condition through the DOTD Assets Management Portal System. Additional responsibilities included coordination with our GIS team to develop maps of the locations of each bridge along with adding attributes for each bridge such required right-of-way, utility relocation, and other environmental constraints. Contributed to the development of the Preliminary Screening Matrix and Final Structure Recommendation list. Project is currently in Final Design Phase where her responsibilities include in assisting with design of roadway horizontal and final alignments. Additional responsibilities include development of construction plans to meet DOTD digital plan submittals. |
| 10/22 – 05/23 | **Barksdale AFB Entrance Road and Gate Complex, Design-Build, Bossier Parish, Louisiana \| *Transportation/Roadway Designer.*** Responsible for the quantity takeoff and development of construction plans for contractor on a design-build project for new entrance roads for Barksdale AFB. The project consists of the design and construction of an extension of an existing state-owned highway, LA 1267, along with a new multi-lane roundabout. The new roadway will be a 4-lane divided highway entrance into the Barksdale AFB. Additional responsibilities include the development of Temporary Traffic Control Plans along with development of typical sections and roadway cross sections. |
| 10/22 – Ongoing | **US 371: KCS RR Overpasses HBI, Webster Parish, Louisiana. LADOTD \| *Transportation/Roadway Designer*.** Responsible for the horizontal layout of detour road/bridge for the replacement of the existing bridge at Sibley, LA. Additional responsibilities include the develop of construction plans that meet DOTD & KCS RR requirements along with development of the 3D design surface models both for the main roadway improvements & detour road improvements to determine quantities. |
| 08/21 – 08/22 | **Perkins Road, East Baton Rouge Parish, Louisiana. East Baton Rouge Parish \| *Engineer Intern.*** Responsible for the design of a section of roadway drainage. Additional responsibilities included the takeoff of project quantities along with participating in the development of geometry design for the project as well as the development of a striping layout. |
| 01/21 – 09/22 | **I-49 Connector, Lafayette, Louisiana. Lafayette Parish \| *Engineer Intern*.** Responsible for the development of preliminary typical sections, cross sections and roadway models through the use of Microstation and Inroads Select Series 2. Developed vehicle turning move layouts with the use of Transoft AutoTurn along with participating in the development of geometry design for the project. Additional responsibilities included roundabout design in the core area along with the required tapers per LADOTD Standards. |

**16. Staff Experience:**

**Michael Baker International**

## Lloyd R. “Eric” Erikson, P.E.

Drainage Lead

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| **Years of experience with this firm/employer** | <1 |
| **Years of experience with other firm(s)/employer(s)** | 23 |

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| **Degree(s) / Years / Specialization** | MS / 2003 / Engineering and Technology Management/ Louisiana Tech University, Ruston, LA<br>BS / 1999 / Civil Engineering / Louisiana Tech University, Ruston, LA | | |
| **Active registration number / state / expiration date** | P.E. 31061 / LA / 3/31/2024 \| P.E.0019275 / MS / 12/31/2023 | | |
| **Year registered** | 2004/2009 | **Discipline** | Civil |
| **Contract role(s) / brief description of responsibilities** | Eric serves as the IIJA Bridges and Hydraulics lead. | | |

| 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 specified in the applicable MPR(s).** |
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| 01/23 – Ongoing | **Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program – District 07 \| *Hydraulic Engineer Supervisor*.** Responsible for the hydraulics/hydrology analysis for the replacement of 12 bridges. Additional responsibilities is to make sure the hydraulics design team is using the DOTD hydraulics manual in combination of the HYDRWIN Drainage software and HEC-RAS to make sure a no-rise condition is created with the new bridge opening. Hydraulic team will use HEC-RAS to determine the existing drainage conditions based on a combination of topo surveys and Lidar and develop the new bridge openings and determine the required length of bridges. He will coordinate with the road and design team for the incorporation of Drainage Basin maps and Hydraulic Table data. relocation, and other environmental constraints. Contributed to the development of the Preliminary Screening Matrix and Final Structure Recommendation list. Project is currently in Final Design Phase & his responsibilities include in assisting with design. |
| 01/20 – 12/22 | **South Choctaw Widening, Baton Rouge, Louisiana, City/Parish of East Baton Rouge DPW \| *QA/QC.*** Responsibilities included oversight of entire construction plan set including geometric design and drainage design. Reviewed LADOTD HYDRWINT input and output files to make sure the design team was following DOTD Hydraulics Manual and design requirements. Also, responsible for assisting designer in addressing drainage comments from municipality. |
| 01/17 – 12/18 | **Port Cameron Access Road and By-Pass Road, Cameron Parish, Louisiana. Port Cameron LLC \| *Project Manager Engineer.*** Responsibilities included oversight of entire construction plan set including geometric design and drainage design. Reviewed LADOTD HYDRWINT input and output files. |
| 01/08 – 12/18 | **Sugar Mill Plantation Master Drainage Plan, Addis, Louisiana. Town of Addis/Private Developer \| *Project Manager.*** Responsibilities included supervising the analysis of a proposed major subdivisions (>1000 acres) effects on the local watershed. Performed modeling of local canals and outfalls utilizing HEC-RAS and LADOTD HYDRWINT software packages. Drainage models were updated as filings of the subdivision were built out. |
| 01/17 – 12/17 | **Scour Analysis for Perkins / Picardy Connector Bridges, Baton Rouge, Louisiana. City/Parish of East Baton Rouge DPW \| *Hydraulic Engineer.*** Responsibilities included hydraulic modeling and scour analysis of two separate proposed bridges in order to provide recommendations for pile lengths. |

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| 08/18 – 11/18 | **Anselm Coulee Analysis, City of Lafayette/Private Developer \| *Hydraulic Engineer.*** Responsibilities included performing the analysis of a proposed major apartment complex adjacent to the Anselm Coulee to determine effects on the local watershed. Performed modeling of local canals and outfalls utilizing HEC-RAS and LADOTD HYDRWINT software packages. |
| 2004 | **Bundick Lake Emergency Action Plan, Deridder, Louisiana. LADOTD Dam Safety \| *Hydraulic Engineer.*** Responsibilities included the hydraulic modeling of the Bundick Lake downstream watershed in HEC-RAS and DAMBRK in order to determine floodway channel affects / widths during a catastrophic event. |
| 2003 | **Bayou D'Arbonne Lake Downstream Impact Study, Union Parish, Louisiana, \| *Hydraulic Engineer.*** Responsibilities included the hydraulic modeling to determine floodway inundation areas for several release scenarios for Bayou D'Arbonne Lake. Mr. Erikson's role included leading the modeling efforts of a network of downstream channels as well as the production and mapping of the inundation areas. Mr. Erikson also coordinated the surveying effort required for proper modeling of all downstream channels. |

**16. Staff Experience:**

**Michael Baker International**

## Lei Wang, Ph.D., P.E., P.M.P., C.F.M.

Project Manager

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| **Years of experience with this firm/employer** | 17 |
| **Years of experience with other firm(s)/employer(s)** | 0 |

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| **Degree(s) / Years / Specialization** | PhD / 2001 / Civil Engineering, University of Missouri at Columbia<br>MS / 1989 / Environmental Engineering / Tsinghua University, China<br>BS / 1987 / Environmental Engineering / Tsinghua University, China | | |
| **Active registration number / state / expiration date** | P.E.0016165 / MS / 12/31/2023 \| P.E. 90005 / FL / 2/28/2025 | | |
| **Year registered** | 2004/2020 | **Discipline** | Environmental / Civil |
| **Contract role(s) / brief description of responsibilities** | Lei will serve as hydraulics/hydrology engineer for the development of hydraulics model for bridge crossings. | | |

| 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).** |
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| 11/21 – Ongoing | **S.R. 5 U.S. 1 NB Bridge Replacement over Turnbull Creek, Volusia County, Florida, Florida Department of Transportation \| *Hydraulic Engineer.*** Responsibilities included conducting hydrological and hydraulic analysis and hydraulic model. Also responsible for evaluating the scour of the bridge. |
| 10/21 – 1/22 | **Baldwin County Six Sites Mitigation Study, Baldwin County, Alabama. Baldwin County Commission (AL) \| *Hydraulic Engineer.*** Responsibilities included hydrological and hydraulic studies for six sites hydraulic structure replacement, processing lidar data, generating the hydraulic models, and writing the final hydraulic reports. |
| 09/19 – 11/20 | **Helena Drainage Improvements, Jackson, Mississippi. Jackson County Board of Supervisors \| *Hydraulic Engineer.*** Responsibilities included hydraulic SRH-2D modeling to simulate the flooding condition and drainage improvement design. MBI is providing Engineering and Related Services for Black Creek watershed drainage improvements and flood reduction study for Helena, MS. |
| 04/18 – 11/18 | **Scour Analysis for Maydell Replacement Bridge, Tampa, Florida. Florida Department of Transportation \| *Hydraulic Engineer.*** Responsibilities included hydraulic modeling and scour analysis. MBI is providing engineering services for replacing the existing 616-foot-long Maydell Drive Bridge over Palm River in Tampa, Florida with a bridge of similar length on the current horizontal alignment, while maintaining the existing vertical clearance and providing the minimum required horizontal clearance at the navigational channel. |
| 08/18 – 11/18 | **Appalachian Corridor V Bridge Project, Mississippi Department of Transportation \| *Hydraulic Engineer.*** Responsibilities included hydraulic modeling and scour analysis. MBI provided design and engineering services for bridge hydraulics, conceptual and final bridge construction plans, and construction engineering services for four twin hydraulic bridge crossings on the Appalachian Corridor "V" new alignment (S.R. 76) from Fairview to S.R. 23. |
| 01/17 – 03/18 | **U.S. Highway 49 Improvements between Florence and the Scales Area, Rankin County, Mississippi. Mississippi Department of Transportation \| *Civil Engineer.*** Responsibilities included roadway drainage and storm water inlet design as well as a No-Rise hydraulic study for three roadway crossings. MBI provided engineering services for roadway and bridge construction on U.S. 49 between Florence and the Scale Area just south of I-20 in Rankin County. |

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| 6/15 – 4/21 | **U.S. 51 Bridge Replacements, Madison County, Mississippi, Mississippi Department of Transportation \| *Hydraulic Engineer.*** Responsibilities included project management, hydraulic 1D and 2D model analyses, and conceptual, preliminary, and final submittals of project reports. MBI provided engineering services for the replacement of five U.S. 51 bridges over Tilda Bogue Creek, Tilda Bogue Tributary 8, and Doaks Creek. MBI's services included bridge hydraulic one-and two-dimensional model analyses, scour analysis and evaluation, bridge scour and stream bank stabilization design, conceptual and preliminary structural design, and final right-of way plans. |
| 6/15 – 6/18 | **S.R. 3 Bridge over Coldwater River Replacement, Tate and Tunica Counties, Mississippi, Mississippi Department of Transportation \| *Hydraulic Engineer.*** Responsibilities included project management, hydraulic 1D and 2D analysis, and conceptual, preliminary, and final submittals of project reports. MBI provided engineering services for the replacement of the bridge carrying S.R. 3 over Coldwater River. Michael Baker's services included bridge hydraulic one- and two-dimensional model analyses, scour analysis and evaluation, bridge scour and stream bank stabilization design, conceptual and preliminary structural design, and preparation of right-of-way plans. |
| 9/13 – 12/16 | **S.R. 3 Bridge Hydraulic Design, Tate County, Mississippi, Mississippi Department of Transportation \| *Hydraulic Engineer.*** Responsibilities included project management, hydraulic model analysis, and preliminary and final submittals of project reports. MBI provided engineering services for the replacement of the S.R. 3 bridges over Strayhorn Creek and Arkabutla Creek. MBI's services included bridge hydraulic analyses, scour analysis and evaluation, bridge scour and stream bank stabilization design, and conceptual and preliminary structural design. |
| 5/13 – 6/14 | **S.R. 57 Bridge over Bayou Castelle, Jackson County, Mississippi, Mississippi Department of Transportation \| *Hydraulic Engineer.*** Responsibilities included project management, hydraulic model analysis, and preliminary and final submittals of project reports. MBI provided engineering services for the replacement of the S.R. 57 concrete pipe culverts over Bayou Castelle. MBI's services included a bridge site break-line survey, bridge hydraulic analysis, and preliminary design |
| 11/05 – 7/11 | **FEMA Flood Insurance Map Revision and digital flood insurance rate map (DFIRM) C2D1 engineering review \| *Hydraulic Engineer.*** Responsibilities included reviewing the hydrological models (TR20, TR55, HEC-HMS, etc.) and checking the drainage map; and reviewing the hydraulic models including HEC-2, HEC-RAS, ICPR and FLO-2D. |

**16. Staff Experience:**

**Michael Baker International**

## Philip Walker, P.E.

Regional Practice Lead - Bridge

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| **Years of experience with this firm/employer** | 4 |
| **Years of experience with other firm(s)/employer(s)** | 27 |

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| **Degree(s) / Years / Specialization** | MSCE / 1991 / Structural Engineering / Georgia Institute of Technology<br>BSCE / 1990 / Structural Engineering / Tennessee Technological University | | |
| **Active registration number / state / expiration date** | P.E.0046394 / LA / 9/30/2024 | | |
| **Year registered** | 2002 | **Discipline** | Civil |
| **Contract role(s) / brief description of responsibilities** | Philip will serve as bridge design advisor and QA/QC role. | | |

| 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). |
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| 10/21 – Ongoing | **SR 28 Bridge over the Strong River, Simpson County, Mississippi. Mississippi Department of Transportation | *Technical Advisor.*** Philip is providing suggestions and guidance to the team while guiding responses to client comments for the design of a three span post-tensioned spliced precast concrete beam bridge across the Strong River. |
| 12/14 – 01/15 | **Harrisburg Overpass, Houston METRO East Corridor Project, Houston, Texas. Houston METRO | *QAQC Review*.** Philip provided QC Review of the 885-foot-long bridge carrying both two tracks of light rail and two lanes of highway traffic. He reviewed both calculations and each plan phase submittal. Project consisted of multiple spans of precast concrete girders made continuous for live load with a substructure containing multiple reinforced concrete straddle bents supported on drilled shafts. Direct fixation was used to connect rails to raised plinths to superstructure deck. |
| 03/09 – 04/14 | **Mid-Bay Bridge Authority General Engineering Contract – Phase 2 and Phase 3, Okaloosa County, Florida. Mid-Bay Bridge Authority | *Structural Project Manager.*** Philip was the Structural Project Manager and Engineer of Record responsible for all structures along the 8 mile corridor. Project includes three grade separation structures and five waterway crossings. Project highlights included minimization of wetlands impacts, prohibition on stream construction to protect endangered species, use of hybrid girders and weathering steel, and use of work trestles at various locations. Project also includes an overhead gantry to facilitate tolling along with other standard overhead sign structures. |
| 02/07 – 05/09 | **HBT Bridge over HBT Railroad - Houston METRO North Corridor Project, Houston, Texas. Houston METRO | *QC Reviewer.*** Mr. Walker was the QC reviewer for structural details along the 1722' viaduct supporting twin light rail tracks. The bridge consisted of fifteen spans of precast Texas U-beam superstructure and a central 426' unit consisting of a 3 span structure consisting of parallel steel box girders. Mr. Walker was the Engineer of Record for a Rolling Stock Analysis of a three-span continuous steel box girder superstructure supporting two parallel light rail tracks. The special study was conducted to verify the appropriateness of live load impact factors used. The work consisted of conducting a time history analysis of vehicles traveling across the structure using the modal superposition technique. |
| 11/08 – 09/13 | **Main Street Bridge over White Oak Bayou – Houston METRO North Corridor Project, Houston, Texas. Houston METRO | *Engineer of Record***. Philip was the Engineer of Record for design of strengthening and reconstruction of the historic structure for purpose of carrying light rail tracks. Historic requirements and permit limitations dictated use of an atypical structural system consisting of reinforced concrete T-beams spanning up to 80 feet for the 420-foot-long bridge. Bridge deck |

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| | and track profile was required to match the existing bridge grade which transitioned 20 feet vertically from the north bank of the waterway up to a track station platform at the third floor of the University of Houston campus building. |
| 06/15 – 12/11 | **Mid-Bay Bridge Authority General Engineering Contract – Phase 1, Okaloosa County, Florida. Mid-Bay Bridge Authority | *Structural Project Manager***. Philip was the Structural Project Manager and Engineer of Record responsible for all structures along the 3.5-mile corridor. Project includes three bridge structures with various walls, sign structures, and mastarms. Bridge structures include two 245-foot simple span hybrid steel plate girder structures and a 95-foot simple span AASHTO Type IV girder structure. |
| 07/06 – 12/11 | **SR 559 over CSX Railroad, Polk County, Florida. Florida Department of Transportation District 1 | *Structural Project Manager***. Philip was the Structural Project Manager and Engineer of Record for the 422-foot AASHTO Type VI girder bridge. Adjacent storage tanks necessitated requirement of drilled shaft foundations at both intermediate piers and end bents to minimize construction vibrations. Project included wrap-around MSE walls and various cantilever sign structures. |
| 02/06 – 01/09 | **Leisey Road Extension Project, Hillsborough County, Florida. Newland Communities | *Structural Project Manager***. Mr. Walker served as the Structural Project Manager and Engineer of Record for all structures along the corridor. The project included a 160-ft. truss bridge carrying two lanes of traffic with sidewalks across CSX railroad tracks at the entrance to the housing development. The project's design reflected incorporation of the requirements of FDOT's Florida Greenbook. The structure's span length across the tracks satisfied FDOT's requirements for horizontal clearance when crash walls were not provided. The Pratt Truss utilizing weathering steel provided the aesthetic look of an "old railroad bridge" that was desired by the owner. The development's fees incorporated maintenance costs for stain removal from concrete surfaces due to use of weathering steel. |
| 03/05 – 02/13 | **SR 79 over Holmes Creek, Vernon, Florida. Florida Department of Transportation District 3 | *Structural Project Manager*.** Philip was the Structural Project Manager and Engineer of Record for the twin 1000-foot AASHTO Type IV girder bridges. He was responsible for all contract documents for the bridge, retaining walls (anchored sheet pile), and mastarm structures. The presence of artesian pressure and swampy conditions required the design of two foundation solutions – steel pipe piles and drilled shafts. He provided technical direction and supervision to a staff of three engineers and two technicians. |
| 12/98 – 03/00 | **US 17 Bridge Replacements, Duval County, Florida. Florida Department of Transportation District 2 | *Project Manager***. Philip was the Project Manager for construction assistance and shop drawing review for construction at seven sites along the corridor. Superstructure types consisted of box culverts, reinforced concrete flat slabs bridges, and bridges utilizing precast concrete AASHTO girders. Both drilled shafts and driven piling were used for deep foundations. |
| 01/96 – 04/96 | **US 1 Bridge Replacements, Duval County, Florida. Florida Department of Transportation District 2**. Assisted in the design of the AASHTO girder structures. HDR provided preliminary, final and post design services for the reconstruction of eight bridges and their roadway approaches located in northwest Florida. Descriptions for each of the bridges are as follows: (01/1996 to 04/1996)<br>• US 1 over Durbin Creek. The crossing consists of a pair of 159-foot long bridges. The multi-span superstructure utilized AASHTO Type II Girders. All bents were supported by precast concrete piling.<br>• US 1 over Moses Creek. The crossing consists of a pair of 150-foot long bridges. The multi-span superstructure utilized AASHTO Type II Girders. All bents were supported by precast concrete piling.<br>• US 1 over Moultrie Creek. The crossing consists of a pair of 210-foot long bridges. The multi-span superstructure was a reinforced concrete flat slab section.<br>• Racetrack Road over Durbin Creek. The bridge was a 376-foot long structure. The multi-span superstructure utilized AASHTO Type III Girders. All bents were supported by precast concrete piling.<br>• SR 207 over Cracker Branch. The bridge was a 171-foot long structure. The multi-span superstructure was a reinforced concrete flat slab section. |

**16. Staff Experience:**

**Michael Baker International**

## Jeffrey McRae, P.E.

Technical Manager - Bridge

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| **Years of experience with this firm/employer** | 24 |
| **Years of experience with other firm(s)/employer(s)** | 0 |

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| **Degree(s) / Years / Specialization** | BS / 1996 / Civil Engineering / Mississippi State University | | |
| **Active registration number / state / expiration date** | P.E.0034554 / LA / 9/30/2023 | | |
| **Year registered** | 2009 | **Discipline** | Civil |
| **Contract role(s) / brief description of responsibilities** | Jeffrey will serve as Bridge Design Lead. | | |

| 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).** |
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| 11/21 – Ongoing | **US 371: KCS RR Overpasses HBI, Webster Parish, Louisiana. LADOTD \| *Bridge Design Lead.*** Jeffrey is serving as the Bridge Design Lead for the replacement of 3 bridges along US 371 at 2 locations: Sibley, La and Minden, LA. His responsibilities include overseeing the bridge design calculations and development of bridge plans making sure they meet both DOTD and KCS Railroad Design Guidelines. Project does include the design of a detour structure (Acrow Bridge) for the bridge site at Sibley in order to keep US 371 open under traffic. |
| 08/21 – Ongoing | **SR 28 Quinn Creek and Strong River Bridge Replacements, Simpson County, Mississippi. Mississippi Department of Transportation \| *Project Manager.*** Responsibilities included overall project management, QA/QC of bridge design calculations, generation of final contract plans and reviewing of contractor submittals. Michael Baker provided design and engineering services for bridge hydraulics, conceptual and final bridge construction plans for two prestressed girder hydraulic bridge sites, including a 3-span spliced post-tension concrete girder span. |
| 06/20 – 12/21 | **SR 601 Middle-Canal Road, Harrison County, Mississippi. Mississippi Department of Transportation \| *Bridge Design Lead.*** Responsibilities included generation of engineering design calculations, bridge geometry, bridge quantities, and conceptual through final bridge design contract plans for three grade crossings and one hydraulic crossing. Michael Baker provided engineering services for Alternate No. 2 (with North Connector Road) for the development of contract plans for the middle section (approximately 3.0 Miles) of a four-lane divided highway on new alignment from US 90 to I-10. Four bridges are on the alignment. Michael Baker also provided aerial mapping and centerline alignment for the entire length of the highway from US 90 to I-10. |
| 11/19 – 12/21 | **US Highway 49 Flyover Bridge Rehab, Rankin County, Mississippi. Mississippi Department of Transportation \| *Project Manager.*** Responsibilities included overall project management, QA/QC of bridge design calculations, generation of final contract plans and reviewing of contractor submittals. Michael Baker provided design and engineering services for final contract plans for the replacement of the curved right-side railing (outside of curve) and overhang on the US 49 North to I-20 West flyover bridge (Bridge No. 30) in Rankin County, Mississippi. Michael Baker also developed traffic control plans, performed infrared and ground penetrating radar surveys of the existing bridge deck and prepared a special provision specification for a high friction overlay to be applied to the bridge deck. |

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| 09/19 – Ongoing | **SR 9 Bridge Replacements, Calhoun County, Mississippi. Mississippi Department of Transportation** \| ***Project Manager***. Responsibilities included overall project management, QA/QC of bridge design calculations, generation of final contract plans and reviewing of contractor submittals. Michael Baker provided engineering and design services for final bridge construction plans for three prestressed girder bridges and one curved steel girder bridge: Bridge No. 35.5 over Shutispear Creek, Bridge No. 40.7 over Yalobusha River Relief, Bridge No. 40.9 over Yalobusha River, and Bridge No. 41.2 over Yalobusha River Relief on SR 9. |
| 07/18 – 12/22 | **Appalachian Corridor "V", Itawamba County, Mississippi. Mississippi Department of Transportation \| *Project Manager.*** Responsibilities included overall project management, QA/QC of bridge design calculations, generation of final contract plans and reviewing of contractor submittals. Michael Baker provided design and engineering services for bridge hydraulics, conceptual and final bridge construction plans, and construction engineering services for four twin hydraulic bridge crossings on the Appalachian Corridor "V" alignment (SR 76) from Fairview to SR 23. |
| 07/12 – 12/22 | **US Highway 49 Improvements between Florence and the Scales Area, Rankin County, Mississippi. Mississippi Department of Transportation** \| ***Bridge Design Lead.*** Responsibilities included generating final construction bridge plans, geometric calculations, design calculations and reviewing of contractor submittals for three hydraulic bridge crossings and three box bridges. Michael Baker provided engineering services for roadway and bridge construction on U.S. 49 between Florence and the Scale Area just south of I-20. Michael Baker's services included the development of detailed design plans for bridges and roadway, including lighting, traffic control, signing, signalization, and intelligent transportation systems. |
| 04/11 – 10/14 | **SR 15 Ripley Bypass, Tippah County, Mississippi. Mississippi Department of Transportation** \| ***Project Manager.*** Responsibilities included project management duties and generation of engineering design calculations, bridge geometry, bridge quantities, and conceptual through final design contract plans. Michael Baker provided engineering services to upgrade S.R.15 to a four-lane limited-access highway to bypass the city of Ripley. The bypass included interchanges at several intersections from the Union County line to one mile north of S.R. 4 in Tippah County. Michael Baker's services included surveying, the design of eight prestressed concrete beam bridges that included three hydraulic crossings and five grade crossings, and the design of a retaining wall adjacent to a railroad. |
| 04/07 – 12/16 | **I-269 from East of I-55 to North of S.R. 305, DeSoto County, Mississippi. Mississippi Department of Transportation** \| ***Bridge Design Lead.*** Responsibilities included generation of engineering design calculations, bridge geometry, bridge quantities, conceptual through final design contract plans and reviewing of contractor submittals for seven bridges. Michael Baker provided engineering services for I-269 from east of I-55 to north of S.R. 305. Michael Baker's services included detailed mapping from aerial photography, field surveys, traffic analysis, the preparation of final right-of-way plans, and preparation of final construction plans. |
| 05/10 – 12/15 | **SR 607 Improvements from Texas Flat Road to I-59, Hancock and Pearl Counties, Mississippi. Mississippi Department of Transportation** \| ***Bridge Design Lead.*** Responsibilities included generation of engineering design calculations, bridge geometry, bridge quantities, conceptual through final design contract plans and reviewing of contractor submittals for three prestressed girder bridges. Michael Baker provided engineering services for the widening of S.R. 607 to four lanes from Texas Flat Road to I-59, including the replacement of bridges over Alligator Branch, Second Alligator Branch and Indian Camp Creek. Michael Baker's services included bridge hydraulic design, load and resistance factor design of the bridges, and the preparation of construction plans. |
| 04/07 – 03/10 | **Reunion Parkway over I-55 Interchange in Madison County, Mississippi. Madison County** \| ***Project Manager***. Responsibilities included project management duties and generation of engineering design calculations, bridge geometry, bridge quantities, and conceptual through final design contract plans for a curved steel box girder bridge. This project includes bridge and retaining wall design, as well as surveying for a Single Point Urban Interchange (SPUI) located at the intersection of I-55 and Reunion Parkway in Madison County, MS. |

**16. Staff Experience:**

**Michael Baker International**

## Shalin Sheth, P.E.

Bridge Engineer

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| **Years of experience with this firm/employer** | <1 |
| **Years of experience with other firm(s)/employer(s)** | 3 |

