

# IDIQ Contract for Bridge Rating

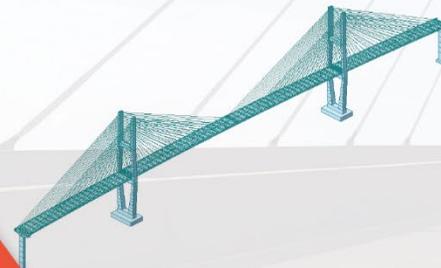
**CONTRACT NOS.**

4400027650, 4400027651, and  
4400027652 - Statewide, Louisiana



LOUISIANA DEPARTMENT OF  
TRANSPORTATION & DEVELOPMENT

*Submitted to:*  
Louisiana Department of  
Transportation and Development



*Submitted by:*  
WSP USA Inc.





WSP USA Inc.  
1100 Poydras Street, Suite 1175,  
New Orleans, LA 70163  
wsp.com

Louisiana Department of Transportation and Development  
Attn: Michael Gorbaty  
Contract Services Administrator  
1201 Capitol Access Road, Room 405-E  
Baton Rouge, LA 70802-4438  
Re: IDIQ Contract for Bridge Rating – Statewide (Contract Nos. 4400027650, 4400027651, AND 4400027652)

Dear Mr. Gorbaty,

WSP USA Inc. (WSP) is privileged to submit our Qualifications Statement using Form 24-102 to provide the needed engineering and related services for the IDIQ Contract for Bridge Rating Statewide.

WSP has strategically assembled a team of Professional Engineers who are registered in the State of Louisiana, collectively possess cumulative experience of more than 500 years, and have firsthand familiarity with projects in Louisiana. WSP Project Manager, Michael Craig, PE, SE is WSP's Southeast Director for in-service bridges and has been focused on bridge inspections, load ratings, and rehabilitation for his entire 26-year career. Our team has 16 Professional Engineers who meet the Minimum Personnel Requirements. This dedicated WSP team will be supported by the seasoned load raters from Michael Baker International, Inc., further bolstering our expertise and capabilities.

We remain resolved in our commitment to continue our long-term relationship with the Louisiana Department of Transportation and Development (LADOTD) with the overarching goal of this assignment being assisting LADOTD in preserving and maintaining the State of Louisiana's bridge infrastructure.

Sincerely,  
**Max Nassar**

A blue ink signature of Max Nassar, written in a cursive style.

Senior Vice President & Managing Director  
Gulf States (LA, MS, AL)

**Michael Craig, PE, SE**

A blue ink signature of Michael Craig, written in a cursive style.

Project Manager  
Senior Vice President/  
Southeast In-Service Bridges Department Manager





SECTIONS



*1-11*

WSP

**DOTD FORM: 24-102**

(Revised January 1, 2023)

**PROPOSAL TO PROVIDE CONSULTANT SERVICES**

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

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

|  |   |
|--|---|
| 1. Contract Name as shown in the advertisement   | IDIQ Contract for Bridge Rating Statewide   |
| 2. Contract Number(s) as shown in the advertisement  | Contract Numbers 4400027650, 4400027651, and 4400027652   |
| 3. State Project Number(s), if shown in the advertisement  | N/A   |
| 4. Prime consultant name ( <b>name must match as registered with the Louisiana Secretary of State where such registration is required by law</b> )                               | WSP USA Inc.  |
| 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.0000623  |
| 6. Prime consultant mailing address  | WSP USA Inc.<br>1100 Poydras Street, Suite 1175, New Orleans, LA 70163                          |
| 7. Prime consultant physical address (existing or to be established, if location is used as an evaluation criteria)  | WSP USA Inc.<br>1100 Poydras Street, Suite 1175, New Orleans, LA 70163                          |
| 8. Name, title, phone number, and email address of prime consultant's contract point of contact  | Max Nassar, Senior Vice President<br>Senior Managing Director, 225-218-3584, Max.Nassar@wsp.com |
| 9. Name, title, phone number, and email address of the official with signing authority for this proposal   | Max Nassar, Senior Vice President<br>Senior Managing Director, 225-218-3584, Max.Nassar@wsp.com |

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

|   |   |
|---|---|
| 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 <u>9/12/2023</u> |
| 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):<br>No DBE Goal<br>Firm(s)' %:  |



Prime consultant name: **WSP USA Inc.**



SECTIONS



*12-15*

WSP

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

| Past Performance Evaluation Discipline(s)  | % of Overall Contract | WSP USA Inc. | Michael Baker International, Inc. | Each Discipline must total to 100% |
|--|-----------------------|--------------|-----------------------------------|------------------------------------|
| Bridge   | 100%                  | 60%          | 40%                               | <b>100%</b>                        |
| Identify the percentage of work for the <b>overall contract</b> to be performed by the prime consultant and each sub-consultant. |                       |              |                                   |                                    |
| Percent of Contract  | <b>100%</b>           | 60%          | 40%                               |                                    |

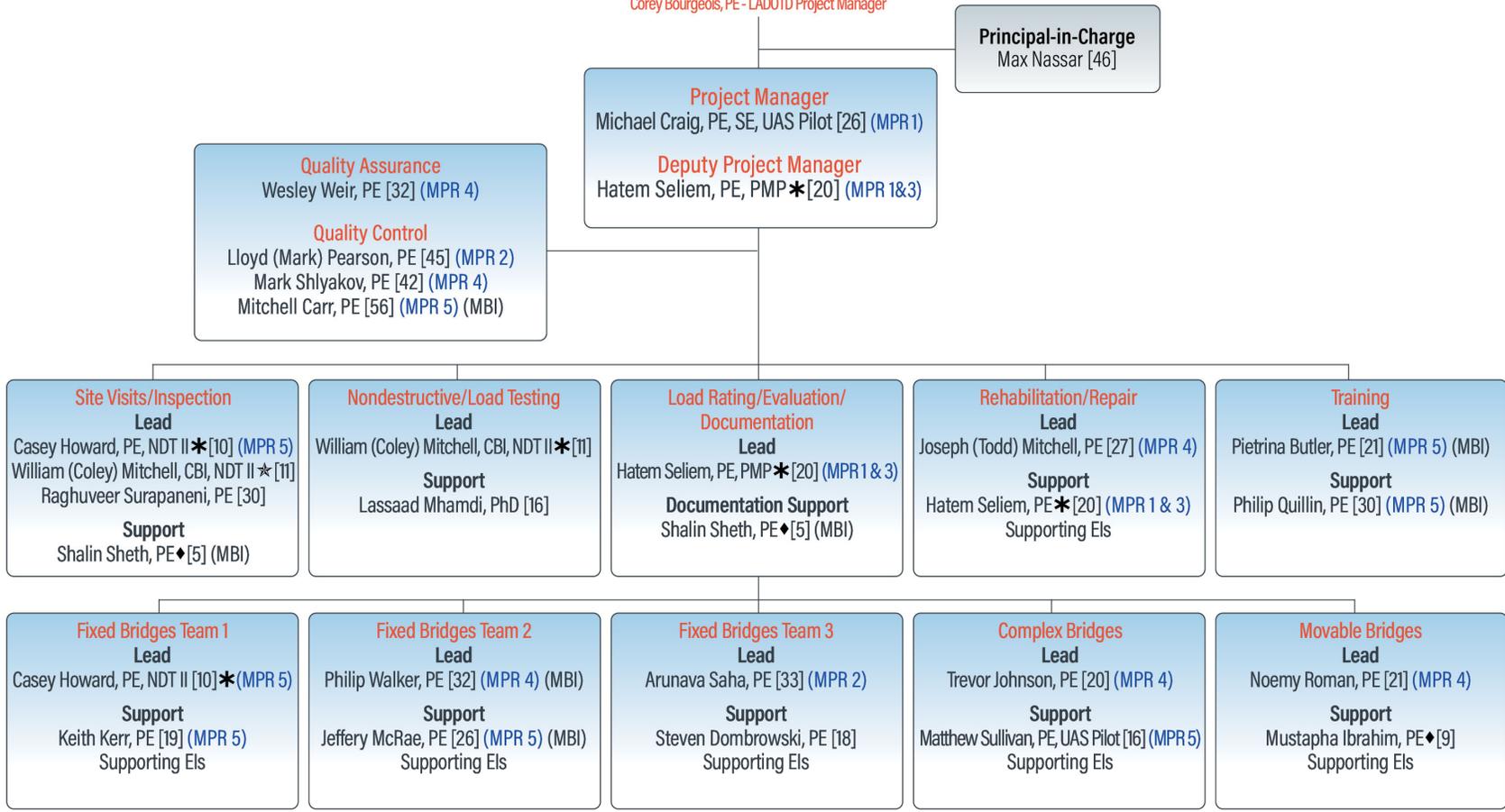


Prime consultant name: **WSP USA Inc.**

**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) |
|--|--------------------------|--|---|
| WSP USA Inc.<br>                      | Principal                | 1  | 25  |
|  | Supervisor – Engineering | 5  | 12  |
|  | Engineer                 | 15   | 32  |
|  | Bridge Inspector         | 10   | 80  |
|  | Engineer Intern          | 10   | 32  |
|  | CADD Drafter             | 2  | 4   |
|  | Technician               | 2  | 8   |
| Michael Baker International, Inc.<br> | Principal                | 1  | 2   |
|  | Supervisor – Engineering | 2  | 3   |
|  | Supervisor - Other       | 0  | 3   |
|  | Engineer                 | 3  | 5   |
|  | Engineer Intern          | 1  | 8   |
|  | Engineer - Other         | 1  | 6   |
|  | Senior Technician        | 1  | 5   |
|  | Technician               | 0  | 6   |
| Administrative   | 1                        | 2  |   |

14. Organizational Chart:



**PRIME**  
WSP USA Inc.  
(All team members are WSP unless otherwise noted)

**Subconsultants**  
(MBI) - Michael Baker International, Inc.

**Legend**  
[Years of Experience]  
(MPR #) — Minimum Personnel Requirement No.  
♦Non-LA PE  
\*Completed Work Zone Training



**15. Minimum Personnel Requirements:**

| MPR No. | Personnel being used to meet the MPR | Firm employed by            | Type of license and discipline meeting MPR/ certification & number (Ex: PE # - Civil) | State of license | License / certification expiration date |
|---------|--------------------------------------|-----------------------------|---|------------------|---|
| 1       | Michael Craig, PE                    | WSP USA Inc.                | PE.41964 - Civil  | LA               | 03/31/2024                              |
|         | Hatem Seliem, PE                     | WSP USA Inc.                | PE.39759 - Civil  | LA               | 09/30/2025                              |
| 2       | Arunava Saha, PE                     | WSP USA Inc.                | PE.38334 - Civil  | LA               | 03/31/2024                              |
|         | Lloyd (Mark) Pearson, PE             | WSP USA Inc.                | PE.39629 - Civil  | LA               | 09/30/2025                              |
| 3       | Hatem Seliem, PE                     | WSP USA Inc.                | PE.39759 - Civil  | LA               | 09/30/2025                              |
| 4       | Wesley Weir, PE                      | WSP USA Inc.                | PE.35035 - Civil  | LA               | 03/31/2024                              |
|         | Trevor Johnson, PE                   | WSP USA Inc.                | PE.45518 - Civil  | LA               | 09/30/2025                              |
|         | Joseph (Todd) Mitchell               | WSP USA Inc.                | PE.42135 - Civil  | LA               | 03/31/2024                              |
|         | Mark Shlyakov, PE                    | WSP USA Inc.                | PE.38927 - Civil  | LA               | 09/30/2024                              |
|         | Noemy Roman, PE                      | WSP USA Inc.                | PE.43748 - Civil  | LA               | 03/31/2024                              |
|         | Phillip Walker, PE                   | Michael Baker International | PE.46394 - Civil  | LA               | 09/30/2024                              |
|         | Casey Howard, PE                     | WSP USA Inc.                | PE.42913 - Civil  | LA               | 03/31/2025                              |
| 5       | Matthew Sullivan, PE                 | WSP USA Inc.                | PE.42490 - Civil  | LA               | 09/30/2024                              |
|         | Keith Kerr, PE                       | WSP USA Inc.                | PE.46584 - Civil  | LA               | 09/30/2024                              |
|         | Phillip Quillin, PE                  | Michael Baker International | PE.36183 - Civil  | LA               | 09/30/2025                              |
|         | Pietrina Butler, PE                  | Michael Baker International | PE.39597 - Civil  | LA               | 09/30/2025                              |
|         | Jeffery McRae, PE                    | Michael Baker International | PE.34554 - Civil  | LA               | 09/30/2025                              |



SECTION

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WSN

**16. Staff Experience:**

|   |  |                   |  |    |
|---|--|-------------------|--|----|
| <b>Firm employed by</b> WSP USA Inc.  |  |                   |  |    |
| <b>Name</b>   | Max Nassar   |                   | <b>Years of relevant experience with this employer</b>     | 4  |
| <b>Title</b>  | Senior Vice President  |                   | <b>Years of relevant experience with other employer(s)</b> | 42 |
| <b>Degree(s) / Years / Specialization</b>   |  |                   | BA, 1976, Psychology                                       |    |
| <b>Active registration number / state / expiration date</b>                       |  |                   | N/A  |    |
| <b>Year registered</b>  | N/A  | <b>Discipline</b> | Management   |    |
| <b>Contract role(s) / brief description of responsibilities</b>                   |  |                   | <b>Principal-in-Charge</b>                                 |    |
| <b>Experience dates (mm/yy-mm/yy)</b>   | <b>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).</b>   |                   |  |    |
|  | Max is a native of Jefferson Parish, Louisiana and has spent 30 years in executive level positions in Fortune 500 Companies in both the manufacturing/industrial sector and architectural engineering consulting services sector. Over the past 20 years, he has overseen a multiplicity of infrastructure projects in the southeast United States, and Central America, with a value in the billions. Many of these projects have been in southeast Louisiana and have been performed for a variety of public and private clients including Louisiana Department of Transportation and Development, The Mississippi Department of Transportation, The Louisiana Department of Natural Resources, The New Orleans Regional Planning Commission, The New Orleans Regional Transit Authority, and others. Max’s international experience includes port and harbor consulting at Puerto Cortes in Honduras, and construction oversight of the Port Connector Roadway in Honduras and Guatemala. He has successfully led negotiations and mediations for a variety of private clients. |                   |  |    |
| <b>04/20 – present</b>  | <b>LADOTD, Contract for Innovative Procurement and Alternative Delivery Support Services, LA:</b> Project Principal, the project includes provision of engineering, financial, management and administrative advice and services to assist with Innovative Project Delivery Methods in connection with administering the procurement process of Design Build, Construction Management at Risk, and/or Public Private Partnerships (P3) projects. The current effort includes leading the procurement of the Calcasieu Bridge in Lake Charles, Louisiana. To be included in the effort is a Level 2 Toll Study. The current Calcasieu Bridge is one of the most critical projects in Louisiana’s Transportation System and has been identified as the most detrimental to economic development.   |                   |  |    |
| <b>10/19 – present</b>  | <b>LADOTD Level 1 Toll Feasibility Study for a new Mississippi River Bridge between LA 1 and LA 30 (Project I.D. No. Number 101, a Priority B Megaproject in the Louisiana Statewide Transportation Plan):</b> Project Principal, the project includes enhancing the Capital Region Planning Commission (CRPC) Travel Demand Model (TDM to include a toll diversion model in order to be able to use the model to evaluate demand for the 3rd Crossing alternatives under different tolling scenarios. Additionally, WSP will generate estimates of annualized gross toll revenue based on the demand as well as prepare a conceptual plan to implement tolling including public outreach, economic impacts, toll infrastructures, institutional requirements, revenue risk, etc.  |                   |  |    |

|                        |  |
|------------------------|--|
| <b>05/19 – Present</b> | <p><b>Board of Commissioners, Port of New Orleans, New Orleans, LA: Seabrook Bridge Span Replacement Project, New Orleans, LA:</b> Project Principal for this project which included structural design, mechanical design, coordination of the preparation of plans and specifications, construction administration and resident inspection, and quality assurance and the assurance of timely delivery to the client. The Seabrook Bridge is a Strauss-Trunnion Bascule Bridge over the Inner Harbor Canal in New Orleans.</p>  |
| <b>05/19 – Present</b> | <p><b>Board of Commissioners, Port of New Orleans, New Orleans, LA: Almonaster Bridge Span Replacement Project, New Orleans, LA:</b> Project Principal for this project which included structural design, mechanical design, coordination of the preparation of plans and specifications, construction administration and resident inspection, and quality assurance and the assurance of timely delivery to the client. The Seabrook Bridge is a Strauss-Trunnion Bascule Bridge over the Inner Harbor Canal in New Orleans.</p>  |
| <b>06/19 – 05/20</b>   | <p><b>NCDOT Design-Build Bridge Replacement, Structure #1: I-485 over Westinghouse Blvd., Mecklenburg County, NC:</b> Principal in Charge for local bridge staff designing this bridge replacement and widening. Staff assignments include modeling, analysis, and design of the prestressed bridge along with preparing bridge final design plans, as well as quality control of other prepared plans.</p>  |
| <b>06/17 – Present</b> | <p><b>LADOTD, IDIQ Contract for Electrical and Mechanical Engineering Services:</b> Project Principal for this Task Order based engineering services contract which supports efforts on mechanical and electrical services related to roadways, pump stations and other mechanical and electrical needs.</p> <ul style="list-style-type: none"> <li>✓ Task Order 1: State Project No. H.010439: Boyd Street &amp; 21ST Street Pump Station Improvements</li> <li>✓ Task Order 2: State Project No. H.010439.5: Boyd Street &amp; 21St St Pumping Station Improvements I-110</li> <li>✓ Task Order 3: State Project No. H.010565 Acadian St. Pumping Station Improvements</li> <li>✓ Task Order 4: State Project No. H.010565.5 Acadian Street Pumping Station</li> <li>✓ Task Order 5: State Project No. H.972249.1 Generator Site Investigation and Load Study for Airline Drive Pump Station and LADOTD Maintenance Facility and Construction Docs for Airline Drive Pump Station</li> <li>✓ Task Order 6: State Project No. H.010253: Bluebonnet Blvd Pump Station Improvements LA 1248</li> <li>✓ Task Order 7: State Project No. H.010251: Chippewa St Pumping Station Improvements US61/190</li> </ul> |
| <b>02/21-Present</b>   | <p><b>Pontchartrain Levee District (PLD), St. Charles Parish, LA:</b> Project Principal for assessment of the Cross Bayou Pumping Station, a flood control pumping station with influent from the canal along the Airline Highway and effluent to Lake Pontchartrain via the Cross Bayou canal. Equipped with five main diesel and one electrical low flow submersible pumps, the pumping station can deliver a total capacity of over a half million gallons per minute; it is a key pumping facility in the St. Charles Parish flood control infrastructure. The assessment involved pump and pump drives, the on-site fuel storage and delivery system, various mechanical and electrical systems and included an opinion of probable construction costs to rehabilitate the station to a state of good repair.</p>   |

|   |   |   |  |    |
|---|---|---|--|----|
| <b>Firm employed by</b> WSP USA Inc.  |   |   |  |    |
| <b>Name</b>   | Michael Craig, PE, SE   |   | <b>Years of relevant experience with this employer</b>     | 14 |
| <b>Title</b>  | Southeast In-Service Bridge Dept. Manager/ Project Manager  |   | <b>Years of relevant experience with other employer(s)</b> | 12 |
| <b>Degree(s) / Years / Specialization</b>   |   | MS / 1999 / Structural Engineering – Bridge Inspection, Repair and Design<br>BS / 1997 / Civil Engineering  |  |    |
| <b>Active registration number / state / expiration date</b>                       |   | PE.41964 / LA / 03-31-2024 (also licensed in MS; TX; GA; FL; SC; NC; TN; VA; MD; NE; PR)  |  |    |
| <b>Year registered</b>  | 2017 (LA)   | <b>Discipline</b>   | Civil Engineering  |    |
| <b>Contract role(s) / brief description of responsibilities</b>                   |   | <b>Project Manager</b> – <b><i>Meets all requirements for MPR 1.</i></b> Provides oversight of all aspects of the project including inspection, testing, repair plans and coordination. |  |    |
| <b>Experience dates (mm/yy–mm/yy)</b>   | <b>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).</b>  |   |  |    |
|  | <p>Over the course of the past two and a half decades, Michael has dedicated his career to the field of bridge inspection and evaluation engineering service contracts. During his career, Mr. Craig has conducted inspections, or supervised the inspection, of an impressive portfolio of over 5,000 structures. His expertise extends to load rating analysis, having performed, or managed the load rating over 3,000 bridges, primarily completed in BrR. He has also been involved in load testing of over 160 bridges and conducting material testing and non-destructive testing (NDT) on over 520 bridges. Notably, Michael has taken on leadership roles in some of the most significant bridge inspection and load rating projects across the Southeastern United States. These projects include the SCDOT Bridge Load Rating project, MDOT Greenville Cable-Stay Bridge Inspection and Testing, NCDOT Statewide Bridge Inspection and Load Rating contract, Georgia Cable-Stay Inspection, Repair and Load Rating contract, and he has provided valuable assistance in managing Texas fracture critical and routine inspection contracts, as well as the Florida Sunshine Skyway Bridge inspection contract. Michael Craig has earned a reputation for successfully completing large-scale, multi-bridge, and statewide bridge inspection and load rating contracts. He holds the title of a registered Professional Engineer in the state of Louisiana, and his academic background includes a master’s degree in Structural Engineering with a specific focus on bridge design. In his management approach for load rating projects, which has proven effective in multiple statewide endeavors, Mr. Craig emphasizes the importance of a cohesive team structure, meticulous pre-planning and staffing, optimization of load rating and load posting avoidance, rigorous progress tracking, and a robust quality assurance/quality control (QA/QC) process.</p> <p><i>Relevant Training: Safety Inspection of In-Service Bridges, 2001 (NHI-130055); Safety Inspect of Fracture-critical Inspection Techniques for Steel Bridges, 2015 (NHI-130078); Bridge Inspection Refresher Training, 2023 (NHI-130053); Railroad Roadway Worker Protection 2023; Bridge Maintenance Training, 2013 (NHI-134029); Tunnel Safety Inspection, 2023 (NHI-130110); Confined Space, 2009; Bridge Inspection Nondestructive Evaluation Seminar (BINS), 2008 (NHI-130099A); Bridge Coatings Level 1, 2012; FHWA Inspection and Maintenance of Ancillary Highway Structures, 2016 (NHI 130087); Aerial Training, 2017; OSHA 30-hour Hazard Recognition Training for the Construction Industry, 2017; Licensed Drone Pilot, 2021</i></p> |   |  |    |
| <b>07/18 – 12/22</b>  | <b>SCDOT, Bridge Inspection and Load Rating, South Carolina:</b> Project Manager of this contract, which consists of bridge inspection and determination of the load capacity ratings utilizing BrR and CSI bridge for <b>2,558 structures</b> including truss, segmental, curved steel girder, movable and significantly retrofitted structures. WSP reviewed the plans, inspection reports, previous load ratings and all other available relevant bridge documents. The load ratings were completed utilizing the information provided by SCDOT and supplemented with information from our field inspections. All load ratings were completed with BrR or CSI Bridge. WSP also utilized drones as an inspection tool to help identify specific areas of bridges  |   |  |    |

|                 |   |
|-----------------|---|
|                 | <p>where a “hands-on” inspection is required. This resulted in reduced time required for traffic control and access equipment, providing a significant cost savings to SCDOT. In addition, WSP performed <b>160 load tests</b> involving instrumenting the bridges with strain gauges and driving known loads across the bridge, to assist SCDOT with advanced load posting avoidance measures. The results of the test were utilized to create corrected effective structural models to increase and remove load postings from bridges across the state. These results were extrapolated out, to not only remove postings on the bridges tested, but also on similar bridges in SCDOT’s inventory. <b>WSP efforts saved the State tens of millions of dollars.</b></p>   |
| 06/01 – Ongoing | <p><b>NCDOT Structures Bridge Inspection Limited Services Contract, North Carolina:</b> Team Leader, Project Manager and QC Manager. Michael has been continuously involved with the NCDOT bridge inspection and load rating program for 24 years. He has performed field inspections, analysis, and load ratings; designed bridge replacements, evaluated the physical condition for repairs; corrosion condition evaluations, health monitoring, nondestructive testing including UT, DP, and MP, drone Inspections and recommended preservation and maintenance needs. To date he has completed over 4,000 inspections and 2000 load ratings, including many of the state’s longest structures, curved steel structures, movable bridge, segmental boxes, and fracture critical trusses.</p>   |
| 06/16 – Ongoing | <p><b>GDOT, Engineering Services for Cable-Stayed Structures, Georgia:</b> In his role as Project Manager, Michael has overseen the task-order contract that encompassed a range of critical bridge evaluation activities. These include a specialized member inspection of the Sidney Lanier Bridge in 2016, focusing on assessing exposed strands with varying degrees of corrosion. Additionally, there were in-depth National Bridge Inspection (NBI) and emergency post-hurricane inspections of the Talmadge Memorial Bridge in 2017 and 2020. His tasks also included the <b>instrumentation and testing</b> of both cable stays bridges to determine the existing force in each cable. Michael's leadership extended to two separate rehabilitation design contracts, for the Sidney Lanier Talmadge bridges, executed in 2021. The initial rehabilitation project for the Sidney Lanier Bridge primarily addressed issues related to excessive cable vibration, which included repairing cable stays with breached protective sheathing and corroded strands. Subsequently, a second rehabilitation project was carried out on the Sidney Lanier, entailing the installation of external dampers on all 176 stays. In 2022, Michael spearheaded the <b>load rating</b> efforts for both the Sidney Lanier and the Talmadge Signature Cable-Stay Bridges, utilizing a full <b>3D FEM MIDAS Model</b> of the structures.</p> |
| 06/21 – 06/23   | <p><b>DC Metro, WMATA Rail Bridge Inspections and Load Ratings, DC:</b> In the capacity of a Project Manager, Michael was involved in this significant project related to the DC Metro's WMATA Rail Bridge Inspections and Load Ratings. This endeavor was conducted in collaboration with Gannet Flemming Engineering. The primary objective was to improve outcomes by developing and refining WMATA's asset management procedures. To achieve this overarching goal, WSP performed routine inspections, and load rating analyses to determine the load rating of these structures. <b>Bridge load ratings were completed in BrR and CSI Bridge</b>, and include truss structures, curved steel box structures, and segmental concrete box structures.</p>  |
| 06/16 – 06/22   | <p><b>TXDOT NBIS Bridge Inspection and Load Rating, Statewide Texas:</b> Michael was responsible for coordinating staff and resources required for conducting comprehensive inspections and load ratings of various structures. Additionally, he played a key role in assisting with the culvert load posting avoidance program, which involved rigorous load testing and analysis to remove thousands of <b>unnecessary load postings</b>. The reports generated as part of these assessments were instrumental in making informed decisions regarding load limits and ensuring the structural integrity and safety of the infrastructure. The team also successfully completed more than 3463 NBIS routine bridge inspections for TxDOT, along with over two hundred <b>load ratings</b>. The range of inspections and load ratings encompassed reinforced concrete slabs, steel floor system superstructures, steel rolled and plate girders, and prestressed concrete girders for both simple and continuous spans.</p>   |

|   |   |                   |  |    |
|---|---|-------------------|--|----|
| <b>Firm employed by</b> WSP USA Inc.  |   |                   |  |    |
| <b>Name</b>   | Hatem Seliem, PhD, PE, PMP  |                   | <b>Years of relevant experience with this employer</b>   | 1  |
| <b>Title</b>  | Vice President, Structural/Bridge Engineer  |                   | <b>Years of relevant experience with other employer(s)</b>   | 19 |
| <b>Degree(s) / Years / Specialization</b>   |   |                   | PhD / 2007 / Civil Engineering (Structural)<br>MS / 2002 / Structural Engineering<br>BS / 2000 / Civil Engineering |    |
| <b>Active registration number / state / expiration date</b>                       |   |                   | PE.39759 / LA / 9-30-2025 (also licensed in FL; MS; TX; GA; SC; NC; VA; MD)  |    |
| <b>Year registered</b>  | 2015 (LA)   | <b>Discipline</b> | Civil Engineering  |    |
| <b>Contract role(s) / brief description of responsibilities</b>                   |   |                   | <b>Senior Load Rating Engineer - <i>Meets all requirements for MPRs 1 &amp; 3.</i></b>                             |    |
| <b>Experience dates (mm/yy-mm/yy)</b>   | <b>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).</b>  |                   |  |    |
|  | Hatem has 20 years of experience in structural engineering with special emphasis on design and behavior of reinforced and prestressed concrete structures and bridges. He served as the lead design engineer on several large-scale projects. Further, he is a Certified Project Management Professional (PMP)® and served as project manager on large-scale projects. He was the lead designer of reinforced concrete and prestressed concrete bridges and structures varying from simple slab spans to box concrete bridges, including multidiscipline coordination. Further, has strong experience for retrofitting structures and bridges using Fiber Reinforced Polymers (FRP) materials. He has in-depth knowledge of national and international design codes including AASHTO, ACI, AISC, PCI, IBC, Eurocode, ECP, and SBC.<br><i>Hatem has been working on Louisiana projects for the past 10 years including several load rating, evaluation, and rehabilitation of bridge structures encompassing simple slab span to complex bridges. He is a certified Traffic Control Technician (TCT) and Traffic Control Supervisor (TCS).</i> |                   |  |    |
| <b>10/19 – 9/22</b>   | <b>LADOTD, MacArthur Interchange Completion, Phase II, Louisiana:</b> Bridge Engineer of Record responsible for the structural design of the superstructure and substructure, deck drainage design, and construction cost estimate. Further Hatem was the Project Manager to coordinate with subconsultants and LADOTD Project Manager. The project constitutes Providing two new, on-ramp and off-ramp connections between the eastbound of the elevated West Bank Expressway (US 90-Z) and Frontage Road, demolish the existing off-ramp, and widening of the US 90-Z bridge structure to accommodate the new ramps.  |                   |  |    |
| <b>09/20 – 06/21</b>  | <b>LADOTD, Load Rating of 396 Bridges, Louisiana:</b> Team leader responsible for the load rating analysis and critical review of Finite Element models and structural analysis. This project involved the load rating of 396 existing off-system bridge structures by the Load and Resistance Factor Rating method (LRFR). Bridge types included prestressed concrete girder bridges, steel girder bridges, precast and CIP slab bridges, concrete culverts, swing bridges, and timber bridges. Three-dimensional finite element modeling is used as necessary for the complex bridges.  |                   |  |    |
| <b>02/20 – 11/20</b>  | <b>LADOTD, Evaluation of Bridge Deficiencies-Concrete Piles Repair, Louisiana:</b> Led the research team, developed the final report, developed repair plans. Deteriorated concrete piles exhibit different signs of distress, depending on exposure environments, stress level, and construction quality. The scope of this work was to research and identify effective repair systems and/or methods to be used for routine and typical maintenance, of RC and PPC piles for above water and underwater applications.   |                   |  |    |
| <b>05/19 – 12/19</b>  | <b>LADOTD, Non-Destructive Evaluation and Load Testing of Seven Posted Bridges, Louisiana:</b> Reviewed and validated finite element analysis results. Provided approval of instrumentation planning, review/validation of diagnostic load testing  |                   |  |    |

