REQUEST FOR QUALIFICATION STATEMENT

IDIQ CONTRACTS FOR BRIDGE PRESERVATION

STATEWIDE
4400023921
4400023922
4400023923
4400024185
4400024186
4400024187
4400024188
2400024189

by

HUVAL

PLANNING | DESIGN | CONSTRUCTION | MANAGEMENT

Prepared for
The Louisiana Department of Transportation and Development

DOTD

LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

DOTD FORM: 24-102

(Revised March 1, 2022)

PROPOSAL TO PROVIDE CONSULTANT SERVICES

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

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

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

1. Contract title as shown in the advertisement	IDIQ CONTRACTS FOR BRIDGE PRESERVATION STATEWIDE
2. Contract number(s) as shown in the advertisement	4400023921, 4400023922, 4400023923, 4400024185, 4400024186, 4400024187, 4400024188, 4400024189
3. State Project Number(s), if shown in the advertisement	
4. Prime consultant name (as registered with the Louisiana Secretary of State where such registration is required by law)	**Huval & Associates, 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)	Professional Engineering – EF.0001542 Land Surveying – VF.0000285 DUNNS - 84-067-2406
6. Prime consultant mailing address	**Huval & Associates, Inc.** 922 West Pont Des Mouton Rd Lafayette, LA 70507
7. Prime consultant physical address (existing or to be established, if location is used as an evaluation criteria)	922 West Pont Des Mouton Rd Lafayette, LA 70507
8. Name, title, phone number, and email address of prime consultant's contract point of contact	Colby Guidry, P.E., – Vice President, Project Manager (337) 234-3798 cguidry@huvalassoc.com

9. Name, title, phone number, and email address of the official with signing authority for this proposal	David S. Huval, Sr. P.E., –President (337) 234-3798 dshuval@huvalassoc.com	
10. This is to certify that all information contained herein is accurate and true, and that the team presently has sufficient staff to perform these services within the designated time frame. By submitting this proposal, proposer certifies that it is not engaged in a boycott of Israel and it will, for the duration of its contract obligations, refrain from a boycott of Israel. Proposer also certifies and agrees that the following information is correct: In preparing its response, the proposer has considered all proposals submitted from qualified, potential subcontractors and suppliers, and has not, in the solicitation, selection, or commercial treatment of any subcontractor or supplier, refused to transact or terminated business activities, or taken other actions intended to limit commercial relations, with a person or entity that is engaging in commercial transactions in Israel or Israeli-controlled territories, with the specific intent to accomplish a boycott or divestment of Israel. The proposer also has not retaliated against any person or other entity for reporting such refusal, termination, or commercially limiting actions. DOTD reserves the right to reject the response of the bidder or proposer if this certification is subsequently determined to be false, and to terminate any contract awarded based on such a false response.	Signature (shall be the same person as #9):  Date: 5/10/2022	
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): Civil Design & Construction, Inc. Vectura Consulting Services, LLC	Firm(s)' %: 5% 3%

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

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

Evaluation Discipline(s)	% of Overall Contract	Huval & Associates, Inc.	Gulf Engineers and Consultants, Inc.	Geo Engineers, Inc.	Civil Design & Construction, Inc.	Wiss, Janney, Elstner Associates, Inc	Bridge Diagnostics, Inc.	Moffatt & Nichol, Inc.	Vectura Consulting Services, Inc.	Bluewing Civil Consulting, LLC
Bridge	60.0%	65.0%	20.0%			5.0%	5.0%	5.0%		
Road	20.0%	60.0%	30.0%							10.0%
Traffic	5.0%	40.0%							60.0%	
Survey	5.0%				100.0%					
Environmental	5.0%		100.0%							
Geotech	5.0%			100.0%						
Identify the percentage of work for the **overall contract** to be performed by the prime consultant and each sub-consultant.										
Percent of Contract	100.0%	53.00%	23.00%	5.00%	5.00%	3.00%	3.00%	3.00%	3.00%	2.00%

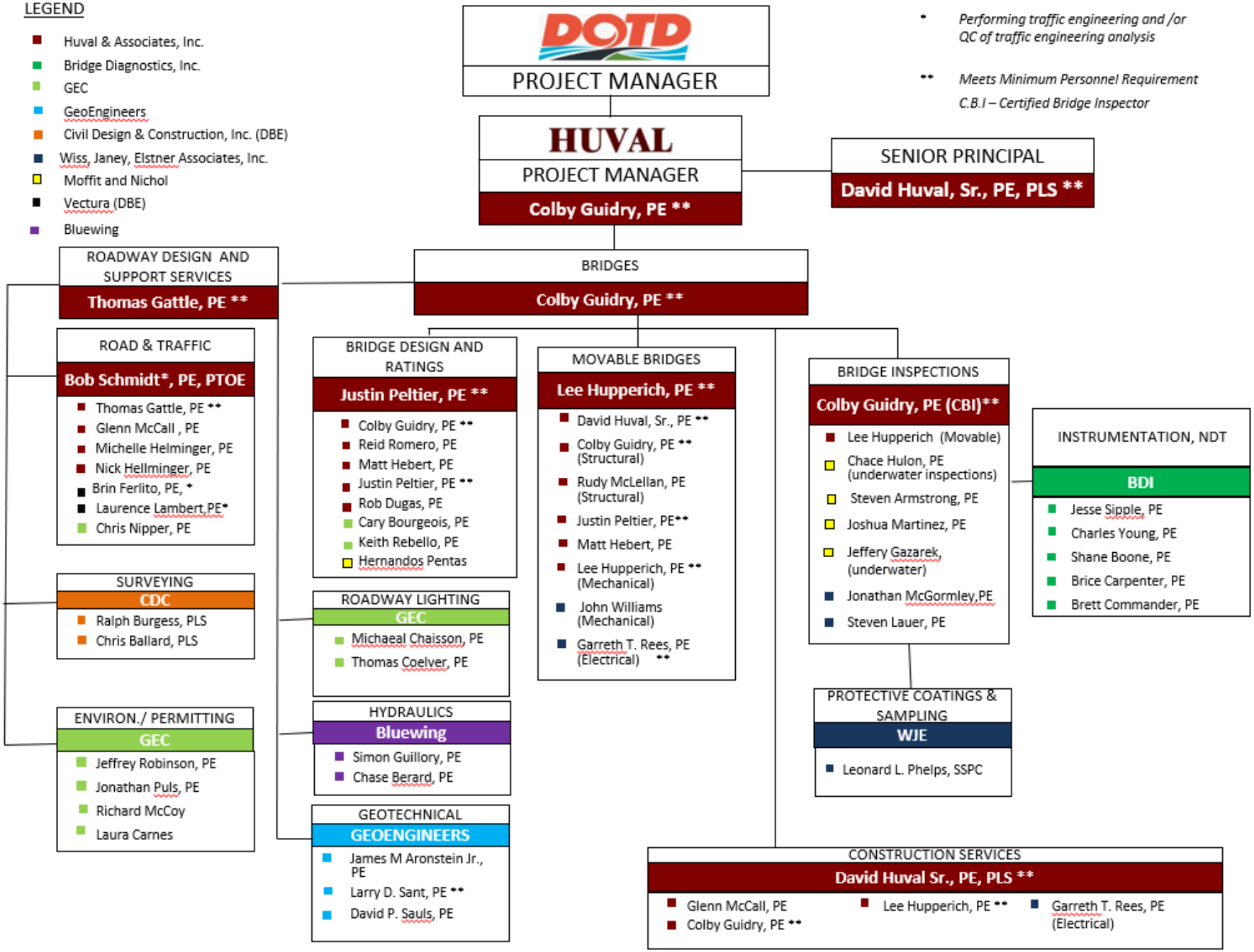
13. **Firm Size:**

Firm name	DOTD Job Classification	Number of personnel committed to this contract	Total number of personnel available in this DOTD Job Classification (if needed)
Huval & Associates, Inc.	Principal	1	1
Huval & Associates, Inc.	Supervisor Engineer	2	5
Huval & Associates, Inc.	Engineer	4	12
Huval & Associates, Inc.	Engineer Intern	3	6
Huval & Associates, Inc.	Technician	1	2
Huval & Associates, Inc.	CADD Technician	1	3
Huval & Associates, Inc.	CADD Drafter	2	4
Huval & Associates, Inc.	Inspector-Certified	1	6
G.E.C., Inc.	Engineer	5	12
G.E.C., Inc.	Environmental Manager	2	2
G.E.C., Inc.	Environmental Pro	1	1
G.E.C., Inc.	Principal	1	3
G.E.C., Inc.	Supervisor – Eng	3	3
G.E.C., Inc.	Technician	1	1
G.E.C., Inc.	Biologist / Wetlands	1	1
GeoEngineers, Inc.	Administrative	0	4
GeoEngineers, Inc.	CADD Technician	0	1
GeoEngineers, Inc.	Driller	2	3
GeoEngineers, Inc.	Engineer	2	9
GeoEngineers, Inc.	Engineer Intern	0	3
GeoEngineers, Inc.	Environmental Pro	0	2
GeoEngineers, Inc.	Principal	2	4
GeoEngineers, Inc.	Sr. Technician	1	1

Firm name	DOTD Job Classification	Number of personnel committed to this contract	Total number of personnel available in this DOTD Job Classification (if needed)
GeoEngineers, Inc.	Technician	1	11
Civil Design & Construction, Inc.	Surveyor	2	2
Civil Design & Construction, Inc.	Party Chief	2	4
Civil Design & Construction, Inc.	Instrument Man	2	2
Civil Design & Construction, Inc.	Rodman	2	3
Civil Design & Construction, Inc.	CADD Operator	1	1
Civil Design & Construction, Inc.	Senior Technician	3	5
Wiss, Janney, Elstner Associates, Inc.	CADD Technician	1	4
Wiss, Janney, Elstner Associates, Inc.	Clerical	2	7
Wiss, Janney, Elstner Associates, Inc.	Engineer	1	3
Wiss, Janney, Elstner Associates, Inc.	Engineer Intern	2	28
Wiss, Janney, Elstner Associates, Inc.	Engineering-Aide	0	1
Wiss, Janney, Elstner Associates, Inc.	Engineer - Other	2	28
Wiss, Janney, Elstner Associates, Inc.	Geologist	0	2
Wiss, Janney, Elstner Associates, Inc.	Principal	4	45
Wiss, Janney, Elstner Associates, Inc.	Professional	4	19
Wiss, Janney, Elstner Associates, Inc.	Senior Technician	1	58
Wiss, Janney, Elstner Associates, Inc.	Supervisor - Arch	0	1
Wiss, Janney, Elstner Associates, Inc.	Supervisor – Eng	1	13
Wiss, Janney, Elstner Associates, Inc.	Supervisor - Other	3	113
Wiss, Janney, Elstner Associates, Inc.	Technician	1	7
Bridge Diagnostics, Inc. (BDI)	Principal	3	3
Bridge Diagnostics, Inc. (BDI)	Supervisor – Engineer	6	6
Bridge Diagnostics, Inc. (BDI)	Supervisor – Other	14	14

Firm name	DOTD Job Classification	Number of personnel committed to this contract	Total number of personnel available in this DOTD Job Classification (if needed)
Bridge Diagnostics, Inc. (BDI)	Engineer – Other	4	4
Bridge Diagnostics, Inc. (BDI)	Engineer – Intern	7	7
Bridge Diagnostics, Inc. (BDI)	Senior Technician	13	13
Bridge Diagnostics, Inc. (BDI)	Technician	4	4
Bridge Diagnostics, Inc. (BDI)	Computer Analyst	1	1
Bridge Diagnostics, Inc. (BDI)	Accountant	2	2
Bridge Diagnostics, Inc. (BDI)	Clerical	3	3
Bridge Diagnostics, Inc. (BDI)	Professional	6	6
Moffatt & Nichol, Inc.	Accountant	1	10
Moffatt & Nichol, Inc.	CADD Technician	1	75
Moffatt & Nichol, Inc.	Engineer (LA PE)	4	25
Moffatt & Nichol, Inc.	Inspector – Bridge	12	50
Moffatt & Nichol, Inc.	Supervisor – Engineer	2	8
Moffatt & Nichol, Inc.	Technician	5	12
Vectura Consulting Services, LLC	Supervisor	2	2
Vectura Consulting Services, LLC	Engineer	3	5
Bluewing Civil Consulting, LLC	Engineer	3	4
Bluewing Civil Consulting, LLC	Engineering-Aide	2	4

14. **Organizational Chart**:



 Prime consultant name: **Huval & Associates, Inc.**

15. **Minimum Personnel Requirements:**

Use the table below to identify both prime consultant and sub-consultant staff designated to work on this contract meeting the Minimum Personnel Requirements (MPRs) specified in the advertisement. Ensure the résumé reflects the required experience stated in the MPR.

MPR No. Do not insert wording from ad	Personnel being used to meet the MPR (Individual(s) may not satisfy more than one MPR unless specifically allowed by Attachment B of the advertisement)	Firm employed by	Type of license / certification & number	State of license	License / certification expiration date
1	David Huval Sr., PE, PLS	Huval & Associates, Inc.	P.E. # 0009931	LA	03/31/2023
2	David Huval Sr., PE, PLS	Huval & Associates, Inc.	P.E. # 0009931	LA	03/31/2023
3	David Huval Sr., PE, PLS	Huval & Associates, Inc.	P.E. # 0009931	LA	03/31/2023
4	Justin Peltier, PE	Huval & Associates, Inc.	P.E. # 0034765	LA	09/30/2023
5	Lee Hupperich, PE	Huval & Associates, Inc.	P.E. # 0030451	LA	03/31/2023
6	Gareth T. Rees, PE	Wiss, Janney, Elstner Associates, Inc.	P.E. # 0040754	LA	9/30/2022
7	Colby Guidry. PE	Huval & Associates, Inc.	P.E. # 0031338	LA	09/30/2022
8	Thomas M. Gattle III, PE	Huval & Associates, Inc.	P.E. # 0030779	LA	09/30/2023
9	Larry D. Sant, PE	GeoEngineers, Inc.	P.E. # 0035625	LA	09/30/2022

16. **Staff Experience:**

Firm employed by **Huval & Associates, Inc.**					
Name	**David S. Huval, Sr., P.E., P.L.S.**			Years of experience with this firm/employer	32
Title	President			Years of experience with other firm(s)/employer(s)	29
Degree(s) / Years / Specialization			Post Graduate Work /Structural, 08/66-05/69 Bachelor of Science, 05/61 Civil Engineering / Structural		
Active registration number / state / expiration date			9931/LA/03/31/2023 2015/LA/03/31/2023		
Year registered	1965/1965	Discipline	Civil Engineering and Land Surveying		
Contract role(s) / brief description of responsibilities			**Senior Principal (MPR 1 thru 3)**		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
	David Huval, Sr. has designed, Inspected, Rated and Constructed Bridges across Louisiana and the Southeastern United States for the past 57 years. His experience includes Highway and Railroad Bridges, Roadways, Cofferdams and Caissons, and he is familiar with Federal and State Government Procedures and the geographic area. Mr. Huval leads construction bid estimates for his sister company C.E.C., Inc. He has designed and managed a number of large projects as a Consultant, General Manager for a Steel Erection Contractor, Bridge Design Engineer for Louisiana Department of Transportation and Development (LADOTD), and Highway Engineer for the Federal Highway Administration (FHWA). Since 1989, Mr. Huval has served as President of Huval & Associates, Inc., where he has worked as a Project Engineer, Project Manager, Quality Assurance Officer, and participates directly as a Design Engineer. Mr. Huval is also a Professional Land Surveyor. David Huval, Sr., was the Lead Engineer for seven (7) separate Bridge Rehabilitation Retainer Contracts that HUVAL has had with the LADOTD over the past eighteen (18) years. Inspection, Repair, Rehabilitation or Replacement Services were performed for several hundred fixed and movable bridge structures under these Retainer Contracts, including the I-10 Calcasieu River Bridge, the LA 70 Sunshine Bridge, I-310 Mississippi River Bridge, US 80 Louisville Street Bascule Bridge in Monroe, Jackson Street Bridge over the Red River in Alexandria, LA 511 Red River Bridge (Jimmie Davis Bridge), and dozens of bridge structures on the future I-49 North corridor.
(2018-2020)	**GNOEC Safety Bay Improvement CMAR (Independent Cost Estimator)** Assisted the Independent Cost Estimator (ICE) for the for the $55 million Safety Bay Improvement CMAR Project, the first highway CMAR project in Louisiana. Under this contract, Mr. Huval assisted in the efforts of producing a detailed independent cost estimate for the contract items and review the CMAR Contractor's schedule and cost model throughout each phase of design under the CMAR pre-construction phase. Additionally, constructability reviews and design comments were performed collaboratively with the CMAR design engineer, contractor, and Program Manager.
(2011 – 2015)	**Retainer Contract for Bridge Preventive Maintenance Program (BRPM) – Statewide, Contract No. 440001543 -** Principal and Lead Bridge Design Engineer for Retainer Contract. Responsible for Task Order conceptual design, oversight, construction support services and QA/QC. Retainer Contract currently consists of 7 Task Orders.

(2009 – 2015)	**Retainer Contract for Bridge Preservation Services – Statewide, S.P. 700-99-0488-** Principal and Lead Bridge Design Engineer for Retainer Contract. Responsible for Task Order conceptual design, oversight, construction support services and QA/QC. Retainer Contract currently consists of 19 Task Order with supplements.
(2008 – 2012)	**Retainer Contract for Urgent Bridge Repair and Rehabilitation Services – Statewide, S.P. 700-99-0449 -** Principal and Lead Bridge Design Engineer for Retainer Contract. Responsible for Task Order conceptual design, oversight, construction support and QA/QC.
(2007 – 2011)	**Retainer Contract for Bridge Preservation Services – Statewide, S.P. 700-99-0431 -** Principal and Lead Bridge Design Engineer for Retainer Contract. Responsible for Task Order conceptual design, oversight, construction support.
(2000-2009)	**District 02, 03 and 07 Inspection and Rehabilitation, S.P. 700-99-0232 -** Principal, Project Manager and Lead Design Engineer for Retainer Contract. Responsible for coordination, project setup, conceptual design, design details and calculations, traffic control, oversight, construction support and QA/QC.
(1994-1998)	**District 02 Major Bridge Inspection (Jefferson and Orleans Parish), S.P. 700-30-0205 (1994 – 1997) -** Inspected the bridges along other team members of Huval & Associates. Prepared final Inspection Report and wrote QA/QC Plan for the Project. Bridges include the US-11 Bridge on Lake Ponchartrain, I-10 Bridge on Lake Ponchartrain and LA-1 Bridge on Caminada Bay.
(2003 & 2015)	**Mississippi River Bridge (Natchez)** Provided the construction engineering for the repairs of the steel trusses on both the east and west bound trusses.
(1997 – 2005)	**I-310 Mississippi River Bridge (Luling) -** Design of Finger Joints replacing Modular Joints, Asphalt and Concrete Overlays and Design of Joint Replacements. Project also included Inspection of various items of the bridge.
(1991-Present)	**St. Martin Parish Bridge Inspection (1991 – Present) -** From 1991 to present, Mr. Huval has been involved in the Inspection and Rating of Bridges for the Parish of St. Martin. This work also included the design of Bridge Repair Projects, in particular the retrofit of Timber Piling on Precast Bridges. Bridges included one Pontoon Bridge, one Swing Span Bridge and numerous Timber and Precast Concrete Bridges.
(1979 – 1989)	**Lafayette Steel Erector, Inc.** During this period David S. Huval, Sr. provided construction engineering and project management on the erection of structural steel girder, truss spans, prestressed concrete girder spans, segmental post tension, concrete girder spans and moveable bridges, including swing spans, vertical lift bridges, and bascule spans.
(1965-1978)	**LADOTD – Bridge Design Engineer, 1965 - 1978** • **Bridge Design, (1965 – 1978) -** Participated in the development of numerous bridge standards on Prestressed Concrete Girders, Piles, Stay-in-Place Forms, Bridge Decks, Joints, Structural Steel Bridges, Movable Bridges, and Timber Bridges. Participated in the planning, design and construction of bridge structures throughout the State of Louisiana. • **Bridge Maintenance, (1965 – 1970) -** Coordinated with the Bridge Maintenance Engineer, C.J. Russell, on the development of Design and Details for bridge maintenance projects throughout the State of Louisiana.

Firm employed by	**Huval and Associates, Inc.**		
Name	**Colby J. Guidry, P.E.**	Years of experience with this firm/employer	15
Title	Vice President and Lead Engineer	Years of experience with other firm(s)/employer(s)	7

Degree(s) / Years / Specialization	08/95-05/00 Bachelor of Science, Civil Engineering
Active registration number / state / expiration date	31338/LA/09/30/2022
Year registered: 2004 — Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities	**HUVAL Project Manager / Lead Bridge Design (MPR 7)**

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
	Mr. Guidry came to Huval & Associates with 7 years' experience with the Federal Highway Administration (FHWA). His FHWA experience included all aspects of transportation related projects, where he was actively involved with environmental review, design, construction, and maintenance of bridges and roadways throughout Louisiana. Since joining HUVAL, he has been involved in bridge and structural design, plan preparation, bridge inspections, and construction support services. Completed the two-week FHWA approved comprehensive bridge training course for bridge inspectors, certified as a Bridge Inspection Team Leader, completed the NHI LRFR for Superstructures Course, the Work Zone Traffic Control Technician and Supervisor Courses, ATSSA Flagger Training, the NHI Design & Operation of Work Zone Traffic Control, Roadside Design Course, NHI Highway Hydraulics Course, NHI Urban Drainage Design Course, as well as many construction and environmental related courses. Very familiar with the LADOTD Bridge Design Manuals, 2002 AASHTO Bridge Specs, and the current AASHTO LRFD Bridge Specs
(1/19-Present)	**Herman Dupuis Swing Span Bridge (Movable) – St. Martin Parish** – Project Manager for the design and plan development of a new swing span bridge over alligator bayou which will replace the Butte LaRose Pontoon bridge. Design elements include all aspects of the bridge including environmental clearance, surveying, structural design, mechanical design, electrical design, hydraulic design, roadway design, and all other design elements.
(10/10-01/22)	**Butte LaRose Pontoon Repairs (Movable) – St. Martin Parish** – Lead Engineer for the design of numerous repairs to the movable pontoon bridge over alligator bayou. Repairs included deck repairs, stringer repairs, cap repairs, pontoon barge repairs, machinery repairs, pile repairs, abutment repairs.
(01/11-08/14)	**St. Ann Bridge Over Bayou Terrebonne (Movable) Swing Span – S.P. 700-55-0107** – Lead structural designer for a new Swing span bridge over bayou Terrebonne. Also assisted with Mechanical reviews throughout the design process. Colby was involved with every aspect of this movable bridge project from environmental clearance through construction. This swing span had unique issues to overcome due to the limited vertical space due to waterway and adjacent road obstructions.
(4/18 – Present)	**Retainer for Engineering Services for Bridge Preservation - Statewide, Contract No. 4400011225 -** Supervisor Engineer of Retainer Contract. Responsible for project management, coordination, project setup, QA/QC, and bridge rehab design for the $4M retainer.