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| **Degree(s) / Years / Specialization** | MS / 2019 / Civil Engineering / University of Houston<br>BS / 2016 / S.V National Institute of Technology / Surat, India | | |
| **Active registration number / state / expiration date** | PE 146736 / TX / 9/30/2023<br>Currently waiting on required time to apply for Louisiana License | | |
| **Year registered** | 2022 | **Discipline** | Civil |
| **Contract role(s) / brief description of responsibilities** | Shalin will serve as bridge engineer working on the design of both the superstructure and substructure of bridges. | | |

| **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).** |
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| 09/22 – Ongoing | **US 371: KCS Railroad Overpasses HBI, Webster Parish, Louisiana. Louisiana Department of Transportation and Development** \| ***Project Engineer***. Responsibilities include computation of engineering design calculations, determining structural feasibility of bridge geometry, structural design of all bridge components, computation of bridge quantities, and plan production at various preliminary and final submittal stages/milestones. The project consists of full-scale replacement of two railroad overpass bridges 3.7 miles apart on the same route of US 371, with three bridges. Michael Baker is providing transportation and bridge engineering services for this project as a lead consultant, while subconsultants Ardaman and Associates, and Vectura Consulting Services, are providing geotechnical and traffic control services respectively |
| 10/22 – Ongoing | **Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program – District 07** \| ***Project Engineer.*** Responsible for the development of expected bridge construction cost based on anticipated square footage of bridge using recent off-system and on-system bridge bid tabulations. Additional responsibilities included participation in development of Preliminary Bridge Matrix and Final Structure Recommendation for the five parishes in District 07 along with helping determine cost per a square foot for right-of-way acquisitions based on recent real estate transactions in each Parish. Project is broken into Initial Phase and Final Design Phase. Matrix developments were part of the initial phase that started in October 2022 and was finished and submitted in December 2022. District 07 was given $30.3 million dollars with allocations for each parish. |
| 07/19 – 08/22 | **Macarthur Interchange Completion Phase II at US90-Z Eastbound, Jefferson Parish, Louisiana**. **Louisiana Department of Transportation and Development** \| ***Engineer Intern***. Responsibilities included structural analysis and girder capacity verification of prestressed concrete girders, developing spreadsheets and Mathcad files for computing development lengths and splice lengths, and deck reinforcement design. Further responsibilities included computing bridge quantities, girder riser elevations, riser thicknesses, deck elevations for the bridge, along with drafting CAD sheets in MicroStation for framing plans, pier cap details, and deck reinforcement plans in compliance with LADOTD standards. This project consisted of demolition of an off-ramp and an on-ramp, along with reconstruction of both at different locations |

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| | in addition to new construction to facilitate bridge widening. SDR Engineering provided comprehensive transportation and bridge structural engineering services. |
| 05/21 – 08/21 | **Mermentau River Swing Span Truss Bridge Repairs at Grand Cheniere, Louisiana**. **Louisiana Department of Transportation and Development \| *Engineer Intern***. Responsibilities included preparing a structural rehabilitation solution to repair the steel truss member with structural deficiency, along with repair solutions for floorbeams and stringers using steel cover plates. Further responsibilities also included drafting and redrawing the fender system plans and railing repair plans and reviewing overall bridge repair quantities and the plan set. SDR Engineering provided the bridge inspection and load rating services in the preliminary stage, and later prepared repair and rehabilitation plans and procedures for the entire superstructure and substructure along with the fender system for the movable bridge span. |
| 07/19 – 02/21 | **Load Rating of 311 Bridges, Louisiana. Louisiana Department of Transportation and Development \| *Engineer Intern***. Responsibilities included load rating 51 bridges of various types such has concrete slab bridges, reinforced concrete girder bridges, prestressed girder bridges, prestressed and reinforced channel bridges, reinforced concrete culverts, and timber beams/timber trestle bridges. For a typical bridge, the load rating process involved developing and analyzing the superstructure structural model in AASHTOWare BrR, substructure structural model in RC Pier (now LEAP Bridge Concrete), and post processing the analysis results using Mathcad to effectively determine the load carrying capacity of the bridge (load rating factors) and accordingly recommending the posting load to LADOTD. This project's scope was initially the load rating of 311 bridges located across Louisiana, however later another 300+ bridges and culverts were added to the scope. SDR Engineering provided the load rating services for this project. |
| 07/22 – 08/22 | **Load Rating of 176 Bridges, Louisiana. Louisiana Department of Transportation and Development \| *Engineer Intern.*** Responsibilities included performing load rating for a total of 43 culverts out of 176. The typical process mainly involved developing and analyzing the structural model for concrete box culverts in AASHTOWare BrR, and then preparing reports with load posting recommendations, if applicable. SDR Engineering provided the load rating services for this project. |
| 07/22 – 08/22 | **Load Rating of 114 Bridges, Louisiana. Louisiana Department of Transportation and Development** \| ***Engineer Intern***. Responsibilities included performing load rating for a historic steel beam bridge, and a prestressed concrete girder bridge. The typical load rating process involves modelling the superstructure and substructure in AASHTOWare BrR and LEAP Bridge Concrete respectively, along with compiling the load rating report. Further responsibilities included reviewing over 40 concrete slab bridges to be load rated by three junior engineer interns. SDR Engineering provided the load rating services for this project |
| 08/20 – 09/20 | **Bridge Deck Investigation using Ground Penetrating Radar (GPR) system, Louisiana. Louisiana Department of Transportation and Development** \| ***Engineer Intern***. Responsibilities included performing GPR investigation of bridge decks for 5 bridges across Louisiana using a vehicle mounted GPR setup provided by 3D-radar (now Kuntur), processing and analyzing scanned data, summarizing insights, and compiling reports regarding feasibility and usefulness of such an investigation. SDR Engineering provided the investigation services for this pilot GPR bridge deck evaluation project. |

**16. Staff Experience:**

**Michael Baker International**

## TJ Holliday, PWS

Environmental Planning Manager

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| **Years of experience with this firm/employer** | 13 |
| **Years of experience with other firm(s)/employer(s)** | 11 |

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| **Degree(s) / Years / Specialization** | BS / 1998 / Civil Engineering / Delta State University | | |
| **Active registration number / state / expiration date** | License No. 2447 / N/A / N/A | | |
| **Year registered** | 2014 | **Discipline** | Professional Wetland Scientist |
| **Contract role(s) / brief description of responsibilities** | TJ will serve as Environmental Permit Lead | | |

| 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).** |
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| 10/22 - Ongoing | **Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program – District 07 | *Environmental Professional Lead.*** Oversaw the research by the environmental team for environmental constraints that could serve as a roadblock for the replacement of a bridge structure. The information gathered allowed the engineers to make decisions on which bridges structures should move forward in design based off these environmental constraints. The constraints included but were not limited to the following: Archaeological Sites, NRHP, Pre-1971 La HBI, 71-85 NRHP, Tribal Lands, Wetlands, Scenic Stream, Levee Permit, Coastal Zone, T&E Species, Section 4(f) and 6(f) lands, Navigable Waterway, UST or Contaminated Sites, Potential Mitigation Cost, and Additional Environmental Permits. Project includes five parishes in District 07 for the replacement of existing off-system bridges. DOTD broke the project into an Initial Phase and a Final Design Phase. Project priorities were part of the initial phase that started in October 2022 and was finished and submitted in December 2022. District 07 was given $30.3 million dollars with allocations for each parish |
| 08/22 - Ongoing | **Barksdale AFB Entrance Roads, Bossier Parish, Louisiana | *Environmental Professional Lead*.** Responsible for the procurement of environmental permits for the new entrance roads for Barksdale AFB. The project includes a new roundabout at the Air Force Base gates along with new 4-lane divided highway to tie into the new LA 1267 highway constructed by DOTD under the I-20/I-220 Design Build interchange improvements. Additional responsibilities include coordination with the U.S. Army Corps of Engineers and Bossier Parish Engineering Department. The project was broken into two separate construction plans (Rough Grade and Final Design) and required additional coordination with DOTD and USACE. The new roundabout is designed to be a multi-lane roundabout that accommodates the new LA 1267 spur of the I-20/220 interchange. |
| 05/11 - Ongoing | **New Orleans Rail Gateway Environmental Impact Statement, Jefferson and Orleans Parishes, Louisiana. LADOTD | *Environmental Specialist***. Conducted field studies and documented findings for wetlands and hazardous materials. Michael Baker is providing environmental and engineering services to develop an environmental impact statement (EIS) for the New Orleans Rail Gateway. Michael Baker's services include project management, review of previous studies, environmental resources investigations, geographic information system development, mapping, rail and roadway travel demand modeling, alternatives analyses, rail and roadway conceptual design, cost estimates, document |

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| | preparation, stakeholder and agency coordination, and extensive public outreach. |
| 01/10 – 04/13 | **S.R. 16 from S.R. 15 to S.R. 19 Bridge Design, Neshoba County, Mississippi. Mississippi Department of Transportation | *Environmental Professional Lead*.** Responsible for field surveys to identify wetlands and other waters of the U.S. and preparation of a jurisdictional findings report for 404 permitting process. Michael Baker provided engineering services for improvements to 10 miles of S.R. 16 from S.R. 15 to S.R. 19. Michael Baker's services included the Phase A preliminary bridge plans for eight bridges, including hydraulic design for three bridges and a railroad crossing bridge, and stream and wetland delineation. |
| 10/08 – 07/15 | **FM 521 Environmental Assessment, Texas. Texas Department of Transportation | *Environmental Professional Lead***. Responsible for completion of the EA document and preparation of the FONSI. Assisted with public involvement activities. Michael Baker performed an environmental assessment (EA) for the reconstructing and widening of FM 521, an existing two-lane rural undivided facility, to a four-lane divided urban arterial from Beltway 8 to FM 2234 (McHard Road). The project also includes improvements on FM 2234 at FM 521 and proposed grade separations at the Union Pacific Railroad (UPRR) crossings on both FM 2234 and FM 521. Michael Baker's services included wetlands delineation and permitting, public involvement, community impacts assessment, indirect and cumulative impacts assessments, and a Section 4(f) analysis. |
| 02/11 – 06/11 | **Wetlands Delineation for S.R. 7 and S.R. 8 Bridge Replacements, Marshall, Benton, and Calhoun Counties, Mississippi. Mississippi Department of Transportation | *Environmental Professional Lead***. Conducted wetland and other waters assessments for a bridge replacement and road improvements along S.R. 7 in Marshall and Benton Counties and S.R. 8 in Calhoun County. Prepared jurisdictional findings report for submittal to USACE for 404 permit evaluations. Michael Baker performed wetland assessments and delineations for the replacement of the bridges on S.R. 7 in Marshall and Benton counties and S.R. 8 in Calhoun County. Michael Baker's services included data collection and analysis, field investigations, wetland delineations and assessments, and report preparation. |
| 03/11 – 07/11 | **Wetland Delineations and Assessments for the S.R. 493, S.R. 19, and I-55 Interchange Bridge Replacements, Kemper, Lauderdale, and Madison Counties, Mississippi. Mississippi Department of Transportation | *Environmental Professional Lead***. Conducted field studies and prepared jurisdictional findings report. Michael Baker performed wetland assessments and delineations for the replacement of the bridges on S.R. 493 in Kemper County, S.R. 19 in Lauderdale County, and at the I-55 interchange in Madison County. Michael Baker's services included data collection and analysis, field investigations, wetland delineations and assessments, and report preparation. |
| 05/10 – 02/13 | **S.R. 607 Improvements from Texas Flat Road to I-59, Hancock and Pearl River Counties, Mississippi. Mississippi Department of Transportation | *Environmental Professional Lead.*** Responsible for wetland and other waters of the U.S. delineation and reporting. Michael Baker provided engineering services for the widening of S.R. 607 to four lanes from Texas Flat Road to I-59, including the reconstruction of a bridge over Alligator Branch, the replacement of a bridge over Second Alligator Branch, and the replacement of a bridge over Indian Camp Creek. |
| 3/18 – 7/18 | **Jackson County Bridges. *Jackson County Road Department. Environmental Professional Lead*.** Michael Baker assisted the Jackson County Road Department with Section 404 permit coordination for multiple bridge replacement and roadway improvement projects within the County. The project included four sites located along *Old Fort Bayou Road, Juniper Drive, and Solomon Road*. Michael Baker's services included data collection and analysis for wetlands and other waters of the U.S. and threatened and endangered species. The projects required coordination with the Mobile District US Army Corps of Engineers (USACE), US Fish and Wildlife Service (USFWS), MS Department of Marine Resources (MDMR), MS Department of Environmental Quality (MDEQ), and the MS Department of Archives and History (MDAH). |

**16. Staff Experience:**

**Michael Baker International**

## Christopher Gesing, P.E.

NEPA Project Manager

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| **Years of experience with this firm/employer** | 3 |
| **Years of experience with other firm(s)/employer(s)** | 15 |

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| **Degree(s) / Years / Specialization** | MS / 1984 / Civil Engineering / Youngstown State University<br>BS / 1980 / Civil Engineering / Youngstown State University | | |
| **Active registration number / state / expiration date** | PE.0026996 / LA / 03/31/2025 | | |
| **Year registered** | 1996 | **Discipline** | Civil |
| **Contract role(s) / brief description of responsibilities** | Chris will serve as Environmental Permitting QA/QC. | | |

| 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 specified in the applicable MPR(s). |
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| 05/08 – 05/11 | **700-08-0130: East-West Corridor Environmental Assessment, EA/FONSI, Bossier Parish, LA \| Northwest Louisiana Council of Governments (NLCOG)** - Mr. Gesing served as ***Project Manager and Environmental Lead*** for a new location eight-mile, two-lane urban collector with right-of-way clearance for future widening to a five-lane facility when traffic conditions warrant. The purpose of the new $56 million facility was to alleviate congestion and reduce travel delays along the other roadways that link the rapidly growing residential areas of Bossier Parish with the Shreveport and Bossier City employment centers. Michael Baker's services included traffic analyses including conducting traffic counts and forecasting traffic using NLCOG's TransCAD regional travel demand model (TDM); Phase I Cultural Resources Assessment including probability modeling for archaeological resources and geoarchaeological study; wetland delineation and surface waters evaluations; Phase I Environmental Site Assessment (ESA); and highway traffic noise studies. |
| 04/22 - Ongoing | **LA 30: EBR PL – I-10, Ascension, Iberville, and East Baton Rouge Parishes, Louisiana \| LA DOTD** - Mr. Gesing is currently serving as the ***Deputy Project Manager and Environmental Lead*** for the NEPA study for the widening of LA 30. Project is currently in the Part 1 phase of the study to determine the required widening requirements of LA 30 from the East Baton Rouge Parish Line to I-10. Project covers nearly 14 miles of improvements along LA 30 through Iberville and Ascension Parish. The study will determine how many additional lanes necessary for LA 30 along this stretch with intersection improvements at Bayou Paul Lane, LA 74, LA 3115, LA 73, and LA 3251. Additional responsibilities for Mr. Gesing includes managing the environmental field services to collect the necessary field data along with developing the FHWA Project Management Plan. |
| 08/02 – 12/06 | **736-99-1025: Stage 1 – Planning/Environmental Manual of Standard Practice, Statewide, LA \| LA DOTD** - Mr. Gesing served as ***Project Manager, Author and Course Instructor***. He developed the LA DOTDs initial Manual of Standard Practice and training program and conducted several half-day training sessions. The Stage 1 Planning/Environmental Manual of Standard Practice provides transportation project managers guidance in advancing transportation improvements projects through Stage 1 of the LA DOTD's Project Development Process (PDP). A half-day training course was developed, and Michael Baker provided several half-day training sessions to LA DOTD and FHWA Louisiana Division staff. The LA DOTD updated the Manual in 2018. |
| 07/11 – Ongoing | **H.005168: New Orleans Rail Gateway Program, Jefferson and Orleans Parishes, LA \| LA DOTD** - Mr. Gesing is currently serving as ***Project Manager and Environmental Lead*** for $638 million in improvements to the New Orleans Rail Gateway, the fourth-largest freight rail gateway in the United States. Michael Baker's services include environmental and engineering services, geographic information system (GIS) development, mapping, rail and roadway travel demand modeling, alternatives analyses, |

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| | rail and roadway conceptual design, cost estimates, document preparation, stakeholder and agency coordination including FRA, FHWA, LA DOTD, NORPC, six Class 1 railroads, Amtrak, NOPB, City of New Orleans, Jefferson Parish, the Port of New Orleans and federal/state resource agencies, and extensive public and minority community outreach. A "Program of Projects" throughout the Gateway is being advanced to improve rail/roadway operational performance and eliminate bottlenecks. Stage 1 studies are currently underway to close, consolidate and grade separate highway-railroad crossings along US 90 in Jefferson, Louisiana and in the Waggaman, Louisiana area. |
| 08/02 – 12/06 | **Louisiana 1 Improvements Alternatives Analysis and Environmental Impact Statement, EIS/ROD, Caddo Parish, Louisiana**. **DOTD**. ***Project Manager and Environmental Lead*** for a $1.3 billion, 17-mile four-lane fully controlled access elevated highway on new location with bridges spanning navigable waterways. Michael Baker conducted the route location, conceptual engineering, and environmental evaluation. The project area encompassed some of the most ecologically unique and sensitive areas in Louisiana, and perhaps the Nation, and traversing the area with a highway on new location presented major environmental challenges. The project received national attention for its environmental stewardship and streamlining accomplishments and was the recipient of the 2004 AASHTO President's Transportation Award for Environment. |
| 08/97 – 09/05 | **North-South Expressway, Location and Environmental Study, EIS/ROD, Caddo Parish, Louisiana. DOTD**. ***Project Manager*** for a $670 million, 35-mile four-lane fully controlled highway on new location between I-220 in Shreveport, Louisiana, and the Arkansas state line (now referred to I-49 North). The project included logical termini evaluation, interchange justification studies (IJS), Phase I Cultural Resources Assessment, wetland delineation and surface waters evaluations, Phase I Environmental Site Assessment (ESA), highway traffic noise studies, and air quality impact assessment.. |
| 01/11 – 12/11 | **700-94-0003; F.A.P. No. HPI-690-1(001): I-69 Section of Independent Utility No. 15 EIS/ROD, Louisiana (HPC 18 US 171 to I-20), Bossier, Caddo and DeSoto Parishes, LA \| LA DOTD** - Mr. Gesing served as ***Project Manager and Environmental Lead*** for a Stage 1 study of a $1.7 billion, 35-mile interstate facility on new location between U.S. Highway 171 (U.S. 171) near Stonewall in DeSoto Parish, and I-20 near Haughton in Bossier Parish. Michael Baker conducted a preliminary engineering and environmental study for I-69 Section of Independent Utility (SIU) 15 including conceptual Red River Bridge design and navigable waterway studies, interchange justification studies (IJS), Phase I Cultural Resources Assessment including probability modeling for archaeological resources and geoarchaeological study, wetland delineation and surface waters evaluations, Phase I Environmental Site Assessment (ESA), highway traffic noise studies, Endangered Species Act Section 7 consultation and Interior least tern (ILT) and Red-cockaded woodpecker (RCW) biological assessments. |

**16. Staff Experience:**

**Michael Baker International**

## Elizabeth Brock
Environmental Scientist

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| **Years of experience with this firm/employer** | 3 |
| **Years of experience with other firm(s)/employer(s)** | 5 |

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| **Degree(s) / Years / Specialization** | BS / 2010 / Environmental Science / University of Mary Washington | | |
| **Active registration number / state / expiration date** | N/A | | |
| **Year registered** | N/A | **Discipline** | N/A |
| **Contract role(s) / brief description of responsibilities** | Elizabeth will serve as permit specialist. | | |

| 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).** |
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| 08/22 - Ongoing | **Barksdale AFB Entrance Roads, Bossier Parish, Louisiana \| *Environmental Scientist*.** Responsible for the procurement of environmental permits for the new entrance roads for Barksdale AFB. The project includes a new roundabout at the Air Force Base gates along with new 4-lane divided highway to tie into the new LA 1267 highway constructed by DOTD under the I-20/I-220 Design Build interchange improvements. Additional responsibilities include coordination with the U.S. Army Corps of Engineers and Bossier Parish Engineering Department. The project was broken into two separate construction plans (Rough Grade and Final Design) and required additional coordination with DOTD and USACE. The new roundabout is designed to be a multi-lane roundabout that accommodates the new LA 1267 spur of the I-20/220 interchange. |
| 03/19 – 01/21 | **Lemoyne Boulevard Erosion Control, St. Martin, Mississippi. Jackson County Board of Supervisors \| *Environmental Scientist***. Responsible for assisting with environmental services. Michael Baker provided professional services associated with performing a detailed drainage study for new erosion control improvements to an existing open channel drainage way located north of Lemoyne Boulevard in the St. Martin Community. The purpose of the drainage and erosion control study was to provide recommendations to the stormwater drainage channel to address channel re-alignment and implement new erosion control measures to mitigation channel migration and sedimentation of channel banks and bottom. |
| 03/19 – 06/19 | **Saline and Caddo River Bridges Design Services, Pike, Howard, and Sevier Counties, Arkansas. Arkansas Department of Transportation \| *Environmental Scientist.*** Responsible for environmental services. Michael Baker provided roadway and bridge design for the replacement of three bridges in Sevier, Pike, and Howard counties in Arkansas. Individual sites on the project include Highway 70 over the Caddo River, Highway 70 over the Saline River, and Highway 278 over the Saline River. Michael Baker provided plans for the replacement of the bridges and approaches and hydraulic and geotechnical studies and completed the environmental clearance documentation at all locations. |
| 10/19 – 11/19 | **S.R. 27 over Big Black River Replacement Project, Warren and Hinds Counties, Mississippi. Mississippi Department of Transportation \| *Environmental Scientist***. Responsible for conducting environmental investigations necessary to prepare the Wetland Delineation in support of the proposed project to replace the existing bridge (Bridge # 117.9) over Big Black River along S.R. 27, in Hinds and Warren County, Mississippi. Michael Baker provided engineering services to assess potential impacts to wetlands and other waters resulting from the replacement of the bridge on S.R. 27 over Big Black River. For the project, Michael Baker reviewed the project plans for the bridge replacement site as well as aerial photography and other |

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| | mapping of the project area. Michael Baker conducted field investigations in the project area to locate, identify, and delineate wetlands and waters of the United States in accordance with the USACE 1987 Wetland Delineation Manual and 2010 Regional Supplement guidance. It also mapped jurisdictional wetland areas and prepared technical reports. |
| 09/19 – 11/19 | **S.R. 12 over Moccasin Creek Bridge Replacement Project, Lexington, Mississippi. Mississippi Department of Transportation | *Environmental Scientist.*** Responsible for conducting environmental investigations necessary to prepare the Wetland Delineation in support of the proposed project to replace the existing bridge (Bridge # 69.2) over Moccasin Creek along S.R. 12 in the city of Lexington in Holmes County, Mississippi. Michael Baker provided engineering services to assess potential impacts to wetlands and other waters resulting from the replacement of a bridge over Moccasin Creek on S.R. 12. For the project, Michael Baker reviewed the project plans for the bridge replacement site as well as aerial photography and other mapping of the project area. Michael Baker conducted field investigations in the project area to locate, identify, and delineate wetlands and waters of the United States in accordance with the USACE 1987 Wetland Delineation Manual and 2010 Regional Supplement guidance. Additionally, Michael Baker provided wetland mapping and a technical report. |
| 06/20 – 07/20 | **S.R. 8 Bridge Replacement Wetland Assessment, Sunflower County, Mississippi. Mississippi Department of Transportation | *Environmental Scientist***. Responsible for conducting environmental investigations necessary to prepare the Wetland Delineation in support of the proposed project in Sunflower County, Mississippi. Michael Baker provided engineering services to assess potential impacts to wetlands and other waters resulting from the replacement of a bridge over the Quiver River on S.R.8. Michael Baker reviewed the project plans for the bridge replacement site as well as aerial photography and other mapping of the project area. It then conducted a field investigation in the project area to locate, identify, and delineate wetlands and waters of the United States in accordance with the USACE 1987 Wetland Delineation Manual and 2010 Regional Supplement guidance. Michael Baker also performed wetlands mapping and provided a technical report. |
| 07/20 – 08/20 | **S.R. 28 over Boles Creek Wetland Assessment, Jefferson County, Mississippi. Mississippi Department of Transportation | *Environmental Scientist***. Responsible for conducting environmental investigations necessary to prepare the Wetland Delineation in support of the proposed project in Jefferson County, Mississippi. Michael Baker provided engineering services to assess potential impacts to wetlands and other waters resulting from the replacement of bridges over an abandoned railroad and over Boles Creek on S.R. 28. Michael Baker compiled and analyzed preliminary information regarding the project sites, including color infrared aerial photography, soil surveys, design plans for the roadway, and other readily available information. It then a performed site investigation to delineate wetlands and other waters of the United States, completed data forms, and took representative photographs of identified resources. |
| 08/20 – 11/20<br>01/22 – 02/22 | **S.R. 601 Canal Road Wetlands Assessment, Harrison County, Mississippi. Mississippi Department of Transportation | *Environmental Scientist***. Responsible for conducting environmental investigations necessary to prepare the Wetland Delineation in support of the proposed project in the City of Gulfport in Harrison County, Mississippi. Michael Baker provided engineering services to assess potential impacts to wetlands and other waters resulting from the construction of a new road to connect southern Gulfport to I-10. For the project, Michael Baker compiled and analyzed preliminary information regarding the project sites, including color infrared aerial photography, soil surveys, design plans for the roadway, and other readily available information. It then performed site investigations to delineate wetlands and other waters of the United States, completed data forms, and took representative photographs of identified resources. |



**16. Staff Experience:**

**Raley and Associates, Inc.**

## Jeff Raley, P.E., PLS

Director of Engineering / Surveying

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| **Years of experience with this firm/employer** | 32 |
| **Years of experience with other firm(s)/employer(s)** | 8 |

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| **Degree(s) / Years / Specialization** | Bachelor of Science / 1983 / Civil Engineering, Louisiana Tech University | | |
| **Active registration number / state / expiration date** | P.E.22831 / LA / Exp. 9/30/23 \| PLS 4630 / LA / Exp. 9/30/23 | | |
| **Year registered** | 1987 (PE); 1990 (PLS) | **Discipline** | P.E./Civil, PLS |
| **Contract role(s) / brief description of responsibilities** | Director of Engineering/Surveying / Jeff will coordinate the Topographic and Boundry Surveying required to complete this project. | | |

| **Experience dates (mm/yy–mm/yy)** | **Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed roadway", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).** |
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| 03/91 – 12/20 | **Long Lake Subdivision, Shreveport, LA**<br>Long Lake Subdivision is a 500 +/- Ac. master planned community. Relevant design work includes the design of all the streets, drainage, several sanitary sewer lift stations, thousands of feet of sanitary sewer and water mains, and thousands of feet of sanitary sewer force main. Jeff designed a metal arch bridge crossing over a major drainage creek running through the subdivision. All improvements were designed to City of Shreveport standards, approved and now owned by Shreveport. |
| 01/00 – 08/18 | **St. Charles Place Subdivision, Shreveport, LA**<br>St. Charles Place Subdivision is a 126+/- Ac. subdivision. The design includes over 5,000 feet of streets, drainage, sanitary sewer and water lines. One of the first subdivisions in Shreveport requiring a storm water detention pond. The design and construction were completed to the city of Shreveport's standards and is now owned and operated by the city. |
| 06/05 – On Going | **Tiburon Subdivision, Bossier City, LA**<br>Jeff was the initial design engineer for a 657acre residential subdivision. Relevant design included an 8 span (200') bridge over Willow Chute Bayou, approximately 19,000 L.F. of streets, drainage, sanitary sewer and water lines. Reggie Lewis of this office has been involved with the latest designs in this subdivision. All designs and construction meet or exceed the City of Bossier Standard Specifications and the LA DOTD design for bridges. |
| 02/18 – 11/19 | **Queensboro and Choctaw Bayou sewer Replacement, Shreveport, LA**<br>Served as project principal and QA/QC engineer on over 30,000 linear feet of sanitary sewer replacement in Phase 2 of the City of Shreveport Consent Decree Program. Project consisted of open cut sewer replacement and pipe burst sewer replacement. The project came in on time and approximately $4,000,000 under budget. |