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|                      | results, and review of final reports and commencement of results. The scope of work was to evaluate seven bridges, five of which are movable bridges, that are posted for a load lesser than the Legal Loads and/or Special Hauling Vehicles. The evaluation was carried out utilizing load rating analysis and load testing coupled with detailed 3-D Finite Element Analysis with the aim of removing current load posting.  |
| <b>06/19 – 03/20</b> | <b>LADOTD, I-20 over Lakeshore Drive and KCS RR, Caddo Parish, Louisiana:</b> Provided review of existing documents including as-built plans, load rating reports, and inspection; QC/QA review of the structural analysis and design of rehabilitation; and Construction cost estimate. Provided Stage 0 Design (Feasibility Study) for four bridge structures of I-20 crossing over Lakeshore Drive and KCS Railroad in Shreveport, LA. Design of rehabilitation to improve the bridges conditions, service life, and load rating was carried out. Different rehabilitation alternates were designed and detailed.   |
| <b>03/19 – 09/19</b> | <b>LADOTD, Evaluation and Load Rating of 27 Complex Off-System Bridges, Louisiana:</b> Team leader responsible for the load rating analysis and critical review of Finite Element models and structural analysis. Included evaluation and load rating of 27 complex off-system bridges. The bridge types included, steel I-beam, plate girder swing spans, plate girder continuous spans, plate girder bascule spans, low truss swing spans, plate girder swing spans and steel box girder.  |
| <b>04/18 – 04/19</b> | <b>LADOTD, LA 182 Over Atchafalaya River (Berwick Bay), Louisiana:</b> Provided QC/QA review of rehab design including FRP, jacking design for bearings replacement; QC/QA review of construction plans; developed the Specifications of Non-Standard items. The simple through truss bridge carries LA 182 over the Atchafalaya River has a total length of 3,746 ft. The approach spans consist of RC slab spans, RC T-beam spans, and two deck truss spans. The navigational spans consist of three through truss spans. Scope of work included evaluation of the existing bridge, rehabilitation design; developing construction plans; perform diagnostic load testing on RC T-beam approach spans; and load rating analysis of the rehabilitated bridge.   |
| <b>05/16 – 04/18</b> | <b>LADOTD, US 80 Red River Bridge Inspection, Load Rating, and Rehabilitation, Louisiana:</b> Provided structural analysis of the main span trusses using refined analysis, inspection team leader conducting hands-on inspection and ultrasonic testing of steel pins; and QC/QA review activities: load rating analysis; evaluation report; design of truss members rehabilitation; design of substructure rehabilitation; and construction plans. The bridge built in 1934 is a historic bridge carrying US 80 over the Red River at Shreveport with a total length of 2,895 ft. The approach spans consist of RC T-beam spans, steel girders, and steel deck trusses. The main spans are three-span steel truss with a total length of 884 feet. Scope of work included in-depth inspection of the entire bridge structure; evaluation of the structural strength; load rating of the deficient structure; rehabilitation design; plans development; and construction support. |
| <b>08/14 – 08/15</b> | <b>LADOTD, LA 66 Big Bayou Sara Bridge, Louisiana:</b> Analyzed the “ponny” trusses under the effect of different loads; and detailed review of rehabilitation design and construction plans. The historic bridge was built in 1949. It consists of five, 100 ft. steel pony truss spans and five 40 ft. steel I-beam approach spans. Services included: inspection and evaluation of the existing structure, rehabilitation design for the superstructure and substructure, development of construction plans, and design of temporary two-lane detour steel panel bridge to maintain traffic during construction.  |
| <b>06/13 – 02/14</b> | <b>LADOTD, I-10 Whiskey Bay Fire Repair, Louisiana:</b> Project Manager to coordinate with LADOTD Project Manager. Senior engineer leading the inspection team and load rating analysis as well as designing of rehabilitation system utilizing FRP composite materials. Developed the Specifications for Non-Standard items. Inspection and evaluation of the elevated expressway (part of I-10) between Atchafalaya River Bridge and Whiskey Bay Pilot Channel Bridge due to fire.   |
| <b>08/13 – 05/15</b> | <b>LADOTD, US 11 Lake Pontchartrain, Louisiana:</b> Provided structural analysis of the arched RC T-beam spans using refined analysis to account for the arching effect; inspection team member conducting hands-on inspection; QC/QA review activities: The historic bridge (built in 1928) carries US-11 over Lake Pontchartrain, which consists of 700 reinforced concrete spans and two steel movable spans for a total length of 24,922 ft.   |

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| <b>Firm employed by</b> WSP USA Inc.  |  |                   |  |    |
| <b>Name</b>   | Lloyd (Mark) Pearson, PE   |                   | <b>Years of relevant experience with this employer</b>   | 3  |
| <b>Title</b>  | QA/QC Engineer   |                   | <b>Years of relevant experience with other employer(s)</b>   | 42 |
| <b>Degree(s) / Years / Specialization</b>   |  |                   | ME / 1979 / Structural Engineering<br>BS / 1977 / Structural Engineering                           |    |
| <b>Active registration number / state / expiration date</b>                       |  |                   | PE.39629 / LA / 9-30-2023 (also licensed in AL; MS; FL; GA; NC; SC; VA)                            |    |
| <b>Year registered</b>  | 2015 (LA)  | <b>Discipline</b> | Civil Engineering  |    |
| <b>Contract role(s) / brief description of responsibilities</b>                   |  |                   | <b>Load Rating and Bridge Repair Engineer –</b><br><b><i>Meets all requirements for MPR 2.</i></b> |    |
| <b>Experience dates (mm/yy–mm/yy)</b>   | <b>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).</b>   |                   |  |    |
|  | <p>Mark is a bridge inspection and preservation manager, senior bridge engineer and project manager. He has functioned as task lead, engineer-of-record and design engineer on a variety of bridge replacement, widening, inspection, load rating and rehabilitation tasks in Alabama, North Carolina, South Carolina, Florida, Georgia, Tennessee and Virginia over a 40+ year career. He is currently task manager for post-tensioned spliced girder bridge in Mississippi replacing steel through-trusses. Recent tasks have included quality control reviews of bridge load ratings in SC and TX (using AASHTOware BrR) and bridge repair plans in NC.</p> <p><i>Relevant Training: Concrete Preservation Alliance, 2021 Seminar Series on Concrete Bridge Preservation, On-line; TRB Seminar, Use of Drones to Inspect Bridges, 2021, On-line; AASHTO, NCPP Bridge Preservation Seminar; Bridge Deck Preservation Using Overlays, 2020, On-line; NSBA Steel Bridge Forum, Raleigh, 2019; NS and CSX Railroad Roadway Worker Protection - Contractor Safety Certification, Raleigh, 2019; PCI Bridge Design Manual Seminar, Raleigh, 2004; FHWA Curved Steel I-Girder Workshop, San Antonio, 2004; FHWA &amp; ALDOT Prefabricated Bridge Elements Workshop, Montgomery, 2004.</i></p>  |                   |  |    |
| <b>07/18 – 12/22</b>  | <p><b>SCDOT, Bridge Inspection and Load Rating, South Carolina:</b> Senior Load Rater/QC Manager on this contract, which consisted of bridge inspection and determination of the load capacity ratings utilizing BrR and CSI bridge for 2,558 structures including truss, segmental, curved steel girder, movable and significantly retrofitted structures. WSP reviewed the plans, inspection reports, previous load ratings and all other available relevant bridge documents. The load ratings were completed utilizing the information provided by SCDOT and supplemented with information from our field inspections. All load ratings were completed with BrR or CSI Bridge. WSP also utilized drones as an inspection tool to help identify specific areas of bridges where a “hands-on” inspection is required. This resulted in reduced time required for traffic control and access equipment, providing a significant cost savings to SCDOT. In addition, WSP performed and Mark QC'd 160 load tests involving instrumenting the bridges with strain gauges and driving known loads across the bridge, to assist SCDOT with advanced load posting avoidance measures. The results of the test were utilized to create corrected effective structural models to increase and remove load postings from bridges across the state. These results were extrapolated out, to not</p> |                   |  |    |

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|                      | only remove postings on the bridges tested, but also on similar bridges in SCDOT's inventory. WSP efforts saved the State tens of millions of dollars.  |
| <b>05/17 – 03/19</b> | <b>City of Oxford, Alabama, Leon Smith Parkway Bridge Widening over Choccolocco Creek, in Calhoun County:</b> Engineer-of-Record for widening design of a four @ 100-foot span bridge and a five @ 100-foot span bridge utilizing prestressed concrete bulb-tees as sub to the prime design firm, GMC, Inc. Work included checking designs and plans sheets and directly supervising the design. Project was reviewed by ALDOT on behalf of the Town of Oxford and partly state funded. (Construction 2021).  |
| <b>05/16 – 07/18</b> | <b>City of Raleigh, NC, B-5556 Replacement of Bridge No. 490 on Lake Dam Road (SR 1427), City of Raleigh Public Works, North Carolina:</b> Project Manager for bridge replacement project with Categorical Exclusion (CE), surveys, hydraulic (FEMA) modeling, utility design/coordination and permitting. Engineer-of Record for design of the 100 foot, two-span precast cored slab bridge replacement. Work included checking the plans and calculations, supervising the design and providing engineering support services. (Construction 2018)   |
| <b>04/16 – 08/16</b> | <b>CFX (FDOT) Ramp G Bridge in SR 417 Boggy Creek Interchange, Load Rating (Bridge 750804), Central Florida Expressway, Orlando, Florida:</b> Engineer-of-Record for structural load rating of four-span, curved, twin steel box girders spanning 201.75ft-246.92ft-201.75ft-246.92ft.  |
| <b>02/09 – 7/14</b>  | <b>Florida DOT - District 4, I-595 Express Lanes (Design-Build) between I-75 and I-95, Broward County, Florida:</b> Bridge Design Task Leader and Engineer of Record. Mark was responsible for the final structure designs for 20 bridges in the design-build phase of a P3 toll project. Designs included 15 highway bridges and five bicycle and pedestrian bridges. Roles included preparing preliminary designs, directly supervising and checking final plans and calculations, writing special provisions, preparing estimates and providing bridge ratings in BrR and construction phase engineering support services. Bridges included curved girders with integral caps. |
| <b>02/13 – 12/13</b> | <b>NCDOT Rail Division, Project P-5201, Morrisville Parkway underpass of Norfolk Southern, Structure Design, Morrisville, Wake County, North Carolina:</b> Structures task manager and engineer-of-record for a new four-span, curved, ballast deck railroad bridge over Morrisville Parkway. Structure featured drilled shaft piers, steel pile abutment foundations, temporary tie-back soldier pile shoring wall and steel plate girders and rolled beams. Roles included preliminary design, checking final calculations and plans, directly supervising the design, writing special provisions and preparing estimates. (Design 2013; Construction 2016).                    |
| <b>04/09 – 07/10</b> | <b>Tennessee Steel Truss Bridge Ratings:</b> Engineer-of-Record for member rating analysis of three steel truss bridges in Tennessee: Old SR25/Cumberland River with 316-foot main span through truss and deck truss approaches; SR375/German Creek with 282 feet main span through-truss; and SR 67/Watauga River with 492 feet main span deck truss. Role included supervising and checking the manual calculations and VIRTIS/BrR analysis.  |

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| <b>Firm employed by</b> WSP USA Inc.  |   |   |  |    |
| <b>Name</b>   | Wesley Weir, PE   |   | <b>Years of relevant experience with this employer</b>     | 3  |
| <b>Title</b>  | Vice President/Bridge Inspector   |   | <b>Years of relevant experience with other employer(s)</b> | 29 |
| <b>Degree(s) / Years / Specialization</b>   |   | BS / 1989 / Civil Engineering   |  |    |
| <b>Active registration number / state / expiration date</b>                       |   | PE.35035 / LA / 3-31-2024 (also licensed in PA; OH; MS; VA; TX; DE; MA; KY; SC; MI; WI; AZ; NY; MO; NE; FL; KS) |  |    |
| <b>Year registered</b>  | 2009 (LA)   | <b>Discipline</b>   | Civil Engineering  |    |
| <b>Contract role(s) / brief description of responsibilities</b>                   |   | <b>Quality Assurance Manager – <i>Meets all requirements for MPR 4.</i></b>                                     |  |    |
| <b>Experience dates (mm/yy–mm/yy)</b>   | <b>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).</b>  |   |  |    |
|  | <p>Wesley has experience in the design, rehabilitation, inspection, and load rating of bridges. He has been heavily involved with technical climbing and rigging of complex, high level, difficult access bridges, confined space inspections and the inspection of movable bridges. Wesley has served as project manager, project engineer, senior structural engineer and resident engineer on numerous inspection, rehabilitation and design projects for the firm. He is an expert in inspection safety and inspection systems including inspection vehicles, rigging systems and technical climbing techniques. Wesley has supervised multiple design and inspection teams composed of both in-house personnel and subconsultants, and has participated in assignments involving underwater inspection and scour analysis, material sampling and testing, various non-destructive testing and maintenance and protection of traffic. He has also been a design engineer for the rehabilitation of fixed and movable bridges, including steel, concrete, masonry, timber and cable (cable stay and suspension) structures. His responsibilities have included training personnel, preparation of contract documents, specification, construction cost estimates, rating calculations, condition evaluation and rehabilitation reports.</p> <p><i>Relevant Training:</i> HWA-NHI Course #130055 - Safety Inspection of In-Service Bridges (1997, 2016), FHWA-NHI Course #130110 Tunnel Safety Inspection, FHWA-NHI Course #130078 - Fracture Critical Inspection for Steel Bridges, FHWA/NHI Course #130053 - Bridge Inspection Refresher Training, SPRAT – Level 1 Rope Access Technician, OSHA 10-Hour Construction Safety</p> |   |  |    |
| <b>01/20 – 6/21</b>   | <p><b>FCM Bridge Inspection and Load Rating Analysis of Ohio River Crossings, Kentucky Transportation Cabinet, Kentucky:</b> QA/QC engineer and team leader for the 2020 and 2021 fracture critical bridge inspection and load rating of five (5) major Ohio River crossing between Kentucky, Ohio, and Indiana. The five bridges included the historic 2,161’ Roebling Suspension Bridge built in 1867; the 3,258’ long Carrol Lee Cropper continuous through truss; the 10 span, 5,385’ long Irvin Cobb Bridge in Brookport, Indiana; and the 12th and 13th streets through truss bridges (2,277’ and 2,314’ respectively) in Ashland, KY. The work included NBIS and Element Level, in-depth, fracture critical inspection of these bridges as well as the <b>load rating</b> of the Carroll Lee Cropper bridge utilizing both BrR and MIDAS load rating software. Inspection access include various types of aerial lift equipment, under-bridge cranes, as well as rope access methods utilizing SPRAT Level I, II and III engineers.</p>  |   |  |    |
| <b>01/17 – Ongoing</b>  | <p><b>GDOT Inspection and Maintenance Manuals for the Sidney Lanier Bridge and Talmadge Memorial Bridge, Georgia:</b> QA/QC Engineer. Wes provided QC for the task-order contract that encompassed a range of critical bridge evaluation activities. These include a specialized member inspection of the Sidney Lanier Bridge, focusing on assessing exposed strands with varying degrees of corrosion. Additionally, there were in-depth National Bridge Inspection (NBI) and</p>   |   |  |    |

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|                                     | <p>emergency post-hurricane inspections of the Talmadge Memorial Bridge in 2017 and 2020. His tasks included assistance with the instrumentation and testing of both cable stay bridges to determine the existing force in each cable. Wes also QC'd rehabilitation design of the cable stay dampening system. The initial rehabilitation project for the Sidney Lanier Bridge primarily addressed issues related to excessive cable vibration, which included repairing cable stays with breached protective sheathing and corroded strands. Subsequently, a second rehabilitation project was carried out on the Sidney Lanier, entailing the installation of external dampers on all 176 stays. In 2022, Wes <b>QC the load rating</b> efforts for both the Sidney Lanier and the Talmadge Signature Cable-Stay Bridges, utilizing a full 3D FEM MIDAS Model of the structures.</p>   |
| 09/07 – 9/08                        | <p><b>I-35W Bridge Collapse over Mississippi River, Minneapolis:</b> Deputy Project Manager and lead investigator for the company in the forensic investigation to the collapse of the I-35W Bridge over the Mississippi River in Minneapolis, Minn. Wesley's responsibilities included the inspection and forensic evaluation of the bridge immediately after the collapse, directing and overseeing the removal operations of the collapsed truss span, and the re-constructing portions of the main truss spans in a lay down yard for further evaluation.</p>  |
| 08/14 – 12/16                       | <p><b>Ohio DOT Complex and Fracture Critical Bridge Inspections and Load Rating Analysis, Ohio DOT District 12:</b> Project Manager/Team Leader for providing FCM bridge inspections for multiple Work Authorizations including the Main Avenue Bridge, a 6,500', complex, difficult access structure in downtown Cleveland consisting of an 11-span cantilevered deck trusses, steel girder spans and reinforced concrete spans; Detroit-Superior Bridge, which consists of a 591', three-hinge steel arch spanning over the Cuyahoga River, 2 spans of cellular construction, 12 spans of concrete open-spandrel arch construction and 2 approach tunnels; and the Hope Memorial Bridge, a 3,285', 13-span cantilevered Pratt deck truss consisting of 4 truss lines which was built in 1932. This contract included the annual inspection of these structures as well a complete <b>load rating</b> analysis with gusset plate analysis of each of the structures. Traffic Control coordination and night inspections were required to complete these projects on-schedule.</p> |
| 01/14 – 09/18                       | <p><b>Delaware DOT, Indian River Inlet Cable Stayed Bridge, Sussex County, Delaware:</b> Project Manager for the new Charles W. Cullen Bridge which carries 4 lanes of Delaware Rte. 1 as well as bicyclist and pedestrian traffic over the Indian River Inlet. The bridge consists of four 250 ft. tall pylons and 152 stay cables supporting the deck. The \$150 M structure is 2,600 ft. long with a main span of 950 ft. and was opened to traffic in January 2012. Under a bridge safety inspection task order contract, Scope of Services included a special member inspection of the stay cable anchorages in accordance with the DeIDOT "Indian River Inlet Bridge Load Rating &amp; Inspection Manual." Access to upper external pylon anchorages was gained through rope access techniques, significantly reducing the impact to pedestrians and vehicular traffic. Deck level anchorages were inspected utilizing an 80 ft. boom lift and 60 ft. bucket boat from below deck.</p>   |
| 04/10 – 12/12<br>&<br>06/14 – 12/16 | <p><b>Ohio DOT, VAR-D8 Bridge Inspections, Complex and Fracture Critical Bridge Inspections (2 Years Inspection), District 8, Southwestern Ohio:</b> Project Manager for the inspection of four complex, difficult access structures - WAR-71-1514, twin 2,230 foot long deck truss structures over the Little Miami River, HAM-50-0376L, a 459 foot long, 4 span trough truss; HAM-50-1874, a 2.690 steel frame viaduct, and HAM-471-0025W a 1,659 foot long steel deck truss structure. The project includes preparation of the inspection reports, material testing program, if needed, repair recommendations and cost estimates.</p>  |
| 6/18-On-going                       | <p><b>TXDOT NBIS Bridge Inspection and Load Rating, Statewide Texas:</b> As Project Manager Wes was responsible for coordinating staff and resources required for conducting comprehensive inspections and load ratings of various structures. Additionally, he played a key role in assisting with the culvert load posting avoidance program, which involved rigorous load testing and analysis to remove thousands of unnecessary load postings. The reports generated as part of these assessments were instrumental in making informed decisions regarding load limits and ensuring the structural integrity and safety of the infrastructure. The team also successfully completed more than 3463 NBIS routine bridge inspections for TXDOT, along with over two hundred <b>load ratings</b>. The range of inspections and load ratings encompassed reinforced concrete slabs, steel floor system superstructures, steel rolled and plate girders, and prestressed concrete girders for both simple and continuous spans</p>   |

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| <b>Firm employed by</b> WSP USA Inc.  |  |  |  |    |
| <b>Name</b>   | Mark Shlyakov, PE  |  | <b>Years of relevant experience with this employer</b>     | 1  |
| <b>Title</b>  | Complex Structural Engineer Load Rater   |  | <b>Years of relevant experience with other employer(s)</b> | 42 |
| <b>Degree(s) / Years / Specialization</b>   |  | N/A  |  |    |
| <b>Active registration number / state / expiration date</b>                       |  | PE.38927 / LA / 9-30-2024 (also licensed in FL; MA; NJ; PA; TX; GA; WV; MD)                        |  |    |
| <b>Year registered</b>  | 2014 (LA)  | <b>Discipline</b>  | Structural Engineering                                     |    |
| <b>Contract role(s) / brief description of responsibilities</b>                   |  | <b>Complex Structural Engineer Load Rater –</b><br><b><i>Meets all requirements for MPR 4.</i></b> |  |    |
| <b>Experience dates (mm/yy–mm/yy)</b>   | <b>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).</b>   |  |  |    |
|  | <p>Mark is a Bridge Inspection and Preservation Manager, Senior Bridge Engineer and Project Manager. He has functioned as task lead, engineer-of-record and design engineer on a variety of bridge replacement, widening, inspection, load rating and rehabilitation tasks in Alabama, North Carolina, South Carolina, Florida, Georgia, Tennessee and Virginia over a 40+ year career. He is currently task manager for post-tensioned spliced girder bridge in Mississippi replacing steel through-trusses. Recent tasks have included quality control reviews of bridge load ratings in SC and TX (using AASHTOWare) and bridge repair plans in NC.</p> <p><i>Relevant Training: Concrete Preservation Alliance, 2021 Seminar Series on Concrete Bridge Preservation, On-line; TRB Seminar, Use of Drones to Inspect Bridges, 2021, On-line; AASHTO, NCPP Bridge Preservation Seminar; Bridge Deck Preservation Using Overlays, 2020, On-line; NSBA Steel Bridge Forum, Raleigh, 2019; NS and CSX Railroad Roadway Worker Protection - Contractor Safety Certification, Raleigh, 2019; PCI Bridge Design Manual Seminar, Raleigh, 2004; FHWA Curved Steel I-Girder Workshop, San Antonio, 2004; FHWA &amp; ALDOT Prefabricated Bridge Elements Workshop, Montgomery, 2004.</i></p>  |  |  |    |
| <b>01/13 – 11/15</b>  | <b>LADOTD Jimmie Davis Bridge over Red River, District 4, Bossier City, Louisiana:</b> Senior structural engineer for this 16-span, 2821-foot-long bridge that includes three central thru-trusses (354'+403'+354') and multiple 200' cantilever plate girders spans. Developed conceptual and final structural steel rehabilitation, truss jacking schemes, and conversion of expansion bearings multiple roller system with hybrid disk bearings. Designed a special strand-jacking system and structural analysis of the trusses and approach spans. Conducted 3D staged modeling with CSiBridge software.  |  |  |    |
| <b>07/18 – 12/22</b>  | <b>SCDOT, Bridge Inspection and Load Rating, South Carolina:</b> Senior Load Rater on this contract, which consists of bridge inspection and determination of the load capacity ratings utilizing BrR and CSI bridge for <b>2,558 structures</b> including truss, segmental, curved steel girder, movable and significantly retrofitted structures. WSP reviewed the plans, inspection reports, previous load ratings and all other available relevant bridge documents. The load ratings were completed utilizing the information provided by SCDOT and supplemented with information from our field inspections. All load ratings were completed with BrR or CSI Bridge. WSP also utilized drones as an inspection tool to help identify specific areas of bridges where a “hands-on” inspection is required. This resulted in reduced time required for traffic control and access equipment, providing a significant cost savings to SCDOT. In addition, Mark assisted with the <b>160 load tests</b> involving instrumenting the bridges with strain gauges and driving known loads across the bridge, to assist SCDOT with advanced load posting avoidance measures. The results of the test were utilized to create corrected effective structural models to increase and remove load postings from bridges across the state. These results were extrapolated out, to not only remove postings on the bridges tested, but also on similar bridges in SCDOT's inventory. <i>WSP efforts saved the State tens of millions of dollars.</i> |  |  |    |
| <b>05/17 – 03/19</b>  | <b>City of Oxford, Alabama, Leon Smith Parkway Bridge Widening over Choccolocco Creek, in Calhoun County:</b> Engineer-of-Record for widening design of a four @ 100-foot span bridge and a five @ 100-foot span bridge utilizing  |  |  |    |



Prime consultant name: **WSP USA Inc.**

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|                      | prestressed concrete bulb-tees as sub to the prime design firm, GMC, Inc. Work included checking designs and plans sheets and directly supervising the design. Project was reviewed by ALDOT on behalf of the Town of Oxford and partly state funded. (Construction 2021).   |
| <b>05/16 – 07/18</b> | <b>City of Raleigh, NC, B-5556 Replacement of Bridge No. 490 on Lake Dam Road (SR 1427), City of Raleigh Public Works, North Carolina:</b> Project Manager for bridge replacement project with Categorical Exclusion (CE), surveys, hydraulic (FEMA) modeling, utility design/coordination and permitting. Engineer-of Record for design of the 100 foot, two-span precast cored slab bridge replacement. Work included checking the plans and calculations, supervising the design and providing engineering support services. (Construction 2018)  |
| <b>04/16 – 08/16</b> | <b>CFX (FDOT) Ramp G Bridge in SR 417 Boggy Creek Interchange, Load Rating (Bridge 750804), Central Florida Expressway, Orlando, Florida:</b> Engineer-of-Record for structural load rating of four-span, curved, twin steel box girders spanning 201.75ft-246.92ft-201.75ft-246.92ft.   |
| <b>02/09 – 7/14</b>  | <b>Florida DOT - District 4, I-595 Express Lanes (Design-Build) between I-75 and I-95, Broward County, Florida:</b> Bridge Design Task Leader and Engineer of Record. Mark was responsible for the final structure designs for 20 bridges in the design-build phase of a P3 toll project. Designs included 15 highway bridges and five bicycle and pedestrian bridges. Roles included preparing preliminary designs, directly supervising, and checking final plans and calculations, writing special provisions, preparing estimates and providing bridge ratings in BrR and construction phase engineering support services. Bridges included curved girders with integral caps. |
| <b>02/13 – 12/13</b> | <b>NCDOT Rail Division, Project P-5201, Morrisville Parkway underpass of Norfolk Southern, Structure Design, Morrisville, Wake County, North Carolina:</b> Structures task manager and engineer-of-record for a new four-span, curved, ballast deck railroad bridge over Morrisville Parkway. Structure featured drilled shaft piers, steel pile abutment foundations, temporary tie-back soldier pile shoring wall and steel plate girders and rolled beams. Roles included preliminary design, checking final calculations and plans, directly supervising the design, writing special provisions and preparing estimates. (Design 2013; Construction 2016).                     |
| <b>04/09 – 07/10</b> | <b>Tennessee Steel Truss Bridge Ratings:</b> Engineer-of-Record for member rating analysis of three steel truss bridges in Tennessee: Old SR25/Cumberland River with 316-foot main span through truss and deck truss approaches; SR375/German Creek with 282-foot main span through-truss; and SR 67/Watauga River with 492 foot main span deck truss. Role included supervising and checking the manual calculations and VIRTIS/BrR analysis.   |

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| <b>Firm employed by</b> WSP USA Inc.  |  |   |  |    |
| <b>Name</b>   | Arunava Saha, PE   |   | <b>Years of relevant experience with this employer</b>     | 3  |
| <b>Title</b>  | Vice President/Georgia Structures Leader   |   | <b>Years of relevant experience with other employer(s)</b> | 30 |
| <b>Degree(s) / Years / Specialization</b>   |  | MS / 1995 / Civil Engineering<br>BS / 1989 / Civil Engineering      |  |    |
| <b>Active registration number / state / expiration date</b>                       |  | PE.38334 / LA / 3-31-2024 (also licensed in GA; SC; NC; MS; KY; NV) |  |    |
| <b>Year registered</b>  | 2013 (LA)  | <b>Discipline</b>   | Civil Engineering  |    |
| <b>Contract role(s) / brief description of responsibilities</b>                   |  | <b>Load Rater - <i>Meets all requirements for MPR 2.</i></b>        |  |    |
| <b>Experience dates (mm/yy-mm/yy)</b>   | <b>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).</b>   |   |  |    |
|  | Arun has more than 30 years of experience in the structural engineering field and holds a master's degree in civil engineering. His structural design experience includes prestressed and post-tensioned concrete, structural steel bridges, seismic design, box culverts, and tieback retaining walls. Arun's bridge design experience includes construction falsework and erection engineering, highly skewed and curved bridges, long-span plate girders, post-tensioned spliced box girders, and trusses. His responsibilities have included preliminary/final/ rehabilitation design, technical design reviews, load rating / BrR, analyses, and management of plan production. He has also developed LOADRATE software using Visual Basic Utilized by GDOT and their consultants to perform load ratings across the state of Georgia.  |   |  |    |
| <b>7/18-12/22</b>   | <b>SCDOT, Bridge Inspection and Load Rating, South Carolina:</b> Senior Load rater for the contract, which consists of bridge inspection and determination of the load capacity ratings utilizing BrR and CSI bridge for <b>2,558 structures</b> including truss, segmental, curved steel girder, movable and significantly retrofitted structures. WSP reviewed the plans, inspection reports, previous load ratings and all other available relevant bridge documents. The load ratings were completed utilizing the information provided by SCDOT and supplemented with information from our field inspections. All load ratings were completed with BrR or CSI Bridge. WSP also utilized drones as an inspection tool to help identify specific areas of bridges where a “hands-. In addition, WSP performed <b>160 load tests</b> involving instrumenting the bridges with strain gauges and driving known loads across the bridge, to assist SCDOT with advanced load posting avoidance measures. The results of the test were utilized to create corrected effective structural models to increase and remove load postings from bridges across the state. These results were extrapolated out, to not only remove postings on the bridges tested, but also on similar bridges in SCDOT's inventory. WSP efforts saved the State tens of millions of dollars. |   |  |    |
| <b>02/13 – 08/15</b>  | <b>LADOTD, US 90 over LA 318 Design-Build, St. Mary Parish, Louisiana:</b> Bridge task manager whose responsibilities included attendance at all design-related meetings (internal team and DOTD), resolution of design issues, coordination of project team, QA/QC design calculations and plans, and management of schedule and budget for the bridge task. The US 90 over LA 318 bridges were constructed as twin bridges for east on” inspection is required. This resulted in reduced time required for traffic control and access equipment, providing a significant cost savings to SCDOT and westbound traffic. Each structure was 1887 feet long with seventeen 111-foot spans, with LADOTD precast, prestressed concrete “LG-54” girders. The superstructure consists of a simple span over LA 318, flanked by four two-span continuous units on the east and west sides. Stantec was the prime design consultant and collaborated with the Gilchrist Construction design-build team.  |   |  |    |