(09/12 – 12/17)	**Retainer Contract for Bridge Repair and Rehabilitation Services - Statewide, Contract No. 4400002537-** Supervising Engineer of Retainer Contract. Responsible for coordination, inspections, project setup, QA/QC, bridge rehab design for the $6M retainer contract.
(05/11 – 08/15)	**Retainer for Engineering Services for Bridge Preventive Maintenance (BRPM) - Statewide, Contract No. 440001543-**Lead Engineer of Retainer Contract. Led the Inspection and Design for 8 different Task Orders covering Preventive Maintenance Repairs for over 100 Bridges statewide in short timeframes.
(08/09– 06/15)	**Retainer Contract for Bridge Repair and Rehabilitation Services - Statewide, S.P. 700-99-0488 -** Lead Engineer of Retainer Contract. Responsible for coordination, inspection team leader, project setup, bridge design, and QA/QC of Task Orders totaling approximately $8.75M over a 5-year period. Contract utilized multiple Subconsultants on all aspects of bridge design and inspection.
(03/09 – 11/12)	**I-49 Bridges (Various Segments), Under Retainer No. 4400000670** – Lead Engineer for LRFR load ratings for 18 bridges, design and final plans of over 10 bridge structures and 1 box culvert structure. Bridge types included steel girder, prestressed concrete, and slab spans. Managed several sub-consultants producing numerous bridge plans.
(01/13-11/15)	**Tappan Zee Bridge, NY Thruway Authority–** Project Manager/design engineer for design of precast tower and anchor pier slabs, pile templates, work platforms, and other systems. Also assisted in the design of temporary fender systems designed to protect the construction area from ice, wave, and ship impacts.
(04/15-Present)	**Cedar Lake Swing Span – (Movable) Biloxi, MS-** Developed plans and specifications for the rehabilitation of the swing span machinery. This work included: Details for the replacement of the, primary gearbox, motor brake, and balance wheels with new. Specifications for the cleaning and inspection of the pivot bearing assembly.
(1/16-12/17)	**Inner Harbor – Navigation Canal Seabrook Bridge Structural Repairs (Movable) Bascule Span – Port of New Orleans** – Lead structural engineer for the means and methods of repair for this structure. Many structural members were required to be replaced while train loads passed on the structure without compromise of the structure. Numerous bypass structural members and complex engineering analysis was required to complete the construction of the project. The contractor hired HUVAL to provide these calculations and construction details and scheme.
(5/16-10/18)	**LA 58 Petit Caillou Rehab (Movable) Lift Bridge --** Lead Design Engineer for the repair and rehabilitation of this vertical lift structure. Various structural, mechanical and electrical repairs were performed for this project. Significant improvement to vertical clearance on the structure for the portal bracing was provided by structural design modifications to the bridge. Structural repairs included removal and replacement of main span deck and girders, portal bracing modifications, machinery platform deck and support repair and modifications, fender system replacement, along with various other repairs.
(05/11-08/16)	**Red River – Jackson St. Bridge, Route US 165 B (Movable) Lift Bridge** – Design engineer for the rehabilitation of the vertical lift bridge. Repairs included abutment repair, approach slab repair, added sidewalks to ADA guidelines, Deck replacement, Operator house repairs, machinery platform and support repairs along with other miscellaneous repair work. Mr. Guidry also performed multiple hands on inspections of the bridge throughout the design process.

Firm employed by **Huval & Associates, Inc.**					
Name	**William Lee Hupperich, PE, M ASCE**			Years of experience with this firm/employer	12
Title	Senior Mechanical Engineer			Years of experience with other firm(s)/employer(s)	13
Degree(s) / Years / Specialization				Louisiana State University /1996/ Bachelor of Science, Mechanical Engineering	
Active registration number / state / expiration date				30451/LA/03-31-23; 37653/CA/09-30-22; 27091/MS/12-31-22; 38683/AL/12-31-22	
Year registered	2003/ 2015/ 2016/ 2019	Discipline		Mechanical Engineering	
Contract role(s) / brief description of responsibilities				**Movable Bridge Mechanical Lead (MPR 5)**	
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "inspected, rated and designed movable bridges and approach spans, including embankments, abutments, bents, main piers, pivot piers, counterweight towers, pier protection, operator's houses and foundations", etc.				

Holds over 24 years of experience in movable bridge mechanical systems, including machinery, plumbing, heating, ventilation, and air conditioning (HVAC) and wastewater systems. As the Movable Bridge Design Expert at LADOTD, designed, developed, and planned production of more than 15 statewide movable bridge projects. Now as Senior Mechanical Engineer at Huval & Associates, continues to engineer complex movable bridge machinery and operator house mechanical systems in Louisiana and Mississippi, expanding expertise in the field. Maintains his engineering license through ongoing professional development including life safety code, building codes, and ADA guidelines. Holds membership in Heavy Movable Structures, Inc., Louisiana Engineering Society, and American Society of Civil Engineers.

11/19 - Present	**Larose Lock Structure, Larose, GLPC –** Designing and detailing final plans, specifications, and cost estimates for the following: Lock machinery consisting of the winch, reducer, idler, and deflector sheave assemblies; HVAC systems and exhaust fans for facility. Currently the project is at the 95% final plan delivery stage.
01/19 - 5/21	**New Swing Span- Herman Dupuis RD. Pontoon BR. Replacement, St. Martin, LA, Bridge Recall 200896 –**Designed, detailed, and sealed final plans, specifications, calculations, and cost estimates for the mechanical and electrical systems including: HPU, piping, Hydraulic motor, gearbox, rack, pinion, pivot bearing, balance wheels, track, live load rockers, end wedges, span balance, movable traffic barriers, and the electrical power and control systems.
10/19 - Present	**New Vertical Lift- GLPC, Airport Connector Road and Bridge, Lafourche, LA, S.P. H.011915 -**Designed, detailed, and sealed final plans, specifications, Calculations, and cost estimates for: tower drive machinery, span locks, counterweight ropes, skew control, leveling clutch, air buffers, movable traffic barriers, span shoes, counterweights and ropes, guide rollers, access systems and handrailing. Currently providing construction related engineering services including shop drawing review, RFI's, shop visits, site visits, and project management.
03/20 - Present	**Double Leaf Bascule Rehabilitation- SR 609 Bridge over Old Fort Bayou, Jackson, MS, BR-9385-00 (017) –** Designed and sealed the temporary hydraulic system including: operating cylinders, HPU schematic, piping, and control interface. Produced a calculation package for span resistance, cylinder loads, horsepower requirements, hydraulic schematic, and the selection of manufactured components for approval prior to manufacturing. Worked together with a hydraulic systems fabricator to build, test, ship, and install the complete system on the bridge. The hydraulic machinery is currently performing successfully while the bridge rehabilitation work is underway.
09/17 – 02/19	**Single Leaf Bascule Rehabilitation – Theriot Bridge, Terrebonne, LA, Parish Project 17-BRG-49 -** Designed, detailed, and sealed final plans, specifications, calculations, and cost estimates for mechanical system including: trunnion shaft and bearing assembly, winch and cable operating system, span balance calculations.
03/17 - Present	**Vertical Lift Rehabilitation- LA 336-1: Bayou Teche Bridge Rehab (HBI); St. Martin, S.P. H.011485 –** Performed site inspections and prepared reports containing recommended repair options and costs for DOTD. Designed, detailed, and sealed final rehabilitation plans, specifications, and calculations of the tower drive machinery, pier machinery and the movable traffic barrier. Currently performing construction related engineering services including shop drawing review, RFI's, shop visits, site visits, and project management.

06/13 - 04/19	**Vertical Lift Rehabilitation- LA 58: Bayou Petit Caillou (HBI), Terrebonne, LA, S.P. H.010006 –** Performed site inspections and prepared reports of recommended repair options and costs for DOTD. Designed, detailed, and sealed final plans covering new trunnion bearings, pinions, pinion bearings, primary and secondary gear reducers, brakes, drive shafting, counterweight ropes, span locks, air buffers, and guide rollers. Developed and sealed plans and specifications for the new operator's house covering HVAC, plumbing, exhaust fans, and STP.
01/13 - 03/17	**New Rolling Lift Bascule-Almonaster Avenue Bridge, New Orleans, LA, S.P. H.007250-** Developed and Delivered preliminary plans for the mechanical and architectural elements. Delivered 60% final plans, specifications, and cost estimate for the movable bridge machinery, operator's house, and machinery houses. Mechanical Design Elements: Curved tread and flat track plates, Span operating machinery, Span Locks, and Storm Locks. Operator's House Design elements: HVAC design and selection, plumbing riser, STP, fixtures, vent, and exhaust fans.
05/16 - 07/17	**Double Leaf Bascule Rehabilitation- Popp's Ferry Bridge, Biloxi, MS -** Performed a complete inspection of the bridge machinery and produced and stamped comprehensive report outlining mechanical deficiencies with estimated repair costs. Developed the plans and specifications for replacing the existing hydraulically operated center locks with a new electro-mechanical operated center lock system.
12/16 - Present	**Member of NCHRP 12-112 Panel -** Panel member for the development of the new AASHTO LRFD MHBDS. This new spec will incorporate reliability methodology into the movable bridge design process. Responsibilities include assist in the development of the research objective, selection of the consultant most qualified to perform the work, review, and comment on the specification throughout its development.
03/15 - 05/16	**Swing Span Rehabilitation- Cedar Lake Bridge, Biloxi, MS P.N. 979 –** Performed Site inspections and prepared a report containing recommended repair options and costs. Designed, detailed, and sealed final plans, specifications, and cost estimate for the swing span operating machinery, end wedge machinery, pivot bearing assembly, and relevant electrical components.
06/13 - 09/15	**Swing Span Rehabilitation- LA 671: Jeanerette Bridge Wedge System Repair, Iberia, LA, S.P. H.009467 -** Designed, detailed, and sealed final plans, specifications, and cost estimates for repairs to the end wedge system, refurbishment of the pivot bearing, adjustments to the span operating machinery. Performed construction related engineering services: submittal and shop drawing review, RFIs, and field inspections.
10/11 - 03/14	**Vertical Lift Bridge Rehabilitation- US 165-B: Red River - Jackson Street Bridge, Alexandra, LA, S.P. H.000579 -** Designed, developed, and sealed final rehabilitation plans, specifications, and cost estimates for the tower drive machinery, span locks, air buffers, span operation adjustments and balancing, operator's house floor plan, reflected ceiling plan, HVAC, plumbing, STP, lift station, water line, booster pump and holding tank. Performed construction related services including submittal and shop drawing review, RFIs, and conducting field inspections.
10/10 - 10/14	**LADOTD Bridge Design Manual, S.P. 700-99-0482 -** Development of the new edition of the LADOTD Bridge Design Manual for compatibility with the AASHTO LRFD Movable Bridge Design Specifications, primarily focusing on authoring Chapter 5, Mechanical Design Loads and Chapter 7, Mechanical Design but also assisted in the structural and electrical design chapters as well.
10/10 - 01/14	**New Swing Span- St. Ann Bridge over Bayou Terrebonne - Terrebonne Parish, LA, S.P. 700-55-0107 -** Performed construction related engineering services, including reviewing equipment submittals, shop drawings, RFIs, and conducting field inspections.
05/97 - 05/10	**Additional New Vertical Lift Bridge Experience: - Bayou Terrebonne, Prospect Street, Houma, S.P. 065-91-0016; Bayou Lafourche, Larose, S.P. 064-05-0085; Bayou Teche, Lewis Street, New Iberia, S.P. 823-46-0001; Bayou Lafourche, Champagne-Harrelson, Matthews, S.P. 064-06-0036; Bayou Terrebonne, Daigleville, Houma, S.P. 246-01-0046; -** Lead Mechanical Design Engineer. Designed, detailed, and sealed plans, specifications and cost estimates including tower drive machinery, span lock, buffer, hoist, bearing selections, brake selection, movable traffic barrier design. Performed the construction related engineering services, including reviewing equipment submittals, shop drawings, responding to RFIs, and conducting field inspections.

Firm employed by **Huval & Associates, Inc.**			
Name	**Rudolph (Rudy) Mclellan, P.E.**	Years of experience with this firm/employer	3
Title	Senior Design Engineer	Years of experience with other firm(s)/employer(s)	41
Degree(s) / Years / Specialization	B.S., Civil Engineering with Honors, University of Florida, 1976 Master of Engineering in Structures, University of Florida, 1977 Post Graduate Studies in Structures, Louisiana State University, 1997		
Active registration number / state / expiration date	19994/LA/03/31/2024 31148/FL/02/28/2023		
Year registered	1981 and 1982	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities	**Bridge Design**		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
Mr. McLellan has over 40 years of experience in every facet of **Bridge Design** and structural design in over 14 states including Louisiana, Texas, Mississippi, Alabama & Florida. He is experienced in complex **Bridge Design**, movable bridges and rating and has been responsible for studies, preliminary and final design, preparation of plans and specifications, cost estimate for highway and railroad fixed and movable bridge projects, flood control structure and special or complex structures, including field inspections and investigative studies. Mr. McLellan has been the chief structural engineer for the **Bridge Design** of four movable bridge projects, including the Award Winning Double Leaf Fixed Trunnion Bascule Bridge in Louisa, Louisiana.	
(09/18-Present)	**Belle Chasse Bridge & Tunnel Replacement Public-Private Partnership Project, Plaquemines Parish, Louisiana, Project No. H.004791 –** The bridge includes the fixed high level continuous steel plate girders having spans of 160' – 175' – 160' over the Intercoastal Waterway (ICWW). The project included a vessel collision design for the waterway main piers. Mr. McLellan performed final **Bridge Design** calculations for the ICWW Main Piers and provided QA/QC for all bridge designs**.** The bridge construction will include Phase construction to maintain existing traffic through the corridor. 
(05/19-Present)	**I-220/I-20 Interchange IMP & BAFB Access Design-Build Project, Louisiana, S.P. H.003370 –** Mr. McLellan served as Design Quality Manager on this Design-Build project which will provide direct access to Barksdale Air Force Base from the I-220/I-20 Interchange. Mr. McLellan performed the Quality Assurance for the project including the Independent Check requiring **Bridge Design** calculations of the I-220 / I20 Overpass bridges and Bridges over the KCS Railroad on the project.
(04/96-7/99)	**S.P. 239-01-0077 LA Highway 319 Intracoastal Waterway Bridge Louisa, St. Mary Parish, Louisiana -** Mr. McLellan performed preliminary and final **Bridge Design** calculations for all superstructure and substructure members of the constructed 276 foot double leaf fixed trunnion bascule movable bridge. The Louisa Bridge is the state's longest steel girder double leaf bascule bridge, is one of the longest span of its type constructed in the nation and is the recipient of the National Steel Bridge Alliance's 2007 Prize Bridge Award Winner in the movable span category. 

(04/09-01/14)	**S.P. 840-43-0001 US 71 & US 165 Fort Buhlow Bridge & Approaches Over The Red River, Rapides Parish, Louisiana.** Structural Engineer - Mr. McLellan performed final **Bridge Design** calculations for all superstructure and substructure members of the constructed twin fixed high level three span continuous steel plate girders having spans 300' - 400' - 300' and some of the prestressed concrete bulb tee girder approach structures supported by river piers with pile and drilled shaft footings constructed in cofferdams. The Main River Piers are subject to marine vessel (Barge) collision.
(01/87-Present)	**Old Mississippi River Railroad Bridge and Tunnel (Old U.S. 80), Vicksburg, Mississippi and Delta, Louisiana** - Mr. McLellan performed bridge safety and repair inspection, bridge load rating and structure maintenance and repair plans repairs for the existing combination highway and railway through truss, the approach deck girder bridge and the concrete tunnel structure. He performed the bridge repair designs, plans, constructability reviews and cost estimates for structural steel removal and replacement, girder strengthening, truss span vertical jacking, pier concrete removal and replacement. 
(04/83-07/86)	**BH-015-1(81) & (87) Mississippi River Bridge Parallel Crossing between Natchez, MS and Vidalia, LA and the Railroad Bridge Overpass in Natchez, MS.** Project Engineer in charge of **Bridge Design** for the twin, five span, multiple cantilever through truss bridge with spans to 875' over the Mississippi River. The project included concrete and steel highway structures & a steel railroad bridge. Mr. McLellan performed the final **Bridge Design** & rating calc's for all superstructure & substructure members of the constructed railroad bridge with steel girder spans over the highways.
(09/95-7/01)	**Project No. BRDP-9205-00(003) Mississippi River Bridge US 82 Greenville, Mississippi** – Mr. McLellan performed the **Bridge Design**, quality review of plans, constructability, cost estimates and final calculations for the post-tensioned concrete segmental alternate and steel composite alternate of the 1,378 foot cable stayed main navigational span. He performed the **Bridge Design** calculations for most of the constructed steel composite main span, river piers supported on dredge caisson type foundations and the anchor spans supported on piers with drilled shaft footings.
((03/85 - 01/94))	**I-49 / LA 3132 and I-49 / I-20 Interchanges, Shreveport, Louisiana, S.P. 455-08-23 & 455-08-20 -** Mr. McLellan was the lead **Bridge Design** engineer, performed the quality review of plans, constructability, cost estimates & final **Bridge Design** calculations for most of the constructed members consisting of curved continuous steel trapezoidal box girders with spans to 250', steel box framed in cap beams, the post-tensioned concrete delta shaped central (tree) pier and architecturally flared piers of both the constructed four-level bridge interchanges. He performed final **Bridge Design** calc's for most of the constructed superstructure and substructure members of the PPC concrete trapezoidal box girder (U-Girders) approach structures. 
(04/89 - 08/90)	**I-4 Turkey Lake Road Interchange, Broward County, Florida** - Mr. McLellan performed the final **Bridge Design** calculations for all superstructure and substructure members for the **AISC Award Winning** curved continuous steel box girder bridge supported by architecturally flared concrete piers having mustang rope indentations. Steel frame-in cap beams were used in the I-4 median to allow for future widening of I-4. 

Firm employed by **Huval & Associates, Inc.**				
Name	**Justin Peltier, P.E.**		Years of experience with this firm/employer	9
Title	Civil Engineer		Years of experience with other firm(s)/employer(s)	8
Degree(s) / Years / Specialization			08/01-05/05 Bachelor of Science Civil Engineering	
Active registration number / state / expiration date			34765/LA/09/30/2023	
Year registered	2009	Discipline	Civil Engineering	
Contract role(s) / brief description of responsibilities			**Bridge Design & Ratings (MPR 4)**	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc.
	Mr. Peltier joined Huval & Associates in 2013 with 8 years of experience in civil engineering. Previously employed with LADOTD, he was involved with the design, live load rating, plan development, and construction support of more than 20 bridge replacement projects. These consisted of various superstructure and substructure types including but not limited to: AASHTO p.p.c. girders, quadbeams, cast-in-place slab spans, precast slab spans, steel girders, steel swing spans, concrete box culverts, p.p.c. pile bents, steel H-pile and pipe pile bents, timber pile bents and column bents supported by drilled shafts and/or p.p.c. pile footings. Mr. Peltier assisted in developing and maintaining LADOTD's highway safety hardware details and specifications, including but not limited to guard rail, barrier rail, and crash cushion attenuators. He served as the Engineer of Record for the LADOTD concrete barrier rail and the detour bridge special details. Mr. Peltier's training includes the NHI LRFR for Highway Bridge Superstructure Course, the NHI AASHTO LRFD for Highway Bridge Superstructure Course, the NHI AASHTO LRFD for Highway Bridge Substructure Course, the Roadside Design Course, ATSSA Traffic Control Technician and Supervisor Course.
(09/20-Present)	**I-10: LA 415 To Essen Lane on I-10 and I-12 CMAR – S.P. H.004100 –** Serving as the lead bridge engineer and overall structures team lead for this $1 billion project to widen I-10 in the heavily congested section through Baton Rouge. This very complex project will replace existing bridges in the urban area within an extremely constrained right of way while maintaining the existing traffic flow on I-10 through the construction zone. Roles include bridge design, plan development, **load rating**, structure rehabilitation, alternative bridge concepts development, construction sequencing, contractor style cost estimates, managing the bridge and structural design and plan production process, leading bi-weekly structures task force meetings, and implementing the bridge design QC/QA process.
(09/19-06/20)	**Airport Connector Road and Bridge, Lafourche Parish, S.P. No. H.011915.** Served as the lead bridge design and **load rating** engineer for a new lift span movable bridge over Bayou Lafourche in Galliano, LA. The bridge required a minimum horizontal and vertical clearance of 70ft and 73ft and a clear roadway width of 42ft with 5ft sidewalks on each side. The project presented unique challenges in that the horizontal clearance is skewed with respect to the bridge alignment and the mean high-water level is approximately 1ft below the existing ground at LA 1 and LA 308. The design included steel lifting girders, steel floor beams and stringers, concrete towers, footings, piers and machinery decks. The design was performed in accordance with the AASHTO LRFD Movable Bridge Design Specifications the LADOTD BDEM. Also responsible for the design of the concrete approach slab spans.