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| 03/96– 01/20 | **Rosedale Subdivision (Multiple Units), Bossier Parish, LA**<br>Jeff was the initial design engineer for the 107+/- Ac. Residential Subdivision with over 340 homes. The development has over 8,000' +/- L.F of of streets and drainages as well as sanitary sewer and water mains designed by Raley and Associates along with a single sanitary sewer lift station and 2,000' +/- L.F. of force main. All design and construction was in accordance with both the Parish of Bossier and the City of Bossier City design standards. |
| 09/01 – 07/14 | **Norris Ferry Crossing Subdivision (Multiple Units), Shreveport, LA**<br>Norris Ferry Crossing is a 60 Ac. residential subdivision. The design included 7,000+/- L.F. of streets and drainage, sewer and water lines, Duplex Lift Station, and force main to connect to the existing city's force main. The design and construction were completed to the City of Shreveport's standards and is now owned and operated by the city. |

**16. Staff Experience:**

**Raley and Associates, Inc.**

## T. Ryan Estess, P.E., PLS

Project Manager and Project Engineer/Surveyor

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|---|---|
| **Years of experience with this firm/employer** | 10 |
| **Years of experience with other firm(s)/employer(s)** | 7 |

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|---|---|---|---|
| **Degree(s) / Years / Specialization** | Bachelor of Science / 2008 / Civil Engineering, Louisiana State University | | |
| **Active registration number / state / expiration date** | P.E.39033 / LA / Exp. 9/30/24 \| PLS 5074 / LA / Exp. 9/30/24 | | |
| **Year registered** | 2014(PE); 2011(PLS) | **Discipline** | P.E./Civil, PLS |
| **Contract role(s) / brief description of responsibilities** | Project Manager / Ryan will lead drainage design, surveying and Right of Way analysis a tasks for this contract. | | |

| Experience dates (mm/yy–mm/yy) | **Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed roadway", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).** |
|---|---|
| 01/17 – 12/19 | **Fairburn Avenue Extension, Benton, LA**<br>Provided 3,500 linear feet of design for the new three lane concrete roadway. The project included miscellaneous drainage, water, and sewer design. Also included was several thousand feet of new ditch improvements to connect to Flat River. |
| 01/18 – 08/2020 | **Innovation Drive Improvements from Swan Lake Road to Greenacres Blvd., Bossier City, LA.**<br>Ryan served as the design engineer on the 3 phases of Innovation Drive responsible for Streets and Drainage. The design includes over 11,000 linear feet of 2 or 3 lane concrete roadway and subsurface drainage. Major drainage improvements to Benoit Bayou Lateral were also performed as a part of the project. |
| 11/21 – On Going | **City of Shreveport System Preservation and Improvements Project, Shreveport, LA**<br>Ryan is the lead engineer for the improvements of over 70 streets in the City of Shreveport. The project includes full depth asphalt pavement reclamation, concrete panel replacements and complete removal and reconstruction of existing streets. The project includes surveying, including the use of drones as well as conventional surveying, geotechnical exploration, drainage design, pavement design and contract administration services. |
| 11/17 – 02/19 | **Benton Road (LA Hwy 3) Turn Lane at Kingston Road, Bossier Parish, LA**<br>Ryan served as the Project Design Engineer for the design and construction of approximately 800 L.F. of new DOTD southbound turn lane construction on Benton Road (LA Hwy. 3.) and the intersection of Kingston Road. All design and construction met LADOTD standards. |
| 02/18 – 08/19 | **Airline Drive Turn Lane at Kingston Road, Bossier Parish, LA**.<br>Ryan served as the Project Design Engineer for the design and construction of approximately 400 L.F. of a new southbound turn lane at Airline Drive and the intersection of Kingston Road. All design and construction met the Bossier Parish standards for design and construction. |

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| 03/22– 09/22 | **Swan Lake Road Turn Lane at Innovation Drive, Bossier City, LA**<br>Ryan served as the Project Design Engineer for the design and construction of approximately 300 L.F. of a new southbound turn lane at Swan Lake Road and the intersection of Innovation Drive. All design and construction met the City of Bossier City standards for design and construction as well as the required DOTD standards for that intersection. |
| 09/21 – On-Going | **Rocking R Travel Plaza Turn Lanes, LA Hwy 2, Hosston, LA**<br>Ryan served as the Project Design Engineer for the design of approximately 1,281 L.F. of turn lanes, restriping and reconstruction of a portion of LA Hwy 2 for access to the new Rocking R Travel Plaza. All design and construction met the LA DOTD standards for design and construction. |

**16. Staff Experience:**

**APS Engineering and Testing, LLC**

## Sergio Aviles, P.E.

President

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|---|---|
| **Years of experience with this firm/employer** | 9 |
| **Years of experience with other firm(s)/employer(s)** | 10 |

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|---|---|---|---|
| **Degree(s) / Years / Specialization** | Bachelor of Science / 2001 / Geotechnical | | |
| **Active registration number / state / expiration date** | P.E. 0033571 / LA / Exp. 3/31/24 | | |
| **Year registered** | 2007 | **Discipline** | P.E./Civil |
| **Contract role(s) / brief description of responsibilities** | Project Manager/Design guidance/Field Crew and lab management. | | |

| 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 specified in the applicable MPR(s). |
|---|---|
| 09/19 – 06/20 | **Project No. H.004100: I-10 Widening LA 415 to Essen LN-** A P S was tasked thru our DOTD geotechnical retainer to drill and sample a total of 52 deep borings starting at the Washington Exit and ending at the LSU lakes. Along with this drillingand sampling APS will also test for strength and engineering characteristics of the soils. A total of eight (8) over the waterborings and 44 land borings with approximate 1000 Triaxial Compression, Unconsolidated Drained Or Undrained (UU) and Atterberg Limits. Sergio was the project manager for the Geotechnical Investigations associated with CMAR project. |
| 08/16 – 10/19 | **Project No. H.012422: I-10/I-110 Interchange Modification at Terrace Ave-** A P S was tasked thru our DOTD geotechnical retainer to drill and sample a total of six (6) deep borings for the design of the Terrace Ave exit. APS tested for strength and engineering characteristics of the soils with approximate 100 Triaxial Compression, Unconsolidated Drained Or Undrained (UU) and Atterberg Limits by A P S Laboratory. Sergio was the project manager for the Geotechnical Investigations. |
| 11/17 – 2/18 | **Project No. H.013193 US 61 Thompson Creek Bridge Replacement-** A P S was tasked thru our DOTD geotechnical retainer to drill and sample a total of eight (8) deep borings for the replacement bridge at US 61 over Thompson Creek. APS tested for strength and engineering characteristics of the soils. Sergio was the project manager for the Geotechnical Investigations. |
| 11/19 – Present | **Project No. H.001352 and H.002273 Comite River Diversion Bridge at LA 67, LA 19 and LA 19 Railroad Bridge LA 67 and LA 19-** A P S was selected with the winning team for the design of the diversion CMAR project. A P S will be the Geotechnical designers for the project. Mr. Aviles is the project manager for the project design team CMAR project |
| 03/19 – 05/19 | **Project No. H.001344 US 190 over Bogue Falaya River-** A P S was selected with the winning team for the Geotechnical Investigation and Design of the proposed new bridge. A total of 19 deep borings were drilled and tested for the foundation recommendation. Mr. Aviles is the project manager for the project design team. |
| 12/19 – 3/20 | **Project No. H.010155 US 90 Railroad Overpass SE of LA 85-** A P S was selected with the winning team for the Geotechnical Investigation and Design for the proposed new overpass. A total of six (6) deep borings were drilled and tested for Geotechnical recommendation. Mr. Aviles is the project manager for the project design team. |

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| 02/17 – 10/17 | **Project No. H.002861 Earhart Expressway/Causeway Boulevard:** APS was tasked with developing the LRFD factors for both existing structures and the new elevated sections to connect to Causeway Blvd. Per the task order APS drilled and tested 85 borings to 120 feet near the proposed and existing structures. APS engineering staff provided designer with pile tip elevations for five elevated ramps to connect Earhart to Causeway Blvd. Provided boring logs, information on site conditions, site preparation recommendations, and load- length curves. Mr. Aviles is the project manager for the Geotechnical investigations and analysis assigned to help calculating the resistance factors. |
| 07/14 – 08/14 | **Project No. 700-51-0110: US 90 elevated portion for the future I-49 corridor.** APS performed all the preliminary drilling, testing, and CPT for US 90 and Highway 318 Intersection. A total of 46 boring and 11 CPT along with all the testing required by LADOTD. Mr. Aviles was the project manager for the Geotechnical investigations and analysis as assigned for roads and bridges design. |
| 2001 – 2005 | The following lists consist of projects that Mr. Aviles did the design or assisted on the design while at LADOTD. These projects included pile design, slope stability, settlement analysis, and construction services (PDA, CAPWAP, and WEAP).<br><br>**ONSYSTEM PROJECTS LIST:**<br><br>Mr. Aviles served as the staff geotechnical engineer while with the Pavement and Geotechnical Section for the following projects below: Below projects varies from Embankment Design, Pile Design, Drilled Shaft design, MSE wall design, and construction supervision.<br>Major projects cost estimated over one million dollars:<br><br>015-04-0037 LA524-LA123 Route US165, 015-05-0035 LaSalle, 015-07-0044 (Route 165 Cadwell, 276-03-0016 Tangipahoa River Bridge, 3132 Innerloop 427-01-0029, 362-01-0009 Rat Bois, 452-01-0039 I-55 CrossOvers, 742-07-0098 Susek Drive, Bayou Perrie and Sand Beach Bayou 103-01-0025, Broadway Ave.700-40-0127, Cameron Route La. 27 193-02-0042, Causeway Boulevard interchange Route I-10 450-15-0098,Clayton-Greenville 026-03-0025, Crescent City Connection 283-08-0143(46), Cross Bayou Bridge 090-01-0020, Flannery at Florida 742-17-0008. |

**16. Staff Experience:**

**APS Engineering and Testing, LLC**

## Sairam Eddanapudi, P.E.

Chief Engineer

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| **Years of experience with this firm/employer** | 9 |
| **Years of experience with other firm(s)/employer(s)** | 8 |

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|---|---|---|---|
| **Degree(s) / Years / Specialization** | Master of Science / 2002 / Civil Engineering / Lamar University<br>Bachelor of Science / 1999 / Civil Engineering, Sri Venkateswara University, India | | |
| **Active registration number / state / expiration date** | P.E. 0035129 / LA / Exp. 3/31/24 | | |
| **Year registered** | 2008 | **Discipline** | P.E./Civil |
| **Contract role(s) / brief description of responsibilities** | Laboratory QA Manager- Will be in charge of all daily operation of the project/QA/Design Engineer. | | |

| 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 specified in the applicable MPR(s). |
|---|---|
| 09/19 – Present | **Project No. H.004100: I-10 Widening LA 415 to Essen LN-** APS was tasked thru our DOTD geotechnical retainer to drill and sample a total of 52 deep borings starting at the Washington Exit and ending at the LSU lakes. Along with this drillingand sampling APS will also test for strength and engineering characteristics of the soils. A total of eight (8) over the waterborings and 44 land borings with approximate 1000 Triaxial Compression, Unconsolidated Drained Or Undrained (UU) and Atterberg Limits. Sairam was the project QA for the Geotechnical Investigations for the CMAR project. |
| 08/16 – 10/19 | **Project No. H.012422: I-110 Interchange Modification at Terrace Ave-** APS was tasked thru our DOTD geotechnical retainer to drill and sample a total of six (6) deep borings for the design of the Terrace Ave exit. APS tested for strength and engineering characteristics of the soils with approximate 100 Triaxial Compression, Unconsolidated Drained Or Undrained (UU) and Atterberg Limits by APS Laboratory. Sairam was QA for the Geotechnical Investigations. |
| 11/17 – 2/18 | **Project No. H.013193: US 61 Thompson Creek Bridge Replacement-** A P S was tasked thru our DOTD geotechnical retainer to drill and sample a total of eight (8) deep borings for the replacement bridge at US 61 over Thompson Creek. APS tested for strength and engineering characteristics of the soils. Mr. Sai was QA for the Geotechnical Investigations. |
| 11/19 – Present | **Project No. H.001352 and H.002273: Comite River Diversion Bridge at LA 67, LA 19 and LA 19 Railroad Bridge LA 67 and LA 19-** A P S was selected with the winning team for the design of the diversion CMAR project. A P S will be theGeotechnical designers for the project. Mr. Sai is the Senior Design Engineer for the project design team. |
| 03/19 – 05/19 | **Project No. H.001344: US 190 over Bogue Falaya River-** APS was selected with the winning team for the Geotechnical Investigation and Design of the proposed new bridge. A total of 19 deep borings were drilled and tested for the foundationrecommendation. Sairam is the Senior Design Engineer for the project design. |

**16. Staff Experience:**

**APS Engineering and Testing, LLC**

## Surendra Raj Pathak, P.E.

Staff Engineer

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| **Years of experience with this firm/employer** | 5 |
| **Years of experience with other firm(s)/employer(s)** | 10 |

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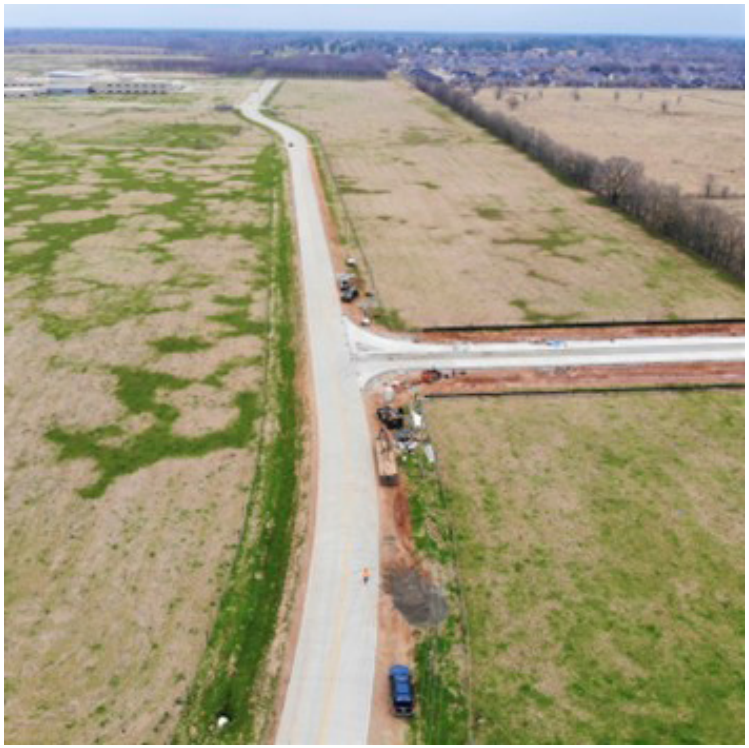
|---|---|---|---|
| **Degree(s) / Years / Specialization** | Master of Science / Civil Engineering / 2013 / Mississippi State University<br>Master of Science / Civil Engineering / 2007 / Norwegian University of Science and Technology<br>Bachelor of Science / Civil Engineering / 1998 / Madan Mohan Malaviya University of Technology | | |
| **Active registration number / state / expiration date** | P.E. 0043487 / LA / Exp. 9/30/23 | | |
| **Year registered** | 2019 | **Discipline** | P.E./Civil |
| **Contract role(s) / brief description of responsibilities** | Staff Engineer-Review field logs, lab data, and Design Engineer. | | |

| 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 specified in the applicable MPR(s). |
|---|---|
| 09/19 – Present | **Project No. H.004100: I-10 Widening LA 415 to Essen LN-** APS was tasked thru our DOTD geotechnical retainer to drill and sample a total of 52 deep borings starting at the Washington Exit and ending at the LSU lakes. Along with this drillingand sampling APS will also test for strength and engineering characteristics of the soils. A total of eight (8) over the waterborings and 44 land borings with approximate 1000 Triaxial Compression, Unconsolidated Drained Or Undrained (UU) and Atterberg Limits. Surendra was the project QC for the Geotechnical Investigations. |
| 08/16 – 10/19 | **Project No. H.012422: I-110 Interchange Modification at Terrace Ave-** APS was tasked thru our DOTD geotechnicalretainer to drill and sample a total of six (6) deep borings for the design of the Terrace Ave exit. APS tested for strength and engineering characteristics of the soils with approximate 100 Triaxial Compression, Unconsolidated Drained Or Undrained (UU)and Atterberg Limits by A P S Laboratory. Surendra was QC for the Geotechnical Investigations. |
| 11/17 – 2/18 | **Project No. H.013193: US 61 Thompson Creek Bridge Replacement-** APS was tasked thru our DOTD geotechnical retainer to drill and sample a total of eight (8) deep borings for the replacement bridge at US 61 over Thompson Creek. APS tested for strength and engineering characteristics of the soils. Surendra was QC for the Geotechnical Investigations. |
| 11/17 – 2/18 | **Project No. H.002273, H.000710, and H.001352 Comite River Diversion Bridge at LA 67, LA 19 and LA 19 Railroad Bridge LA 67 and LA 19:** APS was tasked thru our DOTD geotechnical retainer to drill and sample a total of 12 deep borings for the new and replacement bridges at Highway 19, 67, and 964. APS tested for strength and engineering characteristics of the soils. Surendra was QC for the Geotechnical Investigations. |
| 11/19 – Present | **Project No. H.001352 and H.002273: Comite River Diversion Bridge at LA 67, LA 19 and LA 19 Railroad Bridge LA 67 and LA 19-** APS was selected with the winning team for the design of the diversion CMAR project. A P S will be theGeotechnical designers for the project. Surendra is a design Engineer for the project design team. |



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# Section 17

**17. Firm Experience:**

| **Gresham Smith** | **Past Performance Evaluation Discipline(s)*** | Road |
|---|---|---|

## Hooper Road at Sullivan Road Roundabout Design

| **Firm responsibility (prime or sub?)** | Sub |
|---|---|

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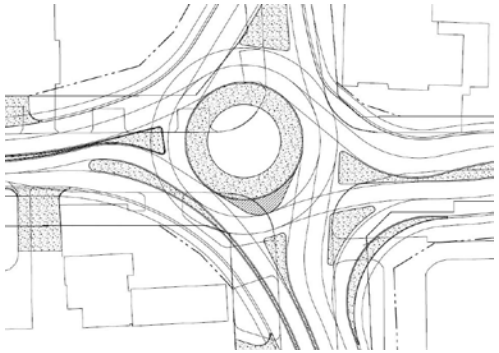
|---|---|---|---|---|
| **Project number** | H.002320 | **Owner's name** | City of Central (LA) | |
| **Project location** | Central, Louisiana | **Owner's Project Manager** | | Toby Picard, P.E., Project Manager |
| **Owner's address, phone, email** | 13421 Hooper Road, Suite 8, Central, LA / 225.379.1302 / toby.picard@la.gov | | | |
| **Services commenced by this firm (mm/yy)** | 04/20 | **Total consultant contract cost ($1,000's)** | | $195 |
| **Services completed by this firm (mm/yy)** | 12/22 | **Cost of consultant services provided by this firm ($1,000's)** | | $195 |

This project was originally designed as an intersection improvement project to add left and right turn lanes at the intersection of Hooper Road (LA 408) at Sullivan Road (LA 3034). Due to the anticipated future traffic volumes, it was determined that a multi-lane roundabout would be more efficient and have a longer service life than the planned traditional signalized intersection. Gresham Smith was selected to design the multi-lane roundabout at the intersection of Hooper Road at Sullivan Road.



The intersection contains some major constraints which include a historic building in the Northeast quadrant of the intersection and a gas station in the Southwest quadrant of the intersection. The roundabout must accommodate both pedestrians and bicyclists as well as multiple approach lanes and free flow right turn lanes at select approach legs as required by LADOTD's conceptual traffic design to accommodate future projected traffic volumes.

Gresham Smith was tasked with the full roundabout design to be in accordance with LADOTD's Roadway Design Manual geometric requirements and LADOTD's Complete Streets Policy to accommodate both pedestrians and bicycles through this intersection. Determining the location of the roundabout is critical in balancing a good geometric design with minimal right-of-way impacts and utility conflicts. Gresham Smith was also tasked with the drainage design at the roundabout and approach legs and was responsible for developing typical sections, plan and profile sheets, cross sections, quantities and construction cost estimates. This project included a conceptual design phase as well as both preliminary and final plan design.

The roundabout design underwent several geometric reviews by DOTD, including a plan-in-hand meeting. The 100% preliminary plans were fully completed. However, construction funding issues led to scope adjustments for the intersection design, and the design reverted back to the signalized intersection for final plans. The project let in December 2022, and the design of the future roundabout is now being considered in a separate CMAR project.

**Nature of firm's responsibility:** Sub Consultant; Responsible for Developing Preliminary and Final Roundabout Design Plans.
**Firm members involved:** Brennon Hughes, Bert Moore, Richard Savoie and Ronnie Robinson.

**17. Firm Experience:**

| **Gresham Smith** | **Past Performance Evaluation Discipline(s)*** | Road |
|---|---|---|

## SRTS/LRSP Task Order #6 and #21: Endom Bridge

| **Firm responsibility (prime or sub?)** | Prime |
|---|---|

| | | | | |
|---|---|---|---|---|
| **Project number** | H.012279; H.012279.5 | **Owner's name** | Louisiana Department of Transportation and Development | |
| **Project location** | West Monroe, Louisiana | **Owner's Project Manager** | Laura Riggs, P.E. | |
| **Owner's address, phone, email** | 1201 Capitol Access Road, Baton Rouge, LA / 225.379.1143 / laura.riggs@la.gov | | | |
| **Services commenced by this firm (mm/yy)** | 12/17 | **Total consultant contract cost ($1,000's)** | $251 | |
| **Services completed by this firm (mm/yy)** | 12/20 | **Cost of consultant services provided by this firm ($1,000's)** | $222 | |

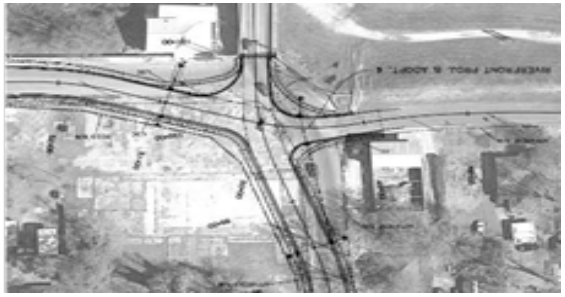
**Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)**

As part of LADOTD's Local Road Safety Program (LRSP) retainer contract, Gresham Smith was tasked to develop operational and safety improvements at the west approach to the Endom Bridge located in West Monroe, Ouachita Parish. After a technical review of this intersection, Gresham Smith was selected to perform engineering and related services to prepare preliminary and final plans for proposed safety and operational improvements to the intersection of Coleman Avenue with North and South Riverfront Streets at the Endom Bridge approach.


**Before**

**After**

The purpose of the improvements is to realign the Coleman Avenue approach to the Endom Bridge to improve intersection sight distance and safety for pedestrians and vehicles. This project will include pedestrian facilities including walking paths long Endom Bridge and the Ouachita River.



**Project Highlights**

- Milling Asphalt Pavement
- Traffic Maintenance
- Intersection Realignment
- Subsurface Drainage Design
- Truck Island Design
- Improved sight distance and safety
- Construction sequencing and detours

Gresham Smith's responsibilities were to oversee the topographic survey, coordinate with the local municipality, develop preliminary and final design plans to realign the intersection, right-of-way maps, specifications and construction cost estimates. This project was let for construction on December 9, 2020 with the apparent low bid only 5.14% over the estimate.

**Nature of firm's responsibility:** Prime Consultant; Overall responsibility for entire contract.
**Firm members involved include:** Bert Moore, Richard Savoie, Brennon Hughes, Rebecca Murray and Ronnie Robinson.

**17. Firm Experience:**

| **Gresham Smith** | **Past Performance Evaluation Discipline(s)*** | Road |
|---|---|---|

## MSY - Task 4: Entrance Road Capacity

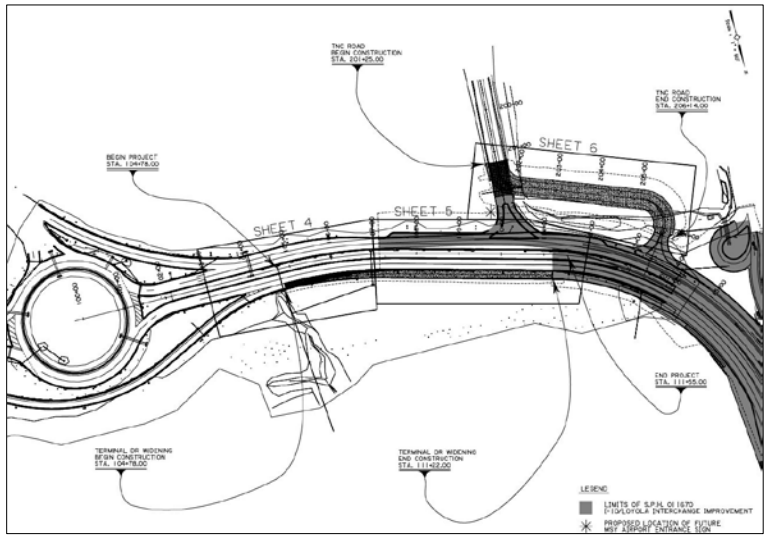
| **Firm responsibility (prime or sub?)** | Prime |
|---|---|

| | | | | | |
|---|---|---|---|---|---|
| **Project number** | N/A | **Owner's name** | New Orleans Airport (MSY) | | |
| **Project location** | Kenner, LA | | **Owner's Project Manager** | Kenny Boyd | |
| **Owner's address, phone, email** | 1 Terminal Dr, Kenner, LA 70062 / 303.641.9729 / ksboyd@burnsmcd.com | | | | |

| | | | |
|---|---|---|---|
| **Services commenced by this firm (mm/yy)** | 03/21 | **Total consultant contract cost ($1,000's)** | $180.5 |
| **Services completed by this firm (mm/yy)** | Ongoing | **Cost of consultant services provided by this firm ($1,000's)** | $180.5 |

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

Executed under a general engineering contract, Gresham Smith is currently providing design and project management for the City of New Orleans to widen the main exit road at Louis Armstrong New Orleans International Airport (MSY) from 2 lanes to 3 lanes. The project includes widening of approximately 1/4-mile of roadway, extending the roundabout slip lane exit from the roundabout and tying into the design-build flyover project currently under construction (S.P. H.011670). The completed widened road will connect the I-10 at Loyola Interchange Design-Build project that is currently under construction for LADOTD, improving the flow of traffic from MSY.