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| 06/16-Ongoing | <b>GDOT, Engineering Services for Cable-Stayed Structures, Georgia:</b> In his role as deputy Project Manager, Arun assisted with rehabilitation design of the cable stay dampening system. Arun's leadership extended to two separate rehabilitation design contracts, for the Sidney Lanier Talmadge bridges, executed in 2021. The initial rehabilitation project for the Sidney Lanier Bridge primarily addressed issues related to excessive cable vibration, which included repairing cable stays with breached protective sheathing and corroded strands. Subsequently, a second rehabilitation project was carried out on the Sidney Lanier, entailing the installation of external dampers on all 176 stays. In 2022, Arun assisted with the <b>load rating</b> efforts for both the Sidney Lanier and the Talmadge Signature Cable-Stay Bridges, utilizing a full <b>3D FEM MIDAS Model</b> of the structures   |
| 02/13 – 08/15 | <b>LADOTD, LA 511: Jimmie Davis Bridge Rehabilitation, Bossier Parish, Louisiana:</b> Overall project manager whose responsibilities included maintaining schedule and budget; quality management; coordination with project team, sub-consultants, and client; design, plan productions, and deliverables. This project is located in Bossier Parish and crosses the Red River. The existing bridge is a 16-span structure, totaling approximately 2,823 feet in length. The bridge is on State Route LA 511 and is composed of three main steel truss simple spans: 354 feet, 402.5 feet, and 354 feet long respectively. The truss spans are flanked on both ends by three-span continuous steel deck girders, totaling 610 feet each and spanning the batture at each end. Simple steel girder spans of 70 feet each complete the structure, with five spans at the west end and two spans at the east end of the bridge. Stantec Consulting researched previous repair and inspection documents along with performing in-depth condition verification inspection using rope access method. Based on the findings of the research and site visit, Stantec generated repair strategies and presented the scope of services to LaDOTD. Upon approval, prepared construction plans for rehabilitation and performed load rating based on as-rehabilitated condition. Structural rehabilitation included full deck replacement, structural repair of truss members over 200 locations, design of paint containment system, replacement of nested rocker bearing, design and detailing of jacking scheme of truss spans, pin and hanger replacement. |
| 02/13 – 08/15 | <b>LADOTD, Retainer Contract for Bridge Preservation, Statewide, Louisiana:</b> Project manager for this \$6-million on-call contract, which includes a full array of services, such as bridge design, rehabilitation, bridge hydraulics, roadway design, geotechnical investigation, and surveying. LaDOTD selected Stantec Consulting Ltd. to provide bridge task order services throughout the state. To date, the focus of the contract has been to provide design and construction documents for the new widening and rehabilitation of bridges throughout the various districts in Louisiana.   |
| 02/13 – 08/15 | <b>LADOTD, Retainer Contract for Bridge Load Rating, Statewide, Louisiana:</b> Project manager for this \$3-million contract. LADOTD selected Stantec Consulting Ltd. to provide bridge load rating services throughout the state. Work began in 2014 and was completed in two years. This contract included load rating of more than 600 bridges. Bridge types included concrete, prestressed concrete, steel, and truss bridges, with lengths ranging from 100 feet to 29,000 feet.   |
| 02/13 – 08/15 | <b>LADOTD, Bridge Scour Project, Statewide, Louisiana:</b> Project manager of this approximate \$1-million contract. The project involves analysis of scour critical bridges throughout the state, including finite element analysis using data gathered from field inspection and providing recommendation reports.  |

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| <b>Firm employed by</b> <b>WSP USA Inc.</b>                                       |   |  |  |    |
| <b>Name</b>   | Joseph (Todd) Mitchell, PE, PMP   |  | <b>Years of relevant experience with this employer</b>     | 20 |
| <b>Title</b>  | Structures Engineer   |  | <b>Years of relevant experience with other employer(s)</b> | 7  |
| <b>Degree(s) / Years / Specialization</b>   |   | BS / 1996 / Civil Engineering  |  |    |
| <b>Active registration number / state / expiration date</b>                       |   | PE.42135 / LA / 3-30-2024 (also licensed in FL)  |  |    |
| <b>Year registered</b>  | 2017 (LA)   | <b>Discipline</b>  | Civil Engineering  |    |
| <b>Contract role(s) / brief description of responsibilities</b>                   |   | <b>Load Rating and Bridge Repair Engineer - <i>Meets all requirements for MPR 4.</i></b> |  |    |
| <b>Experience dates (mm/yy-mm/yy)</b>   | <b>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).</b>  |  |  |    |
|  | Joseph (Todd) is a Senior Bridge Engineer with bridge preservation experience and project manager. He has functioned as task lead, engineer-of-record and design engineer on a variety of bridge replacement, widening, inspection, load rating and rehabilitation tasks in Florida over a 27+ year career. He is currently project manager for a movable rehabilitation task work order contract and responsible for the statewide structures review contract which concentrates on complex structures. These include continuous steel girder bridges, movable bridges which included conventional bascule, lift bridges, and swing bridges.<br><i>Relevant Training: FHWA-NHI 130055 Safety Inspection of Inservice Bridges</i>   |  |  |    |
| <b>02/21 - ongoing</b>  | <b>FDOT District 5 - Ongoing Movable Bridge Continuing Services Contract, Districtwide, Florida:</b> Project manager. WSP was selected for this district-wide on-call bridge engineering services contract. This task order-based contract includes work program support; structural, geotechnical, survey, electrical and mechanical engineering design; maintenance of traffic plans; bridge inspection; design studies; load ratings; and nondestructive testing. Projects include movable bridge rehabilitation and evaluations, preparation of assessment reports and assist the Department in future programming for future replacements or rehabilitations which includes preparation of Life Cycle costs analysis for movable bridge steel repairs and mechanical/electrical upgrades and long-term maintenance.  |  |  |    |
| <b>2011-2016</b><br><b>2016-2021</b><br><b>02/21 - ongoing</b>                    | <b>FDOT Central Office - Ongoing Statewide Structures Review, Florida:</b> Project manager. WSP is responsible for a wide variety of assignments involving post-tensioned structures, movable bridges, and complex steel bridges. In addition, the firm reviewed Florida Department of Transportation specifications, sections of the structure’s manual, and detailing manual, and developed precast bridge element details which were incorporated into the structure’s manual. WSP was responsible for development for the training manual, training video, and leading workshops for the Department for Open Bridge Modeler. WSP also participated in tunneling workshops, light rail analysis, light rail manual, and Ultra High-Performance Concrete on FIB and sheet piling usage. This statewide task-based contract for the design and review of structures statewide includes signature bridges, rail bridges, segmental concrete bridges, movable bridges, and arch bridges. |  |  |    |

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| 01/21 – ongoing | <p><b>FDOT, District 1 - Ongoing: Cortez Bridge Replacement, District 1, Florida:</b> Project manager. WSP is responsible for the Category 2, center span navigational unit for the nearly 3000 ft long, 19 span bridge. WSP developed the vessel collision and worked closely with the designer responsible for the remaining elements to ensure load distribution across the elements. The bridge utilized simply supported FIB beams with continuous diagrams for the center unit supported by phase constructed arced piers resting on 30" piles. WSP worked closely with the Bridge Aesthetic Committee to develop nearly 10 different 3D bridge concept bridge renderings, each with multiple lighting scenarios for the \$2.5M Aesthetics' budget.</p>                    |
| 2021-ongoing    | <p><b>FDOT District 2 - Ongoing District Wide Movable and Complex Bridge Repairs, Districtwide, Florida:</b> Deputy project manager. WSP was selected for this district-wide on-call bridge engineering services contract. This task order-based contract includes work program support; structural, geotechnical, survey, corrosion, electrical and mechanical engineering design; maintenance of traffic plans; bridge inspection; design studies; load ratings; and scour analysis. Agreement Number 173868 Owner FLORIDA DEPARTMENT OF TRANSPORTATION: Start Date 08/30/2012, End Date 06/22/2021 This project has included painting of truss and pedestrian bridges, finger joint replacements, sonovoid PT bar investigative study and sonovoid group rehabilitations.</p> |
| 03/17 – 12/18   | <p><b>PORT NOLA, Almonaster Bridge 2017-2018:</b> Almonaster Avenue Railroad Bridge Fender Assessment: WSP performed and assessment for the Almonaster Avenue Railroad Bridge along the Inner Harbor Navigation Canal, approximately 2 miles South of Lake Pontchartrain. WSP provided an assessment of the original 1966 concrete dolphins/timber fender as a result of an allision of a tugboat transporting a disabled paddle river boat.</p>   |
| 2014-2015       | <p><b>PORT Tampa, 2014-2015: Tampa Port Authority General Engineering Consultant Services:</b> Severed as EOR for various structural assignments WSP and the dry docks 3 &amp; 4 condition assessment report. Eighty tasks have been completed under this contract.</p>  |
| 2012-2016       | <p><b>FDOT D2 2012-2016 District Wide Movable and Complex Bridge Repairs, Districtwide, Florida:</b> Engineer who performed inspection of a 2,600-foot steel cantilever truss bridge to develop rehabilitation plans. WSP provided design services for this task work order contract that involved as needed repair and rehabilitation projects to Florida Department of Transportation District Two's six movable bridges: Bridge of Lions, Crescent Beach, Main Street, Ortega River, St. Mary's River, and Sister's Creek. The work consisted mainly of structural, electrical and mechanical engineering.</p>  |
| 06/17 – 10/20   | <p><b>Interstate 10/Interstate 95 Interchange Design-Build, Duval County, Florida:</b> Project Engineer who provided structures quality control (QC) support. WSP, as subconsultant, performed structural design work for the Interstate 95 interchange at Interstate 10, and preliminary design of the Fuller Warren Bridge and shared-use path over the St. Johns River. The project includes the design of ancillary structures attached to the Fuller Warren Bridge, evaluation/modification of existing precast seawall, preparation of hydraulic design recommendations, independent peer review, and other associated tasks.</p>  |



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| <b>Firm employed by</b> WSP USA Inc.  |   |  |  |    |
| <b>Name</b>   | Trevor Johnson, PE  |  | <b>Years of relevant experience with this employer</b>     | 18 |
| <b>Title</b>  | Director, Structural Engineer   |  | <b>Years of relevant experience with other employer(s)</b> | 2  |
| <b>Degree(s) / Years / Specialization</b>   |   | BS / 2002 / Structural Engineering   |  |    |
| <b>Active registration number / state / expiration date</b>                       |   | PE.45518 / LA / 9-30-2023 (also licensed in FL)  |  |    |
| <b>Year registered</b>  | 2021 (LA)   | <b>Discipline</b>  | Structural Engineering                                     |    |
| <b>Contract role(s) / brief description of responsibilities</b>                   |   | <b>Complex Structural Engineer Load Rater – <i>Meets all requirements for MPR 4.</i></b> |  |    |
| <b>Experience dates (mm/yy–mm/yy)</b>   | <b>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).</b>  |  |  |    |
|  | Trevor is a lead structural engineer and bridge inspector with extensive experience with bridge rehabilitation, design, analysis, inspection, evaluation, retrofit plan work, and alternative studies. Trevor led several complex projects including high-level, difficult access structures; confined space; movable bridges; and historic structures. Trevor has experience with unique vertical lift bridges, bascules, truss bridges, bobtail (asymmetrical) swing bridge, steel box pier caps, and various prestressed concrete superstructures, and has provided quality assurance/quantity control for numerous bridge design and inspection projects.   |  |  |    |
| <b>06/16 – 05/21</b>  | <b>FDOT, District Wide Bridge Engineering Design/CEI Support Services, District One, FL:</b> Project Manager and Engineer of Record responsible for this task work order based contract for various repairs, inspections, and rehabilitation projects including multiple movable bridge repairs and mechanical/electrical upgrades, post tension bridge repairs, conventional bridge repairs, emergency response, engineering assessments, painting, fender repairs, pile jackets, cathodic protection system repairs, ABC bridge span replacement, joint repairs, concrete and steel repairs, load ratings, and temporary traffic control. Responsibilities also included determining appropriate scope of work, implemented innovative cost saving approaches, coordinated with owners, stakeholders, and project team, and lead work to high quality standards, constructability, and accurate cost estimates. |  |  |    |
| <b>06/12 - 12/18</b>  | <b>FDOT, District Wide Movable and Complex Bridge Repairs, District Two, FL:</b> Project Manager and Engineer of Record responsible for this task work order based contract for various repairs, inspections, and rehabilitation projects including movable bridge repairs, approach span repairs, inspections, and mechanical/electrical upgrades, multiple truss bridge repairs, segmental post tension soft grout investigations and impregnation repairs, painting, joint repairs, concrete spall and crack repairs, load ratings, and temporary traffic control. Responsibilities also included determining appropriate scope of work, cost effective complex steel repairs, minimized impacts on the public, coordinated with owners, stakeholders, and project team, and lead work to high quality standards, constructability, and accurate cost estimates.   |  |  |    |

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| 11/16 - 3/21               | <p><b>FDOT, Wilson Pigott Draw Bascule Bridge &amp; LaBelle Draw Bascule Bridge over the Caloosahatchee Channel, Lee County, FL:</b> Project Manager and Engineer of Record responsible for these double-leaf Hopkins trunnion bascule bridges. Work included strengthening to bring the structure up to current HL-93 FL120 load rating. Strengthening included innovative solutions of adding post tensioning bars to the floor beams, post installed shear connectors to the cross beams, and carbon fiber wraps to the pre-stressed approach span beams. Rehabilitation included spall repairs, structural steel repairs, coating spot paint, span balancing, span lock repairs, live load shoe adjustments, temporary traffic control, and Wilson Pigott Draw included replacement of the program logic control system (PLC). Also responsible for coordinating with owners, stakeholders, community outreach, and project team, and lead work to high quality standards constructability, and accurate cost estimates.</p> |
| 10/19 - 4/20               | <p><b>LADOTD, Port of New Orleans, Almonaster Rail Bascule Bridge, New Orleans, LA:</b> Technical Advisor for the single leaf Strauss truss bascule bridge rehabilitation recommendations and analysis for the repair of deteriorated components of the Almonaster Bridge. Trevor's duties include advising and review of the on-site inspection, quality control review reports of findings &amp; technical memorandums, and load rating calculations.</p>  |
| 03/19 – Present            | <p><b>LADOTD, Seabrook Rail Bascule Bridge, New Orleans, LA:</b> Technical Advisor for the single leaf Strauss truss bascule bridge and approach span rehabilitation. Trevor's duties included advising and quality control review of the analysis, design, contract plans and specifications of the full superstructure and bearings replacement for each approach spans along with post design services.</p>   |
| 04/16 – 11/19              | <p><b>FDOT, Bridge of Lions Bascule over Matanzas River IWW, St. Augustine, FL:</b> Project Manager and Structural Engineer responsible for the double rolling bascule bridge rehabilitation, spot painting and overcoating of existing metalizing, correcting barrier railing conflicts, partial replacement of the sidewalk slip resistant plates, and repairing all the pedestrian railing and coordinating the electrical rehabilitation and limit switch improvements.</p>  |
| 7/09 – 7/16 & 10/17 – 9/18 | <p><b>FDOT, Main Street Lift Bridge Structural Enhancements, Jacksonville, FL:</b> Project Manager and Engineer of Record responsible for structural enhancement to this landmark 365-foot span drive vertical lift truss bridge including sidewalk replacement, addition of barriers for truss protection, structural repairs of the trusses, towers, floor beams, stringers, rocker nest bearing repairs, approach span repairs, and spot painting. lead inspections, determine appropriate scope of work, establish structural repair methods. Work also included electrical rehabilitation and droop cable replacement. Engineering studies include: Main Sheave Trunnion and Wire Rope Replacement, Fit for Service analysis (remaining life) of trunnion cracks, cost estimate, construction time estimates and Traffic Resistance Barrier Replacement for making improvements to the existing and replacement options.</p>  |
| 10/14 – 12/17              | <p><b>FDOT, John Ringling Parkway Bascule Bridge over New Pass, Sarasota, FL:</b> Project Manager and Engineer of Record for this single leaf trunnion bascule span. Trevor's responsible for replacing the concrete filled sidewalk grating, window and door replacement, roof replacement, traffic gate replacement, and structural support for the generator replacement, control system replacement, and a motor re-alignment.</p>   |

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| <b>Firm employed by</b> WSP USA Inc.  |   |   |  |    |
| <b>Name</b>   | Noemy Roman, PE   |   | <b>Years of relevant experience with this employer</b>     | 5  |
| <b>Title</b>  | Lead Movable Bridges Engineer   |   | <b>Years of relevant experience with other employer(s)</b> | 16 |
| <b>Degree(s) / Years / Specialization</b>   |   | BS / 2002 / Civil Engineering   |  |    |
| <b>Active registration number / state / expiration date</b>                       |   | PE.43748 / LA / 3-31-2024 (also licensed in OH; IN; MI; KY; WV; FL; SC)       |  |    |
| <b>Year registered</b>  | 2019 (LA)   | <b>Discipline</b>   | Civil Engineering  |    |
| <b>Contract role(s) / brief description of responsibilities</b>                   |   | <b>Senior Load Rating Engineer – <i>Meets all requirements for MPR 4.</i></b> |  |    |
| <b>Experience dates (mm/yy–mm/yy)</b>   | <b>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).</b>  |   |  |    |
|  | <p>Noemy is a Lead Structural Engineer and Bridge Inspector with over 21 years of experience with an emphasis on bridge rehabilitation, design, analysis, inspection, evaluation, retrofit plan work and alternative studies. She has served on several complex projects which include movable bridges, and high level, difficult access structures, confined space, and historic structures. She has experience with unique vertical lift bridges, bascules, truss bridges, a bobtail (asymmetrical) swing bridge, steel box pier caps, various prestressed concrete superstructures, the peer review of bridge plans, and has served as QA/QC for numerous bridge design and inspection projects. In addition, she has extensive experience in retaining walls, culverts, preliminary engineering, cost estimation, report preparation, structural analysis using hand calculations and by various software packages (MDX, LARSA, STAAD, MIDAS), plan preparation, construction specification, and construction supervision of steel retrofits. She has also helped to write the scope of services for Design Build jobs and has worked on several design build teams and on VECPs.</p> <p><i>Relevant Training: FHWA/NHI-130107C Maintenance of Movable Bridges January 2020, Bridge Inspection Refresher Training – FHWA/NHI, February 2019, S-BRITE Center of Purdue University, October 5, 2016 - Inspecting Steel Bridges for Fatigue, Fracture Critical Inspection Techniques for Steel Bridges-FHWA/NHI No. 130078, May 3, 2016, Safety Bridge Inspection for In-Service Bridges – FHWA/NHI, March 2008, OSHA 10 Hour Completion – Construction Safety and Health July 15, 2015 – 21-004445159, BasicPlus CPR, First Aid for Adults, December 22, 2016 – Registry Number 35764</i></p> |   |  |    |
| <b>01/23 – 09/23</b>  | <p><b>Amtrak Vertical Lift Bridge No. IL 466.20 over S. Branch of Chicago River, Amtrak, Chicago Illinois:</b> Deputy Project Manager and design lead for the inspection, crack repair and miscellaneous retrofit work for Bridge IL 466.20, a 1915 span-drive vertical lift bridge with a 272.83ft main lift span and two 53.5ft tower spans and short approach spans. The bridge carries two tracks for Amtrak and Class I freight. The track supporting framing steel exhibits cracking at the tower and lift skewed end supports (&gt;45°) due to differential settlement of stringers, poor web coping details at the approaches and floating bearings at the abutments. The scope includes an expedited set of plans for the floating bearings and unstiffened miter bolster, and another set to provide temporary stiffening to the stringers at the skewed ends. Also included are miscellaneous walkway and railing replacements. A study will be performed for the permanent retrofit of the stringer ends at the skewed supports.</p>  |   |  |    |
| <b>10/18 – 12/20</b>  | <p><b>Chicago DOT, Webster Avenue Bascule Bridge over the North Branch of the Chicago River, Chicago, Illinois:</b> Structural Engineer for the rehabilitation of the 1916 through “pony” truss, double leaf Webster Avenue Trunnion Bascule Bridge over the North Branch of the Chicago River. The bridge is 287 feet long and 60 feet wide and is currently non-operable. The bridge is in poor condition due to advanced deterioration of various steel members. Noemy was involved in helping with the Phase II plan production and designing the lower lateral bracing and strut replacements, the rehabilitation of the anchor columns, the pier protection fender system and the live load span anchor system, as well as various other details</p>  |   |  |    |

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|                      | and reviewing the work of other team members. Bridge is currently under construction, and Ms. Roman is helping with RFI's and designing or reviewing modifications due to latent conditions uncovered by demolition.  |
| <b>10/20 – 05/21</b> | <b>Chicago DOT - Modification of Lake Shore Drive Bascule Bridge over the Chicago River, Chicago, Illinois:</b> Reviewer for this project involved adding a 20-foot multi-user path on the east side of the bridge on the lower deck. The Lake Shore Drive Bascule Bridge over the Main Branch of the Chicago River is a double-leaf, twin level, trunnion type Bascule Bridge. The bridge is approximately 108 feet (33 meters) wide and approximately 356 feet (109 meters) long and was constructed in 1937. The project required two new separate, articulated sidewalk bascules linked to the main bridge bascules, such that the sidewalk leaves open with the larger bridge. Each sidewalk leaf is 24.36ft wide, 26.91ft long from trunnion to toe, and is asymmetrical loaded since the leaf is attached by one post and link arm at the inboard girder only. |
| <b>08/22 – 06/23</b> | <b>Seattle DOT, Fremont Bridge and Ballard Bridge, Bascules Phase II – Seismic Improvements, Washington:</b> Structural Design Engineer for select retrofit components of the Ballard Bridge and advising on the Fremont Bascule Bridge. Retrofit design is based on the recommended retrofit system identified in Phase I, and further updates for AASHTO code updates and refined analysis. Both bridges are double-leaf, trunnion, steel truss bascule bridges with opening span lengths of 242 feet and 218 feet, respectively. Both bridges are over 100 years old but are of historical and operational significance to the City of Seattle.  |
| <b>06/19 – 12/20</b> | <b>City of Cleveland, Center Street Rim Bearing Swing Bridge over the Cuyahoga River, Cleveland, Ohio:</b> Structural Designer and Inspector for the 2021 rehabilitation of the 245'-0" three span, rim bearing, bobtail swing bridge, originally built in 1901. The project included an inspection that formed the basis of the rehabilitation, ultrasonic testing of the pins, review of previous load rating to update for losses found and to determine the extent of repairs/replacement, cost estimation and rehabilitation plans and specifications. Included with the repair work is the heat straightening of selected eyebar members damaged from vehicle collision and a new traffic railing system to protect them, new river span stringers, new end floorbeams, and new deck grating and sidewalks.   |
| <b>12/19 – 09/20</b> | <b>Illinois DOT - Cass Street Rolling Lift Bridge over the Des Plaines River, Joliet, Illinois:</b> Design Engineer for the emergency repairs of selected stringers that were significantly deteriorated with full section losses adjacent to the simple shear connection to the floor beams. The client requires as little disruption to both vehicular and navigational traffic, with all repair work performed without removing deck panels or replacing stringers. Ms. Roman developed the suggested temporary support, sequencing, and the new web reinforcing connections. In addition, she developed the plans, details, quantities, and specifications for the repairs on an expedited schedule.  |

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| <b>Firm employed by</b> WSP USA Inc.  |   |   |  |    |
| <b>Name</b>   | Matthew Sullivan, PE  |   | <b>Years of relevant experience with this employer</b>     | 15 |
| <b>Title</b>  | Project Engineer/Team Leader  |   | <b>Years of relevant experience with other employer(s)</b> | 1  |
| <b>Degree(s) / Years / Specialization</b>   |   | BS / 2007 / Civil Engineering   |  |    |
| <b>Active registration number / state / expiration date</b>                       |   | PE.42490 / LA / 9-30-2024 (also licensed in NH; MA; CT; RI; PA; NY; NJ; DE, MD, OH, TX) |  |    |
| <b>Year registered</b>  | 2018 (LA)   | <b>Discipline</b>   | Civil Engineering  |    |
| <b>Contract role(s) / brief description of responsibilities</b>                   |   | <b>Bridge Inspection Team Leader – <i>Meets all requirements for MPR 5.</i></b>         |  |    |
| <b>Experience dates (mm/yy–mm/yy)</b>   | <b>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).</b>  |   |  |    |
|  | <p>Matthew's experience includes valuable field and office backgrounds in bridge design, load ratings and inspection. At WSP, Matthew has served as a team leader specializing in cable inspection techniques on numerous long span suspension bridges in the New York and Philadelphia metro areas and in the states of Delaware and Rhode Island. He is well versed in the procedures, policies, and standards required to perform inspections of bridge cable components and is also experienced in coordinating with various agency personnel, subcontractors and vendors. He has also served as lead team leader on WSP's inspections of the Newport Pell and Mount Hope Suspension Bridges and the Jamestown-Verrazzano Bridge for the Rhode Island Turnpike &amp; Bridge Authority, as well as the Delaware Memorial Bridge for the Delaware River &amp; Bay Authority. In addition, Matthew has developed the skills required to perform highway and bridge design and ratings, as well as complete contract document preparation. He is well versed in the procedures, policies, and standards required to perform design, ratings and inspections.</p> <p><i>Relevant Training:</i> Safety Inspection of In-Service Bridges, 2011 (NHI-130055); Safety Inspect of Fracture-critical Inspection Techniques for Steel Bridges, 2014 (NHI 130078); Bridge Inspection Refresher Training, 2018 (NHI-130053); Tunnel Safety Inspection, 2017 (NHI 130110); SPRAT-Level II Rope Access Technician, 2018; Inspection and Maintenance of Ancillary Highway Structures, 2015 (NHI 130087); OSHA 10-hour Hazard Recognition Training for the Construction; Licensed Drone Pilot, 2021</p> |   |  |    |
| <b>06/16 Reselected 2018-Ongoing</b>  | <p><b>TXDOT NBIS Bridge Inspection and Load Rating, Statewide Texas:</b> Matt served as team leader and assisted with comprehensive inspections and load ratings of various structures. Additionally, he played a key role in assisting with the culvert load posting avoidance program, which involved rigorous load testing and analysis to remove thousands of <b>unnecessary load postings</b>. The reports generated as part of these assessments were instrumental in making informed decisions regarding load limits and ensuring the structural integrity and safety of the infrastructure. The team also successfully completed more than 3463 NBIS routine bridge inspections for TxDOT, along with over two hundred <b>load ratings</b>. The range of inspections and load ratings encompassed reinforced concrete slabs, steel floor system superstructures, steel rolled and plate girders, and prestressed concrete girders for both simple and continuous spans.</p>   |   |  |    |
| <b>06/16-Ongoing</b>  | <p><b>GDOT, Engineering Services for Cable-Stayed Structures, Georgia:</b> In his role as Project Team Leader, Matt assisted on the task-order contract that encompassed a range of critical bridge evaluation activities. These include a specialized member inspection of the Sidney Lanier Bridge in 2016, focusing on assessing exposed strands with varying degrees of corrosion. Additionally, there were in-depth National Bridge Inspection (NBI) and emergency post-hurricane inspections of the Talmadge Memorial Bridge in 2017 and 2020. His tasks also included the instrumentation and testing of both cable stays bridges to determine the existing force in each cable. Matt assisted on the rehabilitation design of the cable stay dampening system. Matt assisted on to two separate rehabilitation design contracts, for the Sidney Lanier Talmadge bridges, executed in 2021. The initial rehabilitation project for the Sidney Lanier Bridge primarily addressed issues related to excessive cable vibration, which included repairing cable stays with breached protective sheathing and corroded strands. Subsequently, a second rehabilitation project was carried out on the Sidney Lanier, entailing the installation of external</p>  |   |  |    |