(06/14-04/19)	**US 90 (I-49South), Albertson's Parkway to Ambassador Caffery, Design-Build Project, Lafayette Parish, S.P. No. H.010620.** Served as the lead bridge and **load rating** engineer for the new US 90 bridge over Albertson Parkway and provided Q.C. for the US 90 BNSF RR overpass bridge within the same footprint as the existing bridge while maintaining 4-lanes of US 90 traffic during construction. This presented unique design challenges and required a complex, three-phase, traffic control and construction sequencing plan to move traffic safely through the tight work zone. The bridges consisted of multi-continuous p.p.c. girders spans supported by concrete column bents and pile footings. The developed design concept saved millions of dollars and allowed the James Team to be 15% below the construction estimate of the nearest competitor.
(07/17-08/20)	**I-10: Highland Road to LA 73, Design Build Project, East Baton Rouge & Ascension Parish, S.P. No. H.009250**. Served as the lead bridge and **load rating** engineer for the widening of the I-10 E.B. and W.B. slab span bridges over Manchac Bayou and provided Q.C. for the replacement of the I-10 E.B. and W.B. bridges over Highland Road with a new steel plate girder bridge with p.p.c girder approach spans. The existing I-10 mainline bridge at the Highland Road interchange needed to be reconstructed under the project to provide longer spans in addition to more lanes. An innovative sequence of construction scheme and bridge design enabled construction of this bridge while maintaining 74,000 ADT traffic. Huval's cost-effective designs enabled its design-build team to be the only competitor to fit within the Owner's budget of $72 million.
(03/19-Present)	**I-220/I-20 Interchange IMP & Barksdale Access Design-Build Project, Bossier Parish, LA DOTD S.P. No. H.003370.** Currently the bridge design manager and lead bridge design and **load rating** engineer for the I-220 bridges over I-20 and Barksdale Access Road bridges over the KCS Railroad and also responsible for implementing the QC/QA plan for the bridge design and plan development process. The I-220 structures over I-20 consist of twin bridges utilizing LG-54 p.p.c. girder spans supported by concrete column bents and drilled shafts. The Barksdale Access Road structures consist of twin bridges utilizing LG-54 p.p.c. girder approach spans supported by concrete pile bents and a main span over the KCS Railroad consisting of 170'-0", LG-78 p.p.c. girders supported by concrete column bents and drilled shafts. Some unique challenges that the project has presented is designing applicable I-220 bridge column bents for vehicular collision and completely spanning the KCS own right-of-way utilizing concrete p.p.c. girders.
(04/18 -Present)	**I-49 South at Verot School Road, Lafayette, LA, S.P. H.011235, 2016-Present.** Serving as the lead bridge engineer to provide preliminary and final engineering and related services to construct 2.4 miles of mainline freeway and an interchange at the intersection of I-49 South/US 90 and Verot School Road. The project consists of an above grade bridge structure on Verot School Road that traverses over the I-49 South/US 90 mainline roadway over and parallel to the BNSF RR. The project also includes one-way frontage roads on both sides of the mainline roadway, a two-way collector service road east of the mainline roadway, and a new alignment of Verot School Road from the interchange to an existing bridge structure approximately 600' west of its intersection with LA 182 (Pinhook Road).
(10/16-12/17)	**LA 443: Tangipahoa River Bridge Replacement, S.P. H.012728 -** Lead engineer in the LRFD design, LRFR **load rating**, and plan preparation of a LG-25 and LG-36 p.p.c. girder bridge. This was an emergency replacement, due to the flood of 2016, and 100% final plans were completed in 8 weeks.

Firm employed by **Huval & Associates, Inc.**				
Name	**Thomas M Gattle III, P.E.**		Years of experience with this firm/employer	20
Title	Director of Engineering		Years of experience with other firm(s)/employer(s)	4
Degree(s) / Years / Specialization			08/91-12/97 Bachelor of Science Civil Engineering, Structural	
Active registration number / state / expiration date			30779/LA/09/30/2023	
Year registered	2003	Discipline	Civil Engineering	
Contract role(s) / brief description of responsibilities			**Roadway Design Lead (MPR 8)**	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
	Mr. Gattle has over 20 years' experience in the design and management of roadway and bridge projects. Mr. Gattle has been instrumental in the design, production and overall management of projects for the LADOTD. These projects include performing Lead Design and Project Management of numerous Bridge Rehabilitation Retainer Contracts, LADOTD Bridge Inspection projects, and LADOTD Roadway Design Project. In addition, Mr. Gattle was the Lead Designer for numerous road and bridge design projects for the Lafayette Consolidated Government Projects. Prior to joining HUVAL, Mr. Gattle was in responsible charge of the I-49 Connector EIS and I-10 Calcasieu River Bridge Environmental Assessment. He has experience and in roadway design, drainage design, feasibility studies, bridge design, and bridge inspection.
(10/19-06/21)	**Comite River Diversion Bridges at LA 67, LA 19 and LA 19 Railroad Bridge CMAR Project, East Baton Rouge Parish – 4400017421 –**Project Manager and Design Lead for providing geometric layout, construction sequencing and cost estimation for the first CMAR project conducted by the DOTD. The project consisted of constructing 360' roadway bridges for LA 67, LA 19 and the adjacent railroad track to LA 19 over the proposed layout of the Comite Diversion Canal. This $39 million project required continued coordination with the DOTD, CMAR Contractor, ICE, USACE, Geaux-Geaux Railroad and EBR Parish and was completed on-time and in advance of the on-going diversion canal construction in the area.
(11/18-05/19)	**I-10 Loyola Design-Build Project RFP Phase 30% Design - S.P. H.011670 –** Assisted the Design Manager in the coordination and organization of all project data with the various members of the design team from numerous consulting firms. Assisted in development of alternative technical concepts, suggested sequence of construction, and miscellaneous bridge and other details.
(03/19-Present)	**I-220/I-20 Interchange IMP & Barksdale Access Design-Build Project, Bossier Parish, S.P. No. H.003370.** Currently the Design Manager and Lead Design for the Design-Build project. The Design-Build project consisted of modifying the existing I-220/I-20 Interchange to accommodate direct access to the Barksdale Airforce Base. Project includes new roadway design for new directional ramps and I-220 extension, bridges over I-20 and KCS Railroad, temporary traffic control, sequence of construction and drainage design. Mr. Gattle produced the geometric layout of the project and lead the design and coordination for the $72M Design-Build project. The design phase of the project is 100% complete with the overall project scheduled to be completed on time.

(3/18-12/18)	**GNOEC Safety Bay Improvement CMAR (Independent Cost Estimator)** Assisted the Independent Cost Estimator (ICE) for the for the $55 million Safety Bay Improvement CMAR Project. Under this contract, Mr. Gattle assisted in the efforts of producing a detailed independent cost estimate for the contract items and review the CMAR Contractor's schedule and cost model throughout each phase of design under the CMAR pre-construction phase. Additionally, constructability reviews and design comments were performed collaboratively with the CMAR design engineer, contractor, and Program Manager.
(1/18-Present)	**I-10 Widening LA 415 to Essen Lane on I-10 and I-12, WBR and EBR Parishes, S.P. No. H.004100.** Currently the Design Lead for the anticipated $1.2 billion project to widen I-10 from the LA 415 interchange to the I-10/I-12 Interchange. This project consists of all aspects of infrastructure including complex bridge design and roadway design. Prior to the award for engineering services for the project, Mr. Gattle led the Constructability Analysis during the NEPA phase of the project. This included development of construction sequencing while maintaining traffic thru the corridor along with providing construction cost estimates and project timeframes. Mr. Gattle presently leads the bridge and roadway engineering efforts for the current phase of the project that includes the replacement of road and bridges from the I-10/I-110 interchange past the I-10/Acadian Thruway. This includes coordination with the DOTD, CMAR Contractor and ICE to develop the best construction value for the complex project thru Baton Rouge.
(09/12 – 12/17)	**Retainer Contract for Bridge Repair and Rehabilitation Services - Statewide, Contract No. 4400002537-** Project Manager of Retainer Contract. Responsible for coordination, project setup, QA/QC, meetings and contracts for the $6M retainer contract.
(06/14– 04/19)	**I-49 South-US 90 Albertson Pkwy to Ambassador Design Build - S.P. H.010620 -** HUVAL Project Manager. Lead Designer on roadway geometric layout and assisted with bridge design and construction services for this Design Build.
(06/16-Present)	**I-49 South-Verot School Road Interchange, S.P. H.011235 -** HUVAL Project Manager and Prime Consultant Team Leader of roadway geometric design including traffic analysis while assisting with bridge design and construction services.
(04/11 – 05/16)	**West Bank Expressway MacArthur Drive Interchange, S.P. H.002550.5 & H.009933.5 -** As Project Manager and Lead Engineer, Mr. Gattle was responsible for Geometric/Span Layout Modifications and Structure Design. Mr. Gattle coordinated the survey efforts and the responsibilities of multiple Sub-consultants for the $34M reconstruction project to provide additional ramps from the US 90B elevated roadway to the adjacent parallel frontage roads under tight timeframes.
(08/09 – 06/15)	**Retainer Contract for Bridge Repair and Rehabilitation Services - Statewide, S.P. 700-99-0488 -** Project Manager of Retainer Contract. Responsible for coordination, supervising inspection team, project setup and QA/QC of Task Orders totaling approximately $8.75M over a 5-year period. Contract utilized multiple Subconsultants on all aspects of bridge design and inspection.
(06/07 – 11/11)	**Retainer Contract for Bridge Preservation (On-System) – Statewide, S.P. 700-99-0431 -** Project Manager of Retainer Contract. Responsible for coordination, project setup, design and QA/QC of Task Orders.

Firm employed by **Huval & Associates, Inc.**					
Name	**Robert Schmidt, P.E., PTOE**			Years of experience with this firm/employer	3
Title	Engineering Manager			Years of experience with other firm(s)/employer(s)	34
Degree(s) / Years / Specialization			B.S., Civil Engineering – LSU, 1982		
Active registration number / state / expiration date			22837/LA/09/30/2023		
Year registered	1987	Discipline	Civil Engineering		
Contract role(s) / brief description of responsibilities			**Roadway & Traffic Design**		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
	Mr. Schmidt is a Senior Manager at Huval and Associates. Prior to this he was Practice Leader for international engineering firms in the Louisiana and the Gulf Coast Area. He has 37 years of broad transportation experience in New Orleans, Baton Rouge and across the nation, with a focus on the most challenging projects in the industry. Mr. Schmidt has led all aspects of transportation including program management/administration, planning, traffic engineering, design, construction, and operations. He has led numerous alternative delivery projects such as Design-Build and Construction Manager at Risk (CMAR). He has devoted his career to providing credible, quality, innovative solutions to Louisiana's transportation system and other systems across the country.
(11/18-5/19)	**I-10 Loyola Design-Build Project RFP Phase 30% Design - S.P. H.011670 –** Design Manager for the preparation of steel tub girder design and details, concrete box girder design and plans, as well as plans and proposal documents for the RFP phase of the project. Created dozens of computer models in order to analyze and size the steel tub girders, taking into account system redundancy. Assisted in development of alternative technical concepts, suggested sequence of construction, and miscellaneous bridge and other details. Assisted in the coordination and organization of all project data with the various members of the design team from numerous consulting firms.
(1/18-Present)	**Louisiana DOTD, New Belle Chasse Bridge P3 Project - S.P. H.004791** – Mr. Schmidt is the Design Manager for the new $150 million Belle Chasse bridge and urban roadway approaches, including a new access management interchange between LA 23 and Engineers Road. In this role he is responsible for all design work performed on the project including road, bridge, geotechnical, traffic engineering, and other disciplines. The project is currently 50% through the design phase.
(1/20-Present)	**Louisiana DOTD, Comite Diversion Canal Highway and Railroad Bridges CMAR, Caddo Parish, Louisiana - S.P. H. 001352.5 and H. 002273.5** – Mr. Schmidt is serving as the CMAR liaison for the CMAR Preconstruction Phase of this $50 million project to build new highway bridges on LA 19 and LA 67 over the new Comite River Diversion Canal. The project also includes design of a new railroad bridge over the new canal parallel to LA 19. Detour roadways, railroad shooflys, utility coordination are also a part of the project.
(1/18-6/19)	**Louisiana DOTD, I-10 Widening LA 415 to Essen Lane on I-10 and I-12, WBR and EBR Parishes, Louisiana (Management and Advisory Services) - S. P. H.004100.2 --** Mr. Schmidt was Huval Project Manager and Principal in responsible charge of program management and strategic advice to the DOTD on its $1.1 billion project to widen I-10 in the heavily congested section through Baton Rouge. This very complex project will replace existing bridges in the urban area within an extremely constrained right

	of way while maintaining the existing 3 lanes of traffic flow on I-10 through the construction zone. Roles include alternative concepts development, construction sequencing, maintenance of traffic plans, contractor style cost estimates, developing individual project breakout segments, overall program scheduling, risk matrix and assessment, utility conflicts matrix, funding and cash flow assessments, and a formal Project Management Plan in accordance with FHWA guidelines for projects over $500 million for use by DOTD to guide project and program implementation. Schmidt led the team including numerous strategic meetings and workshops with DOTD staff and FHWA. The Program Management project will end Mid 2019 and construction is expected to begin in 2020.
(3/17-1/18)	**Louisiana DOTD, I-10 Design-Build, EBR to Ascension Parishes, Louisiana – S.P. H.009250** – Mr. Schmidt was Huval project manager and principal in responsible charge of engineering/design of the various bridges included as part of this $72 million design-build project. The project includes steel plate girder and PPC girder bridges. Bob managed Huval's design of these bridges in interaction with the Owner (DOTD) and Contractor. The existing I-10 mainline bridge at the Highland Road interchange needs to be reconstructed under the project to provide longer spans in addition to more lanes. An innovative sequence of construction scheme and bridge design enables construction of this bridge while maintaining 90,000 ADT traffic. Huval's cost-effective designs and construction sequencing enabled its design-build team to be the only competitor to fit within the Owner's budget of $72 million. Construction began January 2018.
(1/18-6/20)	**GNOEC Safety Bay Improvement CMAR (Program and Project Management Services).** Since January 2018 Mr. Schmidt has served as Program Manager on behalf of the GNOEC, working with the General Manager plus Financial and Operations staff, for the $55 million Safety Bay project on the 25-mile Causeway Bridge over Lake Pontchartrain. In January 2019 the $40 million Safety Rail project was added under Mr. Schmidt's management. The Safety Bay project, providing 12 bays 16' wide by 1008' long, is the first Construction Manager At Risk (CMAR) highway project in Louisiana. In his role, Mr. Schmidt led the Project Team, including Owner, Designer, Contractor, and ICE through all steps of scoping, procurement, pre-construction design, scheduling, specifications, and construction. This included development of a Guaranteed Maximum Price, an accelerated project schedule (design 6 months and construction15 months), and a unique maintenance of traffic plan to maintain safety such that the existing bridges could be widened under traffic without reducing the number of lanes or narrowing and shifting the lanes. A Segmented CMAR approach was utilized so that advance construction packages including an Advance Pile Program and Advance Pile Order were implemented as well as the final CMAR package and GMP. Construction began December 2018. Mr. Schmidt is currently serving in a Principal role for Huval as Owner's Representative for the construction phase of both projects.
(2/90-3/17)	**Louisiana DOTD, I-49 Connector Urban Freeway Program, Lafayette, Louisiana.** Mr. Schmidt was project manager and project principal for the NEPA planning and engineering design program, covering 27 years, for this 6-mile, $900 million, urban freeway section in Lafayette, Louisiana. This extremely complex and challenging project includes design of 3 1/2 miles of six and eight lane elevated freeway, a directional interchange, numerous braided ramps, railroad bridges, traffic signals, parallel frontage roads, and other features. Services also included traffic engineering, NEPA planning (EIS and ROD), context sensitive design, public involvement, litigation support, and a special GIS web-based public information exchange regarding project design and right of way details. Mr. Schmidt led design and a PSE package of the widening from four- to six-lanes of two miles of the Evangeline Thruway, beginning at the existing southern terminus of I-49 at the I-10 interchange, as a first step in the project and ultimately to serve as the first segment of the southern extension of I-49.

Firm employed by **Huval & Associates, Inc.**					
Name	**Robert P. Dugas, Jr., PE**			Years of experience with this firm/employer	2
Title	Senior Bridge Engineer			Years of experience with other firm(s)/employer(s)	39
Degree(s) / Years / Specialization			B.S., Civil Engineering , 1981		
Active registration number / state / expiration date			21944/LA/03/31/2024		
Year registered	1985	Discipline	Civil Engineering		
Contract role(s) / brief description of responsibilities			**Bridge Design**		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
Mr. Dugas has been a project manager and design engineer for 40 years on government transportation projects. His experience includes the structural design of bridges and highways and includes preparation of specifications, geometrics, drainage computations and plans. He is very familiar with the various policies, procedures, and design criteria which dictate the parameters of every project. The wide range of experience Mr. Dugas has been exposed to will serve as a valuable asset on this project. Mr. Dugas has successfully completed technical design and preparation of plans for several highway and bridge projects.	
(02/21-Present)	**Comite River Diversion Bridge at LA 19 – East Baton Rouge Parish** – Performed the check of the steel girder design and details for the new 5-span through-girder railroad bridge over the new Comite River Diversion Canal for compliance with both the American Railroad Engineering and Maintenance-of-Way Association manual and project design requirements. Also performed a detailed check of the steel span quantities.
(10/20-02/21)	**Kansas Lane – Garrett Road Connector – Ouachita Parish –** Performed the design check for 1) the reinforce concrete column bent designs and RCPier software run, 2) the 3-span continuous steel girder unit and the corresponding MDX software runs and 3) bearing pad design for the steel girders. Also performed the as-designed load rating for the steel girder unit using AASHTOWare Bridge Rating software.
(04/20-12/20)	**Belle Chasse Bridge & Tunnel Replacement – Plaquemines Parish –** Performed the following tasks while assigned to the project: 1) verification of pile reactions using RCPier and FB-MultiPier, 2) check the design and details for the reinforced concrete column bents and 3) performed the design and detail check of the 3-span continuous steel girder unit over the Gulf Intracoastal Waterway.
(6/16-3/18)	**LA1 Relocated Phase 2A & 2E - LaFourche Parish -** Served as the Project Manager and Engineer of Record for the design of the widening of the existing bridge and the construction of a new bridge totaling 6,500' in length. The variably widened portion of the bridge consists of prestressed concrete Type III girder spans. The new bridge portions will be supported on the new Louisiana (LG) girders.
(08/05-05/10)	**Fort Buhlow Bridge Over Red River - Rapides Parish:** Served as Project Manager and Engineer of Record for the design of the $85 million Fort Buhlow Bridge over the Red River in Alexandria. The 0.6 mile bridge was designed with AASHTO 72" Type BT girder spans and a 1000' 3-span steel unit over the channel. Responsibilities included designing concrete decks in accordance with AASHTO LRFD, checking PPC girder designs, checking column bent designs, checking pile bent designs, and performing or checking all geometrics – all in accordance with AASHTO LRFD.

(7/02-08/05)	**Louisiana TIMED Managers –** Mr. Dugas served as the Design Oversight Manager on the joint venture Louisiana TIMED Managers which managed the TIMED program for the Louisiana Department of Transportation and Development. His responsibilities included (1) management of five Design Segment Managers, (2) creation of baseline schedules and budgets, (3) coordination of design with right-of-way acquisition, environmental and utility relocation groups, (4) coordination with project controls, (5) coordination of construction support activities, (6) preparation of advertisement and contract documents for consultant services, and (7) coordination and preparation of advertisement and contract documents for construction services.
(02/94-09/95)	**I-10/I-12 Widening, Acadian Thruway to Airline Highway – East Baton Rouge Parish -** Design included prestressed girders, steel girders and column bents. Mr. Dugas was responsible for the design of all column bents with integral 5 foot diameter drilled shafts.
(02/92-12/92)	**US 71/165 Missouri Pacific Railroad Overpass** – **Rapides Parish -** Design included prestressed girders, column bents and curved steel girders.
(05/87-03/88)	**Route I-49 (Section AU-14), Elliott to Hamilton – Rapides Parish -** Design included prestressed girders, pile bents, column bents, curved steel girders. Mr Dugas was the principal designer of a 250' two span curved steel girder unit with an integral steel box beam column cap.
(01/88-12/89)	**Route I-49 (Section AU-15), Hamilton to Ramp F-2 – Rapides Parish -** Design included prestressed girders, pile bents and column bents. Mr. Dugas was the principal designer of a 192' flaring steel span unit.
(04/86-01/87)	**Ramp A3 of the Alexandria Urban, Section 3 – Rapides Parish** – Mr. Dugas designed a three-span steel span unit for this project. This unit had span lengths of 140', 180', and 140', and it was designed using the ETBridges program. On this same project, Mr. Dugas also designed a five-span unit on Ramp A4. This unit had span lengths of 93', 119', 132', 119', and 93'. The ETBridges program was also used when designing this unit.
(11/81-06/85)	**Transit Mainline Ramp of the Greater New Orleans Mississippi River Bridge No. 2, West and East Approaches – Orleans Parish**– Mr. Dugas is responsible for the design of two curved steel girder units on the Transit Mainline Ramp West Approach. The first unit was a single span 115' long; the second was a two-span continuous unit with span lengths of 203' and 163'. Both of these units were initially designed using the USS Steel V-Load Method. Mr. Dugas is also responsible for the design and plan preparation of a three-span continuous curved girder unit on Ramp IP-C of the East Approach. This unit had span lengths of 83', 109' and 140'. Both the west and east approach project spans were designed using the DESCUS program.