Additionally, Gresham Smith is tasked with the design of the new Transportation Network Companies (TNC) Uber lane roadway. This is a new alignment design which will realign the existing TNC Lane to a tie in point west of the existing location, tying into a turnout being constructed under the I-10 at Loyola Interchange Design-Build project. The completed new alignment roadway will provide access to a dedicated parking lot for ride-share vehicles approaching the airport and awaiting arrivals.

From the start, this project involved constant communication with both MSY Airport representatives along with coordination with the consultant for the I-10 at Loyola Interchange Design-Build project. A key aspect of this project was coordinating with the I-10 at Loyola Interchange Design-Build project which is currently under construction in order to facilitate a smooth transition for the widening of the roadway. This project was signed and sealed recently and is under construction.

**Nature of firm's responsibility:** Prime
**Firm members involved include:** Bert Moore, Brennon Hughes, Ronnie Robinson and Richard Savoie.

**17. Firm Experience:**

| **Gresham Smith** | **Past Performance Evaluation Discipline(s)*** | Bridge |
|---|---|---|

| **SR 178 Benton County – Replacement of 2 Bridges and a Twin-Cell Box Culvert** | **Firm responsibility (prime or sub?)** | Prime |
|---|---|---|

| | | | |
|---|---|---|---|
| **Project number** | N/A | **Owner's name** | Mississippi Department of Transportation |
| **Project location** | Benton County, MS | **Owner's Project Manager** | Scott Westerfield. P.E. |
| **Owner's address, phone, email** | 401 North West Street, Jackson, MS / 601.359.7200 / swesterfield@mdot.ms.gov | | |

| | | | |
|---|---|---|---|
| **Services commenced by this firm (mm/yy)** | 11/17 | **Total consultant contract cost ($1,000's)** | $417 |
| **Services completed by this firm (mm/yy)** | Ongoing | **Cost of consultant services provided by this firm ($1,000's)** | $417 |

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

Gresham Smith holds a 3-year IDIQ Bridge Retainer with MDOT. Under Work Assignment 1, Gresham Smith was tasked for completing Phase B (Final Design) for the reconstruction of two bridges and associated roadway. A third bridge was replaced with a twin-cell box culvert. To reduce the overall construction costs, Gresham Smith was requested to re-design the previously prepared (by others) Phase A roadway design for Bridge 47.1 to utilize the existing alignment, rather than an off-line alternative designed by others.

*Previous Benton County Bridge*

To reduce the total structure depth and improve the bridge hydraulics, the superstructures were designed with Florida I-Beam (FIB) shaped prestressed concrete girders. As one of the longer spans in Mississippi to utilize the FIB shapes, Gresham Smith also performed a haul analysis and constructability review to verify that the 135' long, 70-ton girders could be delivered and erected at this rural location. For the multi-span structure, the bridge spans were designed as simply supported beams with a "link-slab" detail utilized to eliminate the deck joints. The span arrangements are as follows:

- Bridge 51.3 (Bridge A) – FIB-45; 3 spans = 80' – 100' – 80' = 260'
- Bridge 47.1 (Bridge B) – FIB 54; 1 span = 135'

*New 3-Span Bridge with FIB Girders*

*New 2-Span Culvert*

**Nature of firm's responsibility:** Prime Consultant; Overall responsibility for entire contract.
**Firm members involved include:** John Weres and Courtney Rome.

**17. Firm Experience:**

| **Gresham Smith** | **Past Performance Evaluation Discipline(s)*** | Bridge |
|---|---|---|

| **SR 149 Simpson County – Replacement of 4 Bridges & Roadway Plans** | **Firm responsibility (prime or sub?)** | Prime |
|---|---|---|

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|---|---|---|---|---|---|
| **Project number** | N/A | **Owner's name** | Mississippi Department of Transportation | | |
| **Project location** | Simpson County, MS | | **Owner's Project Manager** | Scott Westerfield. P.E. | |
| **Owner's address, phone, email** | 401 North West Street, Jackson, MS / 601.359.7200 / swesterfield@mdot.ms.gov | | | | |
| **Services commenced by this firm (mm/yy)** | 05/19 | | **Total consultant contract cost ($1,000's)** | | $500k |
| **Services completed by this firm (mm/yy)** | Under Construction | | **Cost of consultant services provided by this firm ($1,000's)** | | $500k |

**Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)**
Gresham Smith holds a three-year IDIQ Bridge Retainer with MDOT. Under Work Assignment 3, Gresham Smith is partnered with MDOT for Phase B (Final Design) for the reconstruction of S.R. 149 near D'Lo, Simpson County, Mississippi. Gresham Smith initially designed the two longer structures (Bridge 128.2 and Bridge 128.6) while MDOT was designing the remaining two structures. Gresham Smith is also designing the roadway for the entire project. To support MDOT's workload, Gresham Smith performed final design and plan development for the two bridges preliminarily designed by MDOT.

In order to reduce the total structure depth and improve the bridge hydraulics, the superstructures are being designed with Florida I-Beam (FIB) shaped prestressed concrete girders. MDOT has utilized the FIB shapes on a few smaller structures; however, this 150' span will be the longest FIB girder design completed in Mississippi. The bridge spans are designed as simply supported beams with a "link-slab" detail used to eliminate the deck joints.

The span arrangements for the two larger bridges designed by our Baton Rouge staff are as follows:

- Bridge 128.2 Sellers Creek – 40' clear roadway;
  5 spans = 110' – 130' – 3 @ 110' = 570'
- Bridge 128.6 Strong River – 40' clear roadway; 10 spans = 7 @ 110' – 150' –
  2 @ 110' = 1140'

In May 2020, MDOT notified Gresham Smith that the two bridges scheduled to be designed by MDOT staff would be assigned to Gresham Smith in a future task order due to staffing conflicts at MDOT, in order to complete the design packages more timely. Our Baton Rouge staff designed the two larger bridges while our Jackson, MS staff designed the two smaller bridges.

**Nature of firm's responsibility:** Prime Consultant; Overall responsibility for entire contract.
**Firm members involved include:** John Weres and Courtney Rome.

**17. Firm Experience:**

| **Michael Baker International, Inc.** | **Past Performance Evaluation Discipline(s)*** | Road, Environmental |
|---|---|---|

## Barksdale Air Force Base Entrance Roads (Design-Build)

| **Firm responsibility (prime or sub?)** | Prime |
|---|---|

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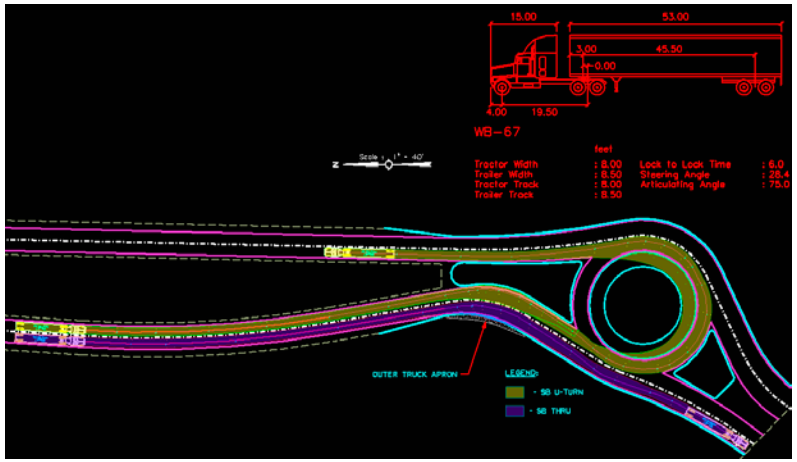
|---|---|---|---|
| **Project number** | N69450-16-D-0100 | **Owner's name** | NAVFAC SE |
| **Project location** | Bossier Parish, Louisiana | **Owner's Project Manager** | Sarah Reed |
| **Owner's address, phone, email** | 334 Davis Avenue West, Suite 105, Barksdale AFB, LA 71110 / 318.243.3902 / sarah.m.reed16.civ@us.navy.mil | | |

| | | | |
|---|---|---|---|
| **Services commenced by this firm (mm/yy)** | 08/22 | **Total consultant contract cost ($1,000's)** | $2,031 |
| **Services completed by this firm (mm/yy)** | 05/23 | **Cost of consultant services provided by this firm ($1,000's)** | $1,918 |

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

Michael Baker International is providing Roadway Design Services for RQ Construction as a member of the deign-build team for the construction of new entrance roads to Barksdale Air Force Base.




Michael Baker design team is developing construction plans per DOTD Design Guidelines and Standard Specifications. The beginning of the project is a direct tie to LA 1267 where it terminates after the KCS railroad crossing bridge constructed under the DOTD I-20/I-220 Design Build project. LA 1267 will continue as a 4-Lane Divided Highway as it enters the base property where it will transition to a new multi-lane roundabout. The roundabout is placed before the new base entrance gates and will allow for motorist that inadvertently exited onto LA 1267 make a U-turn and return back towards the I-20/I-220 interchange without having to enter the Air Force Base. The new portion of LA 1267 is being built on the base property where a Corporate Endeavor Agreement was developed under the DOTD Design-Build project to allow for the completion of the roadway before entering the gates of the Airforce Base.

**RELEVANT TO IDIQ**

- Intersection Design
- New Roadway
- Roadway Drainage
- Environmental Permitting

Michael Baker design team has coordinated directly with DOTD I-20/220 Project Manager, Corey Landry, and with DOTD I-20/220 Owner Verification Consultant Project Manager, Gordon Nelson. Additional requirements by Design Team were to develop Temporary Traffic Control Plans since the I-20/220 Project was completed before this project was able to be construction. The TTC plans identified one construction entry point along Ramp "x" and two construction exit points along Ramps "x" and "x". Additionally, a project permit will be prepared and submitted to DOTD for approval once the Design Plans and TTC plans have been approved.

**Nature of firm's responsibility:** The project includes roadway design, roadway drainage/hydraulics, street lighting design, and development of construction plans that meet DOTD Guidelines and Specifications.

**Firm members involved include:** Daniel Thornhill, PE | Brandon Pitre, PE | Alexis Harrouch, EI | TJ Holliday | Elizabeth Brock

**17. Firm Experience:**

| **Michael Baker International, Inc.** | **Past Performance Evaluation Discipline(s)*** | Road, Bridge |
|---|---|---|

## US 371: RR Overpasses HBI

**Firm responsibility (prime or sub?)** Prime

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|---|---|---|---|
| **Project number** | H.012030 | **Owner's name** | Louisiana Department of Transportation and Development |
| **Project location** | Sibley & Minden, Louisiana, Webster Parish, Louisiana | **Owner's Project Manager** | Hamed Babaizadeh, PE |
| **Owner's address, phone, email** | 1201 Capitol Access Road Baton Rouge, Louisiana 70802 / 225.379.1033 / hamed.babaizadeh@la.gov | | |

| | | | |
|---|---|---|---|
| **Services commenced by this firm (mm/yy)** | 11/21 | **Total consultant contract cost ($1,000's)** | $957 |
| **Services completed by this firm (mm/yy)** | Ongoing | **Cost of consultant services provided by this firm ($1,000's)** | $695 |

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

Michael Baker was selected by DOTD to provide bridge, structural, and transportation services for the replacement of three bridges along US 371 at two locations in Sibley, LA and Minden, LA. All bridges span KCS Railroad at two locations along their rail line. The existing bridge at Sibley, LA was built in 1934 and is currently a three span, steel girder bridge for a total length of 120' resting on concrete substructure. Bridge has sidewalks on both sides of the bridge and ties to existing sidewalks along the route. US 371 is a minor urban arterial with roughly 9% truck traffic along the route. Michael Baker design team is tasked with determining the most efficient and cost-effective bridge to replace the existing structure. A bridge structure report is required to determine if the new bridge will either be concrete or steel girder type. The new structure and road improvements will meet the latest DOTD design guidelines. One of the challenges at this location is the grade difference between the bridge and existing properties with the railroad underneath. Coordination with KCS railroad will help determine the final location of the bridge foundations in relationship with the rail line along with development of a diversion roadway and temporary Acrow Bridge since US 371 is not able to be shut down.

**RELEVANT TO IDIQ**

- Roadway Design
- Bridge Design
- Roadway Drainage

The two bridges at Minden, LA serve as part of the I-20 interchange at US 371. The bridges were built at different times around 1930 and both bridges are three span, steel girder bridges. One bridge is normal skew to the roadway while the other bridge was built on a skew aligning with the rail line. Like the Sibley site, US 371 is considered a minor urban arterial with roughly 9% truck traffic. Similar to the Sibley bridge, the design team will prepare a bridge structure report determining the most efficient and cost-effective bridges while minimizing impact to the local traffic. Being located at an interchange, additional challenges for these bridge replacements is the maintenance of traffic, phase construction, and shifting of traffic. At this location, one bridge will be removed and replaced while reducing travel to one-lane on the other bridge to keep roadway open to existing traffic. Design team is tasked with determining if the new bridge will be concrete or steel girder type while maintaining minimal adjustment to the existing roadway grade to reduce the amount of roadway necessary to tie to existing roadway.

**Nature of firm's responsibility:** The project includes roadway design, railroad coordination, bridge design, and development of construction plans that meet DOTD Guidelines and Specifications.

**Firm members involved include**: Daniel Thornhill, PE | Brandon Pitre, PE | Jeffery McRae, PE | Shalin Sheth, PE | Alexis Harrouch, EI | Alison Gonzalez, P.E.

**17. Firm Experience:**

| **Michael Baker International, Inc.** | **Past Performance Evaluation Discipline(s)*** | Road, Bridge, Environmental |
|---|---|---|

| **Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program – District 07 – Initial Services** | **Firm responsibility (prime or sub?)** | Prime |
|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| **Project number** | H.015338 | **Owner's name** | Louisiana Department of Transportation and Development | | |
| **Project location** | District 07 Parishes, Louisiana | | **Owner's Project Manager** | Amanda Ranck | |
| **Owner's address, phone, email** | 1201 Capitol Access Road Baton Rouge, Louisiana 70802 / 225.379.1338 / amanda.ranck@la.gov | | | | |

| | | | |
|---|---|---|---|
| **Services commenced by this firm (mm/yy)** | 10/22 | **Total consultant contract cost ($1,000's)** | $50 |
| **Services completed by this firm (mm/yy)** | Ongoing | **Cost of consultant services provided by this firm ($1,000's)** | $50 |

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

Michael Baker was selected by DOTD to provide bridge, roadway and environmental services for the replacement of off-system bridges in the five parishes (Allen Parish, Beauregard Parish, Calcasieu Parish, Cameron Parish and Jefferson Davis Parish) located in DOTD District 07. This off-system bridge program is being 100% funded by the recently passed IIJA bill. DOTD allocated $30.3 million of funding for District 07 for the implementation cost (construction, design, mitigation, right-of-way acquisition and utility relocation) for the replacement of bridges in this district. Structures will be replaced with Culvert(s), Box Culvert(s), or Slab Span Bridges that are available in DOTD Standard Plan catalog.

District 07 currently has 62 bridges classified as in poor condition with another 11 classified as fair condition that qualify for the IIJA funding. Michael Baker's initial scope was to meet all five parish representatives (Parish Engineers or Policy Jury) to determine the bridge replacement priority list. After meeting with Parishes, Michael Baker reviewed each bridge on the priority list against the inspection reports provided in the DOTD Asset Management Portal. The inspection reports were used to determine the type of bridges being replaced and to help determine if additional right-of-way (ROW) would be required and if utilities need relocation.

**RELEVANT TO IDIQ**

- Roadway Design
- Bridge Design
- Roadway Drainage
- Slab Span Bridges

Two deliverables were required for the initial phase: Preliminary Screening Matrix (PSM) and Recommended Bridge Structure List (RBSL). The Preliminary Screening Matrix took into constraints both environmentally, design, ROW, and utility relocations. Michael Baker team used available database resources or meeting with agencies to determine the environmental constraints not limited to Arecheological sites, Tribal Lands, Wetlands, T&E Species, Section 4(f) and 6(f) lands, etc… These constraints were used to help determine if bridge priorities needed adjustment. Based on the PSM, the RBSL was developed based on the implementation cost for each structure. Michael Baker team determined the expected number of bridges that could be replaced to be around 15 making sure that each of the 5 parishes had at least 1 structure identified for replacement. Submittal was delivered to DOTD on December 2, 2022 as per the contract. Michael Baker is waiting on approval of submittals. Once approved, DOTD will supplement the original contract for the second phase of the project: Final Design Plans.

**Nature of firm's responsibility:** The project includes roadway design, railroad coordination, bridge design, and development of construction plans that meet DOTD Guidelines and Specifications.

**Firm members involved include**: Daniel Thornhill, PE | Brandon Pitre, PE | Shalin Sheth, PE | Alexis Harrouch, EI | TJ Holliday | Eric Erikson, P.E., CMP

**17. Firm Experience:**

| **Raley and Associates, Inc.** | **Past Performance Evaluation Discipline(s)*** | Road, Survey |
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| **Innovation Drive Extension and Benoit Bayou Lateral Improvements, Bossier City, LA** | **Firm responsibility (prime or sub?)** | Prime |
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|---|---|---|---|
| **Project number** | 14-17 Phase 2 | **Owner's name** | City of Bossier City |
| **Project location** | Bossier City, LA | **Owner's Project Manager** | Mark Hudson, P.E., City Engineer |
| **Owner's address, phone, email** | 620 Benton Road, Bossier City, LA 71111 / 318.741.8568 / braushenbach@manchacgroup.com, Ben Raushenbach, P.E. | | |

| | | | |
|---|---|---|---|
| **Services commenced by this firm (mm/yy)** | 02/18 | **Total consultant contract cost ($1,000's)** | $405 and 33 |
| **Services completed by this firm (mm/yy)** | 10/20 | **Cost of consultant services provided by this firm ($1,000's)** | $405 and 33 |

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

The City of Bossier City desired to extend Innovation Drive from Swan Lake Road to Airline Drive. Raley and Associates had already designed the first 2,330 feet of the roadway as part of a large commercial development and Parish school project. We were chosen to survey and design the roadway extension as well as the improvements to the Benoit Bayou Lateral from I-220 north for approximately 2,600 feet to accommodate the 100-year storm flow. The new roadway and drainage design was approximately 9,200 linear feet in length and was constructed to DOTD specifications.

The roadway section consisted of both two and three lane concrete pavement designed for commercial traffic. As part of the design, a large storm water collection ditch was designed to carry future runoff from the surrounding undeveloped tracts to the Benoit Lateral. Some of the ditch improvements were paved as well. The Lateral crossing at Innovation Drive consisted of (4) 10' X 10' reinforced concrete box culverts. The new Lateral improvements required widening the channel to an average of 200 feet in most areas.

Raley and Associates provided construction layout services for the project and limited contract administration. We also provided all the right-of-way platting and dedication documents for the final roadway construction.

**Nature of firm's responsibility:** Prime Consultant; Overall responsibility for right-of-way, paving and drainage design.
**Firm members involved include:** Travis Sturdivant, PLS, Ryan Estess, PE, PLS and Jeff Raley PE, PLS

**17. Firm Experience:**

| **Raley and Associates, Inc.** | **Past Performance Evaluation Discipline(s)*** | Road, Survey |
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| **Fairburn Avenue Extension and Tiger Pride Drive Benton, LA** | **Firm responsibility (prime or sub?)** | Sub |
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|---|---|---|---|---|
| **Project number** | N/A | **Owner's name** | Bossier Parish | |
| **Project location** | Benton, LA | **Owner's Project Manager** | Butch Ford, P.E., Parish Engineer at the time of construction | |
| **Owner's address, phone, email** | 204 Burt Blvd., Benton, LA 71106 / 318.965.2329 / ehudson@bossierparishla.gov, Eric Hudson, P.E., Parish Engineer | | | |
| **Services commenced by this firm (mm/yy)** | 08/16 | **Total consultant contract cost ($1,000's)** | $70 | |
| **Services completed by this firm (mm/yy)** | 06/17 | **Cost of consultant services provided by this firm ($1,000's)** | $70 | |

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

The Bossier Parish School Board desired to construct a new Benton High School. Raley and Associates was selected as the civil design firm for the $45 million project. As part of the design, the Parish of Bossier required the School Board to extend the existing Fairburn Avenue to the new school site and design a brand-new Tiger Pride Drive. Raley and Associates provided design plans for the 4,300 linear feet of new two and three lane concrete roadway with the associated drainage improvements. We performed the necessary topographic survey for design and right of way maps. The project also included included miscellaneous water and sewer design, and several thousand feet of new ditch improvements to connect to Flat River.

Fairburn Avenue Extension

Tiger Pride Drive

The design and construction met the Bossier Parish requirements for streets and drainage.

**Nature of firm's responsibility:** Sub Consultant for the overall school project; Responsible for right-of-way, paving and drainage design of Fairburn
**Firm members involved include:** Travis Sturdivant, PLS, Ryan Estess, PE, PLS and Jeff Raley PE, PLS

**17. Firm Experience:**

| **Raley and Associates, Inc.** | **Past Performance Evaluation Discipline(s)*** | Road, Survey |
|---|---|---|

| **City of Shreveport System Preservation and Improvements Project, Shreveport, LA** | **Firm responsibility (prime or sub?)** | Prime |
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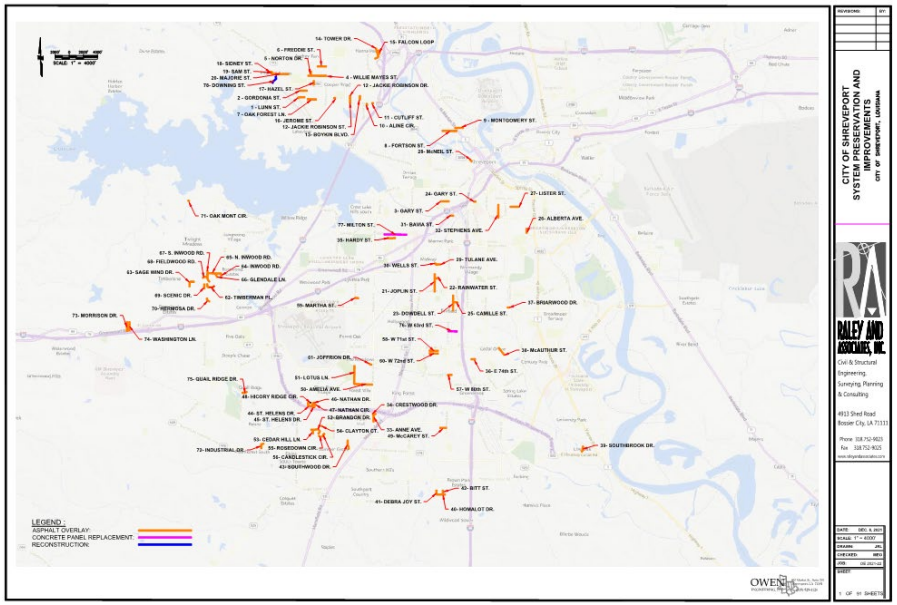
|---|---|---|---|---|
| **Project number** | N/A | **Owner's name** | City Shreveport | |
| **Project location** | Shreveport, LA | **Owner's Project Manager** | David Smith, P.E., Assistant City Engineer | |
| **Owner's address, phone, email** | 505 Travis St., Shreveport, LA 71101 / 318.673.6000 / david.smith@shreveportla.gov, David Smith, PE | | | |
| **Services commenced by this firm (mm/yy)** | 11/21 | **Total consultant contract cost ($1,000's)** | $602 | |
| **Services completed by this firm (mm/yy)** | Ongoing | **Cost of consultant services provided by this firm ($1,000's)** | $602 | |

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




The City of Shreveport desired to refurbish, improve and reconstruct numerous streets throughout the City. The project includes but is not limited to street reconstruction, asphalt overlay, concrete panel replacement, sidewalk/ADA upgrades, and street light rehabilitation.

Raley and Associates will be required to assess the condition and alignment of certain existing streets, storm drains and inlets. We will be addressing sidewalks to comply with ADA requirements. The project involves over 70 streets in the Shreveport area. Currently we have completed the required geotechnical explorations, topographic surveying and pavement condition report and recommendations. We have completed the first street patching plans and the City has added an additional 7 streets for improvements. Sidewalk improvement plans are complete and under City review. The full depth reclamation portion is complete and under review as well.

We are currently complete with approximately 70% of the overall contract and foresee completing the contract by the end of the second quarter of 2023. Raley and Associates will be providing contract administration services for the project during construction. We will also be providing necessary right-of-way platting and dedication documents for the final Steet construction.

**Nature of firm's responsibility:** Prime Consultant; Overall responsibility for right-of-way, paving and drainage design.
**Firm members involved include:** Ryan Estess, PE, PLS and Jeff Raley PE, PLS

**17. Firm Experience:**

| **APS Engineering and Testing, LLC** | **Past Performance Evaluation Discipline(s)*** | Geotech |
|---|---|---|

## I-10 Widening LA 415 to Essen LN

**Firm responsibility (prime or sub?)** Sub

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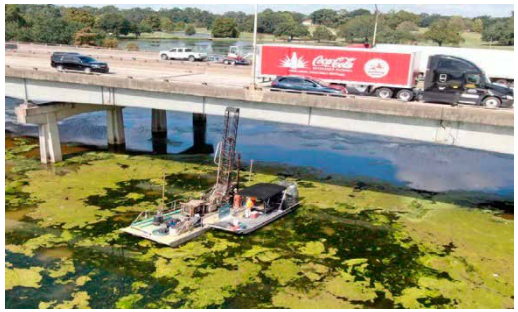
|---|---|---|---|
| **Project number** | H.004100 | **Owner's name** | Louisiana Department of Transportation |
| **Project location** | Baton Rouge, LA | **Owner's Project Manager** | Kristy Smith, P.E. |
| **Owner's address, phone, email** | 1201 Capitol Access Rd., Baton Rouge, LA, 70802-4438 / 225.379.1016 / kristy.smith2@la.gov | | |
| **Services commenced by this firm (mm/yy)** | 09/19 | **Total consultant contract cost ($1,000's)** | N/A |
| **Services completed by this firm (mm/yy)** | Ongoing | **Cost of consultant services provided by this firm ($1,000's)** | $400 |

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

Geotechnical investigation to provide client with the necessary information for planning and design I-10 widening. APS was asked thru our LADOTD geotechnical retainer to drill and sample a total of 52 deep borings starting at the washington exit and ending at the LSU lakes. Along with this drilling and sampling APS will also test for strength and engineering characteristics of the soils. A total of eight (8) over the water borings and 44 land borings with approximate 1000 triaxial compression, unconsolidated drained or undrained and atterberg limits.