Prime consultant name: **WSP USA Inc.**

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|   | dampers on all 176 stays. In 2022, Matt assisted with the load rating efforts for both the Sidney Lanier and the Talmadge Signature Cable-Stay Bridges, utilizing a full 3D FEM MIDAS Model of the structures .  |
| <b>06/16 – 08/17</b>                              | <b>SCDOT, Bridge Inspection and Load Rating, South Carolina:</b> Senior Load Rater on this contract, which consists of bridge inspection and determination of the load capacity ratings utilizing BrR and CSI bridge for <b>2,558 structures</b> including truss, segmental, curved steel girder, movable and significantly retrofitted structures. WSP reviewed the plans, inspection reports, previous load ratings and all other available relevant bridge documents. The load ratings were completed utilizing the information provided by SCDOT and supplemented with information from our field inspections. All load ratings were completed with BrR or CSI Bridge. WSP also utilized drones as an inspection tool to help identify specific areas of bridges where a “hands-on” inspection is required. This resulted in reduced time required for traffic control and access equipment, providing a significant cost savings to SCDOT. In addition, Matt assisted with the <b>160 load tests</b> involving instrumenting the bridges with strain gauges and driving known loads across the bridge, to assist SCDOT with advanced load posting avoidance measures. The results of the test were utilized to create corrected effective structural models to increase and remove load postings from bridges across the state. These results were extrapolated out, to not only remove postings on the bridges tested, but also on similar bridges in SCDOT’s inventory. <i>WSP efforts saved the State tens of millions of dollars.</i> |
| <b>02/11 – 06/15 &amp; 06/18 – 08/22</b>          | <b>Newport Pell Bridge Biennial Inspection, Rhode Island Turnpike and Bridge Authority:</b> Team Leader for the 2018 and 2020 Inspections of the Newport Pell Bridge and Team Leader for the 2011 to 2015 Annual Inspections of the Newport Pell Bridge which also include associated sign and lighting structures throughout RITBA property. Matt’s responsibilities included leading field inspections, report preparation including both a Narrative style report for RITBA and a RIDOT BrM style report per NBIS requirements. Mr. Sullivan utilized rope access for inspection of the main cable anchorages and 100% hands-on inspection of suspender ropes. He has also coordinated the use of drones to inspect various hard-to-access elements of the bridge.  |
| <b>06/16 – Present<br/>Reselected in<br/>2020</b> | <b>MassDOT Statewide Complex Bridge Inspection Services, Massachusetts:</b> Team Leader for this 5-year contract (renewed in 2020) with MassDOT on complex bridge structures throughout Massachusetts. Matt is responsible for determining the inspection and report writing effort required, organizing field work, including vendors, state personnel and police as required and creating detailed inspection reports that include prioritized repair recommendations. Matt has utilized various types of rope access techniques on several of these complex structures including rope drops, swing scaffolding and aide climbing.   |
| <b>05/15 - Present</b>                            | <b>Delaware River &amp; Bay Authority, GEC On-Call Inspection Contract:</b> Lead Team Leader and more recently as Project Manager on this GEC contract for the inspection of the Delaware Memorial Bridge Structures #1 & #2, twin 10,800-foot-long structures that include suspension bridge sections consisting of 2,150-foot-long main spans. Annual inspections also include hundreds of signs, light poles, and high mast towers throughout the DRBA property. These ancillary structures are inspected and re-inventoried regularly. Responsibilities include complete oversight of all field activities and report preparation including a Narrative style report for use by the DRBA as well as submission of Element Level and SI&A data to DeIDOT and NJDOT per NBIS requirements. Climbing and Drones are used during these inspections.  |

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| <b>Firm employed by</b> WSP USA Inc.  |  |  |  |    |
| <b>Name</b>   | Raghuveer Surapaneni, PE   |  | <b>Years of relevant experience with this employer</b>     | 3  |
| <b>Title</b>  | Supervising Bridge Inspection Engineer   |  | <b>Years of relevant experience with other employer(s)</b> | 27 |
| <b>Degree(s) / Years / Specialization</b>   |  | MS / Transportation / 1994 / Temple University<br>ME / Structures / 1991 / University of Auckland, New Zealand<br>BS / Civil Engineering / 1985 / Mysore University, India |  |    |
| <b>Active registration number / state / expiration date</b>                       |  | PE.38403 / LA / 3-31-2024 (also licensed in NY; NJ; NC; MS; SC; PA)  |  |    |
| <b>Year registered</b>  | 2013 (LA)  | <b>Discipline</b>  | Civil Engineering  |    |
| <b>Contract role(s) / brief description of responsibilities</b>                   |  | <b>Bridge Inspection Team Leader</b>   |  |    |
| <b>Experience dates (mm/yy-mm/yy)</b>   | <b>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).</b>   |  |  |    |
|  | <p>Raghuveer is an FHWA certified bridge inspector and a structural engineer. He has 26 years of experience in the inspection, analysis, load rating, and rehabilitation design of existing bridges as well as design of new bridges and other highway structures. He has experience in construction engineering and inspection services in the rehabilitation and construction of highways and bridges. He has inspected and/or supervised the inspection of over 2000 bridges including complex bridges in Northeast, Southeast and South. He has load rated over 200 structures ranging from culverts to simple and continuous span steel and concrete girder bridges.</p> <p><i>Relevant Training:</i> FHWA Safety Inspection of In-Service Bridges, 2023 (NHI 130055); FHWA Introduction to Safety Inspection of In-Service Bridges - WEB-BASED, 2013 (NHI 130101); FHWA Fracture Critical Inspection Techniques for Steel Bridges, 2002 (NHI 130078); FHWA Stream Stability and Scour at Highway Bridges, 2008 (NHI 135046); FHWA Bridge Inspection Refresher Training, 2018 (NHI 130053); FHWA Bridge Inspection Nondestructive Evaluation Seminar - BINS, 2015 (NHI 130099A); FHWA Bridge Management Training Inspection Session, 1998; Confined Space Entry Training, 2021; AWS Certified Welding Inspection Seminar, 2015; OSHA 30 Hour Construction Safety Training, 2021. <b>LADOTD Traffic Engineering Training Course.</b></p> |  |  |    |
| <b>01/15 – 09/16</b>  | <b>LADOTD In-Depth Inspection of Complex Bridges, LA:</b> Project Manager and the Team Leader for the inspection of two cantilever truss bridges: I-10 Calcasieu River Bridge in Lake Charles, LA and I-10 Mississippi River in Baton Rouge, LA and one cable stayed bridge, John James Audubon Bridge. Planned, scheduled and performed in-depth inspections on truss bridges and approach spans of cable stayed bridge. Managed sub-consultants and vendors. Lead four inspection teams in inspecting approach and main spans of truss bridges. Prepared in-depth inspection reports for two truss bridges. Inspection equipment used include man lifts, snoopers and bucket trucks.   |  |  |    |
| <b>06/14 - 12/14</b>  | <b>LADOTD, LA1 Phase 2 Leeville to Golden Meadow, LA:</b> Project Engineer for the preliminary and final design of six miles of elevated highway. Performed design calculations, plan productions, LRFDR load rating and QC/QA. Designed deck, superstructure and the substructure elements using LRFDR design methodology.  |  |  |    |
| <b>2013 - 2015</b>  | <b>LADOTD, LA1 Phase 1 Leeville to Port Fourchon, LA:</b> Lead Inspection Team Leader for the inspection of Phase 1A: Fourchon to Leeville Bridge - Approximately 7 miles, 40-ft wide, two-lane elevated highway south of Leeville Bridge to LA 3090 in Port Fourchon; Phase 1B: Leeville Bridge Approaches and Connector - Two-lane interchanges and connector roads north and south of the Leeville Bridge; and Phase 1C: Leeville Bridge Replacement - Two-lane, fixed-span, high-level bridge (Tomey J. Doucet Bridge) over Bayou Lafourche. Structures include simple and multiple span, multi-beam, prestressed concrete and steel girder bridges. Performed inspections (2 Cycles) using boat, snooper and WZTC.  |  |  |    |

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| 03/21-12/21   | <p><b>GDOT, Engineering Services for Cable-Stayed Structures, Georgia:</b> In his role as team leader, Raghu assisted with task-order contract that encompassed a range of critical bridge evaluation activities. These include a specialized member inspection of the Sidney Lanier Bridge in 2016, focusing on assessing exposed strands with varying degrees of corrosion. Additionally, there were in-depth National Bridge Inspection (NBI) and emergency post-hurricane inspections of the Talmadge Memorial Bridge in 2017 and 2020. His tasks also included the instrumentation and testing of both cable stay bridges to determine the existing force in each cable. Raghu then assisted with the rehabilitation design of the cable stay dampening system. Raghu also assisted with two separate rehabilitation design contracts, for the Sidney Lanier Talmadge bridges, executed in 2021. The initial rehabilitation project for the Sidney Lanier Bridge primarily addressed issues related to excessive cable vibration, which included repairing cable stays with breached protective sheathing and corroded strands. Subsequently, a second rehabilitation project was carried out on the Sidney Lanier, entailing the installation of external dampers on all 176 stays. In 2022, Raghu assisted with the load rating efforts for both the Sidney Lanier and the Talmadge Signature Cable-Stay Bridges, utilizing a full 3D FEM MIDAS Model of the structures.</p> |
| 10/16 - 03/20 | <p><b>NCDOT Statewide Bridge Inspection Services, NC:</b> Raghuveer served as Lead Bridge Inspection Team Leader for the Bridge Safety Inspection Program for NCDOT statewide bridge inspection services. He prepared the estimate, scheduled inspections and coordinated with vendors and the NCDOT. Reviewed previous inspection reports to establish Work Zone Traffic Control (WZTC), access needs, and developed WZTC schedules for bridge inspection. Performed inspections using WIGINS computer program, issued Critical Findings and Priority Maintenance reports to the state as and when needed. He also performed quality control review of bridge inspection reports prepared by other teams. Inspected about 450 structures including simple and multiple span, multi-beam, thru-girder, steel pipe, and concrete box culverts, as well as concrete slab bridges. Responsible for use of access equipment including snoopers or Under Bridge Inspection Units (UBIU), Van lift, hydra platform and railroad flagmen, etc.</p>   |
| 2012 - 2014   | <p><b>MDOT: Lead Bridge Inspection Team Leader for NBI Inspection of Westbound and Eastbound bridges of US 84 over the Mississippi River in Natchez, MS (2 Cycles):</b> Westbound bridge is a 4,205 feet long cantilevered Warren through truss bridge and the Eastbound bridge is 4,202 feet long Continuous Steel Truss through deck bridge. Inspected truss and approach spans using man lifts, snoopers and bucket truck. Prepared inspection reports including conclusions and repair recommendations.</p>   |
| 07/18 - 12/22 | <p><b>SCDOT, Bridge Inspection and Load Rating, South Carolina:</b> Performed inspections and Load ratings for this contract, which consisted of bridge inspection and determination of the load capacity ratings for 2,604 structures in SC within 3 years. All load ratings were completed with BrR. In addition, assisted with 160 load tests, involving instrumenting the bridges with strain gauges and driving known loads across the bridge. The results of the test were utilized to create corrected effective structural models to increase and remove load postings from bridges across the state. These results were extrapolated out, to not only remove postings on the bridges tested, but also on similar bridges in SCDOT's inventory. WSP efforts saved the State tens of millions of dollars.</p>  |

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| <b>Name</b>  | Casey Howard, PE  | <b>Years of relevant experience with this employer</b>     | 10                |
| <b>Title</b>   | Project Manager/Lead Bridge Engineer  | <b>Years of relevant experience with other employer(s)</b> | 0                 |
| <b>Degree(s) / Years / Specialization</b>  | BS / 2013 / Civil Engineering   |  |                   |
| <b>Active registration number / state / expiration date</b>                      | PE.42913 / LA / 3-31-2023   |  |                   |
| <b>Year registered</b>   | 2018 (LA)   | <b>Discipline</b>  | Civil Engineering |
| <b>Contract role(s) / brief description of responsibilities</b>                  | <b>Senior Load Rating Engineer – <i>Meets all requirements for MPR 5.</i></b>   |  |                   |
| <b>Experience dates (mm/yy–mm/yy)</b>  | <b>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).</b>  |  |                   |
|  | <p>Casey is a Federal Highway Administration-certified bridge inspector and a structural engineer. His experience includes inspection and report preparation for bridges and culverts for numerous states the across the Southeast. Casey also has experience in the load rating and analysis of steel, timber, prestressed American Association of State Highway and Transportation Officials concrete girder, reinforced concrete deck girders, and prestressed concrete cored slab and box beam bridges for the North Carolina Department of Transportation.</p> <p><i>Relevant Training:</i> FHWA Safety Inspection of In-Service Bridges, 2014 (NHI 130055); FHWA Prerequisite, 2013 (NHI 130101A); ASNT Ultrasonic Testing Level I, 2015; ASNT Ultrasonic Testing Level II General Exam, 2015; Fracture-Critical Inspection Techniques for Steel Bridges, 2016 (NHI 130078); Bridge Coatings Level 1, 2014 (BCC 12219); FHWA Bridge Maintenance Training, 2013 (NHI 134029); FHWA Introduction to Element Level Bridge Inspection, 2014; SPRAT Level I Rope Access Technician, 2015; SPRAT Level II Rope Access Technician, 2017; FHWA Tunnel Safety Inspection, 2016 (NHI 130110); Confined Space Entry Training, 2017; American Red Cross Adult First Aid/CPR/AED; Bridge Inspection Refresher Training, 2018 (NHI 130053); FHWA Inspection and Maintenance of Ancillary Highway; Structures, 2016 (NHI 130087); Aerial Training, 2017. <i>LADOTD Traffic Engineering Training Course.</i></p>  |  |                   |
| <b>07/18 – 12/22</b>   | <p><b>SCDOT, Bridge Inspection and Load Rating, South Carolina:</b> Deputy Project Manager of this contract, which consists of bridge inspection and determination of the load capacity ratings utilizing BrR and CSI bridge for <b>2,558 structures</b> including truss, segmental, curved steel girder, movable and significantly retrofitted structures. WSP reviewed the plans, inspection reports, previous load ratings and all other available relevant bridge documents. The load ratings were completed utilizing the information provided by SCDOT and supplemented with information from our field inspections. All load ratings were completed with BrR or CSI Bridge. WSP also utilized drones as an inspection tool to help identify specific areas of bridges where a “hands-on” inspection is required. This resulted in reduced time required for traffic control and access equipment, providing a significant cost savings to SCDOT. In addition, WSP performed <b>160 load tests</b> involving instrumenting the bridges with strain gauges and driving known loads across the bridge, to assist SCDOT with advanced load posting avoidance measures. The results of the test were utilized to create corrected effective structural models to increase and remove load postings from bridges across the state. These results were extrapolated out, to not only remove postings on the bridges tested, but also on similar bridges in SCDOT’s inventory. <b>WSP efforts saved the State tens of millions of dollars.</b></p> |  |                   |
| <b>03/16-2022</b>  | <p><b>TXDOT NBIS Inspections and Load Ratings, TxDOT, Statewide Texas:</b> Casey performed comprehensive inspections and load ratings of various structures. Additionally, he played a key role in assisting with the culvert load posting avoidance program, which involved rigorous load testing and analysis to remove thousands of <b>unnecessary load postings</b>. The reports generated as part of these assessments were instrumental in making informed decisions regarding load limits and ensuring the structural integrity and safety of the infrastructure. The team also successfully completed more than 3463</p>  |  |                   |



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|                      | NBIS routine bridge inspections for TxDOT, along with over two hundred load ratings. The range of inspections and <b>load ratings</b> encompassed reinforced concrete slabs, steel floor system superstructures, steel rolled and plate girders, and prestressed concrete girders for both simple and continuous spans.  |
| <b>06/16-Ongoing</b> | <b>GDOT, Engineering Services for Cable-Stayed Structures, Georgia:</b> In his role as Deputy Project Manager, Casey has overseen the task-order contract that encompassed a range of critical bridge evaluation activities. These include a specialized member inspection of the Sidney Lanier Bridge in 2016, focusing on assessing exposed strands with varying degrees of corrosion. Additionally, there were in-depth National Bridge Inspection (NBI) and emergency post-hurricane inspections of the Talmadge Memorial Bridge in 2017 and 2020. His tasks also included the instrumentation and testing of both cable stays bridges to determine the existing force in each cable. Casey assisted with rehabilitation design of the cable stay dampening system. Michael's leadership extended to two separate rehabilitation design contracts, for the Sidney Lanier Talmadge bridges, executed in 2021. The initial rehabilitation project for the Sidney Lanier Bridge primarily addressed issues related to excessive cable vibration, which included repairing cable stays with breached protective sheathing and corroded strands. Subsequently, a second rehabilitation project was carried out on the Sidney Lanier, entailing the installation of external dampers on all 176 stays. In 2022, Casey Assisted with the load rating efforts for both the Sidney Lanier and the Talmadge Signature Cable-Stay Bridges, utilizing a full 3D FEM MIDAS Model of the structures. |
| <b>06/21-06/23</b>   | <b>DC Metro, WMATA Rail Bridge Inspections and Load Ratings, DC:</b> In the capacity of a deputy Project Manager, Casey was involved in this significant project related to the DC Metro's WMATA Rail Bridge Inspections and Load Ratings. This endeavor was conducted in collaboration with Gannet Flemming Engineering. The primary objective was to improve outcomes by developing and refining WMATA's asset management procedures. To achieve this overarching goal, WSP performed routine inspections, and load rating analyses to determine the load rating of these structures. Bridge <b>load ratings were completed in BrR and CSI Bridge</b> , and include truss structures, curved steel box structures, and segmental concrete box structures. A key aspect of the project involved prioritizing repairs. This prioritization process is integral to the current and future bridge asset management and capital program development.  |
| <b>2012-Ongoing</b>  | <b>NCDOT Structures Bridge Inspection Limited Services Contract, North Carolina: Team</b> Leader, and QC Manager. Casey has been involved with the NCDOT bridge inspection program for 9 years. He has performed field inspections, analysis and ratings; evaluated the physical condition; and recommended preservation and maintenance needs. Casey has also led the design for numerous bridge repair and preservation projects under this contract including: hydro-demolition and latex-modified concrete overlays, joint replacement, beam end repairs, timber and concrete pile repairs, galvanic protection of prestressed girders, cathodic and sacrificial anode protection of bent caps, bearing replacement and prestressed pile jacketing with sacrificial anodes. To date he has completed over 1000 load ratings utilizing, Mathcad, Excel and BrR; and 2,000 inspections, including many of the state's longest structures, segmental boxes, and fracture critical trusses.  |

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| <b>Firm employed by</b> WSP USA Inc.  |   |   |  |    |
| <b>Name</b>   | Keith Kerr, PE  |   | <b>Years of relevant experience with this employer</b>     | 17 |
| <b>Title</b>  | Senior Engineer   |   | <b>Years of relevant experience with other employer(s)</b> | 2  |
| <b>Degree(s) / Years / Specialization</b>   |   | BS / 2004 / Civil Engineering (structural focus)  |  |    |
| <b>Active registration number / state / expiration date</b>                       |   | PE.46584 / LA / 9/30/2024 (also licensed in FL; LA; MD; MA; MI; NY; NH; TN; TX; WV; SC) |  |    |
| <b>Year registered</b>  | 2022 (LA)   | <b>Discipline</b>   | Civil Engineering  |    |
| <b>Contract role(s) / brief description of responsibilities</b>                   |   | <b>Fixed Bridges Support - <u>Meets all requirements for MPR 5.</u></b>                 |  |    |
| <b>Experience dates (mm/yy-mm/yy)</b>   | <b>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).</b>  |   |  |    |
|  | Keith is experienced in a variety of commercial, industrial, power and agency projects and clients including Avangrid in NY, Con Edison in NY, National Grid in several NE states, Calpine Energy at Kennedy International Airport, Florida Power and Light in Florida, and substations for a confidential private client in Texas. Keith has acted as the EOR for numerous commercial, industrial, and power projects in several states. In addition, Keith acted as Deputy Lead for all facilities associated with Texas High Speed Rail project involving design and coordination for all the proposed Right of Way facilities and Maintenance of Way facilities along the proposed 250-mile alignment. His effective communication skills allow him to take on the role of lead engineer or project manager for some assignments. |   |  |    |
| <b>07/20 – 12/22</b>  | <b>SCDOT, Bridge Load Rating, South Carolina:</b> Performed Load ratings for this contract, which consisted of bridge inspection and determination of the load capacity ratings for 2,604 structures in SC within 3 years. All load ratings were completed with BrR. These results were extrapolated out, to not only remove postings on the bridges tested, but also on similar bridges in SCDOT’s inventory. WSP efforts saved the State tens of millions of dollars.   |   |  |    |
| <b>6/22-2/23</b>  | <b>Alcoa - Lake Charles Facility Conveyor Modifications, Lake Charles Louisiana:</b> Keith is the engineer of record for a task of reconfiguring select conveyors to allow Alcoa to transport material more efficiently to barges for transport. Work consisted of reconfiguring existing conveyor sections and associated supports from one location on site to another to be repurposed. New foundations were designed for the new location, but existing steel was repurposed to the greatest extent when possible, to keep material cost as economical as possible.   |   |  |    |
| <b>3/18-Ongoing</b>   | <b>Niagara Falls Bridge Commission Bridge Inspections (2018-2021), Niagara Falls, New York:</b> Lead Engineer in charge of inspections teams. Tasks include coordinating scope and times for physical inspection of all clients’ non-bridge assets at 6 plazas of 3 international bridges and 2 support facilities. WSP was awarded a four-year contract to provide Annual Bridge, Infrastructure & Facility Inspections for three international bridge crossings that connect the U.S. and Canada. The bridges include the Lewiston-Queenston, Whirlpool, and Rainbow bridges, as well as inspection of the plazas on both sides of each bridge.   |   |  |    |

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| 05/17-07/18   | <p><b>Structural Assessment of CRH Buffalo Site, Buffalo, New York:</b> Lead Engineer conducting on-site, hands-on inspections for 4 industrial buildings. His duties included hand on inspection of both the interior and exterior of the structures using a JLG 120' lift as required. He also included a detailed report documenting the conditions noted in the field, as well as conceptual remediation and cost estimates. WSP is currently conducting on-site, hands-on inspections for 4 industrial buildings. Buildings included the Old Clinker Silos consisting of 3 congruent silos, with approximate overall plan dimensions of 108'x72' and a height of approximately 80 feet. Duties included hands-on inspection of both the interior and exterior of the structures using a JLG 120' lift as required. Tasks also included a detailed report documenting the conditions noted in the field, as well as conceptual remediation and cost estimates.</p> |
| 01/12-Ongoing | <p><b>NYC Hospital Projects, New York:</b> Lead Engineer and engineer of record for structural design of various equipment support, such as new rooftop AHUs and standby generators. Tasks included field assessment of existing conditions and design of necessary retrofit and improvement to existing at several locations in New York City such as Gold Water Medical Center, Bellevue Hospital, and Coney Island Hospital.</p>  |
| 09/10-6/12    | <p><b>City of Buffalo Department of Public Works, West Ferry Street Bridge Rehabilitation, New York:</b> Staff Engineer in support of various tasks on the project. WSP was responsible for the City of Buffalo Department of Public Works' rehabilitation of this historic lift bridge, originally built in 1913. Work on the 225-foot-long Strauss heel trunnion bascule bridge included replacement of structural steel and sidewalks, and painting. The bridge now features pedestrian and bike paths leading to Broderick Park.</p>   |
| 06/17-01/18   | <p><b>Tecumseh Michigan Plant Expansion, Michigan:</b> Engineer of Record for an expansion of an existing industrial facility. Keith provided structural, site/civil, and landscaping design for a \$5 million expansion of Kirchhoff Automotive's stamping facility. WSP is leading a \$5 million expansion of an automotive stamping facility. This project includes a steel framed building expansion of approximately 52,000 square feet, roadway construction, and new parking additions. The project also includes work inside the existing factory, including the modification of existing press pit for a new 500T press. The modifications includes alterations of the existing pit walls and surrounding floor slab area to accommodate the new press and associated material handling apparatus.</p>  |

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| <b>Firm employed by</b> WSP USA Inc.  |   |   |  |    |
| <b>Name</b>   | Steven Dombrowski, PE   |   | <b>Years of relevant experience with this employer</b>     | 4  |
| <b>Title</b>  | Load Rating Engineer  |   | <b>Years of relevant experience with other employer(s)</b> | 14 |
| <b>Degree(s) / Years / Specialization</b>   |   | BS / 2005 / Civil Engineering                                   |  |    |
| <b>Active registration number / state / expiration date</b>                       |   | PE (Pending) / LA (also licensed in MI; MN; OH; NY; VA; NC; SC) |  |    |
| <b>Year registered</b>  | 2023 (LA Pending)   | <b>Discipline</b>   | Civil Engineering  |    |
| <b>Contract role(s) / brief description of responsibilities</b>                   |   | <b>Load Rating Engineer</b>                                     |  |    |
| <b>Experience dates (mm/yy-mm/yy)</b>   | <b>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).</b>  |   |  |    |
|  | Steve is a former State DOT employee who previously worked in the NCDOT Structures Management Unit. He has a thorough understanding of load rating and bridge engineering analysis procedures, having conducted over 400 load ratings for various state DOTs, railroads, and other agencies. His areas of technical expertise include comprehensive analysis and design of bridges, including prestressed concrete girders, curved steel girders, lightweight concrete decks and girders, steel trusses, long-span steel arches as well as concrete & masonry arches. As a former State DOT Structures Group employee, Steve understands the owner’s perspective as it relates to load rating and the implications a load posting can have. |   |  |    |
| <b>05/23 - Ongoing</b>  | <b>Cedar Avenue Bridges 9600N &amp; 9600S: Bridge Inspection, Structural Analysis &amp; Cable Replacement:</b> Lead Load Rating Engineer for the main spans of the TH 77 Cedar Avenue Bridges. The bridges are a vital Twin Cities metro area transportation connection. The two twin bridges, built in 1980, consist of 43 spans each and have steel tied arch main spans of 360 feet. The remaining 42 approach spans of each bridge are pre-stressed girder spans. The load rating analysis will be used to assist in design and staging analysis for replacement of the tied arch suspender cables.   |   |  |    |
| <b>10/22-Ongoing</b>  | <b>Washington Metropolitan Area Transit Authority (WMATA) Bridges Inspection &amp; Load Rating, Virginia:</b> As a Lead Load Rating Engineer, Steve is overseeing the load rating of complex pedestrian and rail structures that cannot be analyzed using standard client protocols. Structure types include welded tubular steel architectural truss pedestrian overpasses, deep-buried concrete structures at underground stations, and cast-in-place, post-tensioned aerial train structures. This experience will be valuable to LADOT as it demonstrates Steve’s load rating experience with complex pedestrian, railroad, truss, and concrete structures and the use of AASHTOWare BrR and CSiBridge software.                        |   |  |    |
| <b>12/19-09/22</b>  | <b>SCDOT Bridge Load Rating and Evaluation Services:</b> Lead Structural Engineer overseeing load rating calculations and reports for approximately 250 bridges. WSP is providing bridge load rating evaluations, safety inspections, and other related duties for bridges and culverts to assist the South Carolina Department of Transportation with a load rating of all state-owned, county-owned, and government-owned bridges. This experience will be valuable to LADOT as it demonstrates Steve’s ability and experience overseeing a large load rating on-call contract for a state DOT and the use of AASHTOWare BrR and MidasCIVIL.  |   |  |    |

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| 09/19-02/22 | <p><b>Whirlpool Bridge Load &amp; Resistance Factor Rating, Niagara Falls Bridge Commission:</b> Lead Structural Engineer overseeing load rating calculations and reports for the Whirlpool Rapids Bridge over the Niagara River Gorge. The Whirlpool Rapids Bridge is an approximately 1,079-foot-long structure over the Niagara River located approximately 1.2 miles north of Niagara Falls. The bridge carries two lanes of vehicular traffic on the lower deck and a single-track railroad line on the upper deck over the Niagara River. The bridge was originally opened in 1897. The bridge crossing consists of a two-hinged bi-level truss arch flanked at each end with a bi-level eyebar truss. Beyond the trusses at each approach, there are three (3) built-up stringer railroad spans. The main arch span is approximately 550'-0" long and provides a vertical clearance of approximately 225' above the Niagara River. The Whirlpool Rapids Bridge carries rail traffic on its top deck and vehicular traffic on its lower deck. Load rating calculations were performed per AREMA requirements and consider the combined effects of rail and passenger vehicle live loads simultaneously. The dead, live and pedestrian load types were evaluated using an iterative, non-linear analysis to account for variability in loading types, positions, and combinations. Evaluated the original construction sequencing of the bridge and subsequent projects that may have changed the loading on bridge members to account for "locked-in" stresses. This experience will be valuable to LADOTD as it shows Steve's ability experience with load rating calculations for large complex structures over a large body of water.</p> |
| 03/16-10/18 | <p><b>MDOT As-Needed Bridge Load Rating – Complex Structures:</b> Structural Engineer performing 3D structural analysis and load rating for complex bridges in the State of Michigan. Due to the complex construction of these structures, load ratings typically use refined software such as MDX, CONSPAN, MIDAS Civil 3D, SAP2000, and/or detailed hand calculations to obtain loads, forces, and member capacities for load rating. Superstructures load rated as part of this contract typically include pre-tensioned box beams, externally post-tensioned concrete structures, and curved steel girder bridges. On one occasion, the analysis of a curved steel girder superstructure accounted for a "shared" steel pier cap that also supported an independent adjacent superstructure. This experience will be valuable to LADOTD as it demonstrates Steve's experience with federal inventory and operating ratings that were determined along with Michigan Legal Loads and Michigan Overloads (Class A-D) as well as the use of MIDASCivil software.</p>  |
| 02/06-11/07 | <p><b>NCDOT, North Carolina Bridge Design System (NCBDS) LRFD Prestressed Concrete Girder Module:</b> As a member of NCDOT's Engineering Development Squad, Steve served on the development team for the Prestressed Girder Design Module for NCBDS. He was the development team's primary contact in the Structure Design unit. Performed calculations to independently verify the accuracy of the computations performed by the program. As a result of this work, Steve has an excellent working knowledge of prestressed concrete girder design per the AASHTO LRFD code. He served as one of the primary in-house advisors for concrete girder design in the NCDOT Structure Design Unit. NCBDS is NCDOT's in-house design software. The prestressed concrete girder module performs structural design calculations according to the AASHTO LRFD Bridge Design Specifications. This experience will be valuable to LADOTD as it demonstrates Steve's experience performing load calculations involving prestressed concrete girders and knowledge of the AASHTO LRFD code.</p>  |