Firm employed by **Huval & Associates, Inc.**			
Name	**Reid Romero, P.E.**	Years of experience with this firm/employer	13
Title	Civil Engineer	Years of experience with other firm(s)/employer(s)	0

Degree(s) / Years / Specialization	08/04-05/08 Bachelor of Science Civil Engineering
Active registration number / state / expiration date	37772/LA/09/30/2023
Year registered: 2013 / Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities	**Bridge Design**

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
Mr. Romero came to HUVAL after graduating from the University of Louisiana at Lafayette in 2008. Since joining Huval & Associates, Inc., Mr. Romero has been involved in bridge and structural design, plan preparation, bridge inspections and construction support services. Mr. Romero completed several NHI training courses including Fundamentals of LRFR and Applications of LRFR for bridge superstructures course, and a Drilled Shaft LRFD design methods and construction procedures course. Mr. Romero is familiar with the LADOTD Bridge Design Manual, LADOTD LRFD Bridge Design Manual, 2002 AASHTO Bridge Specifications, as well as the current AASHTO LRFD Bridge Specifications.	
(4/18 – Present)	**Retainer for Engineering Services for Bridge Preservation - Statewide, Contract No. 4400011225 -** Lead Engineer of Retainer Contract. Responsible for coordination, project setup, QA/QC, and bridge rehab design for the $4M retainer.
(5/20 – Present)	**Retainer for Engineering Services for Bridge Preservation - Statewide, Contract No. 4400017262 -** Lead Engineer of Retainer Contract. Responsible for coordination, project setup, QA/QC, and bridge design for the $5M retainer.
(03/19-Present)	**I-220/I-20 Interchange Imp & BAFB Access Design Build Project – S.P. No. H.003370 –** Responsible for QA of the bridge plans and load rating for the LA 1267 bridges over I-20 and the LA 1267 bridges over the KCS Railroad. The LA 1267 structures over I-20 consist of twin bridges utilizing LG-54 p.p.c. girder spans supported by concrete column bents and drilled shafts. The LA 1267 structures over KCS Railroad consist of twin bridges utilizing LG-54 p.p.c. girder approach spans supported by concrete pile bents and a main span over the KCS Railroad consisting of 170'-0", LG-78 p.p.c. girders supported by concrete column bents and drilled shafts. Some unique challenges that the project has presented is designing applicable LA 1267 bridges over I-20 column bents for vehicular collision and completely spanning the KCS own right-of-way utilizing concrete p.p.c. girders.
(01/19-05/19)	**I-10 Loyola Design-Build Project RFP Phase 30% Design - S.P. H.011670–** Lead bridge engineer throughout the RFP design phase for this complex urban interchange. Assisted in the preparation of steel tub girder design and details, concrete box girder design and plans, as well as plans and proposal documents for the RFP phase of the project. Created dozens of computer models in order to analyze and size the steel tub girders, taking into account system redundancy. Assisted in development of alternative technical concepts, suggested sequence of construction, and miscellaneous bridge and other details. Assisted in the coordination and organization of all project data with the various members of the design team from numerous consulting firms.

(06/14-05/19)	**US 90 (I-49South), Albertson's Parkway to Ambassador Caffery, Design-Build Project, Lafayette Parish, S.P. No. H.010620.** Performed QA/QC of the LRFD bridge design calculations, LRFR load rating, and plan preparation of a BT-72 girder bridge. The new US 90 bridge over Albertson Parkway and the US 90 BNSF RR overpass bridge were built within the same footprint as the existing bridge while maintaining 4-lanes of US 90 traffic during construction. This presented unique design challenges and required a complex, three-phase, traffic control and construction sequencing plan to move traffic safely through the tight work zone. The bridges consisted of multi-continuous p.p.c. girders spans supported by concrete column bents and pile footings. The developed design concept saved millions of dollars and allowed the James Team to be 15% below the construction estimate of the nearest competitor.
(7/17-8/20)	**I-10: Highland Road to LA 73, Design Build Project, East Baton Rouge & Ascension Parish, S.P. No. H.009250**. Led the design, plan preparation, and load rating for the repair of the prestressed girder bridge on LA 928. Performed QA/QC of the LRFD design calculations and load rating for the steel girder bridge at Highland road and the slab span widening at Bayou Manchac. The existing I-10 mainline bridge at the Highland Road interchange needed to be reconstructed under the project to provide longer spans in addition to more lanes. An innovative sequence of construction scheme and bridge design enabled construction of this bridge while maintaining 74,000 ADT traffic. Huval's cost-effective designs enabled its design-build team to be the only competitor to fit within the Owner's budget of $72 million.
(10/16-current)	**New Swing Span- Herman Dupuis RD. Pontoon BR. Replacement, St. Martin, LA, Bridge Recall 200896–** Lead structural engineer for the bridge design and plan development of a new swing span bridge over alligator bayou which will replace the Butte LaRose Pontoon bridge. Project is currently under construction. Designed, detailed, and sealed final plans, specifications, calculations, load rating and cost estimates for all structural elements.
(11/17-07/18)	**Surrey St. Bridge Repairs, Lafayette Parish –** Lead Engineer for the repair of the Surrey St. Bridge in Lafayette. Project consisted of bearing repair and replacement, concrete riser construction, deck overlay, joint repairs, painting of steel girders with full enclosure, and miscellaneous work.
(03/11-06/13)	**I-49 Segment I Ratings, S.P. 701-65-9999 –** Performed as-designed LRFR calculations on two prestressed girder bridges. Utilized VIRTIS to model varying girder spans. Created rating reports for each span configuration. Developed bridge load rating summary sheets. Provided construction services on an as-needed basis.
(01/12– 11/13)	**I-49 North Segment J (MLK Blvd. to LA 1), S.P. H.003496.5–** Performed LRFD design calculations and led plan preparation on two prestressed girder and steel girder bridges. Performed approach slab design, girder design check using LEAP Conspan, cap and column design check using LEAP RC Pier, steel girder design check using MDX, deck and overhang reinforcing design check, strip seal joint opening calculations, quantity calculations and QA/QC, and elevation calculations Mr. Romero also provided load rating of the completed structure.
(03/09-11/10)	**I-49 North (LA 1 – LA 173), S.P. 701-65-1230 & S.P. 701-65-1349–** Assisted in plan preparation and performed LRFD design calculations on a Type BT Prestressed Girder Bridge and a Type IV Prestressed Girder Bridge. Performed fixed and expansion bearing pad design, deck and overhang reinforcing design, quantity calculations and QA/QC, strip seal joint opening calculations, girder design check using LEAP Conspan, cap and column design check using LEAP RC Pier, and elevation checks.

Firm employed by **Huval & Associates, Inc.**			
Name	**Matthew L. Hebert, P.E.**	Years of experience with this firm/employer	8
Title	Civil Engineer	Years of experience with other firm(s)/employer(s)	5

Degree(s) / Years / Specialization	08/02-05/08 Bachelor of Science Civil Engineering
Active registration number / state / expiration date	37713/LA/09/30/2023
Year registered 2013 Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities	**Bridge Design and Ratings**

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc.

Mr. Hebert joined Huval & Associates, Inc. in 2013 with 5 years' experience in civil engineering. Previously employed with LADOTD, he was involved with the design, live load rating, plan development, and construction support of more than 20 bridge replacement projects. These consisted of various superstructure and substructure types including but not limited to: AASHTO precast prestressed concrete (P.P.C.) girders, quad beams, cast-in-place slab spans, precast slab spans, concrete box culverts, P.P.C. pile bents, steel H-pile bents, and pipe pile bents.

Additionally, Mr. Hebert was project manager for multiple bridge replacement projects. His responsibilities included coordinating all aspects of the plan development process including but not limited to road, bridge, hydraulic, and geotechnical engineering and determining the project scope, schedule, and budget.

Mr. Hebert's training includes the NHI LRFR for Highway Bridge Superstructure Course, the NHI AASHTO LRFD for HWY Bridge Superstructure Course NHI AASHTO LRFD for Highway Bridge Substructure Course, the NHI AASHTO Roadside Design Course, and the NHI Design and Construction of Driven Pile Foundations Course.

(10/19-Present)	**Cheniere Spillway and Bridge Replacement, S.P. H.008226 –** Lead engineer for the LRFD design, plan preparation, and LRFR live load rating for the Cheniere spillway bridge. The bridge consisted of 25ft. slab spans integrated with a fixed crest weir and overflow structure.
(10/20-Present)	**I-10 CMAR: LA 415 to Essen Lane on I-10 and I-12, East & West Baton Rouge Parishes S.P. H.004100 –** As an Engineer on this project, Mr. Hebert developed an alternative bridge construction phasing approach through a constructability review. This alternative phasing approach leads to safer MOT and reduced construction times, throughout the corridor.

(02/17-11/20)	**I-10 Design Build-LA 42 to LA 73, S.P. No. H.009250-** Lead Engineer for the LRFD design, plan preparation, and LRFR live load rating for the Highland Rd. overpass. Highland Rd. consisted of a full replacement of 2 existing structures utilizing a 3-span structure which included 2-60ft. prestressed girder spans and 1-190ft. steel plate girder span. The superstructure is support by column bents and pile bents and will be one structure at the end of the project. In order to maintain traffic, the bridge had to be constructed in 3 separate stages.
(04/14-07/18)	**I-49 South-US 90 Albertson Pkwy to Ambassador Design Build, H.010620–** Lead Engineer for LRFD Bridge design and plan preparation of the mainline bridge and the two frontage road bridges over BNSF Railway. The brides consisted of BT-72 girder spans with column bents and pile footings.
(06/19-Present)	**I-220/I-20 Interchange IMP & BAFA Access Design-Build Project, S.P. H.003370 –** Mr. Hebert is serving as Bridge Design Quality Assurance on this design build project which will provide direct access to Barksdale Air Force Base. Most recently, Mr. Hebert has assisted with the QA of the I-220 Overpass bridges and KCS Overpass bridges on the project.
(9/18 – 6/19)	**Loyola Design Build I-10 Airport Interchange, Jefferson Parish, Louisiana, S.P. No. H.011670-** Mr. Hebert was a primary bridge engineer throughout the RFP design phase for this complex urban interchange. A new interchange was designed and superimposed onto the existing Diamond interchange to provide direct connector access to the new New Orleans International Airport terminal. Assisted in the preparation of steel tub girder design and details, concrete box girder design and details, as well as plans and proposal documents for the RFP phase of the project. Assisted in development of alternative technical concepts, suggested sequence of construction, and miscellaneous bridge design items and other details. Assisted in the coordination and organization of all project data with the various members of the design team from numerous consulting firms.
(3/18 – Present)	**Belle Chasse Public-Private Partnership Project, Plaquemines Parish, Louisiana, Project No. H.004791--** Mr. Hebert was the Bridge Design Lead throughout the design phase for this new high-level fixed bridge over the Intracoastal Waterway. The new bridge will replace the existing moveable bridge and tunnel system. This is the first highway public-private partnership project in Louisiana. The bridge will be constructed in 2 stages to assist in MOT.
(9/18 –8/19)	**LA 106: Bayou Boeuf Bridge, H.009497** - Lead Engineer for the LRFD design, plan preparation, and LRFR live load rating of a new bridge structure to replacement an existing bridge. The new bridge structure consisted of LG girders and pile bents.
(11/15 – 4/17	**Kaliste Saloom Roadway Widening, LCG –** Lead Engineer for the LRFD Bridge Design and plan preparation of an AAHSTO Type 4 girder bridge with pile bents on skew.

Firm employed by **Huval & Associates, Inc.**			
Name	**Glenn McCall, P.E.**	Years of experience with this firm/employer	2
Title	Civil Engineer	Years of experience with other firm(s)/employer(s)	22
Degree(s) / Years / Specialization		Bachelor of Science Civil Engineering / Structural, 05/97 Bachelor of Science Agricultural Engineering, 05/96	
Active registration number / state / expiration date		29639/LA/09/30/2023	
Year registered	2001	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		**Roadway Design**	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
Mr. McCall came to Huval & Associates with over 22 years of experience in transportation related projects. Mr. McCall's experience has ranged from project inception and identification of funding, to the NEPA process, following with production of construction documents and through construction with construction engineering and inspection (CE&I). Most of his experience has been related to detailed engineering, quality assurance/quality control (QA/QC), constructability reviews, and CE&I. Mr. McCall is well versed in roadway design, traffic control plans, concrete, steel, and timber design as well as drainage and municipal utility design. Over the course of his career, he has designed roadways and bridges for State DOTs, local municipalities, and several private clients related to the oil and gas industry. Mr. McCall's training includes ATSSA Traffic Control Technician as well as Traffic Control Supervisor.	
(06/19-Present)	**Belle Chasse Bridge & Tunnel Replacement Project, S.P. H.004791 –** Mr. McCall is serving as a senior design engineer on this P3 project which will construct a new toll bridge over the Gulf Intercoastal Waterway (GIWW). Mr. McCall has assisted with the completion of alternate technical concept No. 1 which will improves the efficiency of all intersections within the construction limits. In addition, Mr. McCall has worked as a senior engineer reviewing geometric design and layout, coordination of right of way and utility work and quality checks on hydraulic analysis and subsurface drainage. In addition to the design duties, Mr. McCall has also assisted with the project management activities including the management of sub-consultants, invoicing and progress reports, as well as design quality checks and adherence to the requirements of the Form DR Process.
(11/19- 06/20)	**I-10 and I-12 College Dr. Flyover Ramp Design-Build Project RFP Phase 30% Design - S.P. H.013897–** As a Senior Engineer on the Team in pursuit of this Project, Mr. McCall assisted with various components of the project. Early on, his involvement centered around the review and understanding of the RFP documents. As the project progressed, Mr. McCall primarily served as a technical advisor in the design and layout of the roadway as well as the drainage analysis. Mr. McCall also participated in the evaluation of proposed team alternatives for the project in addition to quality control review of the technical proposal.
(05/13-05/19)	**US 90(I-49 South) Albertson's Parkway to Ambassador Caffery Design-Build S.P. H.010620** – Under the Design-Build Contractor, Mr. McCall served as the Principal in Charge of the Design Team for this project. In this role, Mr. McCall provided coordination between the Contractor and all members of the design team through coordination with the

	Project Manager. Mr. McCall also provide lead technical experience to the design team during initial construction document production and through completion of construction of the project.
(06/16-Present)	**I-49 South @ Verot School Road, S.P. H.011235.5 –** Mr. McCall served as senior engineer for the road and drainage design portion of this project encompassing the Verot School Rd. improvements as well as the parallel service road. In addition to the roadway aspects, Mr. McCall also provided the customized drainage design for the scuppers on the bridge structures. Mr. McCall has created a SWMM model of the existing and proposed conditions which will be used to meet the requirements of the railroad owner adjacent to the project. This model is a hydrodynamic model with evaluates water surface elevations at time step intervals for the 100-year storm event while also dynamically modeling the water surface elevation of the outfall channel.
(06/19-Present)	**I-220/I-20 Interchange IMP & BAFB Access Design-Build Project, S.P. H.003370 –** Mr. McCall is serving as a senior design engineer on this design build project which will provide direct access to Barksdale Air Force Base. Most recently, Mr. McCall has assisted with the sequence of construction and geometric layout for the proposed improvements to the I-220 to I-20 SB/WB ramp. This modification to the original intent seeks to provide phased construction of this ramp while maintaining full access to I-20. Mr. McCall is also assisting with project management duties and financial controls for Huval and its sub-consultants. In addition, Mr. McCall has completed the design of the box culvert location, coordinated with the electrical sub-consultant on the lighting inventory report and layout as well as assist the Project Manager with various aspects of the project management duties required for this project.
(09/13-02/19)	**Heavy Haul Road Project (HHR), Lake Charles Chemical Complex Project –** Principal in charge and Senior Technical Lead for the 2017 **LADOTD Excellence Award** winning project. This project improved LA HWY 379 in Lake Charles, LA in support of the $11B petrochemical project for Sasol North America. For this project, the existing road improvements were required to meet LADOTD standards while accommodating over 300 heavy haul moves across the almost three miles of roadway. The final design incorporated additional pavement and pavement markings to both accommodate heavy haul vehicles ranging in length from 150' to over 300' with weights varying from 500 tons to over 3,000 tons. Since LA 379, is a significant arterial to the community the design also accommodated the peak traffic demands of the community as well as the 6,000 plus workers accessing the site daily. Once the geometric improvements were approved by the State, Mr. McCall lead the Construction Administration. At the conclusion of the project, Mr. McCall and his team submitted the LADOTD required 3059 construction packet for approval. The project team was presented with the Excellence award as a result of the private-public partnership which improved the existing roadway in accordance with all state standards and completed the project ahead of schedule and under budget.
(06/19-9/19)	**I-10 (LA 415 to Essen on I-10 and I-12), S.P. H.004100 –** Mr. McCall served as a senior design engineer responsible for the creation of the Project Implementation Plan (PIP). The PIP is a compilation of the various project aspects related to the widening project and the associated constructability reviews completed by Huval and Associates.

Firm employed by **Huval & Associates, Inc**				
Name	**Michelle Helminger, P.E.**		Years of experience with this firm/employer	7
Title	Civil Engineer		Years of experience with other firm(s)/employer(s)	0
Degree(s) / Years / Specialization			08/2010-05/2014 Bachelor of Science Civil Engineering	
Active registration number / state / expiration date			43123/LA/03-31-2023	
Year registered	2018	Discipline	Civil Engineering	
Contract role(s) / brief description of responsibilities			**Roadway and Traffic Design**	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
	Mrs. Helminger joined Huval and Associates following her graduation from the University of Louisiana – Lafayette in 2014. In her time with HUVAL, Mrs. Helminger has been involved in roadway geometric design, traffic control & MOT design, structural design, plan preparation, and construction support services. Mrs. Helminger has also performed a variety of services for LADOTD bridge rehabilitation projects, including S.P. 700-99-0559 Retainer Contract for Bridge Preventive Maintenance Program (BRPM), S.P. 4400002537 Retainer Contract for Engineering Services for Bridge Preservation, and several other Retainer Contracts. In addition to typical LADOTD bid-build projects, Mrs. Helminger has been involved in many of LADOTD's alternative delivery projects.
(06/19-Present)	**Belle Chasse Bridge & Tunnel Replacement Project, S.P. H.004791 –** Mrs. Helminger is serving as a design engineer on this P3 project which will construct a new toll bridge over the Gulf Intercoastal Waterway (GIWW). Mrs. Helminger provided design on this project from the initial bid phase to present. Mrs. Helminger served as the primary roadway engineer and the primary point of contact for subconsultants including coordination of lighting, drainage, traffic signals, and MSE walls. Mrs. Helminger developed the overall geometric layout which dictated the available MOT options required to maintain two-lanes of traffic in each direction for the duration of construction. Detailed traffic control plans were developed by Mrs. Helminger to support the construction phasing. Coordination efforts also include utility relocations & ROW acquisition services.
(06/16-Present)	**I-49 South-Verot School Road Interchange - S.P. H.011235 -** Assisted in roadway geometric design including traffic control analysis and plan preparation while also assisting with bridge design and construction phasing. Project management tasks included coordination with subconsultants, LADOTD meetings to present design options, and coordination with LADOTD on response to comments received on plan submittals. Mrs. Helminger has assisted with the study phase of the project, Preliminary Plans and will continue to provide design support through the Final Plans phase of this project.
(01/15-07/18)	**I-49 South-US 90 Albertson Pkwy to Ambassador Design Build - S.P. H.010620 –** Prepared MSE wall layout, site grading, shop drawing reviews and construction services pertaining to demolition.

(10/16-12/17)	**LA 443: Tangipahoa River Bridge Replacement, S.P. H.012728 –** Mrs. Helminger supported the roadway & drainage design efforts for this bridge replacement project. Design tasks included roadway plans, channel grading plans, and detour layout. This was an emergency replacement, due to the flood of 2016, and 100% final plans were completed in 8 weeks.
(11/15-05/16)	**Replacement of Lemon Road Bridge over Redwood Creek, Baton Rouge Parish** – Performed geometric design to accommodate new bridge structure based upon minimum low chord requirements. Created typical roadway sections, performed guardrail design, and created cross sections. Created channel grading layout and created cross sections for the channel. Assisted in roadway plan preparation.
(02/15-12/16)	**US 90 Pearl River Bridges Environmental Assessment - S.P. H.000284.2 –** Performed tasks pertaining to bridge design in order to perform Stage 1 Environmental related services for the two moveable bridges included in the project. Analyzed multiple vertical alignments for various bridge types as well as performed preliminary cost estimates. Created various meeting exhibits for public meetings. Special consideration was required due to the historical nature of the structures.
(04/16-11/17)	**District 05 Bridge Repairs – Bearing Rehab., Deck Joint and Concrete Spall Repairs, & Cleaning & Painting Steel, S.P. H.011766.5** Mrs. Helminger assisted with rehabilitation plans produced. These consisted of bridge deck joint repairs, concrete spall repairs, bridge deck overlays, bearing rehabilitation, cleaning & painting steel girders, and all associated traffic control plans yielding a construction cost of $11M. The bearing rehabilitation consisted of replacing over 700 existing steel fixed/expansion bearing assemblies with a retrofitted bevel sole plate and reinforced elastomeric bearing pad.