**Members involved:**

**Engineering**
Sergio Aviles, P.E., Project Manager
Sairam Eddanapudi, P.E., Project Engineer
Surendra Raj Pathak, P.E., Staff Engineer

**Laboratory testing**
Sergio Aviles, P.E., QA/QC
Sairam Eddanapudi, P.E., QA/QC

**Drilling**
Melvin Vasquez, Driller Tech
Van George, Driller
Eric Bateaste, Driller

**17. Firm Experience:**

| **APS Engineering and Testing, LLC** | **Past Performance Evaluation Discipline(s)*** | Geotech |
|---|---|---|

| **Comite River Diversion Bridge at LA 67, LA 19 and LA 19 Railroad Bridge** | **Firm responsibility (prime or sub?)** | Sub |
|---|---|---|

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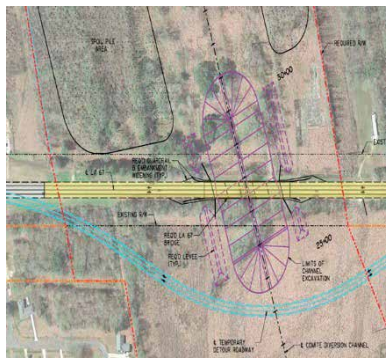
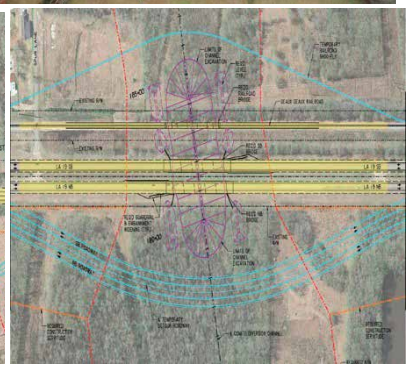
|---|---|---|---|---|---|
| **Project number** | H.001352 and H.002273 | **Owner's name** | Huval & Associates, Inc. | | |
| **Project location** | East Baton Rouge Parish, LA | | **Owner's Project Manager** | Thomas M. Gattle, III, P.E. | |
| **Owner's address, phone, email** | Huval & Associates, Inc. / 922 West Pont Des Mouton Road Lafayette, LA 70507 / 337.234.3798 / tgattle@huvalassoc.com | | | | |
| **Services commenced by this firm (mm/yy)** | 05/20 | | **Total consultant contract cost ($1,000's)** | | N/A |
| **Services completed by this firm (mm/yy)** | Ongoing | | **Cost of consultant services provided by this firm ($1,000's)** | | $115 |

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

Geotechnical engineering to provide client with the necessary information for planning and build of LA 19 rr bridge - slope stability (embankment), LA 19 rr bridge - embankment/ mse wall settlement/ retaining wall, LA 19 twin bridges - ppc piles, LA 67 bridge - drilled shafts. All the necessary design will be done by APS. No issue as of today. APS also drilled and sampled all the borings for LADOTD thru the geotechnical retainer and tested in house by APS laboratory.





**Members involved:**

**Engineering**

Sergio Aviles, P.E., Project Manager
Sairam Eddanapudi, P.E., Project Engineer
Surendra Raj Pathak, P.E., Staff Engineer

**Laboratory testing**

Sergio Aviles, P.E., QA/QC
Sairam Eddanapudi, P.E., QA/QC
Donna Easterly, Lab Manager
Cindy Falks, Lab Tech

**Drilling**

Melvin Vasquez, Driller Tech
Van George, Driller
Eric Bateaste, Driller
Oscar Johnson, Driller Tech
Trenton Anderson, Driller Tech

24-102

# Section 18

## 18. Approach and Methodology:
## Project Background

This project will consist of the design of a new two-lane roadway with 12' travel lanes and 8' shoulders located in Bossier Parish, LA. Several corridors were analyzed as a part of the Environmental Assessment (EA) completed in 2010. Based on the selected alignment, 3R, from this E.A., the new roadway will begin at LA 3 (Benton Rd) just north of Mondello Way and just south of Chinaberry Drive. It will extend to the east approximately eight miles and tie into Bellevue Road at the Winfield Road intersection. Additionally, five bridges are to be constructed along the route. These will consist of two cast-in-place slab spans and three precast prestressed (LG type) girder bridges. Finally, Right-of-Way (ROW) clearance will be provided for the future widening to a four-lane divided highway.

Roadway Design Process

1. Establishing Control for the Project – LADOTD Location & Survey Section must first provide survey control for the project so that our Team Member Raley and Associates may initiate the topographic survey.
2. Topographic and Property Survey – Raley and Associates will complete the topographic survey. As this is a new alignment roadway, we know that ROW will need to be acquired throughout the length of the project limits. Therefore, Raley, who already have vast property records in the area having subdivided many parcels along the route, will be able to pick up any additional information needed for the property survey while mobilized for the topographic survey.
3. Preliminary Design

| 30% Preliminary Plans | 60% Preliminary Plans | 90% Preliminary Plans | 100% Preliminary Plans |
|---|---|---|---|
| Survey of existing conditions | Hydraulics/Drainage Calculations | Plan-in-Hand Meeting | ROW Maps (if necessary) |
| Title Sheet, Proposed Typical Section, Plan Profile Sheets | Drainage Plan Profile Sheets, Drainage Maps, Geometric Details, Cross Sections | List of potential items, Summary Sheets with tables set up, sequence of construction | Joint Plan Review Meeting |
| Establish Design Criteria | Preliminary Design Report | Final Design Report | Revised Final Design Report (if necessary) |
| Geometric Review | Preliminary Hydraulics Review | Initial Design Exception or Waiver request (if necessary) | Final Hydraulics Review |

4. Final Design – if requested, Final Plan services will be provided by supplemental agreement after environmental has been cleared.

Project Obstacles and Solutions

1. Providing ROW Clearance for Future Construction
   - *Obstacle:* The Environmental Assessment for this project was completed in 2010. This EA was based on the future roadway consisting of a 5-lane urban collector with a 16' wide two way left turn lane. However, this project is scoped for future widening to a four-lane divided highway. Current LADOTD Minimum Design Guidelines developed in 2017 call for a preferred at grade median width of 50' for urban roadways. Therefore, in order to meet preferred minimum design guidelines, our required ROW width/footprint will be larger than anticipated in the EA. A wider ROW footprint likely means more impacts to property owners. For example, the EA shows the selected alignment corridor directly over Bayou Crossing Dr at Old Brownlee Rd (approximately as shown by red lines in the photo below). A wider footprint here may lead to the acquisition of the business to the north and/or the residence to the south.

   - ***Solution:*** One solution to consider will be utilizing a median less than the 50' preferred to develop ROW taking lines. For example, a 30' raised median would save 20' of critical ROW. Additionally, this median would still be wide enough to provide opposing offset left turn lanes, where required, allowing for sight distance to safely negotiate the left turns. While a 30' median would require a design waiver to be documented on the project design report form, this solution would be well above the minimum "accepted" value of 6' raised median.
2. Recent Development Since Completion of Environmental Assessment
   - *Obstacle*: Since the completion of the EA, there has been some residential development along the selected alignment which was not originally accounted for. For example, just east of Swan Lake Road, a new subdivision road (Caledonia Drive) has been developed along with several residences. The EA shows the selected alignment corridor potentially impacting these homes (approximately as shown by red lines in the photo below).

- ***Solution*:** Careful consideration must be given to developing our proposed horizontal alignment to minimize impacts as much as feasibly possible. A potential solution will be to slightly modify the alignment to the north at this location.

3. Selected Alignment falls on Property Lines
   - *Obstacle:* According to the EA, there are several locations where the proposed corridor appears to fall along the property line of two adjacent properties. For example, from Old Brownlee Road to the east for about 4,500', the selected alignment corridor straddles the property lines (approximately as shown by the red lines in the photo below). This can add unnecessary ROW acquisition work by increasing the number of affected property owners, adding to project costs and lengthening the schedule.

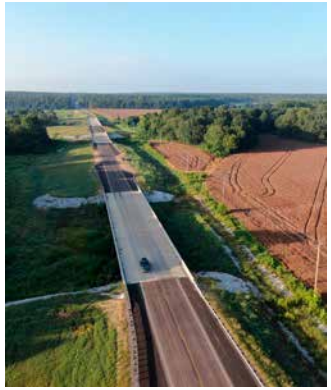

   - ***Solution:*** We will look to mitigate this by adjusting the alignment in these locations in order to minimize the number of property owners affected. In just the photo above, shifting the alignment slightly north can potentially reduce the number of affected properties from 9 to 4. We will consider how these alignment adjustments will affect our roadway geometry, and ensure that we are not incorporating unnecessary curves just to reduce the impacts to a property owner. We will take a holistic look at the corridor and implement these adjustments after thorough analysis.

**Project Features**

- A review of Google indicates there are 2 existing traffic signals south and north of the planned intersection at Benton Road (LA 3). One on the south end at Brownlee Road (2400'+/-) and one on the north end at Wemple Road (2300'+/-). This new intersection with LA 3 is likely to require a signal also and it will be midway between the existing signals. These signals will be less than the ½ mile spacing requirement of the LADOTD. A similar scenario exists on Airline Drive (LA 3105) adjacent to the proposed intersection. Our traffic engineers will evaluate these proposed intersections and make recommendations in accordance with the Traffic Engineering Process and Report that could include relocating existing traffic signals, implementing roundabouts, a super street or another solution.
- There is a sidewalk along Swan Lake Road on the East side. There will be a need to accommodate pedestrians at the intersections with the new roadway. Additionally, the multi-use path on the west side of Brownlee Road will need to be accommodated within the project and will require signage and perhaps control, at the new intersection.
- The existing Two Way Left Turn Lane (TWLTL) on Bellevue Road ends about 275' south of the intersection of Winfield Road, where this new alignment will connect. Widening Bellevue on the west side would eliminate the relocation of Over Head Electrical (OHE) that exists on the east side.
- The levee adjacent to Red Chute Bayou will require a permit from the levee district for the crossing.
- The new intersection with Airline Drive is adjacent to where the existing roadway changes from subsurface drainage to open ditch. This will affect the design improvements for Airline Drive.

## Bridge Approach

Gresham Smith's bridge design team is highly experienced in designing projects with multiple bridges within the same project. The skills required include the coordination of multiple design teams with concurrent design, incorporating repetitive details to minimize both design and construction costs, and a solid QC/QA plan. For the Mississippi Department of Transportation (MDOT), Gresham Smith designed a reconstruction project on SR 178 in Simpson County that included two new bridge structures and replaced a third existing bridge with a twin cell box culvert. In 2019, Gresham Smith designed a 5-span and a 10-span bridge to replace deteriorating timber bridges. During the design process, MDOT added two additional bridges to Gresham Smith's task – bridges that were originally to be designed in-house by MDOT. The Simpson County project is currently under construction.



Gresham Smith also designed two off-line projects for MDOT in Marshall County. In 2017, Gresham Smith designed five bridges on SR 309 and in 2022, we completed the designs for four bridges and a box culvert on SR 178. Both of these Marshall County projects utilized two bridge design teams.

In 2021, Gresham Smith's bridge team designed emergency bridge repairs, including a crash wall supported by helical piles on Spring Street (US71) in downtown Shreveport. Our Baton Rouge staff is experienced with DOTD design manuals as well as geotechnical issues in NW Louisiana.

For this Bossier Parish project, Gresham Smith is proposing utilizing two bridge design teams. John Weres, P.E. will serve as the overall bridge lead and oversee Bridge Team 1 (Gresham Smith). Jeffrey McRae, P.E. will lead Bridge Team 2 (MBI). Combined, John and Jeffrey have over 70 years of bridge design experience. The MBI team will design the culverts and two western bridge structures while Gresham Smith team will design the three eastern bridges. The designs will be based on the currently scoped two-lane urban cross-section. However, the hydraulic evaluation, alignment, and bent locations will consider the future expansion of the corridor so that the newly constructed structures can easily be modified for a future, wider corridor, considering skew alignment and streambank issues. Both bridge teams will follow the same QA/QC process, led by Tom Tran, P.E.

## Project Team

Gresham Smith has established a core management team specific for this project that will include the major efforts for topographic and boundary surveying, roadway design and bridge design. Each of our Task Leaders has proven expertise, relevant experience, and required communication and leadership skills to effectively build a blended and unified team.

**Gresham Smith** will manage all facets of the project and will be supported by our subconsultants **Michael Baker International (MBI), Raley and Associates, Inc. and APS Engineering and Testing (APS)**. The project will be managed by **Richard Savoie, P.E.** and Gresham Smith will lead the Roadway, Bridge, and Traffic related design tasks. **MBI** is very familiar with the project having completed the FONSI for the NLCOG MPO previously, which adds value to our team. **MBI** will support the Roadway and Bridge design efforts by providing a design team for those tasks, led by **Daniel Thornhill, P.E.** and **Jeffrey McRae, P.E.,** respectively. MBI will also lead any necessary environmental and hydraulics work that will be necessary for the project. **Raley and Associates** is an engineering and surveying firm located in Bossier City. They have performed topographic and boundary surveys and site designs for several large residential and commercial developments that border the selected alignment for this project, as shown in the graphic below. The experience from performing topographic surveys, the subdivision of properties and boundary work and the site development and knowledge of the existing drainage for the areas that **Raley and Associates** have, adds value to our team. **APS** completes our team by providing geotechnical expertise. **Gresham Smith** has worked will all of these subconsultants in the past and we are all very familiar with each other's business practices.


Gresham Smith's Project Executive (Principal), **Herbert "Bert" Moore II, P.E., PLS, PTOE** has over 24 years of experience in traffic engineering and operations and has served as both a consultant and as LADOTD's District 61 Traffic Operations Engineer (DTOE) for six years. As project executive, Bert will provide overall management and direction for our team, ensuring that LADOTD's and the Entity's visions for the project are achieved. Our Project Manager, **Richard Savoie, P.E.,** will coordinate the day-to-day efforts between all the tasks and subconsultants and ensure that the project stays on schedule and that all pertinent information is to our LADOTD PM through regular correspondence. Richard will also assist with the roadway design as a part of our road design team.

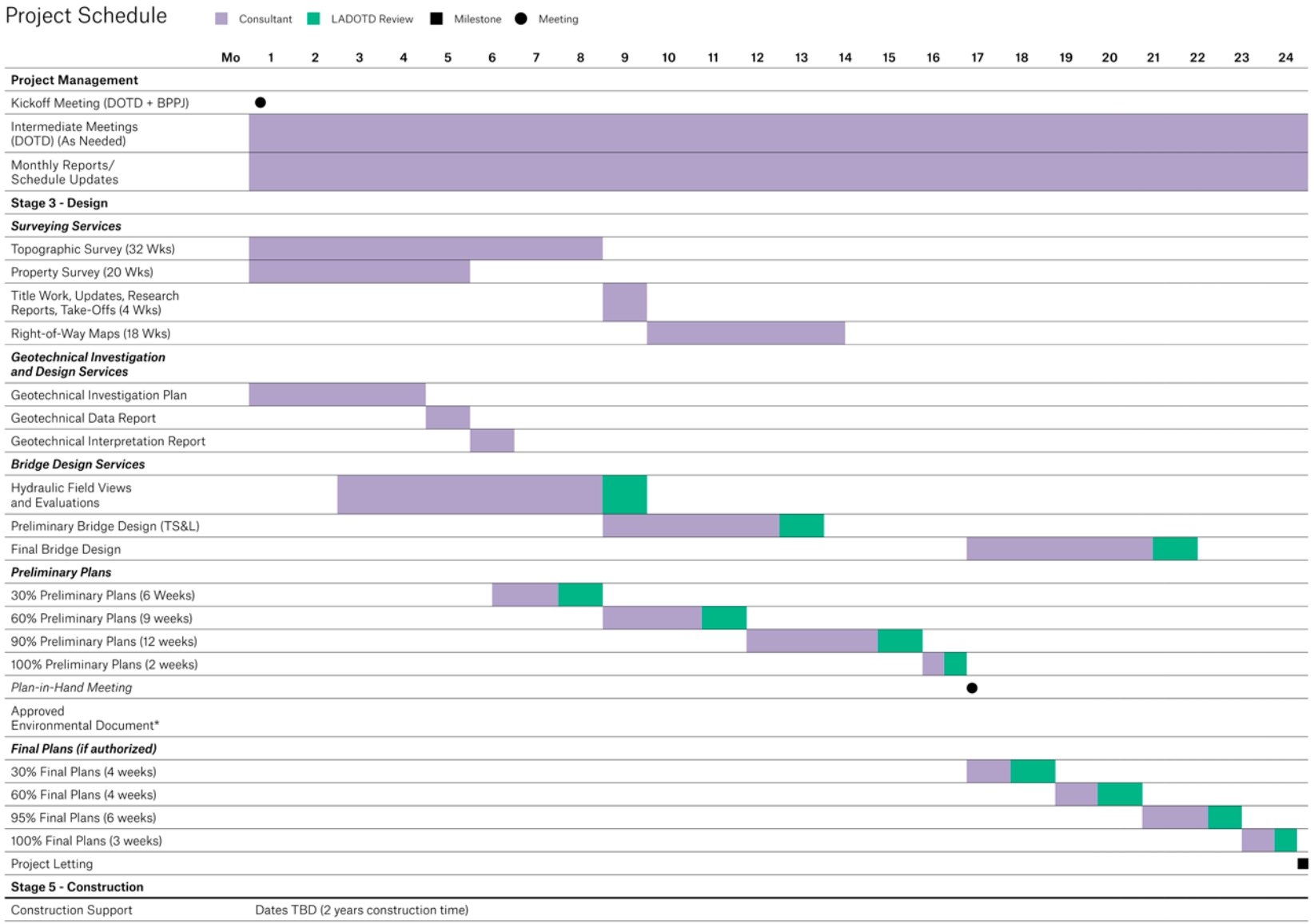
Richard will be supported by **John Weres, P.E.** who will act as our Assistant Project Manager and the task lead for the bridge design efforts. Due to the five bridges included within this project, we will have two bridge teams. Gresham Smith will design three of the bridges and MBI will design the other two. **Brennon Hughes, P.E.** will be the task lead for the roadway design efforts which will also be spread over two design teams. Brennon and his staff will perform the preliminary line and grade for this project and then we will divide the project between the Gresham Smith and MBI design teams.

**Bert Moore, P.E., PLS, PTOE** will lead the traffic engineering design for this project. Bert and his team have performed a number of traffic studies in this area for many of the developments Raley and Associates have designed, which

is another added value to our team. Based on existing volumes and our knowledge of the traffic patterns and volumes in the area, it is anticipated that there will be traffic signals, or some other type of control or improvements, required at the intersections of this proposed roadway at LA 3 (Benton Road), LA 3105 (Airline Drive), Swan Lake Road, and Winfield at Bellevue Road.

The Gresham Smith Team looks forward to your consideration for selection, and we are excited about the opportunity to make this project a success for Bossier Parish and LADOTD.

## Project Schedule




*LADOTD to update FONSI with new design footprint. Duration TBD, Contract Time stops. Final Plans not authorized until approved.


24-102

# Sections 19-23

**19. Workload:**

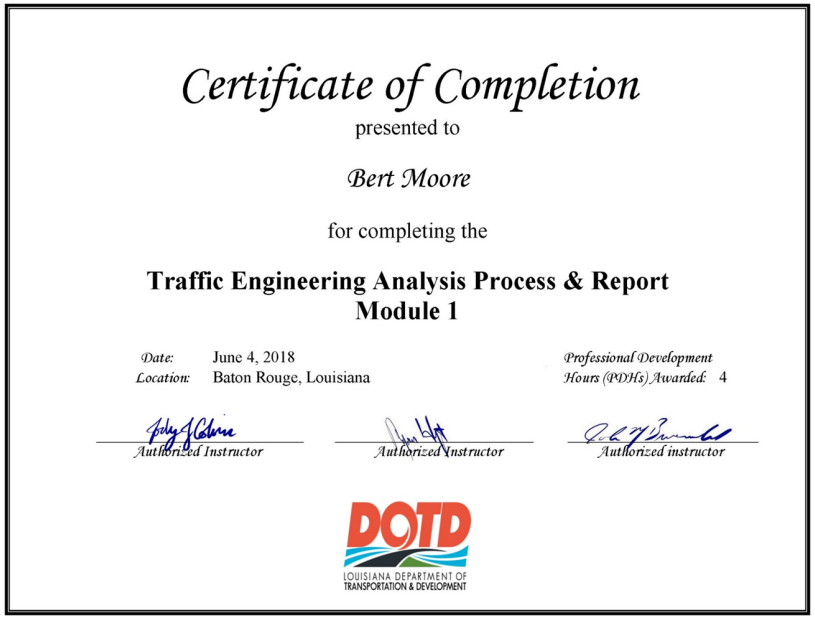
| Firm<br>ALL FIRMS MUST BE REPRESENTED IN THIS TABLE | Past Performance Evaluation Disciplines(s) * | Contract Number and State Project Number | Project Name and Location | Remaining unpaid balance** |
|---|---|---|---|---|
| Gresham Smith | Traffic | 4400005890<br>H.12018.5 | Lafayette Adaptive Traffic Signals | $102,493 |
| Gresham Smith | CE&I/OV / ITS | 4400011253 H.011500.6 | Lake Charles ITS Phase 3 | $34,931 |
| Gresham Smith | Bridge | 4400013322 H.009730.5 | Complex Bridge Inspection TO#7 | $184,993 |
| Gresham Smith | Other (LRSP/SRTPPP Designs) / Road | 4400019871 H.013720.5 | LRSP Signs and Striping - Bonner Street Bridge Pedestrian Improvements | $3,089 |
| Gresham Smith | Other (LRSP/SRTPPP Designs) / Road | 4400019871 H.013767.5 | LRSP Signs and Striping - St. Landry and St. Martin Parishes | $2,111 |
| Gresham Smith | Other (LRSP/SRTPPP Designs) / Road | 4400019871 H.013073.5 | LRSP/STRPPP Greenwells Springs & Wooddale Sidewalks | $45,335 |
| Gresham Smith | Other (LRSP/SRTPPP Designs) / Traffic | 4400019871 H.015086.5 | LRSP/STRPPP LA 14 | $122,647 |
| Gresham Smith | Other (LRSP/SRTPPP Designs) / Road | 4400019871 H.014629.5 | LRSP/STRPPP Lafourche Signing and Striping | $4,759 |
| Gresham Smith | Other (LRSP/SRTPPP Designs) / Road | 4400019871 H.015202.5 | LRSP/STRPPP Donaldsonville Signing and Striping | $6,087 |
| Gresham Smith | Other (LRSP/SRTPPP Designs) / Road | 4400019871 H.015202.5 | LRSP/STRPPP Richwood Sidewalks | $3,985 |
| Gresham Smith | CE&I/OV | 4400013851 H.009308.6 | TO#1 New Orleans DPW SRTS Sidewalk Project | $2,937 |
| Gresham Smith | CE&I/OV / ITS | 4400024424<br>H.013256.6 | I-10 Scott to Lake Charles ITS CEI | $121,865 |
| Gresham Smith | Planning | 4400021326<br>H.010074.1 | LA 70 at LA 3089 Interchange Stage 0 | $193,986 |
| Michael Baker International, Inc. | CE&I/OV | Contract No. 4400025536<br>S.P. No. H.013997 | IDIQ Contract for Construction Engineering and Inspection Services in District 61, Loc Rd. over Borrow Pit (Blind RV BT LNCH), St. James Parish | $363,114 |
| Michael Baker International, Inc. | CE&I/OV | Contract No. 4400014845<br>Task Order No. H.012018.6<br>S.P. No. H.012018.6<br>F.A.P. No. H012018 | IDIQ Contract for Construction Engineering and Inspection Services with majority of work in District 07 Statewide Adaptive Traffic Signal and Implementation, Lafayette Parish | $231,573 |



| Firm<br>ALL FIRMS MUST BE REPRESENTED IN THIS TABLE | Past Performance Evaluation Disciplines(s) * | Contract Number and State Project Number | Project Name and Location | Remaining unpaid balance** |
|---|---|---|---|---|
| Michael Baker International, Inc. | CE&I/OV | Contract No. 440001485<br>Task Order No. H.0003184.6<br>S.P. No. H.003184.6 | IDIQ Contract for Construction Engineering and Inspection Services with majority of work in District 07, I-10: Texas State Line - E. of Coone Gully, Calcasieu Parish | $434,492 |
| Michael Baker International, Inc. | CE&I/OV | Contract No. 440001485<br>Task Order No. H.013959.6<br>S.P. No. H.013959.6<br>F.A.P. No. H013959 | IDIQ Contract for Construction Engineering and Inspection Services (CE&I) with Majority of Work in District 07 Statewide Reeds Bridge Road over Calcasieu River Relief, Calcasieu Parish | $304,327 |
| Michael Baker International, Inc. | CE&I/OV | Contract No. 4400013851<br>Task Order No. H.013271.6<br>S.P. No. H0.013271.6<br>F.A.P. No. H.013271 | IDIQ Contract for Construction Engineering and Inspection Services for Safety Projects (CE&I), Statewide Tangipahoa PH Local Road Safety Upgrade, Tangipahoa Parish | $5 |
| Michael Baker International, Inc. | CE&I/OV | Contract No. 4400013841<br>Task Order No. H.012473.6<br>S.P. No. H.012473.6<br>F.A.P. No. H012473 | IDIQ Contract for Construction Engineering and Inspection Services for Safety Projects (CE&I), Statewide Marconi Dr. Shared-Use Path | $5 |
| Michael Baker International, Inc. | CE&I/OV | Contract No.4400013851<br>Task Order No. H.009308.6S.P. No. H.009308.6 F.A.P. No. H009308 | IDIQ Contract for Construction Engineering and Inspection Services for Safety Projects (CE&I), Statewide New Orleans DPW SRTS Sidewalk Project | $28,608 |
| Michael Baker International, Inc. | CE&I/OV | Contract No.4400013851<br>Task Order No. H.012527.6<br>S.P. No. H.012527.6 F.A.P. No. H012527 | Local Road Safety Upgrade (W. Feliciana)<br>West Feliciana Parish | $60,084 |
| Michael Baker International, Inc. | CE&I/OV | Contract No.4400013851<br>Task Order No. H.013082.6<br>S.P. No. H.013082.6 F.A.P. No. H013082 | Bootlegger Road Sidewalks<br>St. Tammany Parish | $45,880 |
| Michael Baker International, Inc. | ITS | Contract No. 4400011253<br>S.P. No. H.011500.6 | Retainer Contract for Intelligent Transportation Systems (ITS), Lake Charles ITS Phase 3 | $60,473 |
| Michael Baker International, Inc. | ITS | Contract No. 4400014845<br>S.P. No. H.012381.6 | IDIQ Contract for Construction Engineering and Inspection Services with majority of work in District 07 Statewide, Fiber Optic Mapping and Management Statewide, Calcasieu Parish | $24,673 |
| Michael Baker International, Inc. | ITS | Contract No. 4400024424<br>S.P. No. H.013256 | I-10 ITS Scott to Lake Charles | $69,824 |
| Michael Baker International, Inc. | Road/Bridge | Contract No. 4400025026<br>S.P. No. H.015338<br>F.A.P. No. H015338 | Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program – District 07, Supplemental Agreement No. 1 | $1,200,000 |

| Firm<br>ALL FIRMS MUST BE REPRESENTED IN THIS TABLE | Past Performance Evaluation Disciplines(s) * | Contract Number and State Project Number | Project Name and Location | Remaining unpaid balance** |
|---|---|---|---|---|
| Michael Baker International, Inc. | Road/Bridge | Contract No. 4400021519<br>S.P. No. H.012030.5<br>F.A.P. No. H012030 | US 371: KCS RR Overpasses HBI | $279,995 |
| Michael Baker International, Inc. | Road/Bridge/ Environmental | Contract No. 4400019379<br>S.P. No. H.013797<br>F.A.P. No. H013797 | LA 30: EBR PL-I-10 | $107,285<br>$51,325<br>$199,243 |
| Michael Baker International, Inc. | Environmental | Contract No. 4400005484<br>S.P. No. H.005168<br>F.A.P. No. DE-9208 (500) | NORG EIS, New Orleans, Louisiana | $651,241 |
| Michael Baker International, Inc. | Environmental Road | Contract No. 4400005484<br>S.P. No. H.005168 | NORG – Avondale PEL Study, New Orleans, Louisiana<br>Supplemental Agreement | $732,824<br>$36,618 |
| Michael Baker International, Inc. | Other (Water Resource) | Contract No. 4400017092<br>Task Order No. 2 | Collection of Existing Watershed Datasets, Models, and Studies; and Proposition of Modeling Design Approach, Schedule and Costs, Region 6 | $345,715 |
| Michael Baker International, Inc. | Other (Water Resource) | Contract No. 4400017092<br>Task Order No. 3 | Collection of Existing Watershed Datasets, Models, and Studies; and Proposition of Modeling Design Approach, Schedule and Costs, Region 6 | $1,316,892 |
| Michael Baker International, Inc. | Other (Water Resource) | Contract No. 4400017090<br>Task Order No. 2 | Collection of Existing Watershed Datasets, Models, and Studies; and Proposition of Modeling Design Approach, Schedule and Costs, Region 4 | $666,577 |
| Michael Baker International, Inc. | Other (Water Resource) | Contract No. 4400017090<br>Task Order No. 3 | Collection of Existing Watershed Datasets, Models, and Studies; and Proposition of Modeling Design Approach, Schedule and Costs, Region 4 | $187,388 |
| Michael Baker International, Inc. | Other (Water Resource) | Contract No. 4400017067<br>Task Order No. 1 | Collection of Existing Watershed Datasets, Models, and Studies; and Proposition of Modeling Design Approach, Schedule and Costs, Region 1 | $1,888,807 |
| Michael Baker International, Inc. | Other (Water Resource) | Contract No. 4400023101<br>Task Order No. 1<br>S.P. No. H.015040.1& H.015041.1 | IDIQ Contract for Louisiana Watershed Initiative/ State Projects Program (LWI-SPP) – Group 1<br>Beauregard, Vernon, and St. Landry Parishes | $393,909 |
| Michael Baker International, Inc. | Other (Water Resource) | Contract No. 4400023101<br>Task Order No. 2<br>S.P. No. H.015044.1 | IDIQ Contract for Louisiana Watershed Initiative/ State Projects Program (LWI-SPP) – Group 1<br>Beauregard, Vernon, and St. Landry Parishes | $218,411 |
| Michael Baker International, Inc. | Other (Aviation) | Contract No. 4400019130<br>Task Order No. 1 | IDIQ Contract for Statewide Aviation Program Update – Phase II Statewide | $4,980 |
| Raley and Associates, Inc.*** | No Active Contracts with LADOTD | No Active Contracts with LADOTD | No Active Contracts with LADOTD | No Active Contracts with LADOTD |
| APS Engineering and Testing, LLC | Geotech | Contract No. 4400019011<br>H.013127 | Retainer Contract for Geotechnical Services | $275,300 |
| (Add rows as needed) | | | | DO NOT SUM |