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| <b>Firm employed by</b> WSP USA Inc.  |  |  |  |   |
| <b>Name</b>   | Mustapha Ibrahim, PhD, PE, SE  |  | <b>Years of relevant experience with this employer</b>     | 7 |
| <b>Title</b>  | Structural Engineer, Complex & Movable Bridges   |  | <b>Years of relevant experience with other employer(s)</b> | 2 |
| <b>Degree(s) / Years / Specialization</b>   |  | PhD / 2016 / Structural/Materials Engineering<br>BS / 2010 / Civil Engineering |  |   |
| <b>Active registration number / state / expiration date</b>                       |  | SE IL (SE081.008550) 11/30/2024; PE WI (47075-6) 07/31/2024                    |  |   |
| <b>Year registered</b>  | 2020 (IL), 2019 (WI)   | <b>Discipline</b>  | Civil Engineering  |   |
| <b>Contract role(s) / brief description of responsibilities</b>                   |  | <b>Movable Bridges Support</b>   |  |   |
| <b>Experience dates (mm/yy-mm/yy)</b>   | <b>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).</b>   |  |  |   |
|  | Mustapha has experience in design, analysis, and plan preparation of movable and fixed structures for highway, railway, and pedestrian bridges. His professional background encompasses highway, railway, and pedestrian bridge projects. His role involves comprehensive structural modeling, load rating, and seismic analysis, with a specialization in movable bridge designs, load rating, and rehabilitations. Since becoming a part of WSP, Mustapha has significantly contributed to various multifaceted projects. Mustapha served as lead structural analysis modeler for several complex structures including, the Seattle DOT Ballard and Fremont Bascule Bridges and the Carroll Lee Cropper trussed arched bridge.<br><i>Relevant Training: FHWA-NHI-130056 Safety Inspection of In-Service Bridges, FHWA Seismic Design and Evaluation of Bridges, 2020</i> |  |  |   |
| 01/23   | <b>Seismic Improvements for Fremont Bridge and Ballard Bridge, Bascule and Movable Spans, Seattle, Washington:</b> Lead Structural Modeler. The project consists of conducting final design efforts of select retrofit components of the Ballard and Fremont Bascule Bridges from the recommended retrofit system identified in Phase I. Both bridges are double-leaf, trunnion, steel truss bascule bridges with opening span lengths of 242 feet and 218 feet, respectively. Both bridges are over 100 years old but are of historical and operational significance to the City of Seattle. Mr. Ibrahim served as the lead structural modeler for both bridges and performed the structural retrofits for the main bascule leaf truss components, anchor/fixed span components, and the mechanical components including the trunnion bearings and center locks.          |  |  |   |
| 09/20   | <b>Carroll Lee Cropper Bridge over the Ohio River – Load Rating:</b> Lead Structural Modeler. The Carroll Lee Cropper Bridge is a three-continuous long truss span bridge carrying four lanes of traffic between Ohio and Kentucky over the Ohio River. The bridge was constructed in 1977. The outer spans of the bridge are truss shaped and have a span length of 503.75 ft. The middle span is a truss-shaped arch with suspension cables and tie beams with a span length of 750 ft. The total width of the bridge from center to center of the truss is 68 ft. Mr. Ibrahim, performed a full 3D finite element analysis for the entire bridge and conducted load rating analysis for all the major components of the bridge including primary truss members, arch ties, hangers, gusset plates, and floorbeams.  |  |  |   |
| 04/20   | <b>Chicago DOT – Webster Avenue Bascule Bridge Rehabilitation over North Branch of Chicago River, CDOT, City of Chicago, Illinois:</b> Structural Engineer. The structure is a double leaf trunnion with an overall length of 287 feet and a deck width of 60 feet. It was constructed in 1915. WSP Movable bridge team prepared construction contract documents including but not limited to the final plans, specifications, and estimates for full rehabilitation of the bridge. Mr. Ibrahim performed analysis and prepared plan details for the bascule span floorbeams and bascule bridge enclosure walls.   |  |  |   |
| 12/19   | <b>Michigan DOT – Grosse Ile Parkway Swing Bridge over the Trenton Channel – Substructure Long-Term Rehabilitation Alternative Analysis, Grosse Ile, Michigan, Emergency Repair for Piers:</b> Structural Engineer. The Grosse Ile Movable   |  |  |   |

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|      | <p>Bridge over the Trenton Channel of the Detroit River (Bridge No. 382) consists of ten fixed approach spans and a through truss swing bridge serving the two main spans over the navigational channel. The bridge is approximately 32 feet wide and 1345.88 feet long. The swing span is fully operational. Recent underwater inspections from 2017 and 2019 have identified significant deterioration on the timber cribs supporting Piers 2, 4, 6, 8, 9, and 10. The timber crib foundations were originally built around 1873 and the piers were built around 1931 resulting in a service life of 146 years and 88 years, respectively. Both the timber cribs and piers exhibit advanced deterioration. One of the main concerns relates to the large voids discovered in the underwater inspection at the upstream end of the timber cribs resulting in an unsupported pier footing. In response, WSP evaluated several alternatives for the rehabilitation of the timber cribs and piers with consideration to constructability, impact to traffic (e.g. detours, bridge closures), durability, maintenance, impact on future superstructure rehabilitation, strength, environmental impact, hydraulic risk, and overall cost of the rehabilitation. Three different alternatives were found to be feasible: (1) Pier Replacement which straddles or connects above and over the existing piers (referred to as Straddle Bent in this Alternative); (2) Substructure Strengthening with Micropiles; (3) Substructure Strengthening with Concrete Encasement. Mr. Ibrahim performed the analysis and preliminary plan preparations for the three alternatives.</p> |
| 2018 | <p><b>Chicago DOT Lake Shore Drive Bascule Bridge over the Chicago River Phase II, Chicago, Illinois (2017 – 2018):</b> Structural Engineer. The Lake Shore Drive Bascule Bridge over the Main Branch of the Chicago River is a double-leaf, twin level, trunnion type Bascule Bridge. The bridge is approximately 108 feet wide and approximately 356 feet long, consists of four bridge houses, and it was constructed in 1937. The sidewalk, originally located on the upper level of the structure, was reconstructed on the intermediate level of the bridge. The project included full rehabilitation of the bridge as well as widening of the east sidewalk of the bridge. Mustapha's role included designing the Bridge House Expansion to accommodate the widening of the bridge, balancing the bridge, designing, and conducting full finite element modeling for the Heel Lock support of the entire bascule leaf.</p>  |
| 2017 | <p><b>IDOT Load Rating of Ruby St. Bridge over the Des Plaines River in Joliet, Illinois:</b> Structural Engineer. Ruby St bridge is a double leaf trunnion bascule bridge with a total length of 369 feet and out-to-out width of 66 feet. Mustapha performed load rating for all the bridge components for the purpose of rehabilitating the bridge.</p>   |
| 2017 | <p><b>IDOT Load Rating of Jackson St. Bridge over the Des Plaines River in Joliet, Illinois:</b> Structural Engineer. Jackson St Bascule Bridge is a Rolling Scherzer with an overall length of 375 feet and out-to-out width of 52 feet. Mustapha performed load rating for all the bridge components for the purpose of rehabilitating the bridge.</p>   |

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| <b>Firm employed by</b> WSP USA Inc.  |   |   |  |    |
| <b>Name</b>   | William (Coley) Mitchell, CBI   |   | <b>Years of relevant experience with this employer</b>     | 11 |
| <b>Title</b>  | Senior Technical Specialist   |   | <b>Years of relevant experience with other employer(s)</b> | 0  |
| <b>Degree(s) / Years / Specialization</b>   |   | AS / 2011 / Architectural Engineering   |  |    |
| <b>Active registration number / state / expiration date</b>                       |   | N/A                                     |  |    |
| <b>Year registered</b>  | N/A   | <b>Discipline</b>                       | N/A  |    |
| <b>Contract role(s) / brief description of responsibilities</b>                   |   | <b>Nondestructive/Load Testing Lead</b> |  |    |
| <b>Experience dates (mm/yy–mm/yy)</b>   | <b>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).</b>  |   |  |    |
|  | <p>William has experience as team leader and non-destructive testing (NDT) inspector on numerous bridges across the Southeast and Texas. He is well versed in the procedures, policies, and standards required to perform NDT inspections of bridge components and is experienced in coordinating with various agency personnel, subcontractors and vendors. William has a wide variety of experience in bridge inspections, varying from cable-stayed, truss, and suspension span bridges, to single-span timber bridges and culverts.</p> <p><i>Relevant Training:</i> FHWA Safety Inspection of In-Service Bridges, 2014 (NHI 130055); Safety Inspect of Fracture-critical Inspection Techniques for Steel Bridges, 2014 (NHI 130078); ASNT Ultrasonic Testing Level I, 2015; ASNT Ultrasonic Testing Level II General Exam, 2016; Bridge Coatings Level I, 2014 (BCC-12219); FHWA Introduction to Element Level Bridge Inspection, 2014; SPRAT Level I Rope Access Technician, 2014; SPRAT Level II Rope Access Technician, 2017; FHWA Tunnel Safety Inspection, 2016 (NHI 130110); Confined Space Entry Training, 2017; FHWA Inspection and Maintenance of Ancillary Highway Structures, 2016 (NHI 130087); Aerial Training, 2017; American Red Cross Adult First Aid/CPR/AED; OSHA 30-hour Hazard Recognition Training for the Construction Industry, 2014; Bridge Inspection Refresher Training, 2018 (NHI 130053). <i>LADOTD Traffic Engineering Training Course.</i></p>   |   |  |    |
| <b>7/18-12/22</b>   | <p><b>SCDOT, Bridge Inspection and Load Rating, South Carolina:</b> Deputy Project Manager of this contract, which consists of bridge inspection and determination of the load capacity ratings utilizing BrR and CSI bridge for 2,558 structures including truss, segmental, curved steel girder, movable and significantly retrofitted structures. WSP reviewed the plans, inspection reports, previous load ratings and all other available relevant bridge documents. The load ratings were completed utilizing the information provided by SCDOT and supplemented with information from our field inspections. All load ratings were completed with BrR or CSI Bridge. WSP also utilized drones as an inspection tool to help identify specific areas of bridges where a “hands-on” inspection is required. This resulted in reduced time required for traffic control and access equipment, providing a significant cost savings to SCDOT. In addition, WSP performed 160 load tests involving instrumenting the bridges with strain gauges and driving known loads across the bridge, to assist SCDOT with advanced load posting avoidance measures. The results of the test were utilized to create corrected effective structural models to increase and remove load postings from bridges across the state. These results were extrapolated out, to not only remove postings on the bridges tested, but also on similar bridges in SCDOT’s inventory. <i>WSP efforts saved the State tens of millions of dollars.</i></p> |   |  |    |
| <b>03/16-Ongoing<br/>Reselected 2017</b>  | <p><b>TXDOT NBIS Bridge Inspection and Load Rating, Statewide Texas:</b> Team Leader responsible for performing inspections coordinating staff and resources required for conducting comprehensive inspections and load ratings of various structures. Additionally, he played a key role in the field assisting with the culvert load posting avoidance program, which involved rigorous load testing and analysis to remove thousands of <b>unnecessary load postings</b>. The reports generated as part of these assessments were instrumental in making informed decisions regarding load limits and ensuring the structural</p>  |   |  |    |



Prime consultant name: **WSP USA Inc.**

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|                      | <p>integrity and safety of the infrastructure. The team also successfully completed more than 3463 NBIS routine bridge inspections for TxDOT, along with over two hundred <b>load ratings</b>. The range of inspections and load ratings encompassed reinforced concrete slabs, steel floor system superstructures, steel rolled and plate girders, and prestressed concrete girders for both simple and continuous spans. William used rope access to gain the proper hands-on access required and perform non-destructive testing on problematic detail and crack locations across the state.</p>  |
| <b>06/16-Ongoing</b> | <p><b>GDOT, Engineering Services for Cable-Stayed Structures, Georgia:</b> One of six Team Leaders that completed the inspection and rehabilitation of the Talmadge Memorial and Sidney Lanier cable-stayed bridges. This task-order basis contract has included a special member inspection of the Sidney Lanier Bridge (2016) to evaluate exposed strands with various degrees of corrosion present, in-depth NBI and emergency post-hurricane inspection of the Talmadge Memorial Bridge (2017 and 2020) and the rehabilitation of the dampening system for the cable stays, and two rehabilitation design contracts for the Sidney Lanier Bridge. The first rehabilitation project for the Sidney Lanier Bridge primarily addressed deficiencies associated with excessive cable vibration, including repairs to cable-stays with breached protective sheathing and corroded strands. The second rehabilitation project included the installation of external dampers at all 176 stays. Due to geometric constraints, and to minimize impact to traffic, rope access was utilized to inspect several complex bridge elements, including the pylons and below deck stay cable anchorages.</p> |
| <b>06/17-01/18</b>   | <p><b>MnDOT, St. Croix Bridge Inspection, Minnesota and Wisconsin:</b> Team Leader for the initial, element level inspection of the St. Croix River Crossing extradosed cable-stayed bridge. A baseline inspection was performed, providing the client with accurate and repeatable reporting of deficiencies. Due to geometric constraints and to minimize impact to ongoing construction activities, rope access was utilized to inspect several complex bridge elements, including the pylons and below deck stay cable anchorages. In addition to inspection, the scope of work included providing recommendations for updating the maintenance and inspection manual for the new signature structure. The 5,279-ft-long bridge opened to traffic in 2017 and contains 10 main-river crossing extradosed cable-supported spans and continuous post-tensioned precast and cast-in-place box girder approach spans.</p>  |
| <b>2011-Ongoing</b>  | <p><b>NCDOT 2011 - 2022, NBIS Bridge Inspection Team Leader, Statewide, North Carolina:</b> Project Manager. William has been involved with the NCDOT bridge inspection program for 10 years. He has performed field inspections, analysis and load ratings; evaluated the physical condition; and recommended preservation and maintenance needs. To date he has completed over 1,500 inspections, including many of the state's longest structures, segmental boxes, and fracture critical trusses.</p>  |

| Firm employed by <b>WSP USA Inc.</b>  |  |   |  |    |
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| <b>Name</b>   | Lassaad Mhamdi, PhD  |   | <b>Years of relevant experience with this employer</b>     | 1  |
| <b>Title</b>  | Senior Engineer  |   | <b>Years of relevant experience with other employer(s)</b> | 15 |
| <b>Degree(s) / Years / Specialization</b>   |  | PhD / 2015 / Civil Engineering<br>MS / 2008 / Computational Mechanics<br>MS / 2011 / Civil Engineering<br>BS / 2006 / Civil Engineering |  |    |
| <b>Active registration number / state / expiration date</b>                       |  | N/A   |  |    |
| <b>Year registered</b>  | N/A  | <b>Discipline</b>   | Civil Engineering  |    |
| <b>Contract role(s) / brief description of responsibilities</b>                   |  | <b>Nondestructive/Load Testing Support</b>  |  |    |
| <b>Experience dates (mm/yy-mm/yy)</b>   | <b>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).</b>   |   |  |    |
|  | Lassaad is an experienced NDE (Non-Destructive Evaluation) Engineer with over 15 years of diverse background in both academia and industry. He has a deep understanding of NDE techniques and methods and has been instrumental in developing and implementing advanced NDE techniques for a range of industrial applications. He has published several papers on NDE in peer-reviewed journals and has been a keynote speaker at international conferences on NDE. In industry, Lassaad has worked on and led numerous NDE projects, providing technical expertise and solutions to a range of engineering problems.<br><i>Relevant Training: FHWA: Bridge Inspection Certificate, AEWG: Membership Certificate, ASNT: Membership Certificate, ACI: Membership Certificate, EIT: Engineer in Training Certificate</i>                             |   |  |    |
| <b>07/17-09/22</b>  | <b>DELDOT, ITD, LADOTD, MDOT, NDOR, NYSDOT, ODOT, TxDOT, VDOT Nondestructive Evaluation of Bridge Decks:</b> NDE Lead Engineer. With an extensive NDE portfolio, Lassaad has overseen the NDE evaluation, comprehensive data collection, precise data processing, and in-depth analysis of over 20 million square feet of bridge decks across the nation. His versatile expertise spans a range of cutting-edge testing methods, including Ground Penetration Radar (GPR), Infrared Thermography (IR), High-Resolution Imaging (HRI), Rapid Chloride Testing (RCT), and Impact Echo (IE). These methodologies allowed for accurate, non-invasive assessments, uncovering hidden defects, subsurface issues, and structural anomalies, ultimately contributing to the safety, longevity, and reliability of critical transportation infrastructure. |   |  |    |
| <b>07/17-09/22</b>  | <b>Communication Sites Inspection:</b> NDE Lead Engineer for the Nondestructive Testing services of communication towers. This work was performed under several projects with the aim of assessing the structural integrity of telecommunications towers. Lassaad oversaw the examination of more than 100 communication tower foundations throughout the nation (Texas, New York, New Hampshire, Louisiana, Michigan, Virginia). Through the utilization of advanced NDE technology, the team effectively assessed the condition of concrete pads and foundations while also estimating their unknown depths. This in-depth evaluation played a pivotal role in identifying potential structural issues, ensuring that these essential telecommunications towers would continue to function safely and efficiently.                               |   |  |    |

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| 07/21-09-22 | <p><b>LADOTD, NDE of the Whiskey Bay and Piot Channel Bridge Decks, LA:</b> NDE Lead Engineer. Nondestructive Evaluation of 3.5M sf of bridge deck on the structure carrying I-10 over the Atchafalaya Basin between Baton Rouge and Lafayette, LA. Testing included Infrared Thermography (IR), High Resolution Imaging (HRI) collected via drones, Ground penetration Radar (GPR) and Deck Acoustic Response (SoundAR). Lassaad was tasked with analyzing the IR/HRI data, extracting critical information and translating this data into comprehensive deterioration maps which provide a visual representation of the bridge deck and help in informed decision about maintenance and repair.</p>  |
| 11/19-09/22 | <p><b>LADOTD, NDE and Remote Inspection of I-10 over the Bonnet Carre Spillway, LA:</b> NDE Lead Engineer. Nondestructive Evaluation of the bridge deck was performed using Ground Penetrating Radar (GPR), Deck Acoustic Response (SoundAR), Infrared Thermography (IR), and High-Resolution Imaging (HRI) to determine the deck integrity. Lassaad was tasked with analyzing the IR/HRI data, extracting critical information, and translating this data into comprehensive deterioration maps which provide a visual representation of the bridge deck and help in informed decision about maintenance and repair.</p>  |
| 01/21-05/22 | <p><b>VDOT, Eltham Bridge Maintenance Project, VA:</b> NDE Lead Engineer. Nondestructive Evaluation was performed on the prestressed concrete girders of the Eltham Bridge carrying route 30/33 over the Pamunkey River. The aim of this project was to inspect the post-tensioned tendons using the NDE methods of Impact Echo (IE) and the Ultrasonic method. Lassaad helped with the data collection, but his main role was to analyze the IE data, extract valuable information about possible delaminated areas and translate the findings into comprehensive degradation maps.</p>   |
| 02/18-08/15 | <p><b>LADOTD, Truss Monitoring of The Natchez-Vidalia Bridge on US 84 Over the Mississippi River, MS:</b> NDE Lead Engineer. – During the pin replacements on the Natchez cantilever truss over the Mississippi River, Structural Health Monitoring (SHM) was performed on the critical truss members and temporary load path systems during pre, during, and post construction. Lassaad helped with field preparations and installation of the SHM system.</p>  |
| 07/17-12/21 | <p><b>LADOTD, Bridge Unknown Foundations:</b> NDE Lead Engineer for the Nondestructive Evaluation of Unknown Foundations in the state of Louisiana. This project encompasses the assessment of over 500 bridges, all with the common goal of determining the unknown or undocumented depths of their foundation piles. To accomplish this objective, a comprehensive array of advanced Nondestructive Testing (NDE) methodologies were employed. These methodologies include the Sonic Echo method, Ultraseismic method, and Parallel Seismic method. All these methods provided non-invasive means to determine embedded foundation depths for existing bridge foundations based on conventional wave propagation theory. Lassaad's responsibilities extended beyond data collection to encompass NDE evaluations, data processing, and in-depth analysis. Furthermore, his contributions encompassed the thorough analysis of collected data and the creation of detailed reports.</p> |

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| <b>Firm employed by</b> Michael Baker International, Inc.                         |  |  |                   |
| <b>Name</b>   | Mitchell Carr, PE  | <b>Years of relevant experience with this employer</b>     | 12                |
| <b>Title</b>  | Department Manager - Bridge  | <b>Years of relevant experience with other employer(s)</b> | 44                |
| <b>Degree(s) / Years / Specialization</b>   | BS / 1979 / Civil Engineering  |  |                   |
| <b>Active registration number / state / expiration date</b>                       | PE.36619 / LA / 3-31-2024 (also licensed in MS)  |  |                   |
| <b>Year registered</b>  | 2011 (LA)  | <b>Discipline</b>  | Civil Engineering |
| <b>Contract role(s) / brief description of responsibilities</b>                   | QA/QC Engineer/Support <b>Meets all requirements for MPR 5.</b>  |  |                   |
| <b>Experience dates (mm/yy-mm/yy)</b>   | <b>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).</b>   |  |                   |
|  | <p>Mitch Carr joined Michael Baker after serving with the Mississippi DOT for 32 years. He served as the State Bridge Engineer for over eight years where his responsibilities included oversight of structural and hydraulic design and plan preparation activities of bridges and other highway appurtenances. He led management of MDOT's bridge safety inspection program and bridge management system, coordinating activities with law enforcement in the evaluation of vehicles for oversize and overweight permits and providing technical assistance to divisions and districts for construction, inspection, repair and maintenance activities of structures.</p> <p><i>Relevant Training: Mr. Carr has applied his expertise in the implementation of key project initiatives, including expediting the post-Hurricane Katrina emergency response for replacement of the US 90 Bridges over Biloxi Bay and St. Louis Bay, a massive undertaking. Replacement of these bridges, which constituted the first design-build projects undertaken by Mississippi DOT, required overcoming tremendous challenges due to the complete destruction of the existing infrastructure on the Gulf Coast.</i></p> |  |                   |
| <b>11/16 – 12/22</b>  | <b>City of Jackson, Mayes Street Bridge Replacement, Jackson, Mississippi:</b> QA/QC Engineer. Provided oversight of bridge conceptual and final design, constructability review, and QC of the contract plans. Michael Baker developed final roadway and bridge construction plans to replace an existing bridge on Mayes Street that spans the ICRR railroad in Jackson. This project replaced the existing 160-foot-long bridge with a 224-foot-long prestressed concrete bridge.   |  |                   |
| <b>11/19 – 07/22</b>  | <b>OSARC, Complex Bridge Inspection, Statewide, Mississippi:</b> Project Manager. Mitch is responsible for overall project oversight; establishing and administering QA/QC controls that ensured quality project deliverables; developing and maintaining detailed project work plans and equipment and inspection schedules; coordinating with Michael Baker's bridge inspection teams and rigging subcontractor's bridge inspection equipment; monitoring project status; providing status reports to the client, reporting critical findings or urgent issues affecting public safety to the client; performing QA/QC reviews of inspection and load rating; and approving inspection and load rating information in the OSARC AssetWise System.  |  |                   |
| <b>05/13-04/21</b>  | <b>Mississippi DOT, Bridge Hydraulic Design Master Services Agreement, Statewide, Mississippi:</b> Project Manager. Responsible for coordinating with MDOT on individual contract work assignments; work scope, estimate and contract negotiations; constructability review, and QC of bridge concepts. Michael Baker provided engineering services for bridge   |  |                   |

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|                      | replacements under a two-year master services agreement for bridge hydraulic design. Services included hydraulic analyses, scour assessments, stream bank stabilization evaluations, preparation of hydraulic analysis reports, and conceptual and preliminary bridge design.   |
| <b>01/18 – 06/19</b> | <b>Mississippi DOT – Districts 5 and 6, SR 63 Bridge over the Escatawpa River and I-20 Bridges over Valley Street In-Depth Inspections, Jackson and Hinds Counties, Mississippi:</b> Project Manager. Responsible for overall project oversight; establishing and administering QA/QC controls that ensured quality project deliverables; developing and maintaining detailed project work plans and equipment and inspection schedules; coordinating with Michael Baker's bridge inspection teams and rigging subcontractor's bridge inspection equipment; coordinating and organizing bridge inspection information and data submitted by the inspectors; monitoring project status; providing status reports to the client, reporting critical findings or urgent issues affecting public safety to the client; coordinating with the project technical manager to develop the bridge inspection report; performing QA/QC review of inspection report. Michael Baker used magnetic particle testing to locate the ends of all cracks in the steel girders and welds. |
| <b>11/13 – 12/19</b> | <b>Mississippi DOT - District 7, SR 28 Big Creek, Quinn Creek, and Strong River Bridge, Simpson County, Mississippi:</b> Bridge Engineer. Responsible for QC and constructability review. Michael Baker is providing engineering services for the replacement of the SR 28 bridges. Michael Baker's services included hydraulic analyses, scour assessments, stream bank stabilization evaluations, preparation of hydraulic analysis reports, and conceptual and preliminary design.   |
| <b>05/17 – 06/18</b> | <b>Mississippi DOT, Bridge Load Ratings, Statewide, Mississippi:</b> Project Manager. Responsible for scheduling and management of project to load rate approximately 400 bridges for the client utilizing AASHTOWare BrR. Michael Baker performed superstructure load ratings for 391 bridges of various superstructure types located throughout Mississippi. Michael Baker's services also included development and implementation of a load rating QA/QC plan. Deliverables provided by Michael Baker included scanned copies of the complete MDOT standard load rating summary sheet and the associated xml rating file from the AASHTOWare BrR program for each bridge.  |
| <b>12/14 – 02/17</b> | <b>Mississippi DOT - District 5, Construction Services for SR 471 Improvements, Rankin County, Mississippi:</b> Bridge Engineer. Responsible for checking contractor RFI's and other submittals including shop drawings for prestressed beams, shop drawings for structural steel and form grades. Prepared contract plan revisions for as-built conditions.  |
| <b>07/12 – 12/17</b> | <b>Mississippi DOT - District 5, US Highway 49 Improvements between Florence and Scales Area, Rankin County, Mississippi:</b> Engineer. Provided technical management, constructability assessment, and QA and QC review of bridge plans and design processes. Michael Baker is providing engineering services for roadway and bridge construction on US 49. Michael Baker's services include the development of detailed design plans for bridges and roadway, including lighting, traffic control, signing, signalization, and intelligent transportation systems.  |

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| <b>Firm employed by</b> Michael Baker International, Inc.                         |   |   |  |    |
| <b>Name</b>   | Pietrina Butler, PE, ENV SP   |   | <b>Years of relevant experience with this employer</b>     | 3  |
| <b>Title</b>  | Project Manager – Bridge  |   | <b>Years of relevant experience with other employer(s)</b> | 18 |
| <b>Degree(s) / Years / Specialization</b>   |   | MS / 2008 / Structural Engineering<br>BS / 2002 / Civil Engineering       |  |    |
| <b>Active registration number / state / expiration date</b>                       |   | PE.39597 / LA / 9-30-2025 (also licensed in MS)                           |  |    |
| <b>Year registered</b>  | 2015 (LA)   | <b>Discipline</b>   | Civil Engineering  |    |
| <b>Contract role(s) / brief description of responsibilities</b>                   |   | <b>Load Rating Training Lead</b> <i>Meets all requirements for MPR 5.</i> |  |    |
| <b>Experience dates (mm/yy–mm/yy)</b>   | <b>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).</b>  |   |  |    |
|  | <p>Petrina Butler’s diverse capabilities include bridge design and load rating of prestressed concrete girders, steel welded plate girders, cast-in-place concrete flat slabs, prestressed cored slabs, and various substructure types. She also has experience in roadway design, ROW plan development and exhibit preparation, structural analysis and inspection, and management of transportation projects. Her diverse knowledge and background gives her an extremely good understanding of the total project development process from project inception through construction.</p> <p><i>Relevant Training: In 2021 she taught a three day hands-on BrR Load Rating Training Course, to South Carolina DOT. As a graduate student, Ms. Butler conducted research on the effect of Carbon Fiber Reinforced Polymer (CFRP) composites exposed to fire. She was responsible for purchasing and setting up the testing equipment and assisted in testing CFRP and control beams and columns exposed to direct fire. She developed a preliminary thermal finite element analysis using ANSYS, to simulate fire exposure and compare with experimental results.</i></p> |   |  |    |
| <b>04/21 – Ongoing</b>  | <b>SCDOT, Bridge Load Rating and Evaluation Engineering, Statewide, South Carolina:</b> Bridge Design Lead. As lead bridge engineer, responsible for the emergency repair of two bridges and the QC of bridge load ratings. Michael Baker is providing bridge inspection and engineering evaluation services in support of a statewide, consultant-led, bridge inspection effort for higher priority bridges across South Carolina. The bridges included in this contract encompass interstate system bridges, bridges over railroads, underwater inspections, and bridges with more challenging access needs.  |   |  |    |
| <b>09/20 – Ongoing</b>  | <b>SCDOT, S-472/S-45 Bridge Replacement, Horry and Georgetown Counties, South Carolina:</b> Bridge Engineer. Responsible for QC review for load rating of two prestressed concrete cored slab bridges. Michael Baker is providing engineering services for the replacement of the S-472 Bridge over Horsepen Creek in Horry County and S-45 Bridge over Tributary to Boser Swamp in Georgetown County. Project services include surveys, environmental documentation and permitting, hydraulic and hydrological design, roadway design, bridge design, geotechnical design, utility coordination, ROW design and support, SUE, public involvement, and construction services.   |   |  |    |
| <b>05/22 – Ongoing</b>  | <b>SCDOT – District 1, US 21 over Congaree Creek, Lexington County, South Carolina:</b> QA/QC Engineer. Provided QC peer view of load rating calculations and documentation. Michael Baker is providing engineering services for the replacement  |   |  |    |

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|                      | of the U.S. 21 Bridge over Congaree Creek. The project includes development and delivery of preliminary roadway and bridge plans, environmental studies and documentation, environmental permitting, ROW plans, final construction plans, and bridge hydrologic and hydraulic analyses, including a FEMA study.  |
| <b>03/20-02/23</b>   | <b>SCDOT, Bridge Inspection and Evaluation Engineering, Statewide, South Carolina:</b> Assistant Project Manager. Responsible for technical review. Michael Baker provided bridge load rating and evaluation engineering services for state-owned, county-owned, and other municipality-owned structures throughout South Carolina, primarily for the 1,815 bridges in District 3. Tasks include project management, site assessments, data collection, agency coordination, quality assurance reviews, and training development. Michael Baker established this statewide program and oversees five other consultants performing bridge load ratings, assessments, load and material testing, oversize and overweight permitting, complex structure rating and maintenance manuals, development of custom AASHTOWare Bridge Management program, and QA reviews. |
| <b>02/09 – 10/22</b> | <b>Sandia National Laboratories, Bridge Services, Livermore, California and Albuquerque, New Mexico:</b> QA/QC Engineer. Responsible for load rating review. Michael Baker provided traffic counts, growth projections, scour analysis, seismic vulnerability analysis, and load rating for three bridges located at the Sandia National Laboratories sites in Livermore, CA, and Albuquerque, NM. The structure types included prestressed CA BT girders, prestressed t-beams, steel girders, reinforced concrete flat slabs, timber beams, box culverts, corrugated metal pipes, and reinforced concrete pipes. All load ratings were completed to meet the requirements of the Department of Energy Order DOE O 437.1, using AASHTOWare BrR or CANDE.   |
| <b>11/20 – 06/22</b> | <b>Anderson County, Shackleburg Road Bridge, Anderson County, South Carolina:</b> Senior Engineer. Responsible for review and oversight of bridge design calculations and construction plans. Michael Baker provided professional engineering services on an accelerated schedule, providing advance design packages for the new single-span 60-foot span voided hollow cored slab bridge deck units and the end bent steel piles. The replacement design provided a very low maintenance, low-cost solution to prevent future washouts and allow for a 100-year life structure.   |
| <b>01/17 – 1/18</b>  | <b>Mississippi OSARC, Local Bridge Inspection and Load Rating, Statewide, Mississippi:</b> Bridge Design Lead. The project scope consisted of the inspection and load rating of 162 bridges on an expedited schedule (4 months), including both superstructure and substructure components. Bridge Load Rating Task Leader and Engineer of Record for all load rating work, including development of substructure calculation templates using Consys and Mathcad, review of AASHTOWare BrR templates for the project, and QC review of the load rating calculations and reports for the project. The project was delivered on-time and within budget.  |