Firm employed by **Huval & Associates, Inc.**			
Name	**Nicholas Helminger, P.E.**	Years of experience with this firm/employer	3
Title	Civil Engineer	Years of experience with other firm(s)/employer(s)	5
Degree(s) / Years / Specialization		08/2009-05/2013: Bachelor of Science Civil Engineering 08/2013-12/2014: Master of Science in Civil Engineering	
Active registration number / state / expiration date		41937/LA/03-31-2024	
Year registered	2017	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		**Roadway and Traffic Design**	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
Mr. Helminger joined Huval and Associates in 2018 with 5 years' experience with Professional Engineering & Surveying Co, Inc. (PENSCO). His experience with PENSCO included multiple aspects of engineering including roadway design, drainage design, bridge design, plan and specification preparation, construction layout, and construction administration. Since joining HUVAL, Mr. Helminger has been involved in roadway design, bridge design, project coordination and plan preparation for several LADOTD projects. Mr. Helminger's training includes the ATSSA Traffic Control Technician and Traffic Control Supervisor.	
(04/21-Present)	**I-10: LA 415 to Essen Lane on I-10 and I-12 - S.P. H.004100 –** Mr. Helminger is serving as a road design engineer on this CMAR project which includes the reconstruction and widening of I-10 from the Mississippi River Bridge to the I-10/I-12 split. Design duties include horizontal and vertical geometrics for I-10 mainline and entrance/exit ramps and sequence of construction and temporary traffic control along I-10 mainline. As part of the CMAR process, Mr. Helminger is involved in design workshops, bi-weekly task force meetings, and quantity and cost reconciliation meetings.
(07/21-Present)	**LA 94: Vermilion River Bridge Replacement - S.P. H.014560 –** Mr. Helminger is serving as the road design engineer for the replacement of the LA 94 Bridge over the Vermilion River in Lafayette/St. Martin Parish. Mr. Helminger designed the horizontal and vertical geometry of LA 94 and the diversion roadway and prepared all roadway plan sheets.
(06/20-05/21)	**Comite River Diversion Bridges at LA 67, LA 19, and LA 19 Railroad Bridge - S.P. H.001352 and H.002273 –** Mr. Helminger served as the road design engineer and assistant project manager on this CMAR project which includes the construction of new bridges over the Comite River Diversion Channel (CRDC). This project had two sites: LA 67 and LA 19. LA 67 is a two-way two-lane roadway while LA 19 is a 4-lane divided roadway. On site diversion roadways were used on both sites. Mr. Helminger designed the horizontal and vertical geometry for both roadways and diversion roadways, typical sections, sequence of construction, drainage, guardrail, pavement markings, signing, and cross sections. He also created typical sections, plan profiles, and cross sections of the CRDC that will be excavated under this project. The LA 19 site included a railroad crossing over the CRDC. Mr. Helminger designed the vertical and horizontal alignment for the permanent rail over the channel and the shoofly railroad used to maintain rail traffic during construction. Mr. Helminger also computed quantities, developed cost estimates, and participated in all design workshops, plan reviews, and quantity and cost reconciliation meetings as part of the CMAR process.

(11/19-06/20)	**I-10 and I-12 College Dr. Flyover Ramp Design-Build Project RFP Phase 30% Design - S.P. H.013897 –** Prepared plans and proposal documents for the RFP phase of the project. Developed the overall project layout for the proposal phase. Analyzed numerous geometric layouts and cross sections along the I-10/I-12 corridor to develop a flyover concept which fit within the existing right-of-way while complying with project requirements. Designed roadway horizontal and vertical profiles, typical sections, sequence of construction, guardrail, concrete barriers, MSE walls, sound barrier layout, overall bridge layouts, drainage, and computed roadway quantities. Performed the role of Assistant Design Manager by conducting weekly meetings and coordinating/working closely with the entire design team and contractor to develop the plans, quantities, and proposal documents.
(01/20-08/21)	**Belle Chasse Bridge & Tunnel Replacement Project - S.P. H.004791 –** Mr. Helminger is performing the roadway plan review on the Belle Chasse project. The project review consists of overall geometric layout (horizontal and vertical), overall design compatibility between various disciplines of engineering, and plan set review per the project QA/QC process. Additionally, Mr. Helminger will review the temporary traffic control plans and signing/pavement marking plans.
(01/19-05/19)	**I-10 Loyola Design-Build Project RFP Phase 30% Design - S.P. H.011670 –** Assisted in the preparation of plans and proposal documents for the RFP phase of the project. Assisted in development of alternative technical concepts, created roadway typical sections, assisted in roadway geometric design, suggested sequence of construction, and roadway quantities. Assisted in the coordination and organization of all project data with the design team.
(10/18-Present)	**I-220/I-20 Interchange Imp. & BAFB Access Design-Build Project – S.P. H.003370 –** Assisted in the preparation of plans and proposal documents for the RFP phase of the project. Created typical sections, design/layout of guardrail, pier protection and roadway barrier, calculated roadway quantities, performed preliminary bridge design calculations and assisted with coordination of the design team. Providing road design support and bridge QC for the design phase.
(10/18-Present)	**I-49 South-Verot School Road Interchange - S.P. H.011235 –** Prepared and reviewed roadway plans for LADOTD submittal. Designed vertical profiles and performed QC checks on horizontal geometry. Assisted subconsultants in the design of subsurface drainage systems and developed a plan for alternative outfall locations. Performed bridge design calculations including prestress girder design checks to determine span lengths, preliminary pile loads for column bents and pile bents, and vertical clearance calculations. Computed preliminary quantities and developed preliminary construction costs estimates. Assist in coordination of subconsultants primarily for plan consistency between several firms.
(05/13-07/18)	**I-49 South: Ambassador Caffery & U.S. 90 Interchange - S.P. H.002868 –** Prepared roadway plan profiles, typical sections, barrier details, pavement marking details, embankment widening and guardrail details, suggested sequence of construction, MSE wall layout and details, quantity tables, and all bridge plans for the 2 mile stretch of urban freeway in Lafayette Parish. Assisted in drainage design and vertical alignment of roadways. Performed all bridge design calculations including deck design, girder design, column bent and pile bent design, footings, columns, pile loads. Calculated all riser and bent elevations. Assisted in the coordination and organization of subconsultants.
(05/13-07/18)	**Various Roadway Projects –** Roadway geometric design, vertical design, drainage design, quantities, plan and specification preparation, and construction administration for multiple roadway projects for the City of Broussard and St. Martin Parish, LA. Performed QC checks on roadway plans and quantities for various projects for Lafayette Consolidated Government.

Firm employed by	**G.E.C., Inc.**				
Name	**Cary Bourgeois, PE**		Years of experience with this firm/employer	**36**	
Title	Senior Vice President		Years of experience with other firm(s)/employer(s)	**0**	
Degree(s) / Years / Specialization			B.S. / 1983 / Civil Engineering		
Active registration number / state / expiration date			23414 / Louisiana / 09-30-2023		
Year registered	1989	Discipline	Civil		
Contract role(s) / brief description of responsibilities			**Bridge Design**		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc.
36 years of experience	*Mr. Bourgeois is GEC's Senior Vice President, Engineering Division, and he is currently involved in supervising activities and performing design services on several large-scale projects. Mr. Bourgeois is experienced in the areas of Bridge, Roadway, Toll Collection Systems and Intelligent Transportation Systems (ITS) design. He has extensive experience in safety inspection of bridges. He has valuable experience in the design of prestressed concrete girders, curved steel plate girders, continuous slabs, inverted "T" cap column bents, pile bents, footings, retaining walls, as well as geometry associated with bridge structures and roadways. He is thoroughly familiar with AASHTO Standard Specifications for Highway Bridges, AASHTO Policy on Geometric Design of Highways and Streets, Manual on Uniform Traffic Control Devices, the Highway Capacity Manual and the Standard Specifications for Structural Support for Highway Signs, Luminaries and Traffic Signals.*
09/20-Present	**BLUEBONNET BLVD. (PERKINS TO PICARDY): Baton Rouge, LA.** *Principal-in-Charge* - GEC is designing the widening of Bluebonnet Blvd. to include an additional lane in each direction. Mr. Bourgeois oversaw an investigation of the existing bridge over Dawson Creek to determine whether the bridge should be widened or replaced in accordance with Part 1, Chapter 6 of the LADOTD BDEM. This investigation started with an NBIS bridge inspection to determine Condition Ratings for the bridge superstructure, substructure, and piles. A Bridge Load Rating was then carried out based on the AASHTO Manual of Bridge Evaluation and the LADOTD BDEM. Based on the load rating, GEC recommended that the existing bridge be replaced. He also oversaw the preliminary design for the replacement bridge as well as the design study for a six-lane, curb and gutter roadway with pedestrian facilities and subsurface drainage. (City-Parish Project No. 19-CP-HC-0034)
06/17-2021	**H.003074, I-10 WIDENING, WILLIAMS TO VETERANS: Jefferson Parish, LA.** *Principal in Charge* - Mr. Bourgeois oversaw the superstructure and substructure load rating for existing bridges and ramps for this highly congested 2.28 mile urban interstate. The extensive load rating and documentation, allowed LADOTD to make an informed decision on widen or replace the existing bridges. The data supported the replacement of the bridges. GEC designed concrete slab spans, pre-stressed concrete girder spans and steel girder spans. All pre-stressed girders were Louisiana (LG) girders designed in accordance with AASHTO LRFD bridge specs. ()
12/93-08/12	**U.S. 71/U.S. 165, Fort Buhlow Bridge and Approaches over the Red River: Alexandria/Pineville, LA.** *Principal-in-Charge* - This 2.28-mile-long multi-phase project provides for the construction of a new six-lane bridge over the Red River, access ramps for I-49 and local traffic, KCS railroad overpass and approach roadways. The project began with an Engineering Report consisting of a line and grade corridor study, traffic study and bridge feasibility study. An Environmental Assessment was developed concurrent with the engineering study. The project features a 1,000' three-span continuous steel plate girder unit over the Red River, supported on piers founded in the river.
10/19-11/20	**I-10 SERVICE ROAD BRIDGE REPLACEMENTS: Slidell, LA.** *Principal-in-Charge* - The project included the replacement of two slab span bridges. Mr. Bourgeois was Principal-in-Charge and oversaw the design phase of the project.
03/95-06/10	**450-15-0089 / ROUTE I-10, CAUSEWAY BLVD TO 17TH STREET CANAL: Metairie, LA.** *Project Manager/Engineer-of-Record/Structural Engineer* - Mr. Bourgeois performed Quality Assurance and project management on this project. He specifically acted as QA for all disciplines involved including

	surveying, structures/bridge design, electrical & controls design and civil engineering design. Project consisted of widening while under traffic of 1.64 miles of urban interstate highway from six to 10 lanes with roadway and bridges. He performed PPC girder layout and design and performed the design check of a two-span (425' total length) continuous steel girder with integral steel intermediate bent.
01/11-12/15	**H.009323 / GNOEC Bascule Bridge Control System Replacement: Jefferson Parish, LA.** *Principal-in-Charge:* This project included reverse engineering of the existing bridge control system and implementing a complete new PLC project including specifying PLC logic and criteria for bridge control. During this project several NEC violations were corrected to bring the system up to standards. Additionally, several diagnostic routines were added to facilitate maintenance.
07/09-06/12	**U.S. ARMY CORPS OF ENGINEERS, LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY, HURRICANE PROTECTION PROJECT LPV 17.2, BRIDGE ABUTMENT AND FLOODWALL TIE-INS AT CAUSEWAY BRIDGE: Metairie, LA.** *Overall Project Manager* - This project was located in Jefferson Parish, Louisiana and was part of the Lake Pontchartrain and Vicinity, New Orleans, Louisiana, Hurricane Protection Project. This reach consisted of levees, floodwalls, crib walls, Causeway Boulevard and other miscellaneous access points. Designs were intended to bring hurricane protection to Phase II 100-year level. GEC performed detailed engineering and design, preparation of a Design Report, preparation of plans and specifications, and support during advertisement.
12/95-2007	**ROUTE I-10, CAUSEWAY BOULEVARD TO 17TH STREET CANAL: Metairie, LA.** *Project Manager* – This project consisted of the widening while under traffic of 1.64 miles of urban interstate highway from six to 10 lanes with roadway and bridges. The bridges consisted of APSHTO pre-stressed concrete girders and steel plane girder spans. The project included ramp bridge construction with a 400' long continuous steel plane girder wide internal steel bent. Sound barriers were provided for the length of the project.
09/16-Present	**GNOEC, North Channel Bascule Maintenance, Lake Pontchartrain Causeway: Mandeville, LA.** *Project Manager/Structural Engineer:* This project, presently in the design phase, will provide for the maintenance of the mechanical portion of the North Channel Bascule Spans and other repairs not included in the previously completed projects. Work items for this project will include rehabilitation of the lockbar operators, replacement of a lockbar collar and shimming of all collars, shimming of all live load bearings and securing of the live load bearing plates, cleaning and adjustments to gears, adjustment of counterweight to improve operation of the span, replacement of the generator fuel line, upgrade of the UPS for the Bascule Control System, installation of new traffic signal and signage, replacement of the traffic safety gates, rehabilitation or replacement of the span brakes, and PLC software modification.
1991-Present	**GNOEC, INSPECTION OF THE LAKE PONTCHARTRAIN CAUSEWAY BRIDGE AND NORTH SHORE APPROACHES: Metairie, LA.** *Overall Project Manager* – Federal Law 39 FR 10430 requires that all bridges on public roads be inspected in accordance with National Bridge Inspection Standards (NBIS), 23 CFR Part 650 Subpart C. As Consulting Engineer for the Greater New Orleans Expressway Commission (GNOEC), GEC is responsible for performing the NBIS inspection of all GNOEC owned bridges. GEC has conducted the inspections in accordance with the NBIS, utilizing the American Association of State Highway Transportation Officials (AASHTO) *Manual for Bridge Evaluation, AASHTO Manual for Bridge Element Inspection and Louisiana Department of Transportation and Development (LADOTD) Pontis Inspection Manual* requirements.

Firm employed by	**G.E.C., Inc.**			
Name	**Keith Rebello, PhD, PE**		Years of experience with this firm/employer	**24**
Title	Senior Structural Engineer		Years of experience with other firm(s)/employer(s)	**7**
Degree(s) / Years / Specialization			B.S. / 1983 / Civil Engineering M.S. / 1986 / Civil Engineering Ph.D. / 1990 / Civil Engineering	
Active registration number / state / expiration date			24937 / Louisiana / 03-31-2023	
Year registered	1992	Discipline	Civil	
Contract role(s) / brief description of responsibilities			**Bridge Design**	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc.
31 years of experience	*Dr. Rebello has 31 years of structural engineering experience following his research work on non-linear deformation behavior of pre-stressed concrete bridges. His bridge design experience encompasses both structural steel and pre-stressed concrete structures including pre-stressed concrete I-girders, steel plate, steel box girders, long span steel trusses, horizontally curved steel plate girders, post tensioned segmental precast/cast in place box girders, and welded steel plate girders. He has designed and managed a variety of structural projects involving complex interstate & highway bridges (new, replacement, rehabilitation and widening), retaining walls, noise walls, buildings, water and wastewater treatment facilities, hurricane protection systems & hydraulic structures. He has experience in rating of bridges in accordance with LADOTD and AASHTO MBE requirements and performed ratings using AASHTOWare Bridge Rating (Virtis) Software & finite element analysis where required.*
08/05-07/13	**S.P. No. 840-43-0001, Fort Buhlow Bridge: Alexandria, LA.** *Structural Engineer*: Dr. Rebello performed preliminary design of a new 0.6-mile bridge spanning the Red River. He developed alternative designs employing pre-stressed concrete and steel girder spans and segmental concrete box girders spans. He prepared preliminary plan alternative layouts for curved steel girder ramps and bridge plans for an overpass over a railroad, using conventional precast pre-stressed concrete girders. Ultimately, the bridge was designed with AASHTO 72" Type BT girder spans and a 1000', 3-span steel girder unit over the channel
07/16-Present	**GNOEC, Inspection of the Causeway Bridge and Approaches: Lake Pontchartrain Northshore, LA**. *Load Rating Structural Engineer*: Dr. Rebello is the primary Load Rating Structural Engineer on this project. Federal Law 39 FR 10430 requires that all bridges on public roads be inspected and rated in accordance with National Bridge Inspection Standards (NBIS), 23 CFR Part 650, Subpart C. As Consulting Engineer for the Greater New Orleans Expressway Commission (GNOEC), GEC is responsible for the NBIS inspection and load rating for all GNOEC owned bridges. Dr. Rebello has performed superstructure ratings for double-leaf steel Bascule Spans, prestressed concrete box girder spans, prestressed concrete monolithic girder and slab spans, and, composite steel girder and concrete deck spans on the GNOEC owned system. GEC has conducted the inspections in accordance with the NBIS, utilizing the AASHTO Manuals for Bridge Evaluation and Bridge Element Inspection and LADOTD *Pontis Inspection Manual requirements*.
07/15-Present	**H.004273.5, I-49 Connector: Lafayette Parish, LA.** *Structural Engineer*: This project includes bridge design and construction of a freeway with accompanying interchanges in the Evangeline Thruway US 90/US 167 corridor and flanking collector/distributor roads for local traffic

	circulation and land access. The project begins just south of the Lafayette Regional Airport and continues north to the I-10/US 167/I-49 interchange, a length of approximately five miles. Dr. Rebello performed grillage analyses to design three-span continuous steel tub girders as a viable alternative to other bridge span types.
04/13-Present	**H.011207 & H.011239, LA 1 Bridge, Leeville to Golden Meadow: Lafourche Parish, LA**. *Structural Engineer*: Dr. Rebello serves as a Structural Engineer as part of a team involved in the design of the widening of an existing bridge and the construction of a new bridge totaling 6,500 feet in length. The variably widened portion of the bridge consists of prestressed concrete Type III girder spans. The new bridge portions will be supported on special new Louisiana (LG) girders. Dr. Rebello performed the LRFR rating on the existing girders and pile bents to assess the structural feasibility for widening. Dr. Rebello was responsible for ensuring that all updated AASHTO and LADOTD specifications were incorporated into the design. Once the widening was deemed feasible, and all design completed, Dr. Rebello performed an as-designed rating on the entire structure.
06/12-Present	**H.003074, I-10 New Orleans, Williams to Veterans: New Orleans, LA**. *Structural Engineer*: Dr. Rebello was in charge of bridge load rating of existing bridges, bridge design management, and structural design for this complex project. Initial extensive load rating of the existing bridges done at GEC, resulted in LADOTD making an informed decision to replace the bridges. Dr. Rebello supervised the structural design of all components of the replacement bridges – deep foundations, bridge piers, and steel and pre-stressed concrete bridge superstructure. Design has also been performed on the replacement of portions of the concrete lining of Canal No. 3 that will be impacted by the new bridge design. Dr. Rebello supervised and performed superstructure and substructure load rating for existing bridges and ramps for this highly congested 2.58 mile urban interstate project. The extensive load rating and documentation provided to LADOTD allowed an informed decision to be made regarding widening or replacing the existing bridges. The data supported bridge replacement. Dr. Rebello, lead designer for the superstructure design, included composite pre-stress and steel girder span. All pre-stress girders were Louisiana (LG) girders designed in accordance with AASHTO LRFD bridge specifications.
04/19-Present	**Bluebonnet Blvd. (Perkins to Picardy): Baton Rouge, LA.** *Structural Design* - GEC is designing the widening of Bluebonnet Blvd. to include an additional lane in each direction. Dr. Rebello performed an investigation of the bridge over Dawson Creek to determine whether the bridge should be widened or replaced in accordance with Part 1, Chapter 6 of the LADOTD BDEM. This investigation will start with an in-depth investigation of the bridge superstructure and substructure. The inspection report will provide Condition Ratings for the superstructure, substructure, and piles. The Condition Ratings will be used in the performance of a bridge load rating based on the AASHTO Manual of Bridge Evaluation and the LADOTD BDEM. (City-Parish Project No. 19-CP-HC-0034)
07/09-06/12	**LAKE PONTCHARTRAIN, LA AND VICINITY, HURRICANE PROTECTION PROJECT LPV 17.2, BRIDGE ABUTMENT AND FLOODWALL TIE-INS AT CAUSEWAY BRIDGE: Jefferson Parish, LA.** *Structural QA* - Dr. Rebello performed bridge and structural design in the final phases of this project which included 1200 'of new NB and SB elevated bridge structures from 6th street to foot of existing bridge with 40-foot-high structure mounted light fixtures. Design consisted of slab spans & Type III PPC girder spans. Design also included a floodwall (T-wall) at existing levee crossing grade.
11/18-07/20	**I-10 SERVICE ROAD BRIDGES: Slidell, LA.** *Project Manager (Structural)* - This project includes the replacement of a 5 span 100 feet long concrete slab span bridge over Reine Canal and 5span 100 feet long slab span bridge with 30-degree skew over French Branch Canal. Dr. Rebello is the structural project manager for this project and oversaw the structural design, plan preparation and Q.C.

Firm employed by	**G.E.C., Inc.**				
Name	**Christopher Nipper, PE**		Years of experience with this firm/employer	**5**	
Title	Road Design Engineer		Years of experience with other firm(s)/employer(s)	**2**	
Degree(s) / Years / Specialization			B.S. / 2014 / Civil Engineering		
Active registration number / state / expiration date			43281 / Louisiana / 09-30-2023		
Year registered	2019	Discipline	Civil		
Contract role(s) / brief description of responsibilities			**Road Design**		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc.
7 years of experience	*Mr. Nipper has 7 years of experience with civil design projects, including roadway widening and realignment, including those requiring drainage systems. In addition, he has designed projects requiring milling and overlay. He has experience performing hydraulic analyses and preparing associated hydraulics reports for bridge and roadway design projects. Prior to joining GEC, Mr. Nipper worked with LADOTD for over two years, affording him knowledge of their standards and guidelines required for roadway projects. He is also very familiar with AASHTO standards and guidelines*
09/20-Present	**BLUEBONNET BLVD. (PERKINS TO PICARDY): Baton Rouge, LA.** Road Design Engineer - GEC is designing the widening of Bluebonnet Blvd. to include an additional lane in each direction. The project includes replacement of existing bridges at Dawson Creek. Mr. Nipper assisted in preparing the drainage map depicting existing conditions for the 9,730-acre drainage area. Mr. Nipper also developed the soil map for the drainage area and computed the curve number and associated flow through Dawson Creek.
02/19-05/19	**I-10 SERVICE ROAD BRIDGE REPLACEMENTS: Slidell, LA.** Road Design Engineer - The project included the replacement of two (2) slab span bridges. Mr. Nipper was responsible for the vertical alignment, proposed length of the bridges, placement of the new bridges, and guardrail design. Mr. Nipper designed the new roadway approaches to the new bridge and calculated all of the quantities and estimated construction costs for the project.
04/19-05/20	**CHEVELLE DRIVE AND SARASOTA DRIVE BRIDGE REPLACEMENTS: East Baton Rouge Parish, LA.** Design Engineer - Mr. Nipper provided all investigations, preliminary plans, and preparation of final construction contract plans for the replacement of the Chevelle Drive and Sarasota Drive Bridges in East Baton Rouge Parish. Mr. Nipper provided horizontal and vertical alignment and a hydraulic analysis.
06/17-05/19	**H.003074 / I-10 WIDENING, WILLIAMS BLVD. TO VETERANS BLVD.: Jefferson Parish, LA.** Engineer - This project included the addition of a lane to the existing interstate and the widening/replacement of bridges to accommodate the additional lane. Mr. Nipper was responsible for the hydraulic design of the proposed bridge decks, the westbound proposed bridge vertical curve, and for calculating elevations along the bridge bents and girders.
02/20-Present	**H.013897 / I-10 & I-12 COLLEGE DR. FLYOVER RAMP DESIGN-BUILD PROJECT: East Baton Rouge Parish, LA.** Roadway Design - This project involved the redesign of the I-10 WB/I-12 WB merger, and the College Dr. Off Ramp. The existing I-12 WB was realigned to run alongside the existing I-12 EB lanes, and the existing I-10 WB bridge over I-12 EB was raised, widened, and lengthened to provide room for the realigned I-12 WB lanes. Separate dedicated off ramps to College Dr. were provided from I-10 WB and I-12 WB. Mr.