## 20. Certifications/Licenses:



*Certificate of Completion*

presented to

*Bert Moore*

for completing the

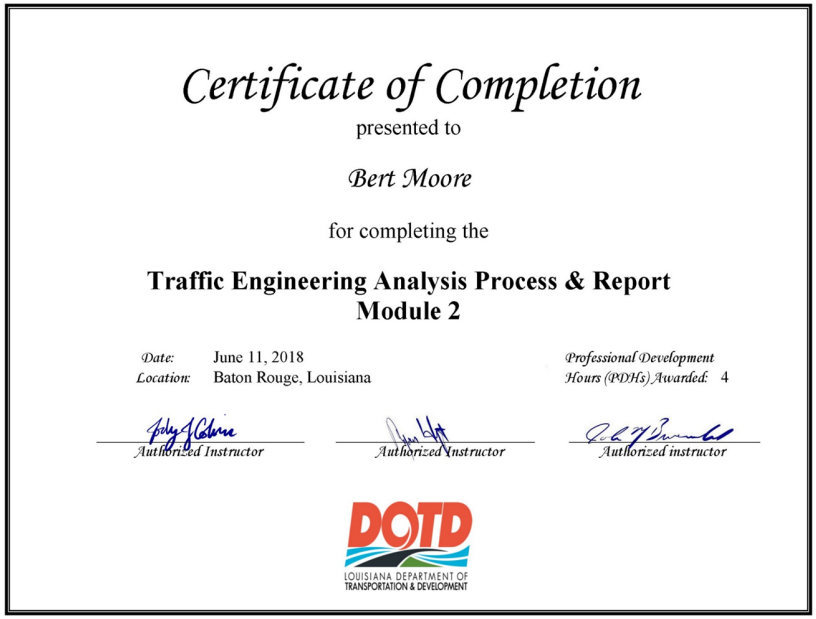
**Traffic Engineering Analysis Process & Report**
**Module 1**

*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

*Bert Moore*

for completing the

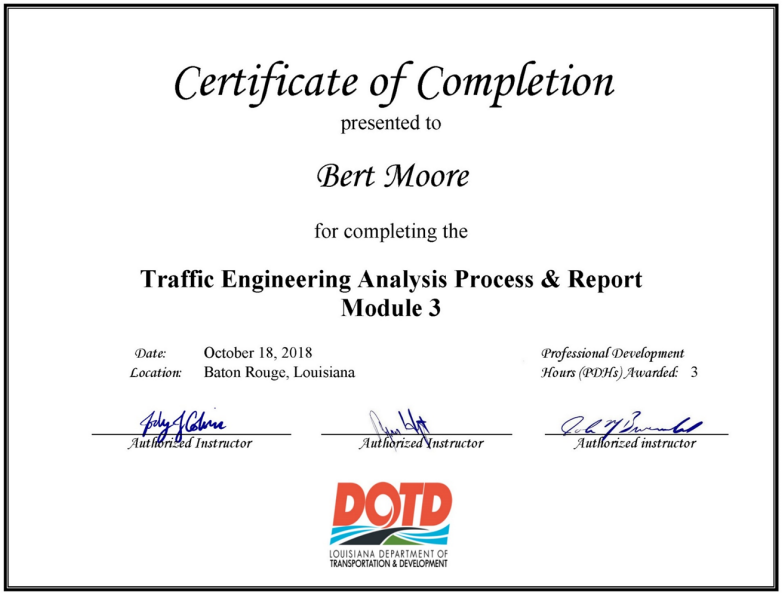
**Traffic Engineering Analysis Process & Report**
**Module 2**

*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



*Certificate of Completion*

presented to

*Bert Moore*

for completing the

**Traffic Engineering Analysis Process & Report**
**Module 3**

*Date:* October 18, 2018
*Location:* Baton Rouge, Louisiana

*Professional Development Hours (PDHs) Awarded:* 3

*Authorized Instructor* *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

U.S. Department of Transportation
Federal Highway Administration

Federal Highway Administration
RESOURCE CENTER

*Certificate of Completion*

BERT MOORE

has successfully completed the course entitled:

**Designing Pedestrian Facilities for Accessibility (DPFA)**

*Location:* Baton Rouge, Louisiana
*Dates:* May 08-09, 2017

*Hours of Instruction enhancing Professional Development:* 12 hrs

Patrick E. Gomez
*Civil Rights Specialist*
*Federal Highway Administration*

Ted Green
*Professional Engineer*
*New Jersey LTAP*

Certificate of Training

PRESENTED BY

The National Cooperative Research Program

TO CERTIFY THAT

Herbert Moore

HAS SATISFACTORILY COMPLETED 20 HOURS OF TRAINING IN:

**Highway Safety Manual Workshop**

**NCHRP 17-38**

Karen K. Dixon, PhD, P.E.
Ida van Schalkwyk, PhD
Larry F. Sutherland, P.E.
Instructors

December 1-3, 2010
Date

Baton Rouge, Louisiana
Location

Certificate of Training

PRESENTED BY

Louisiana Local Technical
Assistance Program

TO CERTIFY THAT

Bert Moore

HAS SATISFACTORILY COMPLETED 3 PROFESSIONAL DEVELOPMENT HOURS IN:

**Regional Crash Data Workshop**

Director of Louisiana LTAP Center

February 23, 2017
Date

Baton Rouge, Louisiana
Location

ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

**Herbert Moore**
has attended
**Traffic Control Supervisor Refresher-LA State Specific**
Training Course

4/7/2023 to 4/7/2027
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 American Traffic Safety Services Association

*This is to affirm that*

Herbert Moore

*has satisfied the requirements to be designated as a*

**CERTIFIED FLAGGER**

*Issue Date* 5/9/2023

*Exp. Date* 5/8/2027

*State Issued* LA

ATSSA

*Instructor Name*

*Instructor Signature*

A1000126198

Verify at Flagger.com

U.S. Department of Transportation
Federal Highway Administration

National Highway Institute

nhi national highway institute

# Certificate of Training

## BRENNON HUGHES

has participated in

**FHWA-NHI-380096V Modern Roundabouts: Intersections Designed for Safety**

hosted by

LA DOTD/LTRC

Date: September 8 and 9, 2020
Location: Virtual Delivery
Hours of Instruction: 6

Instructor

Instructor

Local Coordinator

Thomas Harman
Thomas Harman, Director
National Highway Institute

ATSSA TRAINED

# PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

**Brennon Hughes**
has attended
**Traffic Control Supervisor Refresher-LA State Specific**
Training Course

8/5/2022 to 8/5/2026
Training Valid Through

Baton Rouge, LA
Location

Director of Training

President, CEO

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

ATSSA American Traffic Safety Services Association ATSSA.com

U.S. Department of Transportation
Federal Highway Administration

National Highway Institute

nhi national highway institute

# Certificate of Training

## Brennon Hughes

has participated in

FHWA NHI #380091V
Planning and Designing for Pedestrian Safety

hosted by

Louisiana DOTD

Date: October 25thru 28, 2021
Location: Online Virtual Delivery
Hours of Instruction: 18

Joe Gilpin Digitally signed by Joe Gilpin Date: 2020.12.03 23:15:13 -05'00'
Instructor

Keith Sinclair Digitally signed by Keith Sinclair Date: 2020.12.03 23:16:51 -05'00'
Instructor

Allison H. Landry, CGMP
Local Coordinator

Thomas Harman
Thomas Harman, Director
National Highway Institute

# Certificate of Attendance

presented to

*Brennon Hughes*

for attending

**Advanced Highway Safety Manual Training – Interactive Highway Safety Design Model (IHSDM)**

16 Professional Development Hours

*June 5-6, 2018*

Baton Rouge, Louisiana

Authorized Instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

ATSSA
SAFER ROADS SAVE LIVES

American Traffic Safety Services Association

*This is to affirm that*

Brennon Hughes

*has satisfied the requirements to be designated as a*

**CERTIFIED FLAGGER**

*Issue Date* 5/26/2023

*Exp. Date* 5/25/2027

*State Issued* LA

A1000127001

ATSSA
*Instructor Name*

*Instructor Signature*

Verify at Flagger.com

# Certificate of Completion

presented to

*Rebecca LaPorte*

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

*Rebecca LaPorte*

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

# Certificate of Completion

presented to

*Rebecca LaPorte Murray*

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

# Certificate of Attendance

presented to

*Rebecca LaPorte*

for attending

**Advanced Highway Safety Manual Training –**
**Interactive Highway Safety Design Model (IHSDM)**

16 Professional Development Hours

*June 5-6, 2018*

Baton Rouge, Louisiana

Authorized Instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

The American Traffic Safety Services Association

Hereby recognizes that

Rebecca Murray

has attended

Traffic Control Supervisor Refresher-LA State Specific

Training Course

2/14/2020 to 2/14/2020
Date

Baton Rouge, LA
Location

ATSSA
SAFER ROADS SAVE LIVES

Training & Products Dept. Director

President, CEO

ATSSA
SAFER ROADS SAVE LIVES

AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION

This is to affirm that

Rebecca Murray

has satisfied the requirements to be designated as a

CERTIFIED FLAGGER

Expiration Date 2/8/2024 State Issued in LA

Instructor Signature

Verification available by calling 1-877-642-4637 or at http://www.flagger.com

# Certificate of Completion

presented to

*Payton Nickles*

for completing the

**Traffic Engineering Analysis Process & Report**
**Module 1**

*Date:* March 29, 2022
*Location:* Baton Rouge, Louisiana

*Professional Development Hours (PDHs) Awarded:* 3

*Authorized Instructor* | *Authorized Instructor* | *Authorized instructor*

# Certificate of Completion

presented to

*Payton Nickles*

for completing the

**Traffic Engineering Analysis Process & Report**
**Module 2**

*Date:* March 29, 2022
*Location:* Baton Rouge, Louisiana

*Professional Development Hours (PDHs) Awarded:* 3

*Authorized Instructor* | *Authorized Instructor* | *Authorized instructor*

# Certificate of Completion

presented to

*Payton Nickles*

for completing the

**Traffic Engineering Analysis Process & Report**
**Module 3**

*Date:* March 30, 2022
*Location:* Baton Rouge, Louisiana

*Professional Development Hours (PDHs) Awarded:* 3

*Authorized Instructor* | *Authorized Instructor* | *Authorized instructor*

# Congratulations!
# Kofi Ampofo-Twumasi

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

RTA DOTD

# LOUISIANA UNIFIED CERTIFICATION PROGRAM

## Disadvantaged Business Enterprise Program (DBE)

## Small Business Element (SBE)

This is to certify that under Title 49, Part 26 of the Code of Federal Regulations
& under the State of Louisiana United Certification Program (LAUCP)

**APS Engineering & Testing, LLC**

Is a Certified Disadvantaged Business Enterprise (DBE) & Small Business Element (SBE) in the following specialties:

**NC221310, NC221320, NC541330, NC541370, NC541380, NC541620, NC541690**

*NOTE: There may be other approved NAICS Codes. The online DBE Directory includes a complete list of approved codes.*

**Certificate Eligibility: October 2022 to October 2023**

*This certificate is valid through the above date provided. This firm meets the on-going programmatic standard and fulfills the annual update requirement to remain in good standing as a DBE. This certification is subject to annual verification and suspension or revocation based upon reasonable cause to believe that the firm is ineligible.*

Rhonda Wallace

**Rhonda Wallace, DBE/SBE Programs Manager**

*Louisiana Department of Transportation & Development*

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**LOUISIANA ASSOCIATED GENERAL CONTRACTORS, INC.**
666 North Street – Baton Rouge, LA 70802
Phone: 225/344-0432 * Fax: 225/344-0458
www.lagc.org

January 7, 2019

To Whom It May Concern,

This is to verify that the below listed employee of APS Engineering & Testing has completed LADOTD required ATSSA traffic control training. We are currently awaiting the results of his exam.

LA Specific Traffic Control Supervisor Refresher – December 7, 2018 – Sergio Aviles

If there are any questions regarding this issue, please contact Mr. Barry Lacy, P.E. of LADOTD at Headquarters in Baton Rouge, LA (225-379-1584) or Michael Demouy at the above captioned address.

Best Regards,

Michael Demouy – LAGC Manager

ATSSA TRAINED

# PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

**Surendra Pathak**

has attended

**Traffic Control Supervisor Virtual Training**

Training Course

12/28/2022 to
12/28/2026
Training Valid Through

,
Location

CEU: 1.50

Director of Training

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

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

Mr. Travis Ryan Estess

| License/Certificate Type - Number | Expiration Date |
| --- | --- |
| PE.0039033 | 09/30/2024 |

**Status:** Active

**21. QA/QC Plan and/or Work Plan:**

If the advertisement requires submission of a QA/QC plan, include it here. Otherwise, leave this section blank. If a QA/QC plan is included in this section and was not required by the advertisement, it will be redacted.

Gresham Smith

DOTD Project No. 44-27600

Entity Contract for Congestion Relief

Winfield Road – Bossier Parish

# Bridge Design QC/QA Plan

**Meeting our Client's Needs and Expectations for**
**TECHNICAL QUALITY, SERVICE EXCELLENCE,**
**and CONSISTENT PERFORMANCE**

August 2023

# TABLE OF CONTENTS

# 1.0 INTRODUCTION TO THE BRIDGE DESIGN QC/QA PLAN

A QC/QA program is an essential component of a successful project. The process, when executed properly by a committed bridge team, will eliminate critical errors and conflicts in the ratings and design and improve plan accuracy and quality. Most importantly, the process promotes confidence in the owner and engineer that the rating, design and construction documents reduce liability and financial risk to them. The LA DOTD's Bridge Design and Evaluation Manual – Revision 9 includes the Department's *Policy for Quality Control and Quality Assurance* which establishes the process for all bridge designs performed on LA DOTD projects. This QC/QA Plan has been developed with respect to both the LA DOTD and GRESHAM SMITH policies specifically for the Entity Contract for Congestion Relief, Winfield Road – Bossier Parish.

## 1.1 Alignment of LA DOTD and GRESHAM SMITH'S QC/QA Policies

The LA DOTD policy is well aligned with GRESHAM SMITH's QC/QA program. One key difference in the two policies is that the LA DOTD Bridge QC/QA policy is specific to the design of bridges exclusively, while the GRESHAM SMITH Quality Management System (QMS) is applicable to all disciplines associated with a specific project.

GRESHAM SMITH's commitment to quality is rooted in our desire to meet our clients' needs and expectations for technical quality, service excellence and consistent performance. Quality is a pillar within our overall Practice Excellence model and includes a QMS that is built-in to our processes throughout a project life-cycle.

GRESHAM SMITH is a practice-led organization dedicated to the success of our clients and the development of our employees. Through our QMS, we strive for the continuous improvement of our work practices through the consistent application of established processes for the mutual success of GRESHAM SMITH's clients and the firm. The executive management team is fully committed to our QMS as a means to achieve firmwide operational goals. Our QMS is based on criteria found in the International Standard ISO-9001.

We are committed to accomplishing the following:

- Partnering with our clients to provide them with consistent quality in our deliverables, meeting their needs and expectations, and providing a service experience that results in repeat clients,
- Planning our work so that we deliver on our obligations,
- Providing the tools and processes to our employees to accomplish their work in a consistent and efficient manner,
- Training our employees to meet the requirements of the business and our clients,
- Promoting a practice that fosters collaboration and incorporates innovation,

- Measuring our performance against objectives to confirm we are improving, and communicating results throughout the firm and to our clients,
- Auditing our processes to benchmark new goals, verify compliance through multiple points of feedback, and identify opportunities for improvement,
- Continually improving our QMS to enhance its effectiveness,
- Utilizing a dedicated Quality Director responsible for monitoring the quality system and reporting regularly to the Management Team on the system's implementation, status and effectiveness.

## 1.2 Responsibility for QC/QA and the LA DOTD's Oversight Role

In conversations with the LA DOTD's staff and from review of the LA DOTD's Bridge QC/QA policy, it is apparent that the primary expectation is that consulting engineers contracting with the LA DOTD take full responsibility for their submittals at all stages of the bridge design process. By the assignment of this responsibility, the LA DOTD's bridge design staff expects to provide oversight on the design process but does not expect to be responsible for the checking of bridge designs and plan documents. Specifically, the LA DOTD's Bridge Task Manager will be responsible for the following project tasks, as described in the LA DOTD's Bridge QC/QA policy:

- Develop the bridge design scope of work, labor estimate, design team personnel requirements, and selection evaluation criteria for preparation of the solicitation.
- Participate in the proposal evaluation committee and the selection of the most qualified design team, evaluating design team qualifications, experience and QC/QA plan.
- Initiate a bridge design/rating kickoff meeting, covering items such as the staffing plan, QC/QA plan, project schedule and budget, share expectations and consultant rating criteria, bridge design criteria, and other project management agenda items per the LA DOTD checklist.
- Review and approve the Design Criteria and TS&L submittals for designs. Coordinate revisions in the Design Criteria with the design team for the project duration.
- Monitor the Design Team's implementation of their QC/QA plan.
- Maintain a Project Log sheet recording all major project activities (Project Meetings, Submittals, LA DOTD Review Comments, Major Decisions, etc).
- Review all Design Team submittals, intended to be a cursory review for constructability, consistency and clarity. These reviews are not intended to be a secondary QC of the Design Team's work.
- Monitor project schedule and milestone deliverables.
- Monitor Design Team effort with respect to scope and budget; process supplemental agreements; monitor claims avoidance.

- Review and approve invoices; verify Design Team staff is consistent with proposal; Review and approve qualifications of replacement staff proposed by the Design Team, if necessary.
- Perform a consultant rating for each formal submittal by the Design Team; share ratings and provide feedback to Design Team.
- Archive final bridge design files.

## 1.3 Definitions of QC and QA

An understanding of the definition of Quality Control (QC) and Quality Assurance (QA), as well as the responsibilities contained in these processes is an important component of GRESHAM SMITH's QMS and the LA DOTD's Bridge QC/QA policy. These key definitions are summarized below:

- **Quality Control (QC):** This process involves the procedure of checking the accuracy and consistency of calculations and drawings, detecting conflicts, design errors and omissions, and the procedure for resolution of internal comments, correcting and verification of revisions. Also, specific to bridge design, the process verifies that all bridge components are adequately designed for the specified limit stated in the AASHTO LRFD Bridge Design Specifications and the LA DOTD Bridge Design Manual and Memoranda.
- **Quality Assurance (QA):** This process involves the review of the QC documents to verify that the Quality Control (QC) procedure has been completed in accordance with GRESHAM SMITH's QMS and the LA DOTD Bridge QC/QA policy. In addition, the QA process verifies that the QC process was effective in preventing design and plan errors and assuring consistency.

## 1.4 Evidence/Verification of QC and QA Activities

GRESHAM SMITH's QMS fully documents the QC and QA processes for all intermediate and final submittals, providing evidence to the LA DOTD that our design team has executed the QC/QA procedures in accordance with the policy.

# 2.0 ROLES AND RESPONSIBILITIES

Meeting or exceeding the provisions of the LA DOTD Bridge QC/QA policy, the GRESHAM SMITH QMS requires that the quality control processes be completed for all design disciplines for all submittals. For this Program, as it pertains to QC/QA, the roles and responsibilities of the design team are described below, with identification of specific staff shown in the Organization Chart.

## 2.1 Quality Assurance Manager

The QA Manager (Tom Tran, PE) will be responsible for assurance that the QC process has been completed, documented and properly filed in project records. The QA Manager will oversee the communication and training of the QC procedures to the project team, including subconsultants. The QA Manager is responsible for the documentation of this training (sign in sheet, development of the training course) and for filing these documents in the project directory, available for audit. The QA Manager is responsible for certifying that a submittal deliverable has met the requirements of the GRESHAM SMITH QMS and the LA DOTD Bridge QC/QA policy and can be released to the client.

## 2.2 Original Designers and CADD Design Personnel

The original designers are responsible for preparing original calculations and plan drawings in accordance with the direction provided by the Project Plan and associated pre-planning references and design tools (i.e. – Design Criteria, Technical Task Protocols, Design Tools, Validated Software, etc.). In the QC/QA process, the original designers are responsible for the timely, complete and effective preparation of the calculations and plans, incorporating weekly design coordination directives during the design development. The original designers may be professional engineers or engineering interns.

The original designers are responsible for actively resolving comments received at each level of QC (Discipline, Independent Peer, and Inter-Discipline) and for making the necessary corrections in advance of the next level of QC or QA reviews. All design personnel (Engineering and CADD designers) will be trained in the QC/QA procedures by the Quality Assurance Manager. Evidence of the training (sign in sheets, copy of training course) will be filed in the project directory, available for audit.

## 2.3 Discipline QC Reviewers

This level of review will be completed by experienced engineers who are responsible for the detailed checking of all calculations, specifications, special provisions and plan documents. For this program, we anticipate this level of review will be performed by GRESHAM SMITH staff or the corresponding subconsultant, as indicated in the organization chart. If the original calculations are prepared by a professional engineer, the Discipline QC reviewer may be either another professional engineer or an

experienced engineering intern. If the original calculations are prepared by an engineering intern, the Discipline Review will be completed by an experienced professional engineer. This approach is in compliance with LA DOTD policy. A LA professional engineer will serve as either the lead design engineer or the QC reviewer.

The Discipline QC reviewer will be responsible for documenting all comments, pursuing resolution with the original designer or detailer and for progressing the QC documents (calculations, plans and QC forms) to completion prior to forwarding to the Independent Peer QC and Inter-Discipline QC reviewers. The Discipline QC reviewers will be trained in the QC/QA procedures by the Quality Assurance Manager. Evidence of the training (sign in sheets, copy of training course) will be filed in the project directory, available for audit.

## 2.4 Independent Peer QC Reviewers

Independent peer reviews are not anticipated for this project due to the non-complex classification assigned to this project. Should a future supplement or task order require such an evaluation, an amendment to this document will be provided. Standard forms for independent peer reviews are included in the appendix for general reference.

## 2.5 Inter-Discipline QC Reviewers

This level of review will be completed by Discipline Task Leaders (i.e. – Bridge, Geotechnical, Roadway, MOT, Drainage, Traffic, CADD, etc) who are responsible for an oversight review of the plans intended to identify conflicts between the disciplines and to identify plan consistency issues not identified in the more detailed Discipline QC review. For this project, we anticipate this level of review will be completed by the Discipline Leads, comprising of GRESHAM SMITH and our teaming partners. This level of review is required by GRESHAM SMITH's QMS policy and is not intended to replace the Independent Peer Bridge QC review.

The Inter-Discipline QC reviewer will be responsible for documenting all comments, pursuing resolution with the original designer or detailer and for progressing the QC documents (calculations, plans and QC forms) to completion prior to forwarding to the Quality Assurance Manager for his QA review. All design personnel, including each Inter-Discipline QC reviewer will be trained in the QC/QA procedures by the Quality Assurance Manager. Evidence of the training (sign in sheets, copy of training course) will be filed in the project directory and available for audit.

## 2.6 Engineer of Record

The Engineer of Record for this project will be assigned by the supervisor or discipline lead on the project team for each task assignment. The Engineer of Record is responsible for the supervision of the calculation, plan and special provision preparation, and is responsible for participation in or oversight of the QC and QA review processes. The Engineer of Record must be licensed to practice engineering in the State of Louisiana; and must have demonstrated experience in the design of

similar structures. In addition to overseeing the calculations and plan submittal thru the QC/QA process, the Engineer of Record is responsible for obtaining the seal and signature of any co-signed sheets in the bridge plans (geotechnical, H&H, etc). The Engineer of Record (EOR) is also responsible for assembling the complete final calculation documents in the format prescribed by the LA DOTD, assuring that all plan sheets include the designer's, design checker's, detailer's and detail checker's initials and for sealing and ensuring special provisions are accurately shown on the construction proposal.

The Engineer of Record will be trained in the QC/QA procedures by the Quality Assurance Manager. Evidence of the training (sign in sheets, copy of training course) will be filed in the project directory, available for audit.