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| <b>Firm employed by</b> Michael Baker International, Inc.                         |  |   |                   |
| <b>Name</b>   | Philip Quillin, PE PMP   | <b>Years of relevant experience with this employer</b>                            | 20                |
| <b>Title</b>  | Office Executive   | <b>Years of relevant experience with other employer(s)</b>                        | 10                |
| <b>Degree(s) / Years / Specialization</b>   |  | Master's Certificate / 2011 / Project Management<br>BS / 1994 / Civil Engineering |                   |
| <b>Active registration number / state / expiration date</b>                       |  | PE.36183 / LA / 09-30-2025<br>PMP (9070004) - 8/25/2026                           |                   |
| <b>Year registered</b>  | 2011 (LA)  | <b>Discipline</b>   | Civil Engineering |
| <b>Contract role(s) / brief description of responsibilities</b>                   |  | <b>Training Support</b> <i>Meets all requirements for MPR 5.</i>                  |                   |
| <b>Experience dates (mm/yy-mm/yy)</b>   | <b>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).</b>   |   |                   |
|  | Mr. Quillin has a strong background in the design, analysis, rehabilitation, maintenance, inspection, load rating and permitting of structures. Throughout his 30-year career, he has led the inspection, analysis, load rating, and assessment of over 1,000 bridges. Philip recently served as Project Manager of the Statewide contract for South Carolina to establish a load rating program, overseeing five other consultants performing bridge load ratings, assessments, complex structure rating and maintenance manuals, and development of a custom AASHTOWare Bridge Management program.<br><i>Relevant Training: NHI NBIS Safety Inspection of In Service Bridges; NHI Fracture Critical Bridge Inspection; NHI Bridge Inspection Refresher</i> |   |                   |
| <b>05/10 - 08/13</b>  | <b>LADOTD. Structural Load Rating of Bridges, Statewide, Louisiana:</b> Senior Structural Engineer. Provided senior oversight of a team of engineers performing bridge load ratings. Michael Baker provided engineering services for the structural load rating of about 250 bridges using the load and resistance factor rating method. Michael Baker's services included plan and document review; structural modeling, analysis, and load rating of the bridges, and preparation of load-rating reports and   |   |                   |
| <b>05/10 - 10/13</b>  | <b>LADOTD. Load Rating of Six Complex Steel Truss Bridges, Statewide, Louisiana:</b> Bridge Engineer. Responsible for quality control. Michael Baker provided engineering services for the load rating of six complex steel truss bridges that span major rivers. Michael Baker's services included review of historic plans and documents associated with the bridges, in-depth inspections of the bridges, structural modeling and analysis, load rating, and report preparation and recommendations.  |   |                   |
| <b>05/10 - 08/13</b>  | <b>Mississippi DOT/State Aid Road Construction. Complex and Fracture - Critical Bridge Inspections, Statewide, Mississippi:</b> Bridge Engineer. Responsible for quality control. Michael Baker provided engineering services for the inspection of 101 complex bridges of varying types throughout the state on an expedited schedule. Michael Baker's services included project management; the preparation of bridge inspection plans; condition, appraisal, and fracture-critical inspections; load ratings; and the preparation of inspection and load rating reports.  |   |                   |

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| <p><b>05/17 – 06/18</b></p> | <p><b>Mississippi DOT Bridge Load Ratings, Statewide, Mississippi:</b> Task Manager. Responsible for overseeing team task execution. Michael Baker performed superstructure load ratings for 391 bridges of various superstructure types located throughout Mississippi. Michael Baker's services also included development and implementation of a load rating QA/QC plan. Deliverables provided by Michael Baker included scanned copies of the complete MDOT standard load rating summary sheet and the associated xml rating file from the AASHTOWare BrR™ program for each bridge.</p>   |
| <p><b>09/11 – 10/19</b></p> | <p><b>Mississippi DOT/State Aid Road Construction, Complex and Fracture – Critical Bridge Inspections, Statewide, Mississippi:</b> Senior Structural Engineer. Provided senior oversight to a team of engineers performing bridge inspections and load ratings. Michael Baker provided engineering services under multiple contracts for the inspection of locally-owned complex bridges of varying types throughout the state on an expedited schedule. Michael Baker's services included project management; inspection plan development; in-depth condition, appraisal, and fracture-critical inspections; load ratings; and preparation of inspection and load-rating reports. The number of bridges inspected in the multiple contracts were: 1) FY 2018 &amp; 2019 – 166 bridges; 2) FY 2016 &amp; 2017 – 107 bridges; 3) FY 2014 &amp; 2015 – 101 bridges; and 4) FY 2012 &amp; 2013 – 194 bridges</p> |

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| <b>Firm employed by</b> Michael Baker International, Inc.                         |  |   |  |    |
| <b>Name</b>   | Philip Walker, PE  |   | <b>Years of relevant experience with this employer</b>     | 5  |
| <b>Title</b>  | Regional Practice Lead - Bridges   |   | <b>Years of relevant experience with other employer(s)</b> | 27 |
| <b>Degree(s) / Years / Specialization</b>   |  | MS / 1991 / Structural Engineering<br>BS / 1990 / Structural Engineering    |  |    |
| <b>Active registration number / state / expiration date</b>                       |  | PE.46394 / LA / 9-30-2024 (also licensed in FL; MS)                         |  |    |
| <b>Year registered</b>  | 2022 (LA)  | <b>Discipline</b>   | Civil Engineering  |    |
| <b>Contract role(s) / brief description of responsibilities</b>                   |  | <b>Load Rating / Lead Engineer</b> <i>Meets all requirements for MPR 4.</i> |  |    |
| <b>Experience dates (mm/yy–mm/yy)</b>   | <b>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).</b>   |   |  |    |
|  | Philip Walker's experience focuses on the preliminary evaluation, design, and construction of long span bridge structures with a specialty in segmental concrete bridges. He has either managed, developed concepts for, peer reviewed, load rated, or been responsible for the design of bridges ranging from short span top-down constructed structures to bridges crossing navigational channels with up to 650-foot spans. He has been responsible for structures ranging from segmental concrete bridges to either curved steel girder or steel truss structures.<br><i>Relevant Training: He is an instructor at the University of South Florida for graduate level courses in concrete bridge design, instructor for the NHI Strut and Tie Concrete course, and was one of the responsible engineers for two projects winning national awards—the Marc Basnight Bridge in North Carolina and the St. Croix River crossing in Minnesota.</i> |   |  |    |
| <b>06/21 - Ongoing</b>  | <b>Illinois DOT, Various Statewide Engineering Services for Structure Projects, Statewide, Illinois:</b> QA/QC Review. Michael Baker has overseen 11 work orders since June 2021, assisting with complex load rating assignments on complex bridges and culverts, damage evaluation of bridges, and peer review of bridge policy development.  |   |  |    |
| <b>09/16 – 01/22</b>  | <b>CDOT Baldwin Bridges Load Rating, Old Saybrook, Connecticut:</b> QA/QC Review. Michael Baker is providing inspection services for the pre-cast concrete segmental Baldwin Bridges in Old Saybrook, Connecticut. Services include load rating for each of the Northbound (06200A) and Southbound (06200B) bridges of this twin structure. Michael Baker is performing the load rating using a staged, time-dependent analysis model created using MIDAS Civil software; developing the load rating report and submission for each bridge; and providing QA/QC.   |   |  |    |
| <b>07/10 – 01/22</b>  | <b>CDOT Load Ratings and Inspections of Highway Bridges and Tunnels, Statewide, Connecticut:</b> QA/QC Review. Michael Baker is performing over 1,000 biennial bridge safety inspections with element level reporting throughout the state of Connecticut in accordance with National Bridge Inspection Standards (NBIS) and AASHTO's Bridge Manual for Element Inspection. Tasks include routine, in-depth, complex, fracture-critical, and movable bridge inspections. Typical assignments may involve performing bridge load ratings, preparing white papers, and conducting special investigations. Michael  |   |  |    |

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|                      | Baker's services will assist the client in complying with state and federal highway safety standards and in responding to emergency evaluation and repair needs.  |
| <b>12/10 – 01/11</b> | <b>FHWA Eastern Federal Lands. Foothills Parkway Section 8E Design Build Project (Bridge 9/10), Blount County, Tennessee:</b> Lead Engineer. Lead engineer for the Load Rating of two balanced cantilever erected segmental concrete box girder bridges (Bridge 9 and Bridge 10) constructed on a section of the parkway leading to the construction project. Load rating of the structure for design, various legal loading conditions, and various loading conditions was required.   |
| <b>12/10 – 05/11</b> | <b>NDOT N-2 Missouri River Bridge LRFR Load Rating, Otoe County, Nebraska:</b> Lead Engineer. Responsible for the LRFR load rating of the 1185-foot (main span of 416') cast-in-place segmental concrete box structure constructed in 1989. The single cell box supported a deck width of 68 feet. The bridge was rated for HL93 Design Ratings, AASHTO Legal Trucks, and NDOR Permit Vehicles.   |
| <b>09/09 – 04/10</b> | <b>NDOT N-2 Missouri River Bridge Load Rating, Otoe County, Nebraska:</b> Lead Engineer. Served as the lead engineer for load rating of the 1185-foot (main span of 416') cast-in-place segmental concrete box structure constructed in 1989. The single cell box supported a deck width of 68 feet. The bridge was rated per 1994 Manual of Condition Evaluation, AASHTO Standard Specifications, and as modified by Segmental Guide Specification methodology.  |
| <b>09/09 – 11/09</b> | <b>Mid-Bay Bridge Authority, General Engineering Contract – Max Gunter Load Rating, Okaloosa County, Florida:</b> Engineer of Record. Responsible for the LRFR load rating of the segmentally erected precast post-tensioned flat slab structure. The calculation required development of a finite element shell model to appropriately evaluate flexural stresses given the presence of a linear longitudinal structure joint at the face of an existing median barrier. The structure was being modified to remove the existing median barrier which would result in traffic crossing over the longitudinal joint |

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| <b>Firm employed by</b> Michael Baker International, Inc.                         |   |  |  |    |
| <b>Name</b>   | Jeffrey McRae, PE   |  | <b>Years of relevant experience with this employer</b>     | 26 |
| <b>Title</b>  | Technical Manager - Bridge  |  | <b>Years of relevant experience with other employer(s)</b> | 0  |
| <b>Degree(s) / Years / Specialization</b>   |   | BS / 1996 / Civil Engineering  |  |    |
| <b>Active registration number / state / expiration date</b>                       |   | PE.34554 / LA / 9-30-2025 (also licensed in MS)                        |  |    |
| <b>Year registered</b>  | 2009 (LA)   | <b>Discipline</b>  | Civil Engineering  |    |
| <b>Contract role(s) / brief description of responsibilities</b>                   |   | <b>Load Rating Engineer - <i>Meets all requirements for MPR 5.</i></b> |  |    |
| <b>Experience dates (mm/yy-mm/yy)</b>   | <b>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).</b>  |  |  |    |
|  | <p>Jeff McRae is currently involved in various bridge design projects. His responsibilities have included the completion of contract plans from the conceptual stage through final design on numerous bridge design projects, generation of bridge quantity calculations, checking of concrete and steel bridge shop drawings and bar lists, and generation of substructure and superstructure design calculations. He has also performed the duties of project manager on several bridge design projects and three bridge inspection projects.</p> <p><i>Relevant Training:</i> His continuing education and training has included FHWA Bridge Safety Inspection Training Program, AASHTO LRFD, 3rd Edition; Design for Steel Bridge Superstructures, Design of Concrete Bridges by AASHTO LRFD Bridge Design Specifications; Computer-Aided LRFD Analysis and Design of Bolted Splices for Steel Bridges; and NHI Course No. 130081, 130081A – 130081D Load and Resistance Factor Design (LRFD) For Highway Bridge Superstructures.</p> <p>In addition, he is proficient with several software applications, including Bentley MicroStation, Bentley LEAP Bridge, Microsoft Excel, Adobe Acrobat Professional, Bentley GEOPAK, and MIDAS Civil. Mr. McRae is also affiliated with the National Society of Professional Engineers (NSPE), Mississippi.</p> |  |  |    |
| <b>11/21 – Ongoing</b>  | <b>LADOTD Kansas City Southern Railway Overpasses HBI, Webster Parish, Louisiana:</b> Bridge Design Lead. Jeff is serving as the Bridge Design Lead for the replacement of 3 bridges along US 371 at 2 locations: Sibley, La and Minden. 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 includes the design of a detour structure (Akrow Bridge) for the bridge site at Sibley in order to keep US 371 open under traffic.  |  |  |    |
| <b>09/11 - Ongoing</b>  | <b>Mississippi DOT 5 OSARC Bridge Inspections. Statewide, Mississippi.</b> Michael Baker provided engineering services under multiple contracts for bridge safety inspection, load rating, and reporting of locally owned bridges of varying types throughout the state. Services included project management; inspection plan development; routine and in-depth condition, appraisal, and fracture-critical inspections; load ratings; and preparation of inspection and load-rating reports.  |  |  |    |
| <b>05/17 – 06/18</b>  | <b>Mississippi DOT Bridge Load Ratings. Statewide, Mississippi:</b> Assistant Engineer. Responsibilities included generation and checking of bridge rating calculations and bridge rating software input and output. Michael Baker performed superstructure load ratings for 391 bridges of various superstructure types located throughout Mississippi. Michael Baker's  |  |  |    |

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|                      | <p>services also included development and implementation of a load rating QA/QC plan. Deliverables provided by Michael Baker included scanned copies of the complete MDOT standard load rating summary sheet and the associated xml rating file from the AASHTOWare BrR™ program for each bridge.</p>   |
| <b>05/10 – 01/13</b> | <p><b>Mississippi DOT Improvements from Texas Flat Road to I-59, Hancock and Pearl River Counties, Mississippi:</b> 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. Michael Baker's services included bridge hydraulic design, load and resistance factor design of the bridges, and the preparation of construction plans.</p>  |
| <b>03/98 – 06/98</b> | <p><b>Mississippi DOT Statewide Evaluation (Load Rating) of 412 Box Bridges, Statewide, Mississippi:</b> Assistant Engineer. Responsibilities included generation and checking of bridge rating calculations and bridge rating software input and output. Michael Baker provided professional engineering services related to computing inventory and operating ratings for approximately 412 box bridges (Group G). All ratings were performed in accordance with FHWA procedures for load factor design.</p>  |
| <b>01/99 – 12/02</b> | <p><b>Mississippi DOT I-55/I-20/US 49 Rehabilitation; Stack #3 Design Phase, Jackson, Mississippi:</b> Engineer. Responsibilities included generation and checking of engineering design calculations, bridge quantities, and final design contract plans. Responsibilities included generating design calculations and contract plans for the substructure and AASHTO beam superstructure spans as well as checking of curved steel girder design for Ramp G-6 over I-20 and U.S. 49. Responsibilities also included checking and regeneration of form grades, beam seats, etc. at four other bridge sites. Michael Baker provided engineering services (field surveys, preliminary through final design, and certain construction phase services including public relations assistance) for the rehabilitation of the interchanges of Interstate 20 with both Interstate 55 and U.S. Highway 49 in Jackson, Mississippi. The total project will be built through a series of four separate construction contracts all designed by Michael Baker. Current project is "STACK III". The project was awarded The 2010 Grand Conceptor Award for Engineering Excellence presented by the American Council of Engineering Companies of Mississippi.</p> |
| <b>09/97 – 02/98</b> | <p><b>Mississippi DOT Bridge Rating – 578 Bridges (Group F), Statewide, Mississippi:</b> Assistant Engineer. Responsibilities included generation and checking of bridge rating calculations and bridge rating software input and output. Michael Baker provided professional engineering services for this assignment covering the computation of inventory and operating ratings for approximately 578 various types of bridges. All ratings were performed in accordance with current FHWA procedures for load factor design.</p>  |

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| <b>Firm employed by</b> Michael Baker International, Inc.                         |   |  |  |   |
| <b>Name</b>   | Shalin Sheth, P.E.  |  | <b>Years of relevant experience with this employer</b>     | 1 |
| <b>Title</b>  | Bridge Engineer   |  | <b>Years of relevant experience with other employer(s)</b> | 4 |
| <b>Degree(s) / Years / Specialization</b>   |   | MS / 2019 / Civil Engineering<br>BS / 2016 / Civil Engineering |  |   |
| <b>Active registration number / state / expiration date</b>                       |   | PE TX (146736) – 9/30/2024                                     |  |   |
| <b>Year registered</b>  | 2022 (TX)   | <b>Discipline</b>  | Civil Engineering  |   |
| <b>Contract role(s) / brief description of responsibilities</b>                   |   | <b>Load Rating / Field Staff</b>                               |  |   |
| <b>Experience dates (mm/yy–mm/yy)</b>   | <b>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).</b>  |  |  |   |
|  | Mr. Sheth has experience in bridge structural design and analysis, bridge load ratings, structural diagnostics, project coordination and client interfacing.<br><i>Relevant Training: FHWA-NHI-130092: Load and Resistance Factor Rating of Highway Bridges (Baton Rouge, LA) (10/18/2022-10/21/2022); FHWA-NHI-130056: Safety Inspection of In-Service Bridges for Professional Engineers (Ridgeland, MS) (08/21/2023-08/25/2023)</i>  |  |  |   |
| <b>07/19 – 02/21</b>  | <b>LADOTD Load Rating of 311 Bridges, Statewide, Louisiana:</b> Engineer Intern. Responsibilities included load rating 51 bridges of various types such as 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 across the state, however later another 300+ bridges and culverts were added to the scope. |  |  |   |
| <b>07/22 – 08/22</b>  | <b>LADOTD Load Rating of 176 Bridges, Statewide, Louisiana:</b> 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.  |  |  |   |
| <b>07/22 – 08/22</b>  | <b>LADOTD Load Rating of 114 Bridges, Statewide, Louisiana:</b> 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  |  |  |   |
| <b>09/22 - Ongoing</b>  | <b>LADOTD U.S. 371 KCS Railroad Overpasses HBI, Webster Parish, Louisiana:</b> Project Engineer. Responsibilities include computation of engineering design calculations, determining structural feasibility of bridge geometry, structural design of   |  |  |   |

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|               | <p>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.</p>  |
| 10/22 – 12/22 | <p><b>LADOTD District 7 Infrastructure Investment and Jobs Act (IJA) Off-System Bridge Program, Statewide, Louisiana:</b> 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 ROW acquisitions based on recent real estate transactions in each Parish. Project is broken into Initial Phase and Final Design Phase. Proposed Structure Load Ratings for superstructure and substructure will be performed and report submitted to DOTD before project is let for construction.</p>              |
| 05/18 – 9/22  | <p><b>LADOTD Macarthur Interchange Completion Phase II at US 90-Z Eastbound, Jefferson Parish, Louisiana:</b> 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 in addition to new construction to facilitate bridge widening.</p> |
| 07/19 – 08/22 | <p><b>LADOTD Mermentau River Swing Space Truss Bridge Repairs, Grand Cheniere, Louisiana:</b> 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.</p>   |
| 06/23-Ongoing | <p><b>MassDOT I90/I495 Interchange (Ramps), Design Build, Boston Massachusetts:</b> Engineer. Mr. Sheth's responsibilities include developing a MIDAS civil finite element analysis model to run the seismic analysis to these steel multi-span curved bridges, and then using the seismic loads as input in the LEAP bridge models to verify the design on the plan sets. This ongoing design-build project involves demolition of the on and off ramps to I90, and construction of two new ramps. As a design subconsultant, Michael Baker is performing independent second set calculations related to the structural design of these bridges.</p>  |



SECTION

17



WSP | )

**17. Firm Experience:**

|  |  |  |  |                   |
|--|--|--|--|-------------------|
| <b>Firm name</b>                               | WSP USA Inc.  |  | <b>Past Performance Evaluation Discipline(s)*</b>              | Bridge            |
| <b>Project name</b>                            | Inspection and Load Rating Contract  |  | <b>Firm responsibility (prime or sub?)</b>                     | Prime             |
| <b>Project number</b>                          | 188658   | <b>Owner's name</b>  | South Carolina Department of Transportation, Districts 2 and 7 |                   |
| <b>Project location</b>                        | South Carolina   |  | <b>Owner's Project Manager</b>                                 | Emily Bickley, PE |
| <b>Owner's address, phone, email</b>           | 955 Park Street, Columbia, SC 29202, 803-737-1053, BickleyEJ@scdot.org                         |  |  |                   |
| <b>Services commenced by this firm (mm/yy)</b> | 08/19  | <b>Total consultant contract cost (\$1,000's)</b>                    | \$14,300   |                   |
| <b>Services completed by this firm (mm/yy)</b> | 12/22  | <b>Cost of consultant services provided by this firm (\$1,000's)</b> | \$14,300   |                   |

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



In this comprehensive project, we undertook the load Rating of 2558 structures in South Carolina Districts 2 & 7, a task that included 14 intricate structures (including movable and trusses) spanning the Savannah River. Our team at WSP initiated the project by examining a plethora of documents, including plans, inspection reports, prior load ratings, and any other pertinent bridge-related records. Next, we completed site assessments of these structures. In an innovative approach, we harnessed the capabilities of drones for the site assessments. This approach considerably reduced the time required for traffic control and access equipment, thereby leading to substantial cost savings for SCDOT. We updated the records for each bridge, diligently incorporating all the collected data. The load ratings were meticulously calculated in strict accordance with the South Carolina Department of Transportation's (SCDOT) Load Rating Guidance Document (LRGD) and the contemporary standards laid out by the American Association of State Highway and Transportation Officials (AASHTO), using AASHTOWare BrR software. Furthermore, our team at WSP conducted an impressive total of 520 material and non-destructive tests (NDT), along with 160 load tests. These load tests involved the instrumentation of bridges with strain gauges and the

application of calibrated truck loads. The data gathered through these tests played a pivotal role in constructing accurate structural models, effectively increasing load capacity, and eliminating load restrictions on bridges throughout the state. Notably, these enhancements were not limited to the tested bridges but were extrapolated to **benefit over 700** similar bridges within SCDOT's inventory.

#### **Load Ratings 2558; Load Tests 160; Material Testing and NDT 520 Bridges**

As part of our commitment to efficiency and real-time data sharing, WSP developed an innovative Geographic Information System (GIS) platform. This platform facilitated swift data collection in the field and seamless real-time data transfer among WSP personnel, SCDOT staff, and other collaborating consultants. This technological advancement streamlined the entire project, enhancing communication and data accessibility throughout its duration.

**Key Staff:** Michael Craig; Arunava Saha; Wesley Weir; Matt Sullivan; Casey Howard; Mark Pearson; William Mitchell; Steven Dombrowski; Keith Kerr; Raul Acosta-Garcia; Ricardo Cornejo; Troy Torbett; Hamid Yaghoubi

*“WSP has demonstrated organization, technological efficiencies, and technical expertise during this project. WSP's experience in site assessments, load ratings, load testing, material testing, and everything in between have taken a very difficult project and provided us with many solutions to common issues through innovative ideas and processes.”*

Emily Bickley, PE SCDOT Project Manager



Prime consultant name: **WSP USA Inc.**

|  |  |  |   |         |
|--|--|--|---|---------|
| <b>Firm name</b>                               | WSP USA Inc.       |  | <b>Past Performance Evaluation Discipline(s)*</b> | Bridge  |
| <b>Project name</b>                            | Engineering Services for Cable-Stayed Structures, Georgia  | <b>Firm responsibility (prime or sub?)</b>                           |   | Prime   |
| <b>Project number</b>                          | 188658   | <b>Owner's name</b>  | Georgia Department of Transportation              |         |
| <b>Project location</b>                        | Georgia  | <b>Owner's Project Manager</b>                                       | Robbie Koirala, PE                                |         |
| <b>Owner's address, phone, email</b>           | 935 East Confederate Avenue, Building 24, Room 408, Atlanta GA, (404)635-2893, rkoirala@dot.ga.gov |  |   |         |
| <b>Services commenced by this firm (mm/yy)</b> | 06/16  | <b>Total consultant contract cost (\$1,000's)</b>                    |   | \$5,000 |
| <b>Services completed by this firm (mm/yy)</b> | Ongoing  | <b>Cost of consultant services provided by this firm (\$1,000's)</b> |   | \$3,000 |

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

Under this task-order contract, our scope of work has encompassed various critical aspects:

- 1) **Load Rating of Sidney Lanier and Talmadge Cable-Stayed Bridges:** We conducted a thorough evaluation, including in-depth inspections, internal guide pipe assessments, dampening system analyses, and forced vibration testing, to determine the current condition and recommend necessary repairs. Detailed 3-D numerical models were developed to analyze the bridges for load rating of the superstructure and substructure. The load rating analysis incorporated inspection findings.
- 2) **Special Member Inspection of Sidney Lanier Bridge:** We conducted a meticulous inspection of 49 cable stays within deck-level guide pipes. Notably, 25 of these showed significant deterioration.
- 3) **Routine Safety Inspection of Talmadge Memorial Bridge:** This comprehensive inspection involved a visual assessment of all aspects of the bridge, including the bridge deck, tower interiors and exteriors, substructure, cable exteriors, and various support structures like light poles and overhead signs.
- 4) **Repair Plans for Sidney Lanier Bridge:** We addressed substantial deficiencies linked to excessive cable vibration, including issues like cracked stay piles, neoprene bearing failures, and corrosion of stay strands. Bearing replacement included bridge jacking analysis and design.
- 5) **Dampening Retrofit Plans for Sidney Lanier Cable Stays:** Our team designed a retrofit solution to mitigate excessive cable vibration, incorporating an external viscoelastic damping system.
- 6) **Dampening Retrofit Plans for Talmadge Memorial Bridge:** Similar to task #4, we formulated dampening retrofit plans to address vibration concerns on this bridge.
- 7) **In-Depth Inspection of Talmadge:** Our scope involved a comprehensive visual inspection and repair recommendations of all primary structural elements.
- 8) **Operation and Maintenance (M&O) Manual for Sidney Lanier and Talmadge Bridges:** We developed a comprehensive manual to guide GDOT's staff in maintaining these bridges effectively throughout their service life.

#### *Relevant Features:*

- *Load rating of two cable-stayed bridges incorporating inspection findings*
- *Dampening retrofit plans for Talmadge Memorial Bridge*
- *Repair of Sidney Lanier Bridge including jacking and bearings replacement*



**WSP was asked by GDOT to present this project at the 2023 Southeast Bridge Preservation Conference.**

**Key Staff:** Michael Craig; Hatem Seliem; Arunava Saha; Matthew Sullivan; Casey Howard; William Mitchell; Ricardo Cornejo; Troy Torbett

|  |  |  |   |   |
|--|--|--|---|---|
| <b>Firm name</b>                               | WSP USA Inc.  |  | <b>Past Performance Evaluation Discipline(s)*</b> | Bridge  |
| <b>Project name</b>                            | Fracture-critical Member Bridge Inspections, Texas   |  | <b>Firm responsibility (prime or sub?)</b>        | Prime   |
| <b>Project number</b>                          | 188359   | <b>Owner's name</b>  | Texas Department of Transportation (TxDOT)        |   |
| <b>Project location</b>                        | Statewide, Texas   |  | <b>Owner's Project Manager</b>                    | Lu Trujillo, PE<br>Transportation Engineer Supervisor |
| <b>Owner's address, phone, email</b>           | 125 E. 11th Street, Austin, TX 78701, (512) 416-2075, Lu.Trujillo@TxDOT.gov                    |  |   |   |
| <b>Services commenced by this firm (mm/yy)</b> | 06/16  | <b>Total consultant contract cost (\$1,000's)</b>                    |   | \$10,000  |
| <b>Services completed by this firm (mm/yy)</b> | Ongoing  | <b>Cost of consultant services provided by this firm (\$1,000's)</b> |   | \$2,964   |

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

WSP is providing statewide fracture-critical inspection, tunnel inspection and ultrasonic bridge pin testing services for the TxDOT on a work authorization basis. This was a renewal of a previous \$4,000,000 Fracture-Critical Member Bridge Inspection contract with TxDOT. Services include: reviewing previous inspection reports and load ratings, completing the necessary inspection activities, preparing inspection reports that identify the condition evaluation of the structure, recommending maintenance activities, reporting critical findings, generating any requested load ratings, and updating database records, where necessary. To date, WSP has performed inspections on numerous structure types, including cable-stayed, tub girders, through and pony trusses, plate caps, box caps, railroad flat cars, and two or three-girder framing systems. Services have included non-destructive testing (dye penetrant and magnetic particle) and ultrasonic testing of fracture-critical pins, performed by our Level II certified pin testing technicians. Traditional access equipment utilized in conducting the inspections includes boom lifts, bucket trucks, and under-bridge inspection vehicles. Throughout the contract, WSP utilized innovative access techniques to eliminate or reduce the need for costly traffic control, including the use of technical climbing techniques, rope access, and novel aerial lift equipment (bucket boats).