	Nipper performed all of the geometric design for the project, and developed all of the roadway construction plans. Mr. Nipper was responsible for the hydraulic analysis and design for the entire project, and developed the hydraulic calculations and report. Mr. Nipper was also responsible for calculating quantities for all of the roadway and hydraulic portions of the project.

Firm employed by	**G.E.C., Inc.**				
Name	**Michael Chiasson, PE**		Years of experience with this firm/employer	**12**	
Title	Senior Electrical Engineer		Years of experience with other firm(s)/employer(s)	**33**	
Degree(s) / Years / Specialization			B.S. / 1973 / Electrical Engineering and Computer		
Active registration number / state / expiration date			17978 / Louisiana / 09-30-2022		
Year registered	1979	Discipline	Electrical		
Contract role(s) / brief description of responsibilities			**Electrical & Roadway Lighting**		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc.
45 years of experience	*Mr. Chiasson has over 36 years of experience in the design and development of process control and related systems. At GEC Mr. Chiasson has completed designs for several waste water lift stations and drainage pumping stations. At Dow Chemical, he was responsible for the preparation of plans and specifications (design and development) of process control engineering projects, from plans and specifications to final construction inspection. Other duties include reverse engineering the manufactured systems to understand how to modify the instruments for computer control and data collection. Calculations, field inspections, data collection, and report preparation were also parts of these projects. Mr. Chiasson is experienced with modeling, digital data filtering and simulation of control systems using tools in Excel and other 1st and 2nd order modeling techniques. He is also well versed in Fortran, Visual Basic, Microsoft Word, and Microsoft Excel.*
02/11-10/13	**440000688, H.005755 / ADVANCED WARNING SIGNS FOR MOVABLE BRIDGES, ORLEANS PARISH: Orleans Parish, LA.** *Electrical Engineer* - This project involved designing a bridge status gathering system which then drove DMS message signs to help redirect traffic flow around bridges which were not available due to the bridge opening being done. A total of 3 bridges were connected to the traffic information and 8 traffic display signs were used in this project.
01/11-12/15	**H.009323 / CAUSEWAY BASCULE BRIDGE CONTROL SYSTEM REPLACEMENT: Jefferson Parish, LA.** *Electrical Engineer* – Mr. Chiasson designed a replacement control system to allow operator control of the Bascule Bridge system on the Causeway bridge near the north shore. The project involved replacing the existing PLC control system which is no longer supported with a new modern PLC bridge control system. The Control system must retrain all mechanical interlocks as well as operating procedural interlocks. Many older components were replaced with more modern equivalents. The roadway lighting system was also replaced to make it meet current NEC requirements. Additionally, as part of this project a user manual was created for the operators. The user manual also includes diagnostic and repair procedures.
2011-2012	**GNOEC, EMERGENCY SPAN MOTORS: Mandeville, LA.** *Electrical Engineer*: Mr. Chiasson performed electrical design work for the lighting and controls system at the north bascule under the direction of the Engineer of Record. The project consisted of installation of 3hp 480VAC motors and additional reduction gears at each leaf of the North Channel Bascule bridge. The project also included modifications at the operator's house and surrounding areas, including relocation of roadway lighting on the bridge.
1976-2008	**H.011476 / I-10 ATCHAFALAYA EMERGENCY CROSSINGS: Ramah/Henderson, LA.** *Electrical Engineer* – Mr. Chiasson prepared Supplemental EA, Plans, Specifications & Estimates (PS&E) and CRES for remote operation/rehabilitation of barrier gates on

	emergency crossovers for elevated section of I-10 between Ramah and Henderson. This task included detailing the integration of additional crossover locations (at multiple LADOTD TMC locations) for providing LADOTD staff with status and control information concerning the gate system. Network design included connections to existing fiber optic backbone. Mr. Chiasson designed the control system and network.
09/09-12/15	**LPV 17.2, USACE, LAKE PONTCHARTRAIN, LA AND VICINITY HURRICANE PROTECTION PROJECT – BRIDGE ABUTMENT AND FLOODWALL TIE-INS AT CAUSEWAY BRIDGE: Jefferson Parish, LA.** *Electrical Designer*: Mr. Chiasson performed design assistance on this project and was specifically involved in the electrical and controls design (including roadway lighting) under the signing engineer. The project included 1800' of new elevated bridge structures from 6th St. to the foot of the existing bridge with 40' high structure mounted light fixtures.
2013-2018	**H.010440 / I-210 OVER CALCASIEU RIVER WEST OF I-10 INTERSTATE LIGHTING: Lake Charles, LA.** *Electrical Engineer*: Mr. Chiasson assisted with the design and continues to provide QC/QA services as needed. Project makeup consists of the following types of roadway lighting standards: 44 ground mount low mast, 54 structure mount low mast (bridge), 7 barrier mount low mast, 10 ground mount high mast, and 4 underpass. In addition, lighting control and power distribution and system protection is included. Services include feasibility study, design, development of plans and specifications, and CE&I as required.
01/13-02/17	**Almonaster Avenue Bridge and Approaches: New Orleans, LA.** *Electrical Engineer* - Mr. Chiasson was one of two signing engineers on this project and completed the initial Roadway Lighting Design. He also provided QC/QA services for the final design. GEC was responsible for design and construction services for the bridge and electrical systems. Project consisted of replacing the existing bridge with a rolling leaf bridge to support the roadway and railroad in accordance with all relevant standards.
01/12-07/16	**440000688, H.007276 / CCCD FERRY TRAVELER MESSAGE SIGNING: Orleans Parish, LA.** *Electrical Engineer* - The project involved designing a system to gather data from the Ferry boats AIS system and using the Longitude and Latitude to calculate an estimated time of arrival for the ferry at each dock. The system also included necessary network and control of over 15 Daktronics DMS sign which would display the respective ferry arrival as well as other pertinent information such as delays, river conditions and other information the New Orleans Crescent City Connection personnel wished to display. Besides the design, Mr. Chiasson also was involved in writing the Visual Studio Basic program to receive the Ferry AIS data and control the information each DMS sign was to display.

Firm employed by	**G.E.C., Inc.**				
Name	**Thomas Coerver Jr., PE**		Years of experience with this firm/employer	**31**	
Title	Senior Electrical Engineer		Years of experience with other firm(s)/employer(s)	**6**	
Degree(s) / Years / Specialization			B.S. / 1980 / Electrical Engineering M.B.A. / 1990 / Management Information Systems		
Active registration number / state / expiration date			30722 / Louisiana / 09-30-2023		
Year registered	2003	Discipline	Electrical and Computer		
Contract role(s) / brief description of responsibilities			**Electrical & Roadway Lighting**		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc.
37 years of experience	*Mr. Coerver has experience in engineering and planning for utilities distribution systems, automatic test systems, and navigation and flood control projects. He also has over 20 years of experience with computers using several operating systems for GIS design, implementation, and analysis; computer aided design and drafting; database design and analysis; and internet publishing. His most recent projects at GEC involved electrical power distribution systems, roadway and bridge lighting, fiber optic communication systems, and wireless and landline communication systems. Design duties include preparation of plans and specifications, Quality Control and Quality Assurance (QC/QA) review, calculations, data collection, and report preparation. Construction Engineering and Inspection (CE&I) duties include review of shop drawing and equipment submittals, respond to request for information, review/prepare as-built drawings, review payment applications, and perform periodic inspection and final system acceptance.*
02/20-Present	**H.013897 / I-10 & I-12 College Drive Flyover Ramp Design-Build: Baton Rouge, LA.** *Electrical Engineer* - Mr. Coerver has performed photometric and lighting layout design, sequence of construction, schedule analysis, and quality control review for the GEC/Boh Bros. team. GEC is responsible for engineering and design quality control services as necessary to complete the design and construction for the I-10 & I-12 College Dr Flyover Ramp Design-Build Project which consists generally of highway and bridge design and engineering services.
06/15-Present	**4400002746, H.010916 / PRIEN LAKE MAIN SPAN RE-DECK: Lake Charles, LA.** *Electrical Designer*: Mr. Coerver designed roadway lighting for this project under the signing engineer. Project limits include the I-210 Bridge over Prien Lake and the I-210 / Cove Lane Interchange. Project makeup consists of the following types of roadway lighting standards: 12 ground mount low mast and 50 barrier mount low mast. GEC provided design services under 2 Task Orders and will provide CE&I under a third. In addition, lighting control and power distribution and system protection is included.
01/13-02/17	**H.004698/H.007250 / ALMONASTER AVENUE BRIDGE AND APPROACHES:** Jefferson Parish, LA. *Electrical Designer*: Mr. Coerver designed roadway lighting for this project under the signing engineer. Project limits are from the east and west approaches for the bridge over the Industrial Canal (approximately .25 miles along Almonaster Ave.). GEC was responsible for design and construction services for the bridge and electrical systems. Project consisted of replacing the existing bridge with a rolling leaf bridge to support the roadway and railroad in accordance with all relevant standards.

2015	**H.009323 / CAUSEWAY BASCULE BRIDGE CONTROL SYSTEM REPLACEMENT:** Jefferson Parish, LA. *Electrical Engineer* - This project included reverse engineering of the existing bridge control system and implementing a complete new PLC project including specifying PLC logic and criteria for bridge control. During this project several NEC violations were corrected to bring the system up to standards. Additionally, several diagnostic routines were added to facilitate maintenance.
09/20-Present	**H.004100.5 / I-10: LA 415 TO ESSEN LANE ON I-10 AND I-12: West and East Baton Rouge Parishes, LA.** *Electrical Engineer:* Mr. Coerver completed a roadway and enhancement lighting study for Segment 1 of the project to incorporate roadway lighting along I-10 and interchanges, along with aesthetic lighting at the City Park Lake Bridge, frontage roads, major road underpasses, and to emphasize the Greenway path from the Expressway Park to the bridge. (03/21-Present)
1999-2004	**450-15-0089, 17th STREET CANAL TO CAUSEWAY: Metairie, LA.** *Electrical Engineer* - Projects limits are from 17th Street Canal to Causeway Blvd (approximately 2 miles along I-10). Project makeup consist of 120 ft. high mast poles, median lighting using individual lowering devices on 55 ft. poles, and conventional 40 ft. mounting height poles. In addition, lighting control and power distribution and system protection is included. Services include design, development of plans and specifications, and CE&I as required.
1991-Present	**GNOEC PREVENTATIVE MAINTENANCE: Jefferson and St Tammany Parishes, LA.** *Electrical Engineer* - GEC has an on-going retainer contract, begun in 1991, to serve as the Consulting Engineer for the Greater New Orleans Expressway Commission (GNOEC), Lake Pontchartrain Causeway, in accordance with the GNOEC General Bond Resolution. The GNOEC is responsible for constructing, maintaining, repairing and operating the 24-mile dual span bridge causeway and requisite approaches, across Lake Pontchartrain connecting Jefferson and St. Tammany Parishes. GEC has provided support to GNOEC Maintenance Forces and performed Preventative Maintenance on the systems located on the Lake Pontchartrain Causeway and associated facilities. Systems in need of maintenance include: High Voltage Electrical Transmission, Marine Radar, Variable Message Sign & Call Boxes, North Channel Bascule Control and Mechanical, Fiber Optic Communications and Computer Network, Phone, Automated Toll Collection and CCTV Surveillance Cameras.
06/17-Present	**H.003074 / I-10 WIDENING: WILLIAMS TO VETERANS BLVD.: New Orleans, LA.** *Electrical Designer* - Mr. Coerver was involved in roadway lighting design and provided QA/QC on this project. GEC Electrical is responsible for preparing a feasibility study for the lighting within the project limits that will be affected by the widening of the I-10 in this area. This includes a total length of 2 miles of widening and three interchanges, all of which will need revisions to the lighting systems as well as significant coordination with the FAA for the lighting design.
2010-2012	**LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY HURRICANE PROTECTION PROJECT LPV 17.2 BRIDGE ABUTMENT AND FLOODWALL TIE-INS AT CAUSEWAY BRIDGE: Metairie, LA.** *Electrical Engineer* - The project included 1800 feet of new northbound and southbound elevated bridge structures from 6th street to the foot of the existing bridge with 40-foot-high structure mounted light fixtures. The design also includes relocation of the 25kV electrical distribution equipment and the fiber optic communication system to a new vault building located on the protected side of the levee and routing new 25kV power cable and 144 strand fiber optic cable to tie-in to the existing cable across on the 24-mile bridge. Services include design, development of plans and specifications, and CE&I as required.

Firm employed by	**G.E.C., Inc.**				
Name	**Jeffrey Robinson, PE**			Years of experience with this employer	**27**
Title	Senior Vice President			Years of experience with other employer(s)	**11**
Degree(s) / Years / Specialization			B.S. / 1995 / Civil Engineering		
Active registration number / state / expiration date			29322 / Louisiana / 03-31-2023		
Year registered	2001	Discipline	Civil		
Contract role(s) / brief description of responsibilities			**Environmental Compliance and Permits** **SSPC C-5 Certification Completed 10/13/2021** **SSPC C-3 Certification Completed 04/10/2014**		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc.
38 years of experience	*Mr. Robinson has 38 years of civil / environmental engineering project management experience throughout the United States and provides planning, coordination, and consulting services for Federal and state regulatory compliance issues for numerous governmental and private sector clients. He is widely respected for his thorough and highly objective approach to environmental, hydrologic, transportation, and geotechnical issues as they relate to permitting, design, federal and state compliance, wetlands, hazardous materials, and other critical issues surrounding major infrastructure projects. His experience includes 20 years of successful permitting and compliance with the US Army Corps of Engineers, US Coast Guard, and Louisiana Dept. of Environmental Quality.*
06/19-Present	**LADOTD Retainer Contract #4400014315 – Painting Inspection and Environmental Monitoring with Construction Engineering and Inspection: Statewide, LA.** *Environmental Program Manager:* Mr. Robinson's responsibilities include administration, training, and support for environmental field personnel who monitor air quality for total suspended particulates (TSP-lead), observe and document compliance with hazardous waste storage, transportation, and disposal regulations, observe and document compliance with waste water collection, storage, and disposal requirements; evaluates monitoring data for compliance with contract specifications and prepares recurring environmental reports; provides Quality Assurance for contractors' worker protection plans and submittals; prepares Annual Hazardous Waste Reports (AHWR) for LADOTD submittal to LDEQ; assists LADOTD during post-project environmental audits conducted by LDEQ. Projects have included: • *H.003370 – I-220/I-20 Interchange IMP & BAFB Access, Bossier Parish* • *H.010000 – US 171: Calcasieu River Bridge Repairs (HBI), Calcasieu Parish*
2018	**I-49 CONNECTOR (LAFAYETTE REGIONAL AIRPORT TO I-10/I-49/US 167 INTERCHANGE), LADOTD: Lafayette, LA.** *Environmental Engineer*. Managed a process including environmental, legal, real estate, design, and planning representatives that develops effective screening, evaluation, design, and construction approaches for contaminated sites located within rights-of-way required for the I-49 Connector in Lafayette. He works closely with the Louisiana Department of Environmental Quality to expedite regulatory tasks and decision-making regarding contaminated sites, and manages retainer contracts for Phase II and Phase III Environmental Site Assessment (ESA) services. He ensures contaminated sites are not purchased unknowingly; discounts purchase prices for contaminated sites; encourages current owners to begin/complete remediation prior to DOTD acquisition; develops performance measures and construction methods for sites having use limitations/restrictions; and ensures legal protections are properly addressed and included in purchase documents.

2011-Present	**GREATER NEW ORLEANS EXPRESSWAY COMMISSION (GNOEC): New Orleans, LA.** *Environmental Engineer* – Mr. Robinson has prepared Programmatic and Categorical Exclusions (PEC/CE) for maintenance, repair, and improvement projects to the Lake Pontchartrain Causeway. All projects required coordination and permitting by U.S. Coast Guard. One project is currently in progress: H.011217 – Demolition of 9-Mile Turnaround. Seven completed projects include: H.010440 - North Toll Plaza Widening (2011); H.009322 - Piling Restoration/Transformer Platforms (2012); H.009323 - North Channel Bascule Control System (2012); H.005972 - 9-Mile Turnaround and Crossover No. 5 (2013); H.009325 - South Channel Fender Repairs and Structural Improvements (2014); H.011206 - High Voltage Cable Support Replacement (2014); and H.011231 - North Toll Plaza Scour Protection (2014).
2002-2009	**Louisiana TIMED Managers, Inc.** – Environmental Services Project Manager: Mr. Robinson was responsible for all environmental planning, permitting and design pursuant to the construction of 35 project segments comprising more than 260 miles of new highway construction addressed in DOTD's Transportation Infrastructure Model for Economic Development (TIMED) Program. The program required National Environmental Policy Act (NEPA) evaluations and processing necessary to procure federal and other environmental permits required for construction and included the following tasks: • American Society for Testing and Materials (ASTM) Standard E 1527 *Phase I Environmental Site Assessment Process* to identify more than 220 recognized environmental condition (REC) sites; ASTM E 1903 *Phase II Environmental Site Assessment Process* work plan development and execution for 190 REC sites; and LDEQ *Risk Evaluation/Corrective Action Program (RECAP)* and *Underground Storage Tank Closure/ Change in Service Guidance Document* evaluations of more than 100 sites; • Cultural resources investigations, assessment and impact mitigation with the State Historic Preservation Office; • Wetland delineations, permit applications and impact mitigation with three U.S. Army Corps of Engineers districts; • Bridge location selection, planning and permitting with the U.S. Coast Guard; • Scenic stream design and permitting with the Louisiana Department of Wildlife and Fisheries; and • Biological surveys, planning and design coordination with the U.S. Fish and Wildlife Service and the Louisiana Department of Wildlife and Fisheries to avoid and/or mitigate impacts to threatened and endangered species and sensitive habitats.
01/14-05/17	**H.004987 / U.S. HWY. 190 / COLLINS BOULEVARD WIDENING (US-190B – LA 25): Covington, LA.** *Environmental Project Manager:* Mr. Robinson's responsibilities included project management for the preparation of an Environmental Assessment (EA) with Finding of No Significant Impact (FONSI) for the widening of approximately three miles of U.S. Hwy 190 in Covington in accordance with DOTD, FWHA, and NEPA requirements, a project which will include the construction of new bridges across the Bogue Falaya River. GEC's services included the development of a Purpose and Need statement, agency coordination / Solicitation of Views, and the preparation of environmental documentation. Among other items, the EA addressed wetlands mitigation and permitting, Sections 4(f) and 6(f) consultations, floodplains, and threatened and endangered species consultations.

Firm employed by	**G.E.C., Inc.**			
Name	**Jonathan Puls, PE**		Years of experience with this employer	**15**
Title	Environmental Engineer		Years of experience with other employer(s)	**9**
Degree(s) / Years / Specialization	B.S. / 1999 / Civil Engineering B.S. / 2006 / Environmental Engineering M.S. / In Progress / Coastal Engineering			
Active registration number / state / expiration date	34739 / Louisiana / 09-30-2023			
Year registered	2009	Discipline	Civil	
Contract role(s) / brief description of responsibilities	**Environmental Compliance and Permits, Bridge Scour**			

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc.
24 years of experience	*Mr. Puls has more than 24 years of experience with civil, environmental, and coastal engineering projects. He has worked on a wide variety of projects ranging from ecosystem restoration, drought studies, permitting and compliance, non-point source runoff improvements, and construction management, including feasibility studies, environmental assessments, and environmental impact statements. He also has a background in natural stream design, cost estimating, risk analysis, incremental cost analysis, and network administration. He has worked with Corps Districts throughout the country including the New Orleans, San Francisco, and Jacksonville.*
2019-2021	**PHASE II BRIDGE SCOUR ANALYSES: Multiple Parishes, LA.** *Project Manager and H&H Modeler* – Mr. Puls served as project manager and H&H modeler while conducting Phase II Bridge Scour Analyses on 45 bridges within 23 Louisiana Parishes. For each bridge, Mr. Puls evaluated survey data, developed H&H models with HEC-HMS and HEC-RAS, developed and submitted draft and final Phase II Scour reports, and coordinated with BDI and LADOTD. Each Phase II Scour report included a summary of modeling methods and provided results and scour category recommendations, based on the LADOTD Hydraulics Manual. When necessary, Mr. Puls conducted site visits and coordinated with survey teams to obtain needed project data. Mr. Puls evaluated each bridge by developing watershed characteristics, calculating steady state peak discharges, and estimating scour potential for applicable design storms.
2017-2021	**THIRD PARTY EIS FOR THE MID-BARATARIA SEDIMENT DIVERSION (MBSD): Plaquemines Parish, LA.** *Environmental Engineer* - The Mid-Barataria Sediment Diversion will be the first major controlled sediment diversion reconnecting the Mississippi River with its delta. It is a cornerstone of Louisiana's Coast Master Plan and will provide sediment, water, and nutrients to the Barataria Basin in order to build land, maintain and sustain wetlands. Mr. Puls currently serves as an Environmental Engineer for the development of the Environmental Impact Statement (EIS), required by the National Environmental Policy Act (NEPA) to evaluate the impact on

	human environments for the project. As part of the EIS process, significant public engagement is occurring and the final EIS will clearly and transparently describe the environmental effect of the proposed Mid-Barataria Sediment Diversion.
2011-2017	**HOUMA NAVIGATION CANAL DEEPENING – SECTION 203 FEASIBILITY STUDY: Terrebonne Parish, LA.** *Project Manager/ Environmental Engineer* – Mr. Puls acted as Project Manager and Environmental Engineer on this Section 203 Navigation Study. Mr. Puls helped develop new quantities and a disposal plan for material to be dredged as part of the deepening of the Houma Navigation Canal. Mr. Puls also coordinated with the USACE along with Federal and State agencies to develop a combined Navigation Study and EIS and all pertinent requirements needed for USACE approval. This includes development of a Coordination Act Report, Biological Assessment, NEPA documentation, and all required permits. Mr. Puls was involved in all aspects of the project and coordinated with the USACE, CPRA, LADOTD and local sponsors to complete all applicable reviews, including ATR, IEPR, IPR, CostDX, and ASA(CW). In July 2018, the project received ASA(CW) acceptance and is currently under review with the U.S. Office of Management and Budget.