The Engineer of Record for the bridge design related activities for this project is proposed to be John S. Weres, PE, the Louisiana Bridge Manager for GRESHAM SMITH. A separate Engineer of Record may be assigned for a particular bridge project at a later time, but we would consult with DOTD prior to that assignment.

# 3.0 PRE-PLANNING ACTIVITIES

Both the LA DOTD's and GRESHAM SMITH's QC/QA policies contain careful project execution planning, document control procedures, communication protocols and specific QC and QA procedures.

## 3.1 Development of the Project Plan

The GRESHAM SMITH team will prepare a Project Plan for distribution to the design team. The plan will contain:

- A project background description and scope summary,
- A design criteria document prepared in compliance with the LA DOTD's checklist. The design criteria document will be submitted to the LA DOTD for review and concurrence,
- Identification of the project team members, organization chart, contact information, and guidance on internal and external communication,
- Identification of all deliverables,
- Project design schedule and task budgets,
- Description of the project directory structure, filing of external communication and file naming conventions, etc.,
- Organization of calculation documents, in compliance with the LA DOTD's QA/QC policy,
- QC and QA procedures, responsibilities and documentation of QC/QA training,
- Specific technical task protocols, design tool templates and design tool validation documentation,
- Templates of all project forms (Letter, Memorandum, Meeting Minutes, Design tool validation forms, Drawing and Calculation QC forms (LA DOTD and GRESHAM SMITH), Quality Assurance forms (LA DOTD and GRESHAM SMITH) to use on the project,
- Description of internal project quality auditing, continual improvement, and client feedback processes.

The project plan is a living document, and will be revised as the design criteria, scope or other internal procedure is revised. As stated in the LA DOTD's QC/QA policy, revisions in the design criteria will be forwarded to the LA DOTD for review and concurrence.

## 3.2 Project Directory Structure and Bridge Calculation Document Organization

The GRESHAM SMITH QMS policy has established a standardized project directory structure for the documentation of all projects delivered by GRESHAM SMITH. However, this structure may be modified to meet specific requirements of the client and our teaming partners, including the LA DOTD's preferences and file naming requirements as established in the LA DOTD's ProjectWise procedures.

## 3.3 Development of Technical Task Protocols, Design Tools, and Validation of Software

The design team will prepare technical task protocols for the purpose of documenting and providing detailed direction on specific design tasks. The protocols will provide direction on the specific use of design tools and validated software involved in the completion of the task. The documents will be controlled; revisions to the protocols will be noted by revision number and updated in the Project Plan. All revisions to task protocols will be communicated to design staff. Design Tools (i.e. – Spreadsheets, MathCAD sheets, etc.) will be developed and utilized for specific design calculation functions. All design tools that are prepared will be validated as required by the GRESHAM SMITH QMS, documented, filed and available for audit.

To the extent possible, the design team will select from the pre-approved list of software posted on the LA DOTD Bridge Division website. Before using the pre-approved software, the program will be validated as directed in the GRESHAM SMITH QMS prior to use. For special applications where software not included in the pre-approved list must be used, a synopsis of the software will be provided to the LA DOTD Bridge Design Engineer for approval prior to use. Similar to the pre-approved software, all specialty software will be validated as directed in the GRESHAM SMITH QMS prior to use. It is anticipated that LEAP bridge and MDX will serve as the primary design software with RC-Pier and ConSpan, and /or hand calculations utilized as necessary for various design and analysis components. MIDAS would be utilized for any complex geometry or required finite element analysis, but this is not anticipated for this program.

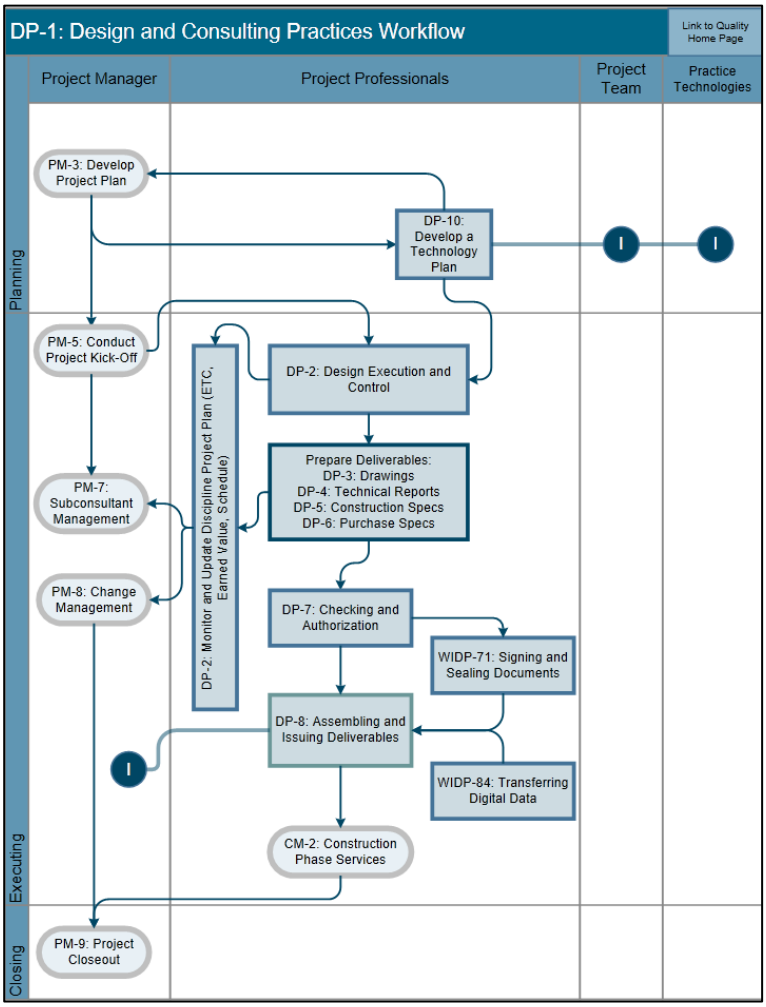
# 4.0 QUALITY CONTROL AND QUALITY ASSURANCE REVIEWS

## 4.1 Design Deliverable Activities

The following are the key anticipated milestones for this project:

- Survey
- Hydraulic Reports
- Pre Plan-in-Hand (Prelim Design)
- Plan-in-Hand
- Post Plan-in-Hand
- Environmental & R/W Requirements
- Pre-Advanced Check Prints
- Advance Check Prints
- Borings or Pile Lengths Reviews
- Final Tracings

Specific expectations for each deliverable are summarized in the LA DOTD Bridge QC/QA policy. Prior to each of the formal submittals, a 3-tiered Quality Control (QC) design review will be performed as well as a Quality Assurance (QA) review. The following flow chart represents the GRESHAM SMITH's design workflow.



## 4.2 Discipline Level QC Review of Calculations and Drawings

In this first tier of QC review, detailed calculation and drawing review is performed. GRESHAM SMITH's standard Document Checking Process as detailed in Appendix B is supplemented as noted below to blend the standard GRESHAM SMITH process and the DOTD requirements. Preceding the review, design development for the design phase is completed, design activity is in a "pencils down" mode and review sets are produced. In the Discipline QC, each calculation and drawing is thoroughly checked for accuracy, completeness, and for compliance with the project's design task protocols. The reviewer is designated as a senior engineer within the Quality Control Team. The review is documented in the calculations and drawings using a check print stamp and a color-coded mark as indicated below:

- Yellow – Confirmed
- Black – General comment or suggestion
- Red – Correction to be made
- Blue – Indicates correction was made
- Green – Back check and concurrence with comment or other resolution
- Pink – verification by the reviewer that the comment was addressed

Once the Discipline QC review of the calculations is completed, verified and documented using GRESHAM SMITH's-based and LA DOTD-based checklists, the calculations are designated as ready for an independent peer review, as may be appropriate. Similarly, once the Discipline QC review of the drawings is completed, verified and documented using GRESHAM SMITH's-based and LA DOTD-based checklists, the drawings are designated as ready for the Independent Peer QC Review in parallel with an Inter-Discipline QC Review. Issues that cannot be resolved between the Discipline QC reviewer and the original designer will be elevated to the design team leader or deputy project manager for resolution. These processes are described below.

## 4.3 Independent Peer QC Review of Calculations and Drawings

Refer to Section 2.4 – No Independent Peer Review is anticipated for this project.

## 4.4 Inter-Discipline QC Review of Drawings

The Inter Discipline Review is a discipline leader and project manager review of the documents; and is intended to be an overall design coordination review to identify potential conflicts in the plans between disciplines (i.e. – Roadway and Geometry, Structures, Drainage, Utilities, Geotechnical, etc.). Preceding the Inter-Discipline review, the Discipline QC review will be completed, design activity is in a "pencils down" mode and a drawing set is produced for review. Similar to the Discipline Review process, comments are provided in black or red, concurrence or other resolution in green, corrections in blue, and verification by the reviewers in pink. Issues that cannot be resolved between

the Inter-Discipline QC reviewer and the original designer will be elevated to the design team leader or deputy project manager for resolution. This review is documented in the Drawing QC checklist form previously discussed.

### 4.5 Quality Assurance Review of Calculations and Drawings

Once the drawings and calculations have completed the tiered, Discipline QC, Independent Peer QC and Inter-Discipline QC review processes, the submittal is ready for a Quality Assurance review. This review is performed at GRESHAM SMITH by a specifically-trained senior engineer designated to be the Quality Manager for the project. The QA reviewer will examine all documented review materials, including plans, calculations and QC forms for compliance with the GRESHAM SMITH and LA DOTD policies and for completeness. In addition, the QA process verifies that the QC process was effective in preventing design and plan errors and in assuring consistency. Any comments provided by the QA reviewer on the QC process or documentation must be resolved and addressed prior to the QA reviewer approving the design package (plans and calculations) to be submitted.

### 4.6 Post QA Review Revisions

If for any reason (i.e. – Late inputs or other issue not anticipated) revisions are necessary during or after completion of the QA review, all revisions will be documented on the drawing or calculation check prints and forwarded with revised drawings or calculations to the QA reviewer for a secondary review, prior to submittal.

### 4.7 Submittal and Filing

Once the QA reviewer has verified that the QC process was completed satisfactorily, they will complete and sign the Document Release Record, allowing the submittal to be released to the client. All calculation, drawing and QC/QA documents will be filed and archived in the project folder, organized and filed by submittal.

# 5.0 DOCUMENTATION OF COMMENTS/RESPONSES

## 5.1 Documentation of Internal Comments and Responses

The documentation of all internal comments and resolution will be contained within Discipline QC drawing check prints and forms, calculation review check prints and forms, and in Independent Peer Bridge QC calculation review forms and drawing check prints. Similarly, the documentation of the Inter-Discipline QC comments and resolution will be contained within the drawing check prints and forms. All QC documents will be stored electronically in the project folder and be available for audit.

## 5.2 Documentation of Client Comments and Responses

At formal submittal client reviews, a comment log will be used to document all comments, by page number. A plan markup may also be provided by the client. The design team will promptly review all comments received and schedule a comment resolution meeting to resolve the comments and set forth an action list to be completed prior to the next formal submittal. Revisions in the action list will be documented on the drawing and calculation Discipline QC review check prints for the next formal submittal.

## 5.3 Quality Assurance Records

Finally, the documentation of the QA review will be contained within the Document Release Record form at the completion and verification of all QC and QA review activities. All QA documents will be stored electronically in the project folder and be available for audit.

## 6.0 CONTROL OF SUBCONSULTANT QC PROCESS

GRESHAM SMITH's approach to project management and delivery is to fully incorporate subconsultants and teaming partners into an integrated project team, as opposed to an approach where subconsultants operate independently, with their deliverables "plugged into" the overall formal submittal. Subconsultants are integrated into the project communication process thru weekly project coordination. Individual subconsultant resources are expected to work as an extension of and inclusive with GRESHAM SMITH's staff resources. As such, subconsultants are expected to be fully trained in the GRESHAM SMITH QMS policy and to participate in the Discipline QC and Inter-Discipline QC reviews.

As described previously, all project personnel (including subconsultants) will be trained in both the LA DOTD's Bridge QC/QA policy, as well as GRESHAM SMITH's QMS policy. The training will be done by the Quality Assurance Manager, or designated Project Manager or Deputy Project Manager familiar with and experienced in the LA DOTD's Bridge QC/QA policy or GRESHAM SMITH's QMS policy.

# 7.0 CLIENT FEEDBACK AND QUALITY AUDITS

## 7.1 Administrative Oversight and Continuous Improvement

A desired outcome of the GRESHAM SMITH QMS policy is continuous improvement. The process identifies issues where the design team (collectively and individually) can improve design processes and skills. Most importantly, feedback from the client is solicited and incorporated into our process of continuous improvement, for each formal submittal. All project performance issues are discussed internally with the design team in regularly scheduled design coordination meetings throughout the project.

## 7.2 Internal and External Quality Audits

GRESHAM SMITH's Office of the Risk Management Plan performs independent internal audits of projects to assure that the QC/QA program is being implemented correctly. As all quality records are maintained for each formal submittal in the project directory, all QC and QA documents are available for LA DOTD quality audits at their request.

# APPENDIX A – PROJECT PRE-PLANNING GUIDANCE & FORMS

- *LA DOTD Design Criteria Checklist*
- *LA DOTD Project Activity Log Sheet*
- *LA DOTD Consultant Project Bridge Design Kick-Off Meeting Agenda Checklist*
- *GRESHAM SMITH PM-2 Assigning Project Roles & Responsibilities (Page 1 of 12)*
- *GRESHAM SMITH PM-3 Developing/Updating a Project Plan (Page 1 of 9)*
- *GRESHAM SMITH PMF-11 Project Plan Summary*
- *GRESHAM SMITH SS-1 Developing a Safety & Security Plan (Page 1 of 10)*
- *GRESHAM SMITH WIPM-31 Developing a Quality Plan Page (1 of 7)*

THE COVER PAGE OF APPLICABLE GRESHAM SMITH PROCEDURES AND POLICIES IS INCLUDED IN THIS DOCUMENT. THE FULL PROCEDURE WILL BE INCLUDED IN THE OPERATIONAL VOLUME OF THE QC/QA PLAN

## APPENDIX A—DESIGN CRITERIA CHECKLIST

Design criteria for each project shall include, but not limited to, the following sections:

__ **Cover sheet**

The following information must be included on the cover sheet:

- LADOTD project number
- Project name
- Revision date
- The Supervisor or Team Leader's signature and date

__ **Governing Design and Construction Specifications and Other References**

A list of governing design and construction specifications and other references used for the project shall be included in this section. The edition number, interim revisions, and/or publication date must be specified for each reference.

__ **Design Assumptions and Design Exceptions**

All design assumptions and design exceptions received must be included in this section along with supporting documents.

__ **General Information**

The general information as listed below should be included in this section:

- Bridge information (no. of bridges, bridge clear width, length, no. of lanes, lane width, shoulder width, etc.)
- Road information (roadway classifications, design speed, traffic data, etc.)
- Vertical datum
- Vertical and horizontal clearances
- Other relevant information

__ **Hydraulic Design Criteria**

All hydraulic design criteria (design year, design water elevations, scour depth and scour elevation, etc.) shall be included in this section and the information shall be provided by the Hydraulic Engineer.

__ **Design Factors**

The ductility factor $\eta_D$, redundancy factor $\eta_R$, and operational importance factor $\eta_I$ shall be listed in this section.

__ **Design Loads**

All design loads (dead load, live load, wind load, thermal loads, vessel collision loads, seismic load, wave loads, etc.) used for the project shall be included in this section.

__ **Limit States**

All applicable limit states for this project shall be listed in this section.

__ **Bridge Barrier Railing**

The design criteria, types, and test levels for bridge barrier railings shall be listed in this section. Standard Plans should be listed if they are utilized.

__ **Guardrail**

The design criteria, types, and test levels for guardrails shall be listed in this section. Standard Plans should be listed if they are utilized.

__ **Approach Slab**

Design criteria for approach slab shall be included in this section. Standard Plans should be listed if they are utilized.

__ **Deck and Deck Drainage**

All design criteria for deck and deck drainage design shall be included in this section. Standard Plans should be listed if they are utilized.

__ **Bearing**

All bearing types and design criteria for each bearing type shall be included in this section. Standard Plans should be listed if they are utilized.

__ **Joint**

All joint types and design criteria for each type shall be included in this section. Standard Plans should be listed if they are utilized.

__ **Superstructure**

All superstructure types and design criteria for each type shall be included in this section. Standard Plans should be listed if they are utilized.

__ **Substructure**

All substructure types and design criteria for each type shall be included in this section. Standard Plans should be listed if they are utilized.

__ **Piles and Drilled Shafts**

All pile types, sizes, and structural design criteria shall be included in this section. Standard Plans should be listed if they are utilized.

__ **Geotechnical Design**

All geotechnical design criteria shall be included in this section and the information shall be provided by the Geotechnical Engineer. Standard Plans should be listed if they are utilized.

__ **Mechanical Design**

All mechanical design criteria shall be included in this section if applicable. Standard Plans should be listed if they are utilized.

__ **Electrical/Lighting Design**

All electrical design criteria shall be included in this section if applicable. Standard Plans should be listed if they are utilized.

__ **As-Designed Bridge Rating Criteria**

All as-designed bridge rating criteria shall be included in this section.

__ **Software**

All software used for design and check shall be included in this section.

## APPENDIX J—PROJECT ACTIVITY LOG SHEET

Project No.:

Project Name:

Bridge Task Manager:

| Date | Project Activity | Comments |
|---|---|---|
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## APPENDIX H—CONSULTANT PROJECT BRIDGE DESIGN KICK-OFF MEETING AGENDA CHECKLIST

A kick-off meeting with the Consultant's bridge design team shall be initiated by the LADOTD Bridge Design Task Manager once the project is awarded. The meeting agenda shall include, but not be limited to, the following items:

__ Introduce LADOTD Bridge Task Manager and the Consultant's Key Team Members (The Supervisor or Team Leader and Key Designers/Design Checkers/Reviewers)

__ Discuss Consultant's Staffing Plan and Implementation of QC/QA Plan Document
(The staffing plan should include names and responsibilities of the designers, detailers, checkers, reviewers, and the EOR.)

__ Determine Schedules for Project Submittals
(Design Criteria, TS & L, 30%, 60%, 90%, 100% of Preliminary Plans and Final Plans, Final Calculations, etc.)

__ Share Expectations and Consultant Rating Criteria
(Consultant rating will be performed for all project submittals shown on the project submittal schedule.)

__ Discuss Design Criteria

__ Discuss Budget, Supplemental Requests, Invoices, and Importance of Avoiding Claims (Staff shown on invoices will be reviewed in accordance with the staffing plan.)

Gresham Smith

# Quality Management System

| | | |
|---|---|---|
| QMS Process Section: Planning and Managing Work | Revision: 4<br>Date: 06SEP2018 | Number:<br>PM-2 |
| Procedure: Project Roles and Responsibilities | Approval:<br>McGormley/Wharton | Page:<br>1 of 9 |

## A. PURPOSE

This procedure and associated exhibits address Gresham Smith's definition of project roles, standard practice for assigning project roles and responsibilities, and the minimum expectations of those individuals assigned a role to assure consistency in completing the responsibilities.

## B. SCOPE

1. This procedure describes the process for assigning project roles and provides guidance to enable scalable application to suit all Gresham Smith projects.
2. This procedure and its associated exhibits define the primary project roles and summarizes general project responsibilities for each role.
3. This procedure does not address roles and responsibilities for personnel performing project support roles (e.g., IT, Document Control, etc.), nor does it address personnel performing business operations roles.

   Note: Project role names may be labeled differently for external use to match client preferences.

## C. DEFINITIONS

1. Authority: The assigned power or right to give instructions or make decisions.
2. Project Role: The project-specific job description assigned to an employee.
3. Responsibility: A functional duty or obligation of an employee or employees by the nature of their assigned project role. Responsibility cannot be shared or delegated.
4. Roles
   a. Assistant Project Manager (APM): The APM position works with project managers (PM) in managing the project from the fee proposal stage through close-out. This position will work with project managers in creating, maintaining and communicating all aspects of the Project Plan, monitoring

# Quality Management System

| | | |
|---|---|---|
| QMS Process Section: Planning and Managing Work | Revision: 4<br>Date: 03JUN2019 | Number:<br>PM-3 |
| Procedure: Developing/Updating a Project Execution Plan | Approval:<br>John Wharton | Page: 1 of 10 |

## A. PURPOSE

1. This procedure addresses Gresham Smith's standard practice for planning projects. It identifies all the elements of a well-planned project and identifies how these elements are pulled together into a cohesive plan. This procedure addresses the project activity after award of the project and prior to the kick-off meeting.

## B. SCOPE

1. This procedure forms the core of the planning process and shows the relationship between the project execution plan and other portions of the "Planning and Managing Work" process.
2. This procedure applies to all projects in Gresham Smith. The degree of development of each project execution plan element is intended to be scalable to match the size and complexity of the project.
3. Note: The Project Execution Plan is a living document; The PM should update and re-issue the Plan throughout the project duration as changes occur.

## C. DEFINITIONS

1. Agreement: The contractual instrument between the Client and Gresham Smith.
2. Digital Data: AIA E203 defines Digital Data as "information, including communications, drawings, specifications and designs, created or stored for the Project in digital form." The term Digital Data includes the Model, CAD files, Word files, Excel files, and PDF files.
3. Qualified Reviewer: A person who has experience directly relevant to the project he/she is being asked to review, and who demonstrates the technical capabilities to perform as a checker. Ideally, the qualified reviewer has designed and/or been in responsible charge of a project very similar in nature, scope and complexity.
4. Quality Assurance (QA): Part of quality management focused on providing confidence that quality requirements as defined in our QMS will be fulfilled. It is aimed at preventing errors and building in quality throughout the process. This

Gresham Smith

# Quality Management System

| QMS Forms: Project Execution Plan | Revision: 6<br>Date: 03JUN2019 | Number: PMF-31 | Page: 1 of 1 |
|---|---|---|---|

| Project Information | | | |
|---|---|---|---|
| Project Name/Location: | ABC Facility and Site Expansion | | |
| Client: | ABC Company, LLC | | |
| Project Manager: | Jones | PX: | Anderson |
| Gresham Smith Project Numbe | 12365.05 | Gresham Smith Responsibility: | Prime |
| Date Prepared: | 7-Jan-2019 | Revision Date: | |

| | Form of Plan/Document: | Describe Location of Plan or Details or Link: |
|---|---|---|
| 1 Agreements | | (Overwrite folder link if necessary) |
| Agreement: Client | Gresham Smith Standard | \\global.gsp\data\nf\cg_nf02\1236505\04PM\01ProjPlan\01Agrmnts |
| Digital Data Agreement: Client | AIA E203, Digital Model Execution Plan | \\global.gsp\data\nf\cg_nf02\1236505\04PM\01ProjPlan\01Agrmnts |
| Agreement: Subconsultants | Gresham Smith Standard | \\global.gsp\data\nf\cg_nf02\1236505\04PM\01ProjPlan\01Agrmnts |
| Digital Data Agrmnt: Subconsultant | AIA E203, Digital Model Execution Plan | \\global.gsp\data\nf\cg_nf02\1236505\04PM\01ProjPlan\01Agrmnts |
| Digital Data Agrmnt: 3rd Party | Gresham Smith Waiver | \\global.gsp\data\nf\cg_nf02\1236505\04PM\01ProjPlan\01Agrmnts |
| Amendments/Changes: | Located in Agreements folder | \\global.gsp\data\nf\cg_nf02\1236505\04PM\01ProjPlan\01Agrmnts |
| Invoicing Process: | Gresham Smith Standard | \\global.gsp\data\nf\cg_nf02\1236505\04PM\00Financial |
| 2 Risk Management Plan | | |
| Risk Management Plan: | See tab RMF41 | \\global.gsp\data\nf\cg_nf02\1236505\04PM\01ProjPlan\02RiskMgmt |
| 3 Staffing Plan / Roles and Responsibilities | | |
| Staffing Plan: | See tab PMF21 | \\global.gsp\data\nf\cg_nf02\1236505\04PM\01ProjPlan\03TeamR&R |
| 4 Scope of Services | | |
| Scope of Services: | Scope incorporated into Agreement | \\global.gsp\data\nf\cg_nf02\1236505\04PM\01ProjPlan\04Scope |
| 5 Schedule and Deliverables | | |
| Project Schedule: | Located in Schedule folder | \\global.gsp\data\nf\cg_nf02\1236505\04PM\01ProjPlan\05Schedule |
| Team Meetings: | Every Two Weeks | \\global.gsp\data\nf\cg_nf02\1236505\04PM\01ProjPlan\05Schedule |
| 6 Budget | | |
| Budget Plan: | Budget Breakdown in Vision | \\global.gsp\data\nf\cg_nf02\1236505\04PM\01ProjPlan\06Budget |
| Earned Value: | Earned Value in Vision | \\global.gsp\data\nf\cg_nf02\1236505\04PM\01ProjPlan\06Budget |
| 7 Work Breakdown | | |
| Work Breakdown Structure: | See Vision | \\global.gsp\data\nf\cg_nf02\1236505\04PM\01ProjPlan\07WBS |
| 8 Quality Plan | | |
| Quality Assurance Plan: | Gresham Smith QMS procedures | \\global.gsp\data\nf\cg_nf02\1236505\04PM\01ProjPlan\08Quality |
| Quality Control Plan: | See tab PMF32 | \\global.gsp\data\nf\cg_nf02\1236505\04PM\01ProjPlan\08Quality |
| Subconsultant Quality Plan: | Subs follow our QC Plan | \\global.gsp\data\nf\cg_nf02\1236505\04PM\01ProjPlan\08Quality |
| Client Quality Process: | No Special Client Requirements | \\global.gsp\data\nf\cg_nf02\1236505\04PM\01ProjPlan\08Quality |
| 9 Technology Plan | | |
| Document Management: | Gresham Smith Standard - NewForma | \\global.gsp\data\nf\cg_nf02\1236505\04PM\01ProjPlan\09PracticeTech |
| Technology Validation Plan: | See tab DPF101 | \\global.gsp\data\nf\cg_nf02\1236505\04PM\01ProjPlan\09PracticeTech |
| Digital Model Execution Plar | Located in PracticeTech folder | \\global.gsp\data\nf\cg_nf02\1236505\04PM\01ProjPlan\09PracticeTech |
| 10 Safety & Security Plan | | |
| Safety & Security Plan: | See tab SSF11 | \\global.gsp\data\nf\cg_nf02\1236505\04PM\01ProjPlan\10Safety |
| 11 Sustainability Plan | | |
| Sustainability Plan: | See tab PMF33 | \\global.gsp\data\nf\cg_nf02\1236505\04PM\01ProjPlan\11Sustainability |

Gresham Smith

# Quality Management System

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|---|---|---|
| QMS Process Section: Safety and Security | Revision: 1<br>Date: 06SEP2018 | Number:<br>SS-1 |
| Procedure: Developing a Safety & Security Plan | Approval:<br>John Wharton | Page: 1 of 10 |

## A. PURPOSE

1. This procedure documents a Safety & Security Plan and provides the details necessary to support the development of a complete and effective plan. The procedure provides a methodology for the identification of the potential risks, evaluation of the probability and severity of those risks, and potential plans to mitigate or eliminate the risk. The Safety & Security Plan is one of the tools for the Project Manager to plan and execute the project.