WSP has also completed over two-hundred load ratings. Load ratings were performed based on the 2020 TxDOT Load Rating Guide and AASHTO Manual for Bridge Evaluation, 3rd Edition. The load rating software used was AASHTO BrR (Version 6.8.4 and 7.0). The Inspections and load ratings have included reinforced concrete slabs, steel floor system superstructures, steel rolled and plate girders, and prestressed concrete girders for simple and continuous spans. Under this contract, TxDOT requested WSP's assistance to perform load testing of 14 culverts and systematic program to extrapolate the data obtained to provide a method of **load posting avoidance** across the entire inventory of **14,000+ culverts**. WSP also assisted with emergency post-Hurricane Harvey bridge inspections in the Houston area. As a testament to WSP's depth of available qualified resources, 8 inspection teams were quickly mobilized to perform these emergency assessments; WSP completed 340 post-hurricane emergency assessments in 1 week.

#### *TxDOT FC Contract Stats to Date:*

- *Total FC Bridges: 392*
- *Total FC Elements: 1043*
- *Total Truss Spans:*
- *144 (includes deck, pony and thru)*
- *Pins UT Tested: 136*
- *Total Bent Caps: 355 (includes plate and box caps)*
- *Total FC Girder Spans: 299 (includes plate, box and railroad flat cars)*
- *200 Load Ratings*
- *Load Testing*

**Key Staff:** Michael Craig; Matt Sullivan; Casey Howard; William Mitchell; Raghuvver Surapaneni; Troy Torbett



Prime consultant name: **WSP USA Inc.**

|  |   |  |   |             |
|--|---|--|---|-------------|
| <b>Firm name</b>                               | WSP USA Inc.  |  | <b>Past Performance Evaluation Discipline(s)*</b> | Bridge      |
| <b>Project name</b>                            | VDOT Load Rating of Existing Structures and Bridges On-Call Contract                          |  | <b>Firm responsibility (prime or sub?)</b>        | Prime       |
| <b>Project number</b>                          | 188897  | <b>Owner's name</b>  | Virginia Department of Transportation             |             |
| <b>Project location</b>                        | Statewide, Virginia   |  | <b>Owner's Project Manager</b>                    | Tony Barati |
| <b>Owner's address, phone, email</b>           | 1401 East Broad Street, Richmond, VA 23219, (804)786-5117, tony.barati@vdot.virginia.gov      |  |   |             |
| <b>Services commenced by this firm (mm/yy)</b> | 08/11   | <b>Total consultant contract cost (\$1,000's)</b>                    |   | \$6,829     |
| <b>Services completed by this firm (mm/yy)</b> | Ongoing   | <b>Cost of consultant services provided by this firm (\$1,000's)</b> |   | \$5,122     |

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

WSP has held the load rating contract with VDOT for the past 12 years and load rated and tested more than 3,200 bridges and culverts throughout the state of Virginia. Load ratings were based on LRFR, LFR (for trusses and structures with low ratings in LRFR) and ASR methods for timber structures. The length of bridges rated ranged from 10' to over 6,000' in length. Structure types rated included Steel Rolled Beam, Plate Girder and Built-up Sections; Prestressed Beams (I-Beam, Bulb-T, Box Beam and Voided Slab); Reinforced Concrete Beams (Solid Slab, Voided Slab, and T-Beam); Cast-in-Place Multi-Cell Concrete Box Bridges with and without post tensioning; Steel Trusses and Gusset Plates; Girder Floorbeam and Stringer System, Timber Bridges (Glulam Deck and Timber Beams), Curved Steel Bridges, Steel and Concrete Rigid Frames, Concrete Culverts and Buried Structures, Spandrel Arches, CONTECH Arches, Steel Cross Girders and Straddle Bents, and Concrete Pier Caps. Load ratings used the following software: AASHTOWare Bridge Rating, DESCUS, LARSA, MIDAS, CANDE, CSI Bridge, and RC PIER software using conventional methods and finite element analysis. Emergency load ratings were provided within a week of NTP for a few "low rating" bridges in critical condition that required posting. WSP also has performed load rating software validation for AASHTOWare BrR, CANDE, and CSIBridge.

WSP developed the VDOT Bridge Load Rating Manual to incorporate the current VDOT load rating policies currently contained in the VDOT Instructional and Informational Memorandum (IIM-S&B-86.4) that governed Load Rating and Posting of Structures (Bridges and Culverts), and a series of JOB AIDES. The manual directs methods of load rating analysis for all entities that perform load rating of bridges and culverts on Virginia roadways. The manual is structured as a supplement to the AASHTO Manual for Bridge Evaluation (MBE), which provides methodology to load rate bridges in accordance with current load rating requirements via Load and Resistance Factor Rating (LRFR), or as applicable per VDOT policy, Load Factor Rating (LFR) or Allowable Strength Rating (ASR). WSP also developed the Load Rating Guidelines for Refined Analysis that standardize load ratings using refined analysis. The JOB AIDS, in the form of detailed spreadsheets or workbooks serve as supporting calculation templates to supplement load rating analysis of different structure types. WSP also presented a series of online interactive workshops to VDOT staff to introduce the manual and job aids to VDOT staff. The workshops focused on delivering key considerations in modeling and load rating analysis for Steel Structures, Reinforced Concrete Structures, Timber Structures, Concrete Box Culverts, Floorbeam Systems, Steel Trusses, and Gusset Plates using AASHTOWare BrR; and Buried Structures using CANDE 2019.

*"WSP recently collaborated with VDOT in the validation of AASHTOWare BrRV7.3, and the development of guidelines for refined analysis for bridge load rating. Throughout both of the endeavors, WSP consistently delivered high-quality results within the designated timeframes. We deeply value their professionalism and expertise exhibited during these collaborative efforts."*

Tony Barati, VDOT Project Manager

**Key Staff:** Shiwei Luo; Matthew Sullivan; Casey Howard; Lloyd (Mark) Pearson; Steven Dombrowski; Bo Yan



Prime consultant name: **WSP USA Inc.**

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|--|---|--|---|-----------------------------------|
| <b>Firm name</b>                               | WSP USA Inc.  |  | <b>Past Performance Evaluation Discipline(s)*</b> | Bridge                            |
| <b>Project name</b>                            | Structures Bridge Inspection Limited Services Contract  |  | <b>Firm responsibility (prime or sub?)</b>        | Prime                             |
| <b>Project number</b>                          | 30900678  | <b>Owner's name</b>  | North Carolina Department of Transportation       |                                   |
| <b>Project location</b>                        | Statewide, North Carolina   |  | <b>Owner's Project Manager</b>                    | David Snoke, PE Bridge inspection |
| <b>Owner's address, phone, email</b>           | 1000 Birch Ridge Drive, Raleigh, NC 27610; dsnoke@ncdot.gov                                   |  |   |                                   |
| <b>Services commenced by this firm (mm/yy)</b> | 06/11   | <b>Total consultant contract cost (\$1,000's)</b>                    |   | \$2,000 per cycle                 |
| <b>Services completed by this firm (mm/yy)</b> | Ongoing   | <b>Cost of consultant services provided by this firm (\$1,000's)</b> |   | \$2,000 per cycle                 |

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

Our team has performed over 4,000 bridge inspections and 2000 load ratings across nearly all the counties in the state over the past 11 years. The following includes highlighted projects/tasks:

- 1) **Albemarle Sound Corrosion and Detailed Deck Inspection, Washington County, NC:** WSP provided corrosion condition evaluation of the post-tensioned tendons, grout and the concrete deck of the 4,015-ft-long approach and main span box girder section.
- 2) **Bonner Bridge Health Monitoring:** WSP performed health monitoring of the Bonner Bridge in using solar power and cellular data. WSP performed a repair inspection of the south end of the Bonner Bridge, recommended and prioritized repairs, and provided engineering.
- 3) **Ultrasonic Inspection of Truss Structures, Haywood and Davidson Counties, NC:** WSP performed NBIS and ultrasonic inspections of three fracture critical truss bridges in 2015. WSP was re-selected in 2017 to assist NCDOT with this ultrasonic testing. WSP has developed an ASNT compliant pin testing procedure to be able to better identify deficiencies in bridge pins.
- 4) **Bridge Preservation/Rehabilitation:** The ongoing work under this contract includes the bridge rehabilitation plans of one bascule bridge's approach spans, one segmental box girder bridge, and four large coastal bridges in Carteret, Craven and Pamlico Counties, NC. Work previously completed under a task order included the rehabilitation of a 14-span, prestressed concrete girder bridge, located along the east coast of NC, spanning the Banks Channel, and connecting Wilmington to Wrightsville Beach, NC.
- 5) **Diagnostic Load Testing and Finite Element Analysis, Davidson and Gaston Counties, NC:** WSP provided load rating evaluation through diagnostic field load testing and 3D finite element analysis (FEA) of two steel girder bridges. Posting was removed for the Davidson County Bridge, and for Gaston the allowable posting was increased from Single Vehicle 26 tons to 31 tons.
- 6) **Load Testing Evaluation of Culverts, Forsyth, Davidson and Iredell Counties, NC:** WSP provided load rating evaluation utilizing diagnostic load testing and advanced FEA of four reinforced concrete box culverts. WSP found that there was no need for load posting.
- 7) **Load Ratings, NC:** WSP has performed over 2000 load ratings utilizing MathCad, Excel, MDX, and BrR AASHTOWare. Locations have included municipalities across the state of NC, including the City of Charlotte and Raleigh. Bridge Types have included curved and straight steel girder, prestress concrete, timber, culverts, and truss structures.

#### Relevant Features

- Inspection & Load Rating of over 4000 structures
- Wide variety of structure types for load rating
- Numerous load rating software used including: AASHTOWare BrR, CSI Bridge, MDX, MathCad, BRASS Culvert. LEAP Bridge

**Key Staff:** Michael Craig; Casey Howard; William Mitchell; Lloyd (Mark) Pearson; Raghuveer Surapaneni; Steven Dombrowski; Raul Acosta-Garcia; Troy Torbett



Prime consultant name: **WSP USA Inc.**

|  |  |  |   |                   |
|--|--|--|---|-------------------|
| <b>Firm name</b>                               | Michael Baker International, Inc.<br><b>Michael Baker</b><br>INTERNATIONAL |  | <b>Past Performance Evaluation Discipline(s)*</b> | Bridge            |
| <b>Project name</b>                            | Bridge Load Rating and Evaluation Engineering Services                     |  | <b>Firm responsibility (prime or sub?)</b>        | Prime             |
| <b>Project number</b>                          | S-239-19   | <b>Owner's name</b>  | South Carolina Department of Transportation       |                   |
| <b>Project location</b>                        | Statewide  |  | <b>Owner's Project Manager</b>                    | Emily Bickley, PE |
| <b>Owner's address, phone, email</b>           | 955 Park Street, Columbia, SC 29202, 803-737-1053, BickleyEJ@scdot.org     |  |   |                   |
| <b>Services commenced by this firm (mm/yy)</b> | 01/19  | <b>Total consultant contract cost (\$1,000's)</b>                    |   | \$17,363          |
| <b>Services completed by this firm (mm/yy)</b> | 02/23  | <b>Cost of consultant services provided by this firm (\$1,000's)</b> |   | \$17,363          |

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

Michael Baker provided bridge load rating and evaluation engineering services for state-owned, county-owned, and other municipality-owned structures throughout South Carolina, primarily for the 1,815 bridges in District 3. Michael Baker established the statewide program and oversaw five other consultants performing bridge load ratings, assessments, load and material testing, oversize and overweight permitting, complex structure rating and maintenance manuals, development of custom AASHTOWare Bridge Management program, and QA reviews for the more than 9,400 state bridges across seven districts.

Michael Baker provided QA/QC checks to verify accuracy of the load rating. During data review and site assessments, erroneous National Bridge Inventory Data was corrected. During the data review and site assessments, the assigned structures were assessed for inspection needs and frequency. Michael Baker also determined if a structure required an NBIS fracture critical, underwater, special, or complex inspection.

Michael Baker created a customized training session incorporating the LRGD and AASHTOWare Bridge Rating. **Michael Baker provided instructors and workshop materials.** Topics included development of AASHTOWare Bridge Design and Rating; system overview; bridge workspace; libraries; defining a superstructure and members; entering a P/S I-Beam Bridge; creating a new superstructure definition; entering a reinforced concrete bridge; bridge explorer issues; miscellaneous topics; and AASHTO 3D engine for steel multi-girder system. Hands-on exercises were included in the training.

While serving as the program manager for SCDOT's statewide load rating contract, Michael Baker developed a "help desk" feature addressing questions from the consultant teams and issues policy. Michael Baker also assisted with the development of the Bridge Inspection Guidance Document.

**Key Staff:** *Petrina Butler*



|  |  |  |   |                      |
|--|--|--|---|----------------------|
| <b>Firm name</b>                               | Michael Baker International, Inc.<br><b>Michael Baker</b><br>INTERNATIONAL                     |  | <b>Past Performance Evaluation Discipline(s)*</b> | Bridge               |
| <b>Project name</b>                            | Hwy 49 Mississippi River Bridge Rehabilitation   |  | <b>Firm responsibility (prime or sub?)</b>        | Prime                |
| <b>Project number</b>                          | ARDOT Oncall 2021-2024   | <b>Owner's name</b>  | Arkansas Department of Transportation             |                      |
| <b>Project location</b>                        | Phillips County, Arkansas  |  | <b>Owner's Project Manager</b>                    | Charles "Rick" Ellis |
| <b>Owner's address, phone, email</b>           | 10324 Interstate 30, P.O. Box 2261, Little Rock, AR, 72209; 501-569-2361, rick.ellis@ardot.gov |  |   |                      |
| <b>Services commenced by this firm (mm/yy)</b> | 10/21  | <b>Total consultant contract cost (\$1,000's)</b>                    |   | \$1,785              |
| <b>Services completed by this firm (mm/yy)</b> | Ongoing  | <b>Cost of consultant services provided by this firm (\$1,000's)</b> |   | \$1,785              |

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



Michael Baker is providing design and engineering services for bridge rehabilitation work on Highway 49, section 11 in Phillips County. The project includes detailed bridge inspection, load rating, providing repair options for the superstructure to increase its service life, and maintenance of traffic and stage planning. Proposed rehabilitation efforts include structural steel repairs and replacements, polymer overlay for the approach spans, deck replacement for the main truss spans, and miscellaneous repairs.

At nearly one mile in total length (5198'-6"), the Helena Bridge (Bridge No. 02899) carries US 49 over the Mississippi River and connects the towns of Helena-West Helena, AR and Lula, MS. One 4-girder superstructure unit and two 2-girder superstructure units compose the west approach spans in Arkansas, and two 2-girder superstructure units make up the east approach spans in Mississippi. The main river bridge spans are composed of five truss spans.

In December of 2021, Michael Baker conducted an inspection of the bridge deck. Michael Baker reported its findings from the deck inspection, a cost comparison of various deck rehabilitation options, and deck rehabilitation recommendations to ARDOT in a report in January of 2022.

After the NBIS routine bridge inspection and deck rehabilitation study revealed the quickly deteriorating bridge deck conditions in the main truss spans (among other findings), it was determined that a more extensive bridge rehabilitation would be required than what was originally anticipated to increase the service life of the bridge.

In May 2022, Michael Baker performed a detailed inspection followed by a load rating of the entire bridge. The rating included an "assumed" pristine condition as well as the actual "deteriorated" condition. Michael Baker recommended repair options to cover a range of estimated service life targets, including the minimum required repairs to avoid any load posting of the bridge, as well as the option to replace the entire bridge with a new structure.

**Key Staff:** Hussam Saleem; Jefferey McRae

|  |   |  |   |               |
|--|---|--|---|---------------|
| <b>Firm name</b>                               | Michael Baker International, Inc.<br><b>Michael Baker</b><br>INTERNATIONAL                |  | <b>Past Performance Evaluation Discipline(s)*</b> | Bridge        |
| <b>Project name</b>                            | Bridge Load Ratings   |  | <b>Firm responsibility (prime or sub?)</b>        | Prime         |
| <b>Project number</b>                          | 160474  | <b>Owner's name</b>  | Mississippi DOT                                   |               |
| <b>Project location</b>                        | Jackson, Mississippi  |  | <b>Owner's Project Manager</b>                    | Justin Walker |
| <b>Owner's address, phone, email</b>           | 401 North West Street, PO Box 1850, Jackson, MS 39215; 601-359-7200; jmwalker@mdot.ms.gov |  |   |               |
| <b>Services commenced by this firm (mm/yy)</b> | 05/2017   | <b>Total consultant contract cost (\$1,000's)</b>                    |   | \$483         |
| <b>Services completed by this firm (mm/yy)</b> | 06/2018   | <b>Cost of consultant services provided by this firm (\$1,000's)</b> |   | \$483         |

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

Michael Baker performed superstructure load ratings for 391 bridges of various superstructure types located throughout Mississippi. Michael Baker's services also included development and implementation of a load rating QA/QC plan.



Load ratings were performed in accordance with the latest version of the AASHTO Manual for Bridge Evaluation and using AASHTOWare's Bridge Rating program (BrR™). Load ratings were based on the information shown in MDOT's existing as-built bridge plans and the most recent National Bridge Inventory safety inspection report. The AASHTOWare BrR™ bridge model included any condition noted from the NBI inspection report that affected the load capacity of the superstructure. Load ratings were primarily performed using the load factor rating (LFR) methodology unless the bridge was originally designed using the load and resistance factor design (LRFD), in which case the load and resistance factor rating (LRFR) was used. Bridge decks were not load rated unless the superstructure type was a slab span. Load ratings included truck load evaluations for the inventory and operating vehicles, five - MS Legal Trucks, and two emergency vehicles EV2 and EV3. Michael Baker provided scanned copies of the complete MDOT standard load rating summary sheet and the associated xml rating file from the AASHTOWare BrR™ program for each bridge.

Superstructure types are as follows:

- Concrete Slab Spans – Simple and Continuous
- Concrete Channel Beam Spans
- Concrete T-Beam Spans
- Concrete Box Girder Spans
- Steel Girder Spans
- Steel Truss Spans
- Prestressed Concrete Girder Spans - Simple

**Key Staff:** Mitchell Carr, Jeffrey McRae, Philip Quillin



Prime consultant name: **WSP USA Inc.**



SECTION

18



WSK

**18. Approach and Methodology:**  
**WSP Strategy**

WSP's vision involves establishing a long-term partnership with the Louisiana Department of Transportation and Development (LADOTD) Maintenance Section with the overarching goal of assisting LADOTD in preserving and maintaining the State of Louisiana's bridge infrastructure. To realize this vision, WSP has strategically assembled a team of Professional Engineers who are registered in the State of Louisiana, collectively possessing a cumulative experience of **more than 500 years**. Many have firsthand familiarity with projects in Louisiana, which enhances our team's understanding of the state's unique infrastructure needs. One of the key strengths of the WSP's team proposed for this project is their extensive track record. In the past three years alone, they have successfully completed **over 6,000 load ratings**, encompassing a wide spectrum of bridge types, from simple slab bridges to complex cable-stayed, segmental bridges, and movable bridges. This demonstrates the team's versatility and proficiency in assessing various bridge structures. This dedicated team of Professional Engineers will be supported by the seasoned load raters from Michael Baker International, Inc. (Michael Baker), further bolstering our expertise and capabilities. Michael Baker has experience performing load ratings across the country.

This team of Professional Engineers will be complemented by a significant contingent of Engineer Interns (EIs), who are specifically trained to conduct load rating analyses in BrR efficiently. This is especially important when adhering to tight schedules and budget constraints. Their contributions will be invaluable in ensuring that the project progresses smoothly and meets its objectives cost effectively. The proposed team structure, as depicted in the organizational chart, is designed to be flexible and scalable. It can be expanded at any time by tapping into the broader southeast group, which comprises more than 100 bridge engineers, designers, and inspectors. This agility ensures that the LADOTD's objectives are consistently met on time.

**Project Management**

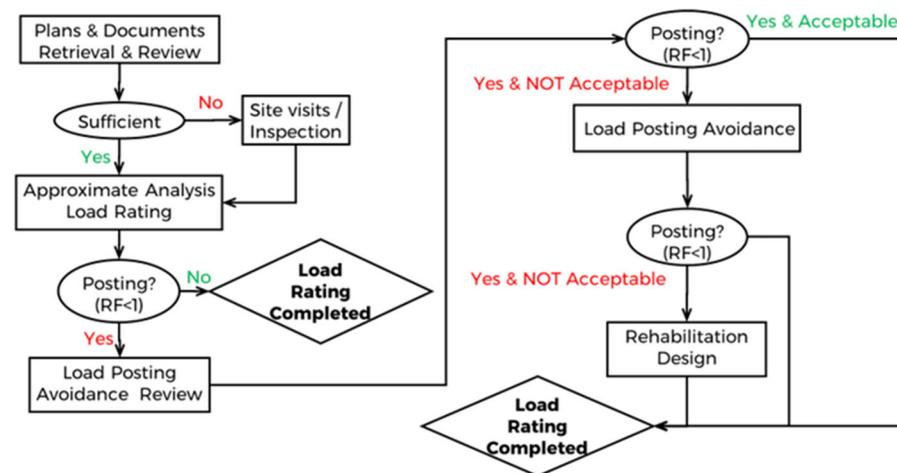
WSP Project Manager (PM), Michael Craig, PE, SE (MPR 1) is the Southeast Director for in-service bridges who has been focused on bridge load ratings, inspections, and rehabilitation for his entire 26-year career. Michael will be assisted by Hatem Seliem, PE, PMP (MPRs 1 & 3), who has more than 10 years of experience with LADOTD bridge manuals and specifications. A Project Management Plan (PMP) detailing the project requirements, resources, and information will be developed by Michael and will be distributed to the team.

*"Michael Craig and his team have provided excellent service for every aspect of this contract. The team members have seamlessly acted as an extension of SCDOT staff and required almost no oversight. The progress of our program is largely due to this team's efforts to make sure the SCDOT bridge program excelled in every way."*  
 Quote from SCDOT consultant performance evaluation in 2022 for the SCDOT Load rating contract.

WSP's and Michael Baker's southeast groups have teamed up before on similar load rating projects, most recently on the SCDOT Bridge Load Rating contract. The close collaboration and diverse expertise provided by both firms was a key to the success of this project. The contract management including invoicing, coordination, and consultant's services will be led by Mark Pearson, PE (MPR 2). Invoicing will be monthly based on the number of submitted bridges to the total number of bridges assigned for each Task Order (TO). WSP's Project Accountant will be working closely with LADOTD PM or designee to ensure accurate and timely invoice delivery.

**Load Rating Approach**

The load rating approach will be in accordance with Bridge Design Technical Memorandum (BDTM) No. BDTM.96: "Publication of Load Rating, Posting and Strengthening Standard Operating Procedure (SOP)", as outlined in the chart below.



WSP's recent load rating projects, specifically the SCDOT District 1 & 7 Load Rating and the TxDOT Load Rating and Inspection, serve as compelling demonstrations of the efficiency and effectiveness of the load rating approach employed by WSP.

#### **SCDOT District 1 & 7 Load Rating and Inspection:**

- Load Rating of 2,558 bridges primarily using AASHTOWare BrR.
- Load Testing of 160 bridges eliminated posting requirement for over 700 bridges. This was a significant achievement in terms of maintaining operations and avoiding postings.
- Nondestructive Testing (NDT) of 524 bridges assisted in removing postings on hundreds of bridges in the state.

*"WSP has demonstrated organization, technological efficiencies, and technical expertise during this project. WSP's experience in site assessments, load ratings, load testing, material testing, and everything in between have taken a very difficult project and provided us with many solutions to common issues through innovative ideas and processes."*

Emily Bickley, SCDOT Assistant State Bridge Management Engineer

#### **TxDOT Load Rating and Inspection:**

- Load testing of 14 culverts for calibration of 3D and 2D FE models.
- 3D FE modeling of 40 culverts reflects WSP's capability to complete sophisticated analyses.
- Load Rating of 1,624 culverts illustrates WSP's capacity to complete large complex load rating projects efficiently.
- Statistical analysis correlations of load testing and 3D models were utilized to modify load ratings in a data-driven approach that enhanced the accuracy and removed the load postings of thousands of culverts across the state of Texas.

These projects not only showcase the capacity of WSP to handle a wide variety of large/complicated load rating and load posting avoidance tasks, but also highlight the dedication to ensuring the safety and structural integrity of critical infrastructure assets. It is evident that WSP's approach combines advanced techniques, data analysis, and comprehensive inspections to achieve efficient and reliable load ratings, ultimately preserving budget for needed projects, contributing to the preservation and longevity of bridges and culverts.

**Quality Management Plan (QMP)** will be submitted to LADOTD PM at the beginning of the project for review and approval. The QMP will include the QA/QC procedures, and Document Control procedures. WSP's QA/QC procedures will be developed in accordance with LADOTD QC/QA Policy presented in LADOTD Bridge Design and

Evaluation Manual (BDEM), Part I, Chapter 3. WSP's QC review process is a five-step process.



The independent QA/QC team consists of Wesley Weir, PE (MPR 4), Mark Pearson, PE (MPR 2), Mark Shlyakov, PE (MPR 4), and Mitchell Carr, PE (MPR 5) with 32, 45, 42, and 56 years of experience, respectively. The QA/QC team's responsibilities encompass a thorough review of project deliverables, including those from subconsultants. Their meticulous examination ensures that all aspects of the project meet the highest standards. Once the QA/QC process is completed, a QA Review Certification will be signed and attached to the deliverable, signifying that the work has undergone rigorous scrutiny.

The team will maintain a meticulous record of each review and the disposition of prior reviews. This documentation is vital for ensuring transparency, accountability, and traceability throughout the project.

#### **Task 1: Plan/Document Retrieval and Review**

The process of collecting plans and documents is a crucial component of the bridge load rating activity, as the accuracy and quality of this information directly impacts the load rating results. The collected information includes as-built plans, shop drawings, rehabilitation plans, inspection reports, and previous load rating reports.

#### **Use of Standard Plans:**

In cases where it is not possible to retrieve as-built plans or shop drawings for standard bridges, the project team may utilize Standard Plans available on the LADOTD website. When plans do not exist for a particular structure, our team will identify "sister" bridges (bridges of a similar date, type, and geometry), make field visits as needed to verify the "sister" bridge plans should be utilized, and perform GPR if need to identify rebar location and approximate size. However, this will only occur after coordination and approval from the LADOTD PM. This approach ensures that the most accurate and relevant information is used for load rating assessments.

#### **Document Control and Submission:**

WSP will maintain a record of collected information and electronic copies will be submitted to LADOTD through AssetWise/ProjectWise platform. This digital submission streamlines the document-sharing process and enhances accessibility and traceability.

By effectively managing the collection of plans and documents and coordinating with relevant groups and platforms, the project team ensures that the load rating results are based on comprehensive and accurate data, promoting the reliability of bridges in question.

## Task 2: Site Visits

The process of selecting bridges for site visits and conducting these visits is a critical step in ensuring the accuracy of load rating assessments. Here's how this process will be managed:

### Shortlisting Bridges for Site Visits:

The project team will thoroughly review all available documents and related information for each bridge. Bridges selected for site visits will fall into one of the following categories:

- Bridges that haven't been recently inspected.
- Bridges that have been recently damaged or repaired.
- Timber structures.
- Deck super or substructure rated below 5.
- Steel girder bridges rated 5 and below.
- Bridges recommended by LADOTD.



These criteria will help ensure that site visits are targeted towards bridges where an on-site assessment is most needed.

### Inspection Team:

WSP inspection team will be led by Casey Howard, PE, NDT II (MPR 5), William (Coley) Mitchell, CBI, NDT II, and Raghuvier Surapaneni, PE. All are senior bridge inspectors with NHI certification for routine and fracture critical bridge inspections. Both Coley and Casey hold Sprat Level II Rope Access Technician certifications. All three members of the inspection team have completed the required work zone training courses, ensuring their readiness for site visits.

### Coordinating Site Visits:

To visit the site and inspect the bridges, WSP team will coordinate with several key stakeholders, including:

- DOTD Maintenance Section for logistical support and access arrangements.
- District Bridge Engineer for technical guidance and coordination.
- Local Parishes for local insights and coordination.
- For complex bridges, preliminary site visits may be necessary to determine the best approach to access the bridge with minimal interruption to traffic.

## Use of Certified Rope Access Technicians and Drones:

The presence of certified rope access technicians is invaluable for safely accessing and inspecting bridges with minimum disruption to traffic flow. This approach minimizes interruptions to road users while ensuring thorough inspections.

Additionally, like the SCDOT load rating project, we propose utilizing drones where appropriate to minimize the need for traffic control and access equipment. Drones can provide a unique vantage point and data collection method for bridge site assessments, further enhancing the efficiency and safety of the process.



## Task 3: Analysis and Load Rating

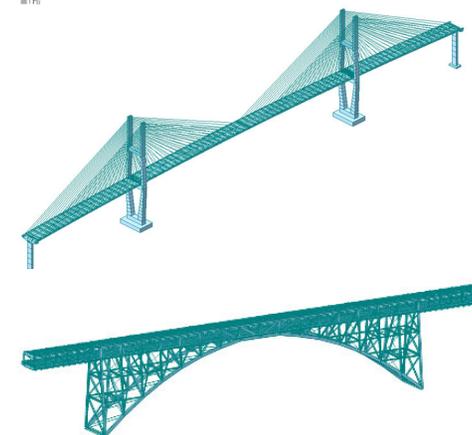
**AASHTOWare Bridge Rating (BrR)** will be the primary software used for superstructure load rating analysis. BrR is a recognized and widely used tool for bridge rating assessments. In cases where bridges have complex geometries or unique structures that cannot be effectively analyzed using BrR, a refined analysis will be conducted. This involves utilizing an assortment of pre-approved FEA software packages:

- ✓ Midas Civil
- ✓ CSI Bridge
- ✓ LARSA 4D Bridge Plus
- ✓ MDX
- ✓ STAAD

For superstructures not analyzed using BrR, **influence lines** will be generated for the critical section(s) of the controlling member(s), which are to be determined based on the legal loads rating factors. Influence lines results will be presented using LADTOD COMPSTIL2 standard input file.

By combining BrR with refined analysis when necessary and utilizing a variety of approved FEA software packages, WSP ensures that the load rating analysis for superstructures is comprehensive and tailored to the specific characteristics of each bridge.

When required, **substructure** load ratings will utilize the pre-approved Leap Concrete (RC Pier) software, sublimated by in-house Mathcad and Excel spreadsheets. In cases of substructures exhibiting deep beam behavior (shear span/depth < 2), we will employ Strut-and-Tie (STM) models, primarily utilizing Leap Concrete or, if more suitable, finite element (FE) software.