Firm employed by	**G.E.C., Inc.**			
Name	**Laura Carnes**		Years of experience with this employer	**15**
Title	Environmental Scientist / NEPA Specialist		Years of experience with other employer(s)	**3**
Degree(s) / Years / Specialization			B.S. / 1993 / Psychology M.S. / 2002 / Geography	
Active registration number / state / expiration date			N/A	
Year registered	N/A	Discipline	N/A	
Contract role(s) / brief description of responsibilities			**Environmental Compliance and Permits**	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc.
18 years of experience	*Ms. Carnes is an Environmental Scientist with more than 18 years of experience preparing Environmental Impact Statements (EISs) and Environmental Assessments (EAs) for Federal agencies including HUD, USACE, FERC, FEMA, US Forest Service, and FHWA-DOTD. Ms. Carnes' experience includes assessing environmental and socioeconomic impacts, assessing cumulative impacts, leading coordination with resource agencies, developing and analyzing alternatives, managing technical staff and subconsultants, reporting on scoping comments, and serving as technical writer and editor. Through the NEPA process, she has ensured project compliance with applicable laws, regulations, and executive orders for more than 30 projects, particularly as related to NEPA, ESA, E.O. 12898, Section 106 of the NHPA, E.O. 11990, and Section 404 of the Clean Water Act. Ms. Carnes is also experienced in Environmental Site Assessments and Section 404 permitting. Several examples of her NEPA expertise are provided in the project summaries below, two of which earned a Performance Rating of "Exceptional" from CEMVN project managers.*
2017-Present	**GNOEC, LAKE PONTCHARTRAIN CAUSEWAY: St Tammany and Jefferson Parishes, LA.** *NEPA Specialist* - Ms. Carnes serves as NEPA Specialist for improvements to the Causeway. She provides regulatory stakeholder solicitation, environmental field investigations and assessments, and National Environmental Policy Act (NEPA) documentation. Several projects have been documented as Categorical Exclusions (CE) since 2011. GEC documented these CE projects in accordance with the DOTD's Environmental of Standard Practice guidance regarding Stage 0 – Feasibility and Stage 1 – Planning/Environmental processes. GEC prepared preliminary Purpose and Need Statements, assessed alternatives, and identified potential environmental constraints using DOTD's Environmental Determination Checklist. GEC prepared and conducted regulatory Solicitations of Views, responses to regulatory comments/ guidance, conducted wetland delineations, prepared wetland/water body survey reports and Coastal Use Permit applications.
01/14-05/17	**U.S. HIGHWAY 190/COLLINS BOULEVARD WIDENING (US-190B – LA 25): Covington, LA.** *Environmental Scientist* - Ms. Carnes participated in the preparation of an Environmental Assessment (with Finding of No Significant Impact) and Line and Grade Study to widen approximately three miles of U.S. 190 in Covington, a project which will include the construction of new bridges across the

	Bogue Falaya River. Notably, the project proposed the elimination of all signalized intersections within the project corridor and replacement with roundabouts.
2006-2011	**HIGHLAND ROAD (LA 42) IMPROVEMENTS (PERKINS TO AIRLINE): Baton Rouge, LA.** *NEPA Specialist* - GEC conducted an Environmental Site Assessment (ESA) and a wetland delineation. The ESA was performed in accordance with the scope and limitations of ASTM E 1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. In order to characterize environmental conditions for the project GEC: (1) reviewed federal, state, and local environmental databases; (2) conducted historical research; (3) interviewed pertinent personnel; and (4) performed a site investigation. This assessment revealed no recognized environmental conditions (RECs) on or in the vicinity of this project.

Firm employed by	**G.E.C., Inc.**			
Name	**Richard "Barry" McCoy**		Years of experience with this firm/employer	**31**
Title	Wetlands Biologist		Years of experience with other firm(s)/employer(s)	**1**
Degree(s) / Years / Specialization		B.S. / 1989 / Wildlife Conservation		
Active registration number / state / expiration date		N/A		
Year registered	N/A	Discipline	N/A	
Contract role(s) / brief description of responsibilities		**On-Site Environmental Monitor** **SSPC C-5 Certification Completed 10/13/2021** **SSPC C-3 Certification Completed 04/10/2014**		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc.
32 years of experience	*Mr. McCoy has experience within the environmental resources field including wildlife hazard assessments, wetland delineations, threatened and endangered species surveys, Habitat Evaluation Procedures (HEP), preparation of numerous NEPA documents, environmental phase I site assessments (Phase I ESAs), and hazardous, toxic, and radioactive waste investigations. He has participated in a Basic Wetland Delineation class conducted by the Wetland Training Institute and a Wetland Plant Identification Workshop conducted by the Wetland Biogeochemistry Institute of Louisiana State University. He has also attended the Wetland Delineation Preparatory course for the Wetland Delineator Certification Program provided through the Wetland Training Institute. Other classes include a Habitat Evaluation Procedures Course, and a 40-Hour Waste Site Operations Course along with annual refresher courses. Having completed numerous projects as lead biologist and/or wetland scientist, Mr. McCoy will serve as Environmental Biologist on this contract, directing any necessary field work.*
10/21-Present	**LADOTD Retainer Contract #4400014315 – Painting Inspection and Environmental Monitoring with Construction Engineering and Inspection Statewide: S.P. No. H.003370 – I-220/I-20 Interchange IMP & BAFB Access, Bossier Parish, LA –** *On-Site Environmental Monitor:* Mr. McCoy collects pre-project soil samples; conducts air quality monitoring for TSP-Lead during construction; conducts visual assessments of contractor air emissions; observes contractor sample collection; ensures compliance with specifications during hazardous waste and waste water collection, storage, disposal/discharge; inspects contractor compliance with worker training and safety requirements; documents waste shipments and water discharges; files daily reports; collects post-project soil samples.
11/18-02/21	**I-10 SERVICE ROAD BRIDGE REPLACEMENTS: Slidell, LA.** *Wetland Scientist* - Mr. McCoy was the lead Wetland Scientist responsible for the wetland delineation within the proposed project area. Mr. McCoy oversaw the field efforts associated with the project and the preparation of the wetland delineation report. Mr. McCoy coordinated with the New Orleans District, Corps of Engineers to request a Preliminary Jurisdictional Determination and assisted in preparing the joint permit application for Louisiana Department of Natural Resources, Coastal Use Permit and the Corps of Engineers Wetland Permit.
04/19-12/21	**CHEVELLE DRIVE AND SARASOTA DRIVE BRIDGE REPLACEMENTS:** East **Baton Rouge Parish, LA.** *Wetland Scientist* - Mr. McCoy was responsible for conducting a wetland delineation, preparing a wetland report, and requesting a Preliminary Jurisdictional Determination from the New Orleans District, Corps of Engineers for both of the bridge replacement locations. Mr. McCoy also

	assisted in preparing the necessary Corps of Engineers permit applications for projected impacts to wetlands and other waters within the project area for both replacement projects. (Bridge Recall No(s). 800541 and 800561; City Parish Project No. 18-BRUS-0016)
2006-2011	**HIGHLAND ROAD (LA 42) IMPROVEMENTS (PERKINS TO AIRLINE): Baton Rouge, LA.** *Wetland Scientist* - For this Green Light Plan project, GEC designed additional lanes and a raised median for Highland Road from Perkins Road to Airline Highway. Mr. McCoy conducted a wetland delineation in accordance with Section D, Subsection 2 of Technical Report Y-87-1, Corps of Engineers Wetlands Delineation Manual as well as the Atlantic and Gulf Coastal Plains Regional Supplement. The results of the delineation were compiled in a formal report and submitted to the New Orleans District, Corps of Engineers for an approved Jurisdictional Determination. (2006-2011)
2011-Present	**GNOEC, LAKE PONTCHARTRAIN CAUSEWAY: St. Tammany and Jefferson Parishes, LA.** *Wetland Scientist* – Mr. McCoy serves as Wetlands Specialist for improvements to the Causeway. GEC prepares and conducts regulatory Solicitations of Views, prepares responses to regulatory comments/guidance, conducts wetland delineations, prepares wetland/water body survey reports and prepares Coastal Use Permit applications.
04/17-Present	**LA 66: BIG BAYOU SARA BRIDGE REHABILITATION: West Feliciana Parish, LA.** *Field Inspector* – Mr. McCoy was responsible for monitoring the nesting activities of cliff swallows under the bridge on a weekly basis while contractors were conducting rehabilitation tasks on the bridge. He was tasked with keeping records of active and inactive nests, number of birds present at the site, nesting activities, and behavior of the birds while construction activities were conducted. If construction activities disrupted the normal activities of the nesting cliff swallows, he was responsible for informing the contractor and suspending those tasks until nesting was complete. Weekly reports were submitted to U. S. Fish and Wildlife Service to provide a summary of the nesting activities.
01/02-12/10	**ENVIRONMENTAL SURVEYS AND PERMITTING, TRANSPORTATION INFRASTRUCTURE MODEL FOR ECONOMIC DEVELOPMENT (TIMED) PROGRAM (LTM, Louisiana): 250 Miles of Hwy, LA.** *Lead Field Biologist* – Mr. McCoy was the Lead Field Biologist responsible for the completion of wetland delineations; threatened and endangered species surveys; and the required permit applications necessary for construction of approximately 250 miles of proposed highway right-of-way required for the highway expansion. He was responsible for preparing findings reports and submitting these reports to the appropriate state and federal agencies for review and concurrence. Also he assisted other Environmental Scientists with Phase I Site Assessments within the right-of-way and Asbestos Inspections of structures impacted by the proposed construction.
2018	**Cleveland Street Bridge Replacement: Covington, LA.** *Biologist* - Mr. McCoy was responsible for conducting a wetland delineation at the project site and obtaining a jurisdictional determination from the New Orleans District, Corps of Engineers. He utilized this information to apply for a Section 10/404 Corps permit as well as a Louisiana Department of Wildlife and Fisheries, Natural and Scenic Rivers System permit.
01/14-05/17	**S.P. H.004987 / U.S. HWY. 190 / COLLINS BOULEVARD WIDENING (US-190B – LA 25): Covington, LA.** *Wetlands Specialist* – Mr. McCoy participated in the preparation of an Environmental Assessment (with Finding of No Significant Impact) and Line and Grade Study to widen approximately three miles of U.S. 190 in Covington, a project which will include the construction of new bridges across the Bogue Falaya River. Notably, the project proposed the elimination of all signalized intersections within the project corridor and replacement with roundabouts.

Firm employed by **GeoEngineers, Inc.**			
Name	**David P. Sauls, PE**	Years of relevant experience with this employer	26
Title	Senior Principal Geotechnical Engineer | QA/QC	Years of relevant experience with other employer(s)	10
Degree(s) / Years / Specialization		M.S. | 1984 | Civil Engineering B.S. | 1982 | Civil Engineering	
Active registration number / state / expiration date		Professional Engineer: Civil #23270 | LA | 03/31/2023	
Year registered	1989	Discipline	Civil
Contract role(s) / brief description of responsibilities		**Quality Assurance/Quality Control – Geotechnical Design**	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
David has more than 30 years of experience providing services on transportation-related projects and extensive experience working with the LA DOTD including the U.S. 165, Pollock to Tullos project and various timed projects for numerous private consultants. He has been the engineer of record in the production of many LA DOTD profile and laboratory data programs. David'srole in these projects required project supervision and quality control in the generation of the field data as well as laboratory testingassignments and techniques. David is aware of the budget and schedule requirements for LA DOTD-related activities and has metsuch conditions in the past. David currently serves as frequent guest speaker to the Louisiana State University civil engineering department and previously was an adjunct professor for the instruction of Civil Engineering 4300 Foundation Design. He is an active member with numerous technical and professional societies, both locally and statewide. He is an author and co-author of seven technical papers regarding the soil behavior and deformation characteristics of numerous geotechnical foundation studies. Relevant examples of transportation project experience include:	
07/19 - ongoing	**S.P. H.004932: LA DOTD, I-10/Loyola Interchange Design Build, Kenner, LA**—David is performing the geotechnical quality assurance during this design-build project that will increase traffic capacity and alleviate congestion on Loyola Drive at the I-10 interchange in the New Orleans area.
06/18 – 07/19	**Plank Road Relocation; City-Parish of East Baton Rouge, Baton Rouge, LA—**Performed geotechnical exploration and laboratory testing for the City of Baton Rouge. New runways at the Baton Rouge Metropolitan Airport necessitated the relocation of Plank Road. David provided bridge and **piling design** as well as pavement design recommendations based on geotechnical investigation results.
08/17 – 11/20	**S.P. H.009250: LA DOTD, I-10 Widening (Highland to LA-73) Design Build, OV/QA, Baton Rouge, LA:** David was the Managing Principal for GeoEngineers' OV/QA role in this highly-anticipated I-10 project that involves widening a 6.5-mile segment of I-10 from four lanes to six lanes between Highland Road and LA-73.
04/15 – 11/17	**S.P. H.004932: LA DOTD, US-90/LA-318 Interchange Design Build, Baton Rouge, LA:** David completed the quality assurance during this design-build project in support of the proposed Interchange on US90 at LA318. Our team completed the geotechnical design including drilling, log review, test assignments, pile design, settlement analysis, embankment monitoring, and embankment design. We also conducted extensive settlement modeling to demonstrate that the aggressive schedule for this project can be met along with modeling driving in the wave

	equation analyses (WEAP). During construction we conducted PDA/CAPWAP testing to keep the schedule progressing.
09/12 – 04/15	**S.P. H.010151: LA DOTD, I-210 at Cove Lane Interchange, Lake Charles, LA:** David completed the quality assurance during this fast-track design and construction project in support of the proposed Interchange on I-210 at Cove Lane. GeoEngineers' completed engineering analyses and provided recommendations for design and construction of about **8,000 driven pile** foundations, **MSE walls**, and **wick-drain/surcharge** design to reduce post-construction embankment **settlement**, in accordance with AASHTO LRFD specifications for highway bridges. In addition, the GeoEngineers' team monitored MSE wall construction, provided **PDA** evaluation of the piles during installation, and installed liquid **settlement sensors** to monitor embankment settlement.
01/10 – 12/12	**S.P. 454-02-0071: LA DOTD, I-12 Widening (Amite River to Juban Road) Design Build, Denham Springs, LA:** David was the Managing Principal for this design build project. GeoEngineers completed engineering analysesand provided recommendations for design and construction of driven pile foundations for four bridge structures in accordance with AASHTO LRFD specifications for highway bridges, which included PDA/CAPWAP monitoring**.**
09/09 – 07/11	**S.P. 424-04-0032: I-49/US90, LA85 Overpass; LADOTD and Design Build Team, Patoutville, Iberia Parish, LA:** David was the Managing Principal for the geotechnical engineering design support for the approximately $25 million, 1,900-foot interstate level overpass of two, two-lane bridges. This design includes **wick drains and surcharge** to accelerate the settlement of the 14-foot earthen approach embankment. We provided **pile design** for precast concrete piles to support the bridge bent foundation.

Firm employed by **GeoEngineers, Inc.**			
Name	**James M. Aronstein, Jr., PE**	Years of relevant experience with this employer	52
Title	Principal Geotechnical Engineer | Principal	Years of relevant experience with other employer(s)	5
Degree(s) / Years / Specialization		B.S. | 1965 | Civil Engineering	
Active registration number / state / expiration date		Professional Engineer: Civil and Environmental #11794 | LA | 3/31/23 Professional Land Surveyor: #458 | LA | 3/31/2023	
Year registered	1969	Discipline	Civil
Contract role(s) / brief description of responsibilities		**Principal-In-Charge – Geotechnical Design**	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
	James "Jim" Aronstein has provided geotechnical services on private, industrial, and public facilities since 1969, with extensive, significant expertise in the transportation industry. He has been the engineer of record for the majority of GeoEngineers' Louisiana road and bridge projects over the past 30 years, including LADOTD statewide retainer contracts for geotechnical investigations and project-specific programs. His projects include the I-210 at Cove Lane Interchange; I-49/US90 Widening over LA182 and BNSF Railroad Design-Build; 37-mile extension of I-49 North through Louisiana, I-220 to the Arkansas state line; Rigolets Pass Bridge project on US 90; numerous off-system bridge sites for LADOTD through local consultants; and work on the East Baton Rouge Parish Green Light roads and streets improvements plan. Jim's role has involved managing and executing engineering analyses and reports, field exploration, site access, drilling technology evaluation, exploration conduct, laboratory test assignments, and quality control of the generated work product.
01/19 - ongoing	**S.P. H.011670: LA DOTD, I-10/Loyola Interchange Design Build, Kenner, LA:** GeoEngineers is completing the geotechnical exploration, testing and engineering for this high-profile project in Kenner that will ultimately improve the Loyola Drive interchange to increase operational efficiency and traffic capacity. Jim is serving as Principal-in-Charge.
05/18 - ongoing	**S.P. H.003370: LA DOTD, I-20/I-220 (Barksdale AFB) Design Build, OV/QA, Bossier Parish, LA:** Jim is the Principal-in-Charge for GeoEngineers' OV/QA role in this design-build project which involves interchange improvements that will increase access to the Barksdale Air Force Base in Bossier Parish.
08/17 – 11/20	**S.P. H.009250: LA DOTD, I-10 Widening (Highland to LA-73) Design Build, OV/QA, Baton Rouge, LA:** Jim is the Principal-in-Charge for GeoEngineers' OV/QA role in this highly-anticipated I-10 project that involves widening a 6.5-mile segment of I-10 from four lanes to six lanes between Highland Road and LA-73.
04/15 – 11/17	**S.P. H.004932: LA DOTD, US-90/LA-318 Interchange Design Build, St. Mary Parish, LA:** Jim was the principal-in-charge during this design-build project in support of the proposed Interchange on US90 at LA318. GeoEngineers performed the geotechnical design including drilling, log review, test assignments, pile design, settlement analysis, embankment monitoring, and embankment design. We also conducted extensive settlement modeling to demonstrate that the aggressive schedule for this project can be met along with modeling driving in the wave equation analyses (WEAP). During construction we conducted PDA/CAPWAP

	testing to keep the schedule progressing.
02/13 – 04/13	**S.P. H.010620: LA DOTD, I-49/US90 Widening over LA182 and BNSF Railroad, Lafayette, LA:** A Louisiana DOTD widening project in preparation for upgrading US90 to I-49 from Albertson Road to Ambassador Caffery where Jim was the principal-in-charge in conducting **bridge and roadway borings**, and laboratory tests in support of design of this bridge and roadway widening project located just south of Lafayette. GeoEngineers completed **119 borings** for the project on a **fast-track schedule** utilizing multiple drill rigs to meet the deadline.
08/12 – 04/15	**S.P. H.010151: LA DOTD, I-210 at Cove Lane Interchange, Lake Charles, LA:** Jim was the principal-in-charge during this fast-track design and construction project in support of the proposed Interchange on I-210 atCove Lane. GeoEngineers' completed engineering analyses and provided recommendations for design and construction of about **8,000 driven pile** foundations, **MSE walls**, and **wick-drain/surcharge** design to reduce post-construction embankment **settlement**, in accordance with AASHTO LRFD specifications for highway bridges. In addition, the GeoEngineers' team monitored MSE wall construction, provided **PDA** evaluation of the piles during installation, and installed liquid **settlement sensors** to monitor embankment settlement.
01/10 – 12/12	**S.P. 454-02-0071: LA DOTD, I-12 Widening (Amite River to Juban Road) Design Build, Denham Springs, LA:** Jim was the principal-in-charge during this design build project. GeoEngineers completed engineering analysesand provided recommendations for design and construction of driven pile foundations for four bridge structures in accordance with AASHTO LRFD specifications for highway bridges, which included PDA/CAPWAP monitoring.
09/09 – 07/11	**S.P. 424-04-0032: LA DOTD, US90 at LA85 Interchange Design Build, Iberia Parish, LA:** Jim was the principal-in-charge during this design-build project in support of the proposed Interchange on US90 at LA85. GeoEngineers' completed engineering analyses and provided recommendations for design and construction of driven pile foundations in accordance with AASHTO LRFD specifications for highway bridges and PDA/CAPWAP monitoring. In addition, the GeoEngineers' team analyzed embankment settlement and provided design recommendations for wick drains and surcharge loading to reduce post construction settlement and prevent downdrag loads on the proposed adjacent bridge foundations.
04/07 – 04/09	**S.P. 700-09-0165: LA DOTD, I-49 North, Caddo Parish, LA:** A Louisiana DOTD Priority 1 Mega Project where Jim led the GeoEngineers' team in conducting bridge and roadway borings and laboratory tests before bridges are constructed and pavement is laid on the **36-mile northward extension** in Louisiana. GeoEngineers completed 166 borings for the project. At some sites, the team had to overcome the challenge of drilling exploratory borings at the same time LA DOTD cleared the area for construction, disturbing the site where samples are taken.