## B. SCOPE

1. This procedure applies to all projects and provides the standard template for capturing all issues related to Safety and Security.

2. Safety & Security Management begins during the "Pursuing" phase – before a proposal has been submitted – and continues throughout the life-cycle of the project. The major efforts will take place during both the Pursuing and Planning phases, after which the efforts will primarily focus on ensuring the plan is followed by the project team, identifying additional risks that may arise, and monitoring for compliance to the plan.

3. The intent is to address all elements of the project that are included in our scope – including work in the home office, client's site, and construction site. Guidance is provided for typical scenarios, but is not to be considered comprehensive.

4. The plan requires the PM to identify issues that are beyond the scope of "typical" hazards for which the majority of our staff will have been trained. These atypical or unusual hazards are to be identified and then a plan must be developed to address how we will work in a safe and secure manner. The PM is not expected to identify every possible hazard.

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# Quality Management System

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|---|---|---|
| QMS Process Section: Planning and Managing Work | Revision: 3<br>Date: 03JUN2019 | Number:<br>WIPM-31 |
| Work Instruction: Developing a Quality Control Plan | Approval:<br>John Wharton | Page: 1 |

A. PURPOSE

1. This work instruction addresses Gresham Smith's standard practice for creating and maintaining a Quality Control Plan.

B. SCOPE

1. This work instruction applies to all projects in Gresham Smith. The degree of development of the Quality Control Plan is intended to be scalable to match the size of the project.

C. DEFINITIONS (See QM-7: Definitions)

1. Formal Check: Types of Formal Checking Include: Off-Team Discipline QC Check, Cross-Discipline Coordination (CDC) Check, Constructability Check
2. Quality Assurance (QA)
3. Quality Control (QC)
4. Quality Assurance (QA) Plan
5. Quality Control (QC) Plan
6. Quality Management System (QMS)
7. Roles: Constructability Reviewer (CR), Project Professional (PP), Qualified Reviewer (QR)

   Notes:

   - If a Market has a listing of designated Qualified Reviewers and Constructability Reviewers, the QR or CR must be from this list.
   - Although the QR is not part of the project team, the team is encouraged to inform the QR periodically as significant decisions are made. This will provide valuable context to the QR prior to their review.
8. Scope of Services (SOS)
9. Self-Check
10. Work Breakdown Structure (WBS)

# APPENDIX B – DISCIPLINE & INTER-DISCIPLINE QC FORMS

- *LA DOTD Final Calculation Book Checklist*
- *LA DOTD Off-System Guidelines – Survey Checklist – Not Anticipated*
- *GRESHAM SMITH DP-7 Checking and Authorization (Page 1 of 13)*
- *GRESHAM SMITH DP-10 Developing a Technology Plan (Page 1 of 5)*
- *GRESHAM SMITH DPF-71 QC Check Cover Sheet (Pages 1 & 2 of 2)*

THE COVER PAGE OF APPLICABLE GRESHAM SMITH PROCEDURES AND POLICIES IS INCLUDED IN THIS DOCUMENT. THE FULL PROCEDURE WILL BE INCLUDED IN THE OPERATIONAL VOLUME OF THE QC/QA PLAN

## APPENDIX B—FINAL CALCULATION BOOK CHECKLIST

The final calculation book for each project shall include, but not limited to, the following sections:

__ **Cover Sheet**

The following information must be included on the cover sheet:

- LADOTD project number
- Project name
- The title of "Final Calculation Book"
- The EOR's seal with signature and date

__ **Final Calculation Book Check List**

__ **QC/QA Certifications**

__ **Peer Review Resolution Agreement (if peer review is performed)**

__ **Design Criteria**

__ **Final Hydraulic Analysis Report from Hydraulic Engineer**

__ **Final Geotechnical Analysis Report from Geotechnical Engineer**

__ **Superstructure Design Calculations**

__ **Substructure Design Calculations**

__ **Quantity Calculations**

__ **Special Provisions/NS-Items**

__ **Construction Cost Estimate**

__ **As-Designed Rating Report**

__ **List of All Final Electronic Design Files and File Locations (ProjectWise directory name)**

Consultants shall submit the final calculation book to LADOTD bridge task managers; the submittal shall be on a CD or Flash Drive or placed to a designated ProjectWise folder including the following information:

__ **A PDF File of the Calculation Book (Including the As-Designed Rating Report)**

__ **All Electronic Design Files**

__ **A PDF File of the As-Designed Rating Report Only**

The final calculation book for in-house projects shall include the same files listed above for consultant projects. The final calculation book and other final design documents for all projects including in-house and consultant projects shall be uploaded to the archiving location designated in the record retention policy within 30 calendar days after the stamped final plans are delivered.

# SURVEY CHECK LIST

**PROJECT NO.:** _____
**PARISH:** _____
**DATE:** _____
**CHECKED BY:** _____

1. _____ Minimum of 4 TBMs (one at each end of project & at each bridge end)
2. _____ North arrow
3. _____ Scale:
4. _____ Name of roadway:
5. _____ Type of roadway:
6. _____ Width of roadway:
7. _____ Centerline elevations - 2 decimals (Asphalt or Concrete) - 1 decimal (Gravel)
8. _____ Bearings
9. _____ Curve data
10. _____ Showing distance to the nearest intersecting roadway on both ends of survey?
11. _____ Elevations & plusses of centerline of channel
12. _____ Stream traverse shown & stationed where it ties to the survey line
13. _____ Structure Number:
14. _____ Description of existing structure in upper right corner?
15. _____ Description of existing structure: W- x L-
16. _____ # of Spans:
17. _____ Type of Bridge:
18. _____ Exist. structure dashed/spans in the plan view
19. _____ Exist. structure dashed/spans in the profile view
20. _____ All existing pipe dashed
21. _____ All cross drains shown in profile (dashed) with flow lines
22. _____ Pipe diameters shown
23. _____ Name of waterway:
24. _____ Flow arrows in stream shown
25. _____ Type of fence spelled out. # strands of B/W shown? Y N N/A
26. _____ Utilities in plan & profile (if buried) shown
27. _____ Utility Owners
28. _____ Existing / Assumed / Apparent R/W
29. _____ Reference Points
30. _____ Low Chord Elevation:
31. _____ Drainage Map
32. _____ Lettering & symbols correct size & weight? Will be legible when reduced to half-size?
33. _____ State Project number and Parish name on field book(s) in permanent ink?
34. _____ Certification in field book(s)?
35. _____ Point listing: numerical order with description, coordinates, elevations?
36. _____ Point listing: station & offset, descriptions, elevations?
37. _____ Point listing: roadway cross section points; station, offset, elevations?
38. _____ Point listing: stream cross section points; station, offset, elevations?
39. _____ Plotted roadway and stream cross sections
40. _____ Copy of color photos for DOTD file?
41. _____ State plane coordinates shown at 2 points (min.) on survey?
42. _____ QC/QA Certification

# Quality Management System

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|---|---|---|
| QMS Process Section: Design and Consulting Practices | Revision: 2<br>Date: 06SEP2018 | Number:<br>DP-7 |
| Procedure: Document Checking and Authorization | Approval:<br>J. Wharton | Page: 1 |

## A. PURPOSE

1. Establish minimum requirements for checking and authorizing documents.

## B. SCOPE

1. The scope of this document applies to technical reports, drawings, technical specifications, calculations, and cost estimates.
2. This procedure describes a process for checking documents to ensure quality work has been produced. Proactive efforts are required to produce quality work through daily commitment to the project plans, and close coordination with colleagues, Clients, and external parties.
3. All Formal Issue documents REQUIRE an Off-Team Discipline QC Check prior to issue. This check is performed by a Qualified Reviewer who is not part of the project team.
4. All Formal Issue documents that involve multiple disciplines REQUIRE the Project Professionals to perform a Cross-Discipline Coordination Check prior to issue.
5. Constructability Checks are strongly recommended prior to each Formal Issue, if applicable.
6. Informal Issues of Documents – For Information Only – do not require a formal check.
7. The scope of this document includes our subconsultants. Any documents that are produced by others under our prime agreement with the Owner must go through an Off-Team Discipline QC Check (using their own resources to perform the check). Subconsultants must also fully participate in our Cross-Discipline Coordination Check prior to each formal issue. Subconsultants are required to produce a cover sheet DPF-71 as evidence that the check took place and provide the signed copy to the GS&P Project Manager for each Formal Issue.

## C. DEFINITIONS

1. Authorization: Individual's signature or initials on a document indicating the document is approved for Formal Issue.

# Quality Management System

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|---|---|---|
| QMS Process Section: Design and Consulting Practices | Revision: 2<br>Date: 06SEP2018 | Number:<br>DP-10 |
| Procedure: Developing a Technology Plan | Approval:<br>J. Wharton | Page: 1 |

## A. PURPOSE

1. This work instruction addresses Gresham Smith's standard practice for creating and maintaining a Technology Plan.

## B. SCOPE

1. This procedure applies to all projects in Gresham Smith.
2. The Technology Plan is the minimum requirement; however, many projects will require a Digital Model Execution Plan.
3. This procedure addresses the use of the following types of software products:
    a. Commercially licensed software
    b. Vendor-supplied software
    c. Client-supplied or Client-mandated software
    d. In-house developed software
    e. Excel Spreadsheets used to impact design or deliverables
    f. Public domain software
    g. New Versions/Updates to any of the above
4. This procedure does not apply to software that is developed by Gresham Smith for use outside of Gresham Smith. Software developed for external use must be approved by the MVP and CFO.
5. This procedure does not apply to technology that is being used only to record data or information. For example, an Excel spreadsheet that is used to create a table of information.

## C. DEFINITIONS

1. Commercial product: A product available for sale on the commercial market that provides results that we will use to impact our deliverables.
2. In-House Developed Software: Software developed by Gresham Smith that is not to be transferred outside of Gresham Smith. (Software developed for transference outside of Gresham Smith requires corporate approval.)

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# Quality Management System

| QMS Forms: QC Check Cover Sheet | Revision: 2<br>Date: 06SEP2018 | Number:<br>DPF-71 | Page: 1 |
|---|---|---|---|

| Project Information | | | |
|---|---|---|---|
| Project Name/Location: | | | |
| Client: | | | |
| Project Manager: | | PX: | |
| Gresham Smith Project Number: | | Date Prepared: | |
| Project Professional: | | Discipline: | |
| Submittal Description: | | Submittal Date: | |
| Qualified Reviewer: | | Constructability Reviewer: | |

| Off-Team Discipline QC Check – Signature Block | | |
|---|---|---|
| **Action:** | **Signature:** | **Date:** |
| Submitted by Project Professional: | | |
| Checked by Qualified Reviewer: | | |
| Resolved by Project Professional: | | |

| Cross-Discipline Coordination Check – Signature Block | | | |
|---|---|---|---|
| **Discipline Designation** | **Originating PP: Confirm Review (Signature)** | **Discipline Designation** | **Originating PP: Confirm Review (Signature)** |
| Choose an item. | | Choose an item. | |
| Choose an item. | | Choose an item. | |
| Choose an item. | | Choose an item. | |
| Choose an item. | | Choose an item. | |
| Choose an item. | | Choose an item. | |
| Originating Discipline Resolved and Back-Checked Comments: | | | |
| Resolved By PP: | | Date: | |

| Constructability Check – Signature Block | | |
|---|---|---|
| **Action:** | **Signature:** | **Date:** |
| Submitted by Project Professional: | | |
| Checked by Constructability Reviewer: | | |
| Resolved by Project Professional: | | |

**Note: Completed Forms are to be stored digitally in the Newforma Folder: 04PM\01ProjPlan\08Quality**

| **Project Professional's Notes to Reviewer(s)** |
|---|
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| **Documents to be Checked in this review (PP to List or Attach List)** | |
|---|---|
| **Document Name/Description** (Drawings, Reports, Specs, Calculations, etc.) | **Revision/Date** |
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| **Supporting Documents (PP to List or Attach List)** | |
|---|---|
| Document Name/Description (Design Basis, Code Analysis, AHJ Comments) | Revision/Date |
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# APPENDIX C – INDEPENDENT PEER REVIEW BRIDGE QC FORMS

*Not Required for this Bridge Project.*

# APPENDIX D – QUALITY ASSURANCE & DELIVERABLE RELEASE RECORD FORMS

- *LA DOTD QA Information Package Checklist*
- *LA DOTD QC/QA Certification*
- *LA DOTD Consultant Submittal QC/QA Certification*
- *GRESHAM SMITH QM-5 Internal Project Auditing (Page 1 of 11)*
- *GRESHAM SMITH QMF-52 Corrective Action Report Form (Page 1 of 1)*
- *GRESHAM SMITH WIDP-71 Signing and Sealing Documents (Page 1 of 18)*

THE COVER PAGE OF APPLICABLE GRESHAM SMITH PROCEDURES AND POLICIES IS INCLUDED IN THIS DOCUMENT. THE FULL PROCEDURE WILL BE INCLUDED IN THE OPERATIONAL VOLUME OF THE QC/QA PLAN

## APPENDIX C—QA INFORMATION PACKAGE CHECKLIST

Project No.:
Project Description:

_____ Calculation Book

_____ Plans

_____ Special Provisions

_____ Cost Estimate

_____ Other Documents _____

## APPENDIX D—QC/QA CERTIFICATION

Project No.:

Project Name:

We, the undersigned designers, detailers, checkers and reviewers for this project, have reviewed and accepted the calculations, plans, quantities, special provisions, and cost estimate prepared for the project. We certify that the work for which we are responsible has been completed in accordance with the LADOTD Bridge Design Section policy on QC/QA.

| Team Members | Name | PE Registration No. | Responsible Plan Sheets | Responsible Special Provisions | Construction Cost Estimate | Signature |
|---|---|---|---|---|---|---|
| Designers | | | | | | |
| | | | | | | |
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| Design Checkers | | | | | | |
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| Detailers | | | | | | |
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| Detail Checkers | | | | | | |
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| | | | | | | |
| Reviewers | | | | | | |
| | | | | | | |
| | | | | | | |
| Peer Reviewer | | | | | | |
| Geotechnical Engineer | | | | | | |
| Hydraulic Engineer | | | | | | |
| EOR | | | | | | |

## APPENDIX I—CONSULTANT SUBMITTAL QC/QA CERTIFICATION

Project No.:

Project Name:

I, the undersigned Supervisor or Team Leader for this project, certify that the information included in this submittal has been prepared in accordance with the QC/QA plan documents and LADOTD Bridge Design Section policy on QC/QA and the information presented is accurate and meets the requirements of this submittal. All CAD drawings meet LADOTD CAD standards.

_____

Submittal Description

| _____ | _____ | _____ |
|---|---|---|
| Supervisor or Team Leader Name | Signature | Date |

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# Quality Management System

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|---|---|---|
| QMS Process Section: Quality Management | Revision: 1<br>Date: 15SEP2017 | Number:<br>QM-5 |
| Procedure: Internal Project Auditing | Approval:<br>John Wharton | Page:<br>1 of 11 |

## A. PURPOSE

To define the steps for internal auditing of projects. Audits are conducted to verify conformance to process definitions, procedures, work instructions, and policies, in order to determine the effectiveness of the Quality Management System.

## B. SCOPE

This procedure applies to internal audits only, and covers the complete audit process, from identification of the need for an internal audit, method of conducting an audit, reporting of audit findings, to completion of follow-up on corrective actions.

Internal audits are generally scheduled in advance, but an unscheduled audit may be initiated when a procedure breakdown has been identified, significant quality problem has arisen, or at other times as identified by the Director of Quality or Market Vice President.

## C. DEFINITIONS

1. Audit Terms:
    a. Complete: All information is provided and filed properly in the project directory. All form blanks requesting information are addressed, or identified as “Not Applicable”. All actions are performed according to the relevant procedure or work instruction.
    b. Partially Complete: Information is entered that is meaningful for a portion of the document that is being audited, but other relevant parts of the document are incomplete or incorrect.
    c. Maintained: Documents have been created, and have been updated as the project has changed or evolved with time. For example, the project plan and the 11 modules that supplement the project plan are created at the beginning of the project, and those documents – especially schedules – frequently require maintenance as things change.

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# Quality Management System

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|---|---|---|
| QMS Process Section: Quality Management | Revision: 2<br>Date: 06SEP2018 | Number:<br>QMF-52 |
| QMS Forms: Corrective Action Report | Approval: Wharton | Page: 1 of 1 |

| | | | |
|---|---|---|---|
| Project Name/Location: | Project Name | | |
| Client Name: | Client Name | | |
| Project Manager: | Name | PX: | Name |
| Auditor's Name: | Name | Gresham Smith Project No: | 00000.00 |
| Auditee's Name: | Name | Gresham Smith Office: | Choose an item. |
| Project Phase being audited: | Choose an item. | Date Prepared: | 5-Jan-2017 |

**Note: Turn on "Review" "Track Changes" to allow tracking of Comments and Signatures**

| | | | | |
|---|---|---|---|---|
| Auditor's Description of Non-Conformance<br>*(Include a list of Project documents that do not conform to QMS Requirements, and list QMS documents that address the requirements)* | | | | |
| Auditee Proposed Corrective Action Plan: | Comply with Procedure, Non-Conformance will be Corrected: | | | ☐ Yes ☐ No |
| | Recommend a Change to the Procedure (Explain Below): | | | ☐ Yes ☐ No |
| | Other (Explain Below): | | | ☐ Yes ☐ No |
| | | | | |
| Auditor Response: | Corrective Action Plan Approved: | | | ☐ Yes ☐ No |
| | Corrective Action Plan Disapproved: | | | ☐ Yes ☐ No |
| Corrective Action Completed (Auditee): | Signature: | | Date: | |
| Corrective Action Confirmed (Auditor): | Signature: | | Date: | |
| Director of Quality Response: | Follow-up Action Required: | | | ☐ Yes ☐ No |
| | Procedure Revision to be Implemented: | | | ☐ Yes ☐ No |
| | | | | |

Gresham Smith

# Quality Management System

| | | |
|---|---|---|
| QMS Process Section: Design and Consulting Practices | Revision: 1<br>Date: 06SEP2018 | Number:<br>WIDP-71-EX4 |
| Work Instruction: Signing and Sealing Documents:<br>Exhibit 4 – Issuing Digitally Certified Documents | Approval:<br>Wharton/Munkel | Page: 1 of 4 |

## Process for Creating "Digitally Certified" Documents

1. PP: Before applying seals and signatures, create a "backup" folder and store copies of PDFs to be sealed. The signing process sometimes has glitches and creating a backup can avoid having to re-publish PDFs from CAD.
2. PP: Apply the electronic seal image.
    a. Method 1: Apply the electronic seal image and date in the native format (CAD or Revit) file. Generate the PDF file with the seal embedded. Be sure to use the correct PDF naming convention.
    b. Method 2: Apply the electronic seal image in the PDF after the PDF has been generated from the native format (CAD or Revit) file. This is done in Adobe Reader DC using the "Stamp" tool. Select "Tools", then "Stamp". Click on the "Stamp" icon in the top banner. From the drop-down list, select "Seal". If you created a custom stamp (See Exhibit 3), it will appear as an image. Drag the image to the correct location and click to place it.


3. PP: Apply the date (If the date was not already placed in the native format file prior to creating the PDF file): In Adobe Reader click "Tools", then click "Comment". Click on the text box symbol T. Then place the text box on the PDF file. The date normally goes below the professional seal, but be sure to check the state licensing laws and policies to ensure you are complying. Insert the appropriate date in the text box. The box should be formatted with no border.
3. PP: Place the digital signature/certificate on each document:

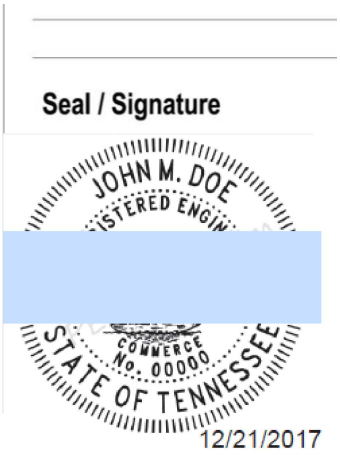
    Note: If you are using the Entrust verification system, insert your USB token with the Entrust Certificate into a USB port now.

    Note: The PP must perform a final review of the PDF contents to ensure the PDF is complete and ready for signature.

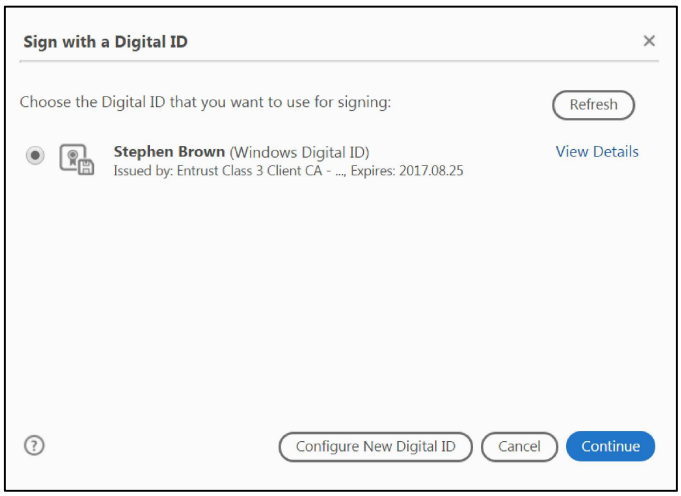
    a. Open one or multiple PDFs using Adobe Reader DC. Up to about 10 PDF's can be opened at a time.
    b. Zoom / pan to the area in the plan where the seal resides.

c. Click the "Tools" tab and then click the "Certificates" icon. Click "Digitally Sign"

d. Select the Location of the digital signature: A box will appear. Place the box and resize if necessary to place the signature block in the correct location. The signature normally goes across the professional seal, but be sure to check the state licensing laws and policies to ensure you are complying.

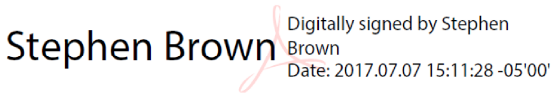



e. Apply the Digital Certificate: A pop up box, "Sign with a Digital ID" will appear. Select the correct digital ID, and hit the "Continue" button. Note: Typically, there will just be one choice, unless you have certificates with both Entrust and IdenTrust.




f. Choose how the signature will appear: Another box "Sign As..." will appear. Select the "appearance" box to make the selection.

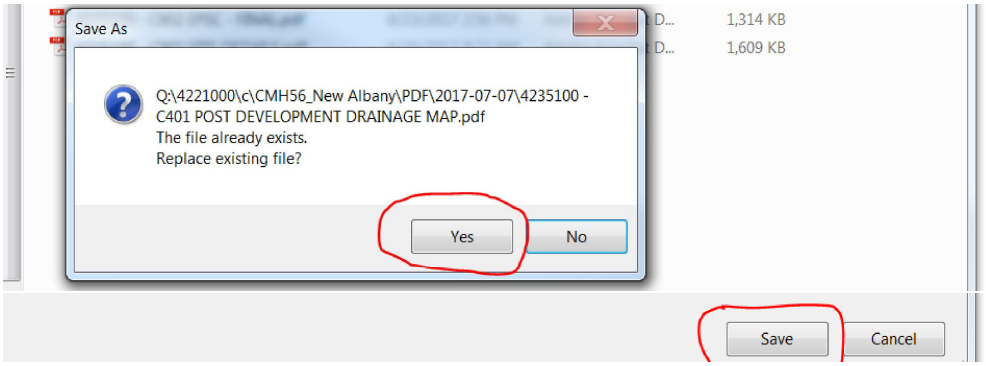
i. Method 1: The default signature is the text certificate, and is the more secure method. Below is an example of a text, time and date stamp digital signature.




ii. Method 2: If the client, AHJ or State Licensing Board requires a scanned image of a manual signature, click on the drop-down box next to "Appearance" and select the transparent signature image created in the setup process (Exhibit 3).

g. The "Sign as "YOUR NAME"" screen will appear. Select "Lock document after signing".


h. Complete the signing process:
   i. Enter your password created during the setup process.
   ii. Select the "Sign" button.
   iii. The "Save As" Windows dialog will appear. Click the "Save" button. Another dialog box will appear asking if you want to replace the existing file. Click "Yes". This will overwrite the original PDF with the new signed, secure version.
   iv. Close the individual PDF (not the Adobe window).




Note: After you save the file, be careful not to click again in the PDF until after the save command is complete which can take a few seconds. Clicking while it is saving can cause you to inadvertently apply two signatures which can frequently crash Adobe Reader DC.

Note: You may will see an error message after the save process competes. This is a glitch that typically has no adverse effects associated with viewing the final secure pdf and can typically be disregarded.

4. PP: Repeat the signing steps with the remaining PDFs. If you keep the active Adobe Reader DC window open during the entire multiple PDF signing process, you will not be prompted to enter your password each time you apply a signature.
5. PP or Designee: After the process is complete for multiple sheets, re-open each of the files to verify the signature has been properly applied and the security certificate is valid.
6. All PP's: Applying multiple signatures: If multiple signatures are required on a single sheet, for example, a Project Manual cover sheet, each registrant should apply their seal and signature as above, but DO NOT click on "Lock document after signing" as described above. If that box is checked, it will not be possible to add more signatures without invalidating the signatures already in place. Only the last registrant will click on "Lock document after signing".
7. PP: Signed documents should always be retained internally in accordance with various state board regulations and GSP document retention policies. Be careful to not delete any securely signed documents. These are considered originals.

Tips:

- Note: If you must apply anything other than your signature in Adobe, do so prior to applying the signature. For example, if the seal or date is left off, it can be applied in Adobe before applying the signature. Once you select "Lock document after Signing", "Sign", and save the file, you cannot make any changes to the document without invalidating the document.
- Non-secure documents such as transmittals can be signed simply using the "Sign" tool in "Fill & Sign". Typically, secure signatures are only needed in sealed documents or other sensitive documents.


REVISION HISTORY

| Rev. No. | Date | Approval | Summary of Changes |
|---|---|---|---|
| 1 | 05JAN2017 | Wharton | General Revisions |
| 2 | 06SEP2018 | Wharton | Format Change |

**22. Sub-consultant Information:**

| Firm Name (Name must match as registered with Louisiana's Secretary of State) | Address | Point of Contact and email address | Phone Number |
|---|---|---|---|
| **Michael Baker International, Inc.** | 2600 Citiplace Drive, Suite 450<br>Baton Rouge, LA 70808 | Daniel Thornhill, PE<br>daniel.thornhill@mbakerintl.com | 225.218.2846 |
| **Raley and Associates, Inc.** | 4913 Shed Road<br>Bossier City, LA 71111 | Jeff Raley, PE, PLS<br>jeff@raleyandassociates.com | 318.752.9023 |
| **APS Engineering and Testing, LLC** | 5261 Highland Rd. PMB #320<br>Baton Rouge, LA 70808 | Sergio Aviles, PE<br>sergio@aps-testing.com | 225.456.5714 |

(Add rows as needed)

**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. Any information included in this section will be redacted if not required by the advertisement.

Gresham Smith

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Richmond, VA
Suwanee, GA
Tallahassee, FL
Tampa, FL

10000 Perkins Rowe
Suite 280
Baton Rouge, LA 70810

225.757.5849
GreshamSmith.com