WSP will develop a standardized load rating report template that aligns with LADOTD standards. This template will incorporate the most current LADOTD Bridge Load Rating Summary Sheet and adhere to the documentation specifications outlined in the LADOTD BDEM. It will comprehensively address multiple elements, encompassing inspection findings (if relevant), utilized documentation, analysis outcomes, testing results (if needed), and suggest load posting avoidance measures for bridges with rating factors less than 1.0.

**Review and Approval Process:**

Draft final reports will be internally reviewed for quality and then submitted to the LADOTD PM for review and approval before final submission and populating to LADOTD AssetWise platform.

**Alternatives to Load Posting:**

When traditional analytical efforts are exhausted to avoid load posting, WSP team will provide a range of alternative techniques including:

- Refined analysis to better estimate live load demand.
- Material testing to determine their condition and strength.
- Nondestructive testing to provide additional information, e.g., rebar size and location.
- Load testing to accurately determine live load distribution or better understand boundary conditions.
- Rehabilitation work to enhance the bridge's capacity.

**Expertise in Bridge Strengthening and Rehabilitation:**



Precast slab bridge rehabilitated with standard detail provided by WSP during the SCDOT load rating contract.

WSP team has a proven track record of experience providing temporary and permanent strengthening and retrofits for bridges to increase/remove postings for both fixed and movable bridges. This includes expertise in emergency response for bridges affected by impacts, fires, or natural disasters such as hurricanes. For SCDOT project, WSP developed a standard strengthening for enhancing the

flexure capacity of deficient slab bridges utilizing externally bonded Carbon Fiber Reinforced Polymer (CFRP ) materials.

This experience provides our team know-how to not only assess and rate bridges but also recommend and implement appropriate retrofits and rehabilitation measures to remove their bridge postings, increase safety, and maximize longevity of LADOTD's bridges.

**Task 4: Training**

Michael Baker is leading the industry in providing subject matter experts to help train and increase the industry's knowledge on Bridge Inspection, and Load Rating. Michael Baker has also been at the forefront of AASHTOWare Bridge Rating (BrR) & Design (BrD)

software development. Clients throughout the country have requested custom developed BrR training courses, delivered both virtually and in-person. These have either been developed utilizing BrR tutorial bridges or completely customized to the client. This involves utilizing bridges from the State's inventory and implementing state-specific guidance in rating methodology and posting requirements. Our team has successfully performed this scope of work for many State DOT's including South Carolina, Hawaii, and Mississippi.

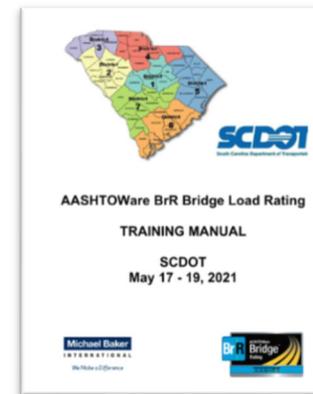
Michael Baker will provide the instructors and the customized workshop materials, which includes a workbook of training bridges the users will enter BrR during the training. LADOTD will specify what bridge types to cover and types of complex analysis to focus on. Example topics to be covered are as follows:

- Development of AASHTOWare Bridge Design and Rating (BrDR)
- Bridge Workspace - Organization of Bridges
- Truck/Vehicles Libraries
- Defining Superstructure and Members
- Creating New Superstructure Definition Using the Wizard
- AASHTO 3D Engine
- Bridge Explorer Issues
- Entering Deterioration and Section Loss
- Hands-on exercises

**Project Schedule**

The schedule for each TO will be dependent on the number, type, and complexity of bridges assigned. The schedule shown below is a proposed example for a typical TO consisting of 100 conventional bridges with a proposed duration of approximately six months:

| Task/Week                             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---------------------------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| <b>1.0 PROJECT SETUP</b>              |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 1.1 Kickoff meeting                   | █ |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 1.2 Develop manhours                  |   | █ |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 1.3 Negotiate manhours                |   |   | █ |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| <b>2.0 DOCUMENT RETRIEVAL</b>         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 2.1 Data collection                   |   |   |   | █ |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 2.2 Data review                       |   |   |   |   | █ |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 2.3 Developing records                |   |   |   |   |   | █ |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| <b>3.0 SITE VISITS</b>                |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 3.1 Coordination                      |   |   |   |   |   |   | █ |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 3.2 Inspection                        |   |   |   |   |   |   |   | █ |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 3.3 Site Assessment Report            |   |   |   |   |   |   |   |   | █ |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| <b>4.0 LOAD RATING &amp; ANALYSIS</b> |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 4.1 Analysis                          |   |   |   |   |   |   |   |   |   | █  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 4.2 Reporting                         |   |   |   |   |   |   |   |   |   |    | █  |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 4.3 QA/QC                             |   |   |   |   |   |   |   |   |   |    |    | █  |    |    |    |    |    |    |    |    |    |    |    |    |
| 4.4 DOTD review                       |   |   |   |   |   |   |   |   |   |    |    |    |    | █  |    |    |    |    |    |    |    |    |    |    |
| 4.5 Final submission                  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |





## SECTIONS



# 19-23



**19. Workload:**

| Firm(s)<br>ALL FIRMS MUST<br>BE REPRESENTED<br>IN THIS TABLE                        | Past<br>Performance<br>Evaluation<br>Discipline(s) * | Contract Number and State<br>Project Number   | Project Name   | Remaining<br>Unpaid<br>Balance** |
|---|--|---|--|----------------------------------|
|    | Bridge   | Contract No.<br>S.P. No. H.010253.5   | ELEC. & MECH. ENG. ON CALL TO9   | \$110,274                        |
|   |  | Contract No.<br>S.P. No. H.004791   | Belle Chasse Bridge & Tunnel   | \$357,712                        |
|   |  | Contract No.<br>S.P. No. H.004791   | Belle Chasse Tunnel Inspection   | \$26,432                         |
|   | Planning   | Contract No.<br>S.P. No. H.003931.5   | LADOTD P3 Advisory Services On-Call TO2  | \$40,802                         |
|   |  | Contract No.<br>S.P. No. H.003931.5   | LADOTD P3 Advisory Services On-Call TO2  | \$947,099                        |
|  | CE&/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                        |
|   |  | 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                        |
|   |  | 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 Statewide, I-10: Texas State Line - E. of Coone Gully, Calcasieu Parish          | \$434,492                        |
|   |  | 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                        |
|   |  | Contract No. 4400013851 Task<br>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                              |
|   |  | Contract No. 4400013841 Task<br>\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                              |
|   |  | Contract No.4400013851 Task<br>Order  | IDIQ Contract for Construction Engineering and Inspection Services for   | \$28,608                         |

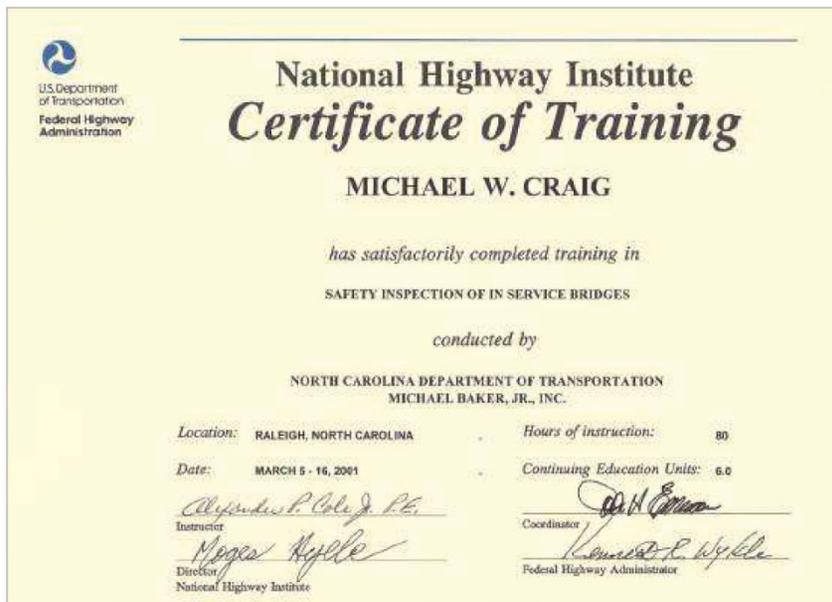


Prime consultant name: **WSP USA Inc.**

|  |  |  |  |          |
|--|--|--|--|----------|
|  |  | No.H.009308.6S.P. No.<br>H.009308.6 F.A.P.<br>No. H009308  | Safety Projects (CE&I), Statewide New Orleans DPW SRTS<br>Sidewalk Project |          |
|  |  | Contract No.4400013851 Task<br>Order No. H.012527.6 S.P. No.<br>H.012527.6 F.A.P.<br>No. H012527 | Local Road Safety Upgrade (W. Feliciana), West Feliciana Parish            | \$60,084 |
|  |  | Contract No.4400013851 Task<br>Order No. H.013082.6 S.P. No.<br>H.013082.6 F.A.P.<br>No. H013082 | Bootlegger Road Sidewalks, St. Tammany Parish                              | \$45,880 |

20. Certifications/Licenses:

**Michael Craig, PE, SE**



Prime consultant name: **WSP USA Inc.**

Michael Craig, PE, SE, continued



**National Highway Institute**  
**Certificate of Training**  
**Michael Craig**  
*has participated in*  
**BINS Workshop-013099**  
*hosted by*  
**North Carolina Department of Transportation**

**Date:** October 11, 2011      **Hours of Instruction:** 6.5  
**Location:** Raleigh, NC

*[Signature]*  
 Instructor

*[Signature]*  
 Local Coordinator  
 Richard Barnaby, Director  
 National Highway Institute

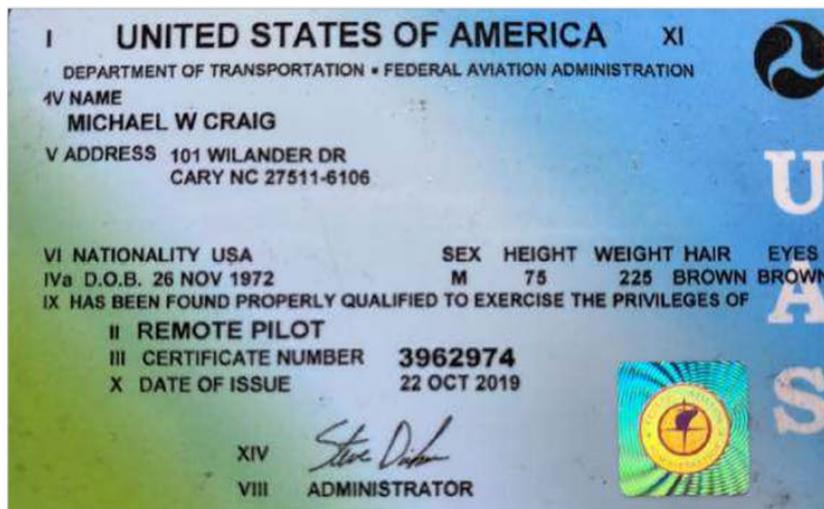


**National Highway Institute**  
**Certificate of Training**  
**Michael Craig**  
*has participated in*  
**FHWA-NHI-134029 Bridge Maintenance Training**  
*hosted by*  
**WSP GROUP**

**Date:** October 1-4, 2013      **Hours of Instruction:** 24  
**Location:** Charlotte, NC

*[Signature]*  
 Instructor

*[Signature]*  
 Local Coordinator  
 Richard Barnaby, Director  
 National Highway Institute



**I UNITED STATES OF AMERICA XI**  
 DEPARTMENT OF TRANSPORTATION • FEDERAL AVIATION ADMINISTRATION

**IV NAME**  
**MICHAEL W CRAIG**

**V ADDRESS** 101 WILANDER DR  
 CARY NC 27511-6106

**VI NATIONALITY USA**      **SEX** HEIGHT WEIGHT HAIR EYES  
 IVa D.O.B. 26 NOV 1972      M 75 225 BROWN BROWN

**IX HAS BEEN FOUND PROPERLY QUALIFIED TO EXERCISE THE PRIVILEGES OF**

**II REMOTE PILOT**  
**III CERTIFICATE NUMBER 3962974**  
**X DATE OF ISSUE 22 OCT 2019**

**XIV** *[Signature]*  
**VIII ADMINISTRATOR**

**Hatem Seliem, PE**



Casey Howard, PE



## PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

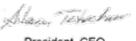
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**Casey Howard**  
has attended  
**Louisiana Traffic Control Supervisor**  
Training Course

---

|  |           |
|--|-----------|
| 8/16/2023 to 8/16/2027<br>Training Valid Through | CEU: 1.50 |
|--|-----------|

New Orleans, LA  
Location

  
 Vice President of Education and Technical Training  
  
 President, CEO

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





## Certificate of Training

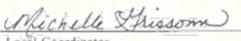
Casey Howard

*has Successfully Completed*

**FHWA-NHI-130053 Bridge Inspection Refresher Training**

*hosted by*  
**WSP**

|                            |                          |
|----------------------------|--------------------------|
| Date: November 01-03, 2022 | Hours of Instruction: 18 |
| Location: Mooresville, NC  |                          |

|   |  |
|---|--|
| <br>Instructor | <br>Local Coordinator |
| <br>Instructor | Thomas Harman, Director<br>National Highway Institute  |




## Certificate of Training

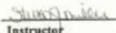
Casey Howard

*has participated in*

**FHWA-NHI-130078 Fracture Critical Inspection Techniques for Steel Bridges**

*hosted by*  
**Stantec**

|                          |                          |
|--------------------------|--------------------------|
| Date: August 23-26, 2016 | Hours of Instruction: 25 |
| Location: Denver, CO     |                          |

|   |  |
|---|--|
| <br>Instructor | <br>Local Coordinator |
| <br>Instructor | Valerie Briggs, Director<br>National Highway Institute   |




## Certificate of Training

Casey Howard

*has participated in*

**FHWA-NHI-134029 Bridge Maintenance Training**

*hosted by*  
**WSP GROUP**

|                         |                          |
|-------------------------|--------------------------|
| Date: October 1-4, 2013 | Hours of Instruction: 24 |
| Location: Charlotte, NC |                          |

|   |  |
|---|--|
| <br>Instructor | <br>Local Coordinator |
| <br>Instructor | Richard Barnaby, Director<br>National Highway Institute  |

Casey Howard, PE, continued

**National Highway Institute**  
**Certificate of Training**  
 Casey Howard  
*has participated in*  
**FHWA-NHI-130055 Safety Inspection of In-Service Bridges**  
*hosted by*  
**WSP GROUP**  
 Date: January 27- February 7, 2014      Hours of Instruction: 60  
 Location: Charlotte, NC  
 Instructors: [Signatures]  
 Local Coordinator: [Signature] Richard Barnaby, Director National Highway Institute

**National Highway Institute**  
**Certificate of Training**  
 Casey Howard  
*has Successfully Completed*  
**FHWA-NHI-130053 Bridge Inspection Refresher Training**  
*hosted by*  
**WSP**  
 Date: November 01-03, 2022      Hours of Instruction: 18  
 Location: Mooresville, NC  
 Instructors: [Signatures]  
 Local Coordinator: [Signature] Thomas Harman, Director National Highway Institute

**National Highway Institute**  
**Certificate of Training**  
 Casey Howard  
*has participated in*  
**FHWA-NHI-130078 Fracture Critical Inspection Techniques for Steel Bridges**  
*hosted by*  
**Stantec**  
 Date: August 23-26, 2016      Hours of Instruction: 25  
 Location: Denver, CO  
 Instructors: [Signatures]  
 Local Coordinator: [Signature] Valerie Briggs, Director National Highway Institute

**National Highway Institute**  
**Certificate of Training**  
 Casey Howard  
*has participated in*  
**FHWA-NHI-134029 Bridge Maintenance Training**  
*hosted by*  
**WSP GROUP**  
 Date: October 1-4, 2013      Hours of Instruction: 24  
 Location: Charlotte, NC  
 Instructors: [Signatures]  
 Local Coordinator: [Signature] Richard Barnaby, Director National Highway Institute

Casey Howard, PE, continued



**SOCIETY OF PROFESSIONAL ROPE ACCESS TECHNICIANS**

**SPRAT**  
Society of Professional Rope Access Technicians

Acknowledges that

**CASEY HOWARD**

has demonstrated through practical and written examinations, attainment of SPRAT's Certification Requirements for Rope Access Work, and is therefore

**CERTIFIED**

**Level 2 Rope Access Technician**

SPRAT # 151444  
AWARDED: February 19, 2021  
Expires: February 19, 2024

*[Signature]*  
TROLL, EVALUATIONS COMMITTEE CHAIR

*[Signature]*  
TOM WOOD, SPRAT PRESIDENT

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National Highway Institute

**Certificate of Training**

Casey Howard  
*has participated in*

*FHWA-NHI-130055 Safety Inspection of In-Service Bridges*

*hosted by*

**WSP GROUP**

Date: January 27- February 7, 2014      Hours of Instruction: 60  
Location: Charlotte, NC

*[Signature]*  
Instructor

*[Signature]*  
Local Coordinator

*[Signature]*  
Instructor

Richard Barnaby, Director  
National Highway Institute

Raghuveer Surapaneni, PE

**National Highway Institute**  
**Certificate of Training**  
 Raghuveer Surapaneni  
*has participated in*  
**FHWA-NHI-130053 Bridge Inspection Refresher Training**  
*hosted by*  
**AECOM**  
 Date: June 26-28, 2018      Hours of Instruction: 18  
 Location: Raleigh, NC  
 Instructor: [Signature]      Local Coordinator: [Signature]  
 Instructor: [Signature]      Valerie Briggs, Director  
 National Highway Institute

**National Highway Institute**  
**Certificate of Training**  
 Raghuveer Surapaneni  
*has participated in*  
**FHWA-NHI-130055 Safety Inspection of In-Service Bridges**  
*hosted by*  
**National Highway Institute**  
 Date: April 8 - 19, 2013      Hours of Instruction: 67  
 Location: Arlington, VA  
 Instructor: [Signature]      Local Coordinator: [Signature]  
 Instructor: [Signature]      Richard Barnaby, Director  
 National Highway Institute

**National Highway Institute**  
**Certificate of Training**  
 Raghuveer Surapaneni  
*has satisfactorily completed training in*  
**Fracture Critical Inspection Techniques for Steel Bridges**  
 NHI Course No. 130078  
*conducted by*  
**Michael Baker Jr. Inc.**  
 Location: Trenton, New Jersey      Hours of instruction: 28  
 Date: September 24-27, 2002      Continuing Education Units: 2.1  
 Instructor: [Signature]      Coordinator: [Signature]  
 Instructor: [Signature]      Director, Office of Professional Development  
 Federal Highway Administration

**National Highway Institute**  
**Certificate of Training**  
 Raghuveer Surapaneni  
*has participated in*  
**FHWA - NHI Course No. 130099A**  
**Bridge Inspection Nondestructive Evaluation Seminar - BINS (2 Days)**  
*hosted by*  
**LA DOTD/LTRC**  
 Date: October 6-7, 2015      Hours of Instruction: 13  
 Location: Baton Rouge, LA  
 Instructor: [Signature]      Local Coordinator: [Signature]  
 Instructor: [Signature]      Valerie Briggs, Director  
 National Highway Institute

Raghuveer Surapaneni, PE, continued



National Highway Institute  
**Certificate of Training**

**Raghuveer Surapaneni**  
has participated in  
**FHWA-NHI-135046**  
**STREAM STABILITY AND SCOUR AT HIGHWAY BRIDGES**  
hosted by  
**Pennsylvania Department of Transportation**

Date: October 7, 2008  
Location: Indiana PA  
Hours of Instruction: 18

*Jaura Gural*  
Instructor

*[Signature]*  
Local Coordinator

*[Signature]*  
Joseph S. Taylor, Associate Administrator  
Office of Professional and Corporate Development

**CERTIFICATE OF COMPLETION**

**RAGHUVVEER SURAPANENI**  
No license indicated  
has successfully completed the following course  
**Mobile Elevating Work Platform (MEWP) Safety for Supervisors**  
this course is approved for **1** Continuing Education hours

December 2 2020  
Course Completion Date

*[Signature]*  
Victoria Coltrane, DVM, IFCE, CCI, CCI-ACC  
Two Urban Center  
14890 West Kennedy Boulevard  
Suite 300, Tampa, FL 33609  
813-944-1200

**ACCREDITED IACET PROVIDER**  
As an IACET Accredited Provider, Vector Solutions offers CEUs for its programs that fulfill quality under the ANSI/IACET Standard.

**VECTOR SOLUTIONS** **RedVector**



**American Welding Society®** Certifies That  
**Raghuveer Surapaneni**  
Has Completed the AWS  
**Certified Welding Inspector Seminar**  
Charlotte, NC

**8 Professional Development Hours**

January 16, 2015  
Date

*[Signature]*  
Director of Operations, Education Services

William "Coley" Mitchell, PE



## PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

---

**William Mitchell**  
has attended  
**Louisiana Traffic Control Supervisor**  
Training Course

---

|  |  |
|--|--|
| <p>8/16/2023 to 8/16/2027<br/>Training Valid Through</p> <p>New Orleans, LA<br/>Location</p> | <p>CEU: 1.50</p> <p style="text-align: right;"><i>John H. White</i><br/>Vice President of Education and Technical Training</p> <p style="text-align: right;"><i>Shawn T. Fisher</i><br/>President, CEO</p> <p style="font-size: small; text-align: center;">ATSSA provides training and certification but neither constitutes employment by ATSSA.<br/>This certificate provides proof of training, not certification.</p> |
|--|--|





## Certificate of Training

**William Mitchell**  
*has participated in*

**FHWA-NHI-130053 Safety Inspection Refresher Training**

*hosted by*  
**WSP USA**

|                                  |                                 |  |
|----------------------------------|---------------------------------|--|
| <b>Date:</b> January 16-18, 2018 | <b>Hours of Instruction:</b> 18 |  |
| <b>Location:</b> Cary, NC        |                                 |  |

|   |   |
|---|---|
| <p><i>[Signature]</i><br/>Instructor</p> <p><i>[Signature]</i><br/>Instructor</p> | <p><i>[Signature]</i><br/>Local Coordinator</p> <p><i>[Signature]</i><br/>Valerie Briggs, Director<br/>National Highway Institute</p> |
|---|---|




## Certificate of Training

**William Mitchell**  
*has participated in*

**FHWA-NHI-130078 Fracture Critical Inspection Techniques for Steel Bridges**

*hosted by*  
**WSP**

|                                   |                                 |  |
|-----------------------------------|---------------------------------|--|
| <b>Date:</b> February 18-21, 2014 | <b>Hours of Instruction:</b> 21 |  |
| <b>Location:</b> Cary, NC         |                                 |  |

|   |  |
|---|--|
| <p><i>[Signature]</i><br/>Instructor</p> <p><i>[Signature]</i><br/>Instructor</p> | <p><i>[Signature]</i><br/>Local Coordinator</p> <p><i>[Signature]</i><br/>Richard Barnaby, Director<br/>National Highway Institute</p> |
|---|--|




## Certificate of Training

**William Mitchell**  
*has participated in*

**FHWA-NHI-130087 Inspection and Maintenance of Ancillary Highway Structures**

*hosted by*  
**WSP | Parsons Brinckerhoff, Inc.**

|                               |                                 |  |
|-------------------------------|---------------------------------|--|
| <b>Date:</b> July 18-19, 2015 | <b>Hours of Instruction:</b> 11 |  |
| <b>Location:</b> Herndon, VA  |                                 |  |

|   |   |
|---|---|
| <p><i>[Signature]</i><br/>Instructor</p> <p><i>[Signature]</i><br/>Instructor</p> | <p><i>[Signature]</i><br/>Local Coordinator</p> <p><i>[Signature]</i><br/>Valerie Briggs, Director<br/>National Highway Institute</p> |
|---|---|

**William "Coley" Mitchell, PE, continued**




**National Highway Institute**

## Certificate of Training

**William (Coley) Mitchell**

*has participated in*

**FHWA-NHI-130110 Tunnel Safety Inspection**

*hosted by*

**Wetherill Engineering**

**Date:** May 02-06, 2016      **Hours of Instruction:** 32

**Location:** Cary, NC

*Thomas H. Egan*  
Instructor

*Eric B. Kasper*  
Local Coordinator

*Valerie Briggs*  
Instructor

*Valerie Briggs*  
Valerie Briggs, Director  
National Highway Institute




## Welder Training and Testing Institute

### Certificate of Completion

Be it known that

**William C. Mitchell**

Has attended and successfully completed the  
Professional Development Course

### Ultrasonic Testing (UT)

#### Level II

(40 Hours)

Awarded this 18<sup>th</sup> day of September 2015

*Thomas R. Martin*  
Thomas R. Martin  
Instructor / NDT Level III

*Robert K. Wiswesser*  
Robert K. Wiswesser  
Director / ASNT Level III




**National Highway Institute**

## Certificate of Training

**William Mitchell**

*has participated in*

**FHWA-NHI-130087**

**Inspection and Maintenance of Ancillary Highway Structures**

*hosted by*

**WSP | Parsons Brinckerhoff, Inc.**

**Date:** July 18-19, 2016      **Hours of Instruction:** 11

**Location:** Herndon, VA

*Eric B. Kasper*  
Instructor

*William C. Mitchell*  
Local Coordinator

*Valerie Briggs*  
Instructor

*Valerie Briggs*  
Valerie Briggs, Director  
National Highway Institute

Matthew Sullivan, PE



**National Highway Institute**  
**Certificate of Training**  
**MATTHEW SULLIVAN**  
*has participated in*  
**FHWA-NHI-130055 Safety Inspection of In-Service Bridges**  
*hosted by*  
**Boston Society of Civil Engineers with Massachusetts Department of Transportation**  
**Date:** May 02-13, 2011      **Hours of Instruction:** 60  
**Location:** Boston, MA  
**Instructor:** *Dennis K. Bough*  
**Local Coordinator:** *Richard Barnaby*  
**Instructor:** *Richard Barnaby*  
**Richard Barnaby, Director**  
**National Highway Institute**



**National Highway Institute**  
**Certificate of Training**  
**Matthew Sullivan**  
*has participated in*  
**FHWA-NHI-130078 Fracture Critical Inspection Techniques for Steel Bridges**  
*hosted by*  
**MP Engineers, P.C.**  
**Date:** February 25-28, 2020      **Hours of Instruction:** 25  
**Location:** Kingston, NJ  
**Instructor:** *Jim White*  
**Local Coordinator:** *Mahendran Patel*  
**Instructor:** *Prasad D. Dutt*  
**Michael Davis, P.E.**  
**Director, National Highway Institute**



**National Highway Institute**  
**Certificate of Training**  
**Matthew Sullivan**  
*has participated in*  
**FHWA-NHI-130087 Inspection and Maintenance of Ancillary Highway Structures**  
*hosted by*  
**PKB Engineering Corporation**  
**Date:** July 14-15, 2015      **Hours of Instruction:** 12  
**Location:** Secaucus, NJ  
**Instructor:** *Michael Davis*  
**Local Coordinator:** *Valerie Briggs*  
**Instructor:** *Valerie Briggs*  
**Valerie Briggs, Director**  
**National Highway Institute**



**National Highway Institute**  
**Certificate of Training**  
**Matthew Sullivan**  
*has participated in*  
**FHWA-NHI-130053 Bridge Inspection Refresher Training**  
*hosted by*  
**Rhode Island Department of Transportation**  
**Date:** February 26-28, 2019      **Hours of Instruction:** 18  
**Location:** East Greenwich, RI      **24**  
**Instructor:** *Valerie Briggs*  
**Local Coordinator:** *Michael Davis*  
**Instructor:** *Michael Davis*  
**Michael Davis, Director**  
**National Highway Institute**

Matthew Sullivan, PE, continued



**SOCIETY OF PROFESSIONAL ROPE ACCESS TECHNICIANS**

**SPRAT**

*Acknowledges that*

**MATTHEW SULLIVAN**

*has demonstrated through practical and written examinations, attainment of SPRAT's Certification Requirements for Rope Access Work, and is therefore*

**CERTIFIED**

**Level 2 Rope Access Technician**

SPRAT # 130358  
AWARDED: May 21, 2021  
Expires: May 21, 2024

*Troll*  
TROLL, EVALUATIONS COMMITTEE CHAIR

*Tom Wood*  
TOM WOOD, SPRAT PRESIDENT

©2013 - Present, Society of Professional Rope Access Technicians

**UNITED STATES OF AMERICA** XI

DEPARTMENT OF TRANSPORTATION • FEDERAL AVIATION ADMINISTRATION

IV NAME  
**MATTHEW P SULLIVAN**

V ADDRESS 31 BLITHEWOOD AVE APT 1006  
WORCESTER MA 01604-3556

VI NATIONALITY USA SEX HEIGHT WEIGHT HAIR EYES  
IVa D.O.B. 18 DEC 1984 M 74 180 BROWN BLUE

IX HAS BEEN FOUND TO BE PROPERLY QUALIFIED TO EXERCISE THE PRIVILEGES OF

II REMOTE PILOT  
III CERTIFICATE NUMBER 4172067  
X DATE OF ISSUE 28 AUG 2018

XIV *OK Edw M*  
VII ACTING ADMINISTRATOR



Lassaad Mhamdi, CBI




National Highway Institute

## Certificate of Training

**Lassaad Mhamdi**  
*has participated in*

FHWA-NHI 130099 – Bridge Inspection Non-Destructive Evaluation Showcase

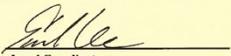
*hosted by*

Delaware T<sup>2</sup> Center

**Date:** November 22, 2011      **Hours of Instruction:** 6 Hours

**Location:** Kent Polytech Adult Education Center, Woodside, DE

  
Instructor

  
Local Coordinator

  
Instructor

**Richard Barnaby, Director**  
National Highway Institute



Lassaad Mhamdi

is granted this

## Certificate of Membership

in this organization, which is dedicated to the development and perpetuation of the highest standards of professional service and efficiency in the field of nondestructive testing.

The American Society for Nondestructive Testing

  
Executive Director

Date September 1, 2014

**21. QA/QC 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.**

**N/A**

**22. Sub-consultant information:**

| Firm Name<br>(Name must match as registered with<br>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 |

**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.**

**N/A**