Firm employed by **GeoEngineers, Inc.**			
Name	**Larry D. Sant, PE**	Years of relevant experience with this employer	20
Title	Associate Geotechnical Engineer | Project Manager	Years of relevant experience with other employer(s)	2
Degree(s) / Years / Specialization		M.S. | 2001 | Civil Engineering B.S. | 2001 | Civil Engineering	
Active registration number / state / expiration date		Professional Engineer: Civil #35625 | LA | 9/30/2022	
Year registered	2010	Discipline	Civil
Contract role(s) / brief description of responsibilities		**Project Manager, Geotechnical Engineer (MPR 9)**	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
Larry Sant is a senior geotechnical engineer with over two decades of experience managing geotechnical engineering projects. His experience includes project planning and technical direction during exploration, laboratory testing, engineering design analyses, report preparation and construction monitoring. Larry has been involved in hundreds of projects including roadways ranging from highways to private access drives, airports, bridges, dams, university and K-12 schools, wastewater treatment plants, drainage facilities, utility projects, and other structures ranging from private residences to large public and private facilities. Representative bridge and roadway project experience includes the following.	
01/19 - ongoing	**S.P. H.011670: LA DOTD, I-10/Loyola Interchange Design Build, Kenner, LA:** GeoEngineers is completing the geotechnical exploration, testing and engineering for this high-profile project in Kenner that will ultimately improve the Loyola Drive interchange to increase operational efficiency and traffic capacity. Larry is serving as project manager.
05/18 - ongoing	**S.P. H.003370: LA DOTD, I-20/I-220 (Barksdale AFB) Design Build, OV/QA, Bossier Parish, LA:** Larry isthe project manager for GeoEngineers' OV/QA role in this design-build project which involves interchange improvements that will increase access to the Barksdale Air Force Base in Bossier Parish.
08/17 – 11/20	**S.P. H.009250: LA DOTD, I-10 Widening (Highland to LA-73) Design Build, OV/QA, Baton Rouge, LA:** Larry is the project manager for GeoEngineers' OV/QA role in this highly-anticipated I-10 project that involveswidening a 6.5-mile segment of I-10 from four lanes to six lanes between Highland Road and LA-73.
04/15 – 11/17	**S.P. H.004932: LA DOTD, US-90/LA-318 Interchange Design Build, St. Mary Parish, LA:** Larry was the project manager during this design-build project in support of the proposed Interchange on US90 at LA318. He lead the geotechnical design including drilling, log review, test assignments, pile design, settlement analysis, embankment monitoring, and embankment design. We also conducted extensive settlement modeling to demonstrate that the aggressive schedule for this project can be met along with modeling driving in the wave equation analyses (WEAP). During construction we conducted PDA/CAPWAP testing to keep the schedule progressing.
02/13 – 04/13	**S.P. H.010620: LA DOTD, I-49/US90 Widening over LA182 and BNSF Railroad, Lafayette, LA:** A Louisiana DOTD widening project in preparation for upgrading US90 to I-49 from Albertson Road to Ambassador Caffery

	where Larry was the project manager in conducting bridge and roadway borings, and laboratory tests in support of design of this design build widening project located just south of Lafayette. GeoEngineers completed 119 borings for the project on a fast-track schedule utilizing multiple drill rigs to meet the deadline.
08/12 – 07/15	**S.P. H.010151: LA DOTD, I-210 at Cove Lane Interchange, Lake Charles, LA:** Larry was the project manager during this fast-track design and construction project in support of the proposed Interchange on I-210 at Cove Lane. GeoEngineers' completed engineering analyses and provided recommendations for design and construction of about **8,000 driven pile foundations** including modeling driving in the wave equation analyses (WEAP), **MSE walls**, and **wick-drain/surcharge** design to reduce post-construction embankment settlement, inaccordance with AASHTO LRFD specifications for highway bridges. In addition, the GeoEngineers' team monitored MSE wall construction, provided **PDA/CAPWAP** evaluation of the piles during installation, and installed **liquid settlement sensors** to monitor embankment settlement.
01/10 – 12/12	**S.P. 454-02-0071: LA DOTD, I-12 Widening (Amite River to Juban Road) Design Build, Denham Springs, LA:** Larry was project manager during this design build project. GeoEngineers completed engineering analyses and provided recommendations for design and construction of driven pile foundations for four bridge structures in accordance with AASHTO LRFD specifications for highway bridges, which included PDA/CAPWAP monitoring**.**
09/09 – 07/11	**S.P. 424-04-0032: LA DOTD, US90 at LA85 Interchange Design Build, Iberia Parish, LA:** Larry was the project manager during a design-build project in support of the proposed Interchange on US90 at LA85. GeoEngineers' completed engineering analyses and provided recommendations for design and construction of driven pile foundations in accordance with AASHTO LRFD specifications for highway bridges and PDA/CAPWAP monitoring. In addition, the GeoEngineers' team analyzed embankment settlement and provided design recommendations for wick drains and surcharge loading to reduce post construction settlement and prevent downdrag loads on the proposed adjacent bridge foundations.
Certifications Louisiana Traffic Control Technician (The American Traffic Safety Services Association) Louisiana Traffic Control Supervisor (The American Traffic Safety Services Association) Louisiana Registered Flagger (The American Traffic Safety Services Association)	

Firm employed by			**Civil Design & Construction, Inc. (CD&C)**	
Name	Ralph Burgess, PLS		Years of relevant experience with this employer	11
Title	Principal Land Surveyor		Years of relevant experience with other employer(s)	12
Degree(s) / Years / Specialization			BS / 2004 / Industrial Design & Supervision, Southeastern LA University	
Active registration number / state / expiration date			5040 / Louisiana – September 30, 2022	
Year registered	2010	Discipline	Land Surveyor	
Contract role(s) / brief description of responsibilities.			Mr. Burgess serve as the Survey Manager for this project. He will work to oversee the project progress stays on schedule, aide in both crew coordination and office production, and provide final QC on the firms' deliverable to the Prime Consultant. Mr. Burgess has an extensive background in providing topographic surveys for LADOTD in accordance with Location and Survey policies and procedures. He has overseen projects utilizing traditional means and methods of collecting data as well as those that include the use of 3D Terrestrial Scanning.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
07/20 – 04/21	**H.001352.5 and H.002273.5 Comite River Diversion Bridge at LA 67, LA 19 and LA 19 Railroad Bridge, East Baton Rouge Parish**:Mr. Burgess was the Survey Manager for this project. CD&C as a sub-consultant on this project was responsible for topographic surveying the LA 67 and LA 19 sites of the Comite River Diversion project. This included merging of data from a previous survey on one portion of the site and field verifications of that data. The topographic data for this project was collected traditionally.
01/18-01/20	**H.004100 I-10: LA 415 to Essen Lane on I-10 and I-12, West and East Baton Rouge, LA**:Mr. Burgess was the surveying Manager for this project. CD&C as a sub-consultant on this project is responsible for topographic surveying the portion of I-10 in West Baton Rouge Parish beginning at the start of the project limits to a point just before the approach of the I-10 Bridge and the limits of the project along LA 415 including work on Tributaries of the Intercoastal Canal. This work included using 3D Scanning for the bridge at I-10 bridge @ LA 415 as well as scanning every 500' for control verification and incorporation of the Mobile Lidar for the I-10 pavement.
07/17-12/18	**H.010960.5-2, LA 30 Roundabout at Tanger I-10, Ascension Parish, LA**: Mr. Burgess served as Survey Manager for the project. Duties included meeting with LADOTD & Cardno, Inc for utility locations, coordination of crews and 3D terrestrial scanning crew along with office personnel, coordination. Special duties were merging of two state projects with project survey for final submittal to combine all projects together.
01/16-08/16	**H.005733.5 US 190 Superstreet, St. Tammany Parish, LA**: Mr. Burgess served as Survey Manager for the project. Duties included complete topographic survey and drainage map for this project including all utility coordination. The survey began at the intersection of US 190 and Holiday Square Frontage Road. From this point, the survey proceeded in a northerly direction along US 190 for approximately 2.9 miles to a point that is 700 feet South of Intersection of US 190 and E. Boston St. in Covington, LA. This project also included work in the Abita River and utilized 3D Terrestrial Scanning for the main route.

10/15-12/18	**H.003184.5 I-10 Texas State Line –East of Coone Gully, Calcasieu Parish, LA**: Mr. Burgess served as Survey Manager for the project. Duties included meeting with LADOTD, coordination of traditional crews and 3D terrestrial scanning crew, coordination of utility companies on the project, review and verification of drainage crossing I10, merging of existing topographic survey of bridges from LADOTD and final review of all survey data for submittals
08/16-12/17	**H.011235 I-49 South at Verot School Road, Lafayette, LA**: Mr. Burgess served as the Survey Manager for the project. Duties included meeting with LADOTD, and all consultants on the team, coordination of both traditional crews and 3D terrestrial scanning crew, coordination of survey crews with Cardno, Inc, utility locations on the project, met and review right of entry with landowners for project, review of drainage map, merging of existing topographic survey of the I-49 Connector project from LADOTD with current survey of project, review of apparent right of way mapping for prime consultant, and final review of all survey data.
07//14-10/15	**H.011088.5 I-110 North Street to Plank Road, EBR Parish, LA**: Mr. Burgess served as Survey Manager for the project. Duties included meeting with LADOTD, coordination of traditional crews and 3D terrestrial scanning crew, review and verification of drainage map, merging and final review of all survey data for submittals. Other special duties were coordinating with LADOTD District 61 for a rolling lane closure for location of drainage located in the interior of the project along the existing crash wall. Also, coordination with LADOTD Records and EBR City Parish regarding the research of all drainage structures that enter and leave the project area.
04/17-07/17	**H.010006.5-3 LA 58 Petit Caillou Bridge Rehabilitation (Sarah Bridge), Terrebonne Parish, LA**: Mr. Burgess served as Survey Manager on this project which included a complete topographic survey, utility coordination, channel cross-sections and the scanning of the existing vertical lift bridge for the design of its repairs/replacement. Project included data collection of the topography via traditional means and methods along with 3D terrestrial scanning and hydrographic surveying.
03/14-06/14	**H.008369 Cleo Road Roundabout, St. Tammany Parish, LA**: Mr. Burgess served as the project manager for the project. CD&C was responsible for the topographic survey that began approximately 2400 ft. NW of intersection of I-59 and US Hwy 1090 and ended approximately 1000 ft. NW of intersection of I-59 and US Hwy 1090. The survey also included 500 ft. of Cleo Road and 175 ft. of Avenue D.
05/13-07/13	**H.009288 LA 1 Railroad Bridge at DOW, West Baton Rouge, LA**: Survey Manager for this project located in West Baton Rouge Parish. The intent is to create a grade separation at the intersection of LA 1 and the R/R spur for DOW. CD&C is performing all of the topographic survey for this project including utility coordination and R/R coordination and permits so that CD&C can survey the spur and parallel line.
10/14-12/14	**H.011088.5 West Prien Lake, Lake Charles, LA**: Mr. Burgess served as the Survey Manager for this project. This project was to provide topographic survey for a new route to be constructed. Topographic survey and DTM was required along the proposed alignment including all utilities and all drainage with the survey limits.
02/14-03/17	**H.010620 I-49 Design Build**: Mr. Burgess managed and supervised all field work, utility coordination, and review of existing survey data for final topographic survey submittal. CD&C also produced ROW maps for the project. Mr. Burgess's duties for this portion also included title reports, review of property surveys and final submittal of final existing right of way plans.

Firm employed by	Civil Design & Construction, Inc. (CD&C)		
Name	Chris Ballard, PLS	Years of relevant experience with this employer	6
Title	Survey Project Manager	Years of relevant experience with other employer(s)	19
Degree(s) / Years / Specialization		BS / 2004 / Biological Science / Southeastern LA University	
Active registration number / state / expiration date		5033 / Louisiana – September 30, 2022	
Year registered	2010	Discipline	Land Surveyor
Contract role(s) / brief description of responsibilities.		Mr. Ballard serve as the Survey Project Manager for this project. He will work to oversee the project progress stays on schedule, aide in both crew coordination and office production, and provide final QC on the firms' deliverable to the Prime Consultant. Mr. Burgess has an extensive background in providing topographic surveys for LADOTD in accordance with Location and Survey policies and procedures. He has overseen projects utilizing traditional means and methods of collecting data as well as those that include the use of 3D Terrestrial Scanning.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
01/18-01/20	**H.004100 I-10: LA 415 to Essen Lane on I-10 and I-12, West and East Baton Rouge, LA**: Mr. Ballard is the Surveying Project Manager for this project. CD&C as a sub-consultant on this project is responsible for topographic surveying the portion of I-10 in West Baton Rouge Parish beginning at the start of the project limits to a point just before the approach of the I-10 Bridge and the limits of the project along LA 415 including work on Tributaries of the Intercoastal Canal. This work included using 3D Scanning for the bridge at I-10 bridge @ LA 415 as well as scanning every 500' for control verification and incorporation of the Mobile Lidar for the I-10 pavement.
04/17-07/17	**H.010006.5-3 LA 58 Petit Caillou Bridge Rehabilitation (Sarah Bridge), Terrebonne Parish, LA**: Mr. Ballard served as the firms Survey Project Manager on this project which included a complete topographic survey, utility coordination, channel cross sections, and the scanning of the existing vertical lift bridge for the design of its repairs/replacement. Project included data collection of the topography via traditional means and methods along with 3D terrestrial scanning and hydrographic surveying.
02/19-09/19	**Bridge Replacements in East Feliciana Parish, Rural East Feliciana Parish, LA**: Mr. Ballard is serving Survey Project Manager for this project for East Feliciana Parish Police Jury. It includes the replacement of 2 bridges which were damaged from flooding and the repairs to many rural roadways throughout the parish. These projects are being funded thru FEMA and all documentation has to be in accordance with FEMA's policies and procedures.

01/17-12/17	**East Baton Rouge Parish Bridges, East Baton Rouge Parish, LA:** In 2017, CD&C has performed topographic surveys for at least 4 Bridge Replacement Projects throughout East Baton Rouge Parish. Mr. Ballard served as Survey Project Manager on each of these projects which included cross-sectioning and tracing the channel at each location. These included bridges over Dawson Creek, Claycut Bayou, Copper Mill Bayou, and Cypress Bayou.
10/16 - 11/16	**H.012728.5 LA 443: Tangi River Bridge Replacement, Tangipahoa Parish, LA**: Mr. Ballard served as the Project Manager for this Project. Among the duties performed for the project were review of the crew work conditions, review & processing of the survey data, verification and review of final submittal. CD&C completed a topographic survey which included all utilities with depths, all drainage, all building information including finish floor elevations, and all super/substructure of the bridge over the Tangipahoa River. Additional information regarding the river was located by traditional means upstream and downstream for the engineer's design of the new bridge. To utilize data collection of the failed bridge, **3D Terrestrial Scanning** was incorporated in conjunction with traditional means to complete the topographic survey. Due to the nature of the project being an Emergency Bridge replacement all staff worked on this project non-stop until field work was completed in less than 3 weeks.
09/17 - 12/17	**H.012650.5-1 District62 Bridges, Livingston and Tangipahoa Parishes, LA**: Mr. Ballard served as a Survey Project Manager for this project which included 5 bridge sites in District 62. In addition to all of the existing data for the bridge and roadway at each site, each channel was cross-sectioned both upstream and downstream of the bridge. These included bridges over the US 190 Bridge over Gray's creek, 2 bridges on LA 442 both crossing East Hog Branch, LA 1063 over the Natalbany River, and US 51 over Ponchatoula Creek. Several of these bridges including the US190 one was surveyed utilizing **3D Terrestrial Scanning**.
10/15 - 12/18	**H.003184.5 I-10 Texas State Line – East of Coone Gully, Calcasieu Parish, LA**: Mr. Ballard served as the Survey Project Manager on this project which is a 6-lane widening of I-10. Duties performed on this project included the review of the survey information from crew, verification of project delivery schedule, processing of data and final review of submittal of project. 3D Terrestrial Scanning was used in conjunction with traditional means and methods for the completion of this project.
01/16 - 08/16	H**.005733.5 US 190 Superstreet, St. Tammany Parish, LA**: Mr. Ballard served as the Survey Project Manager on this project. CD&C provided a complete topo survey & drainage map along with utility coordination for the project. Project duties included **processing** of data, review of field notes and weeklies, & performing final punch list. This project also included work in the Abita River utilized **3D Terrestrial Scanning** for the main route.
10/15 - 01/16	**H.011773 Hanks Dr/Landis Drive Pedestrian Improvements, East Baton Rouge Parish, LA**: Mr. Ballard served as the Survey Project Manager on this project that included a topographic survey and establishment of the ROW for Hanks Dr. for installation of new sidewalk.
06/11 - 09/13	**260-01-0028, H.002372 LA 42 Widening and Improvements, Ascension Parish, LA**: Mr. Ballard worked as a PLS on this project which included boundary and topography, establishing the existing ROW and acquisition of additional ROW.
07/17 - 12/18	**H.010960.5-2, LA 30 Roundabout at Tanger I-10, Ascension Parish, LA**: Mr. Ballard served as the Survey Project Manager on this project that includes a complete topo survey, utility coordination and drainage, along with finish floor elevations of all buildings that fall within the survey limits. Project included data collection of the topography via traditional means and methods along with **3D terrestrial scanning.**

Firm employed by **Wiss, Janney, Elstner Associates, Inc.**				
Name	Jonathan C. McGormley, PE		Years of relevant experience with this employer	28
Title	Principal		Years of relevant experience with other employer(s)	1
Degree(s) / Years / Specialization			BS, 1992, Civil Engineering, University of Cincinnati MS, 1994, Civil Engineering, Purdue University	
Active registration number / state / expiration date			***In addition to LA, Mr. McGormley is licensed in 7 other states and is a licensed Structural Engineer in IL.***	
Year registered	2019	Discipline	**PE LA,** License No. 43912 / expires 3/31/2024	
			NBIS Certified Team Leader and Program Manager	
			NHI 130078 - Fracture Critical Inspection Techniques of Steel Bridges	
			NHI 130055 - Safety Inspection of In-Service Bridges (& Refresher 130053)	
			ATSSA Traffic Control Technician Training/ TC Supervisor Training	
Contract role(s) / brief description of responsibilities			**Bridge Inspections & Repair Design**	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
07/19–ongoing	**Danziger Lift Span Bridge, US 90, over the Industrial Canal, New Orleans, LA:** Project Manager responsible for overseeing the inspection of portions of the lift span contributing to reported operational issues, an in-depth inspection of the lift bridge machinery and electrical systems, and development of repairs to restore the bridge's long-term functionality and reliability. Oversaw the development of a unique monitoring and sensor installation plan, the installation of instrumentation and monitoring equipment, and the creation of a web-accessible reporting platform to evaluate the bridge's operations over an extended period. Assisted with development of plans and specifications to address emergency repairs including the installation of polyester polymer concrete lift span orthotropic deck overlay repairs, replacement of failed pinion bearings, elimination of lift span-to-approach span contact issues, and the improvement of the lift span seating by counterweight movements and air buffer repairs. Bridge monitoring is ongoing.
05/19–08/19; 08/20–ongoing	**I-255 Jefferson Barracks Bridge over the Mississippi River, Emergency Repairs, Mehlville, MO:** Project Manager responsible for emergency repairs and subsequent rehabilitation repair design. Following the discovery of a six-foot-long crack in the steel tie girder during a fracture critical inspection, performed an in-depth inspection of similar details, obtained material samples for laboratory testing, coordinated emergency repairs, oversaw repair installation, and prepared investigation report. Completed bridge rehabilitation plans for the twin, tied-arch structures with construction ongoing.
03/21–ongoing	**Luling Bridge Deck Overlay Repair Consultation, St. Charles Parish, LA:** Project Manager responsible for revising the project specifications and providing quality control assistance for the repair of an orthotropic deck overlay system comprising and epoxy underlayment with a SFRC overlay on the cable-stayed spans. Installed a long-term monitoring system to evaluate the performance of the overlay repairs.

02/19–ongoing	**US 90 over Bayou Ramos, St. Mary Parish, LA:** Project Manager leading the investigation of delayed end cracking of precast, prestressed concrete (PPC) girders. The project includes the evaluation of previously collected monitoring data, development of a detailed finite element model to examine crack initiation and repair options, inspection of existing retrofits, laboratory testing of CFRP repairs, and development of a trial retrofit program.
09/21–ongoing	**I-10/310 Bonnet Carré Fire Damage Repair, St. Charles Parish, LA:** Project Manager overseeing the emergency inspection and load rating of the PPC girders, substructures, and bridge deck damaged by fire. Developed repair scope of work and estimated probable construction costs. Preparation of repair drawings and specifications ongoing.
12/21-ongoing	**Jefferson St. Bascule Bridge Rehabilitation, Joliet, IL:** Project Manager overseeing the rehabilitation of structural, mechanical, and electrical components of this rolling Scherzer lift bridge. Inspection and design work ongoing.
02/19–07/19	**Lake Shore Drive Bridge over the Chicago River, Girder Fracture Investigation, Chicago, IL:** Project Manager leading the investigation, stabilization, and repair installation after the bridge experienced two girder fractures related to corrosion.
10/18–01/19	**Sunshine Bridge over the Mississippi River, St. James Parish, LA:** Project Manager responsible for the development and implementation of a monitoring plan to provide information regarding redistribution of loads during the installation of repairs to the truss bottom compression chord damaged by impact. Responsible for the design of the jacking system, review of member repair design, site observations, preparation of shop and jacking procedure drawings, field technical assistance, and chord jacking operations oversight.
03/15–06/17	**IH-345 Inspection, Analysis, and Retrofit Design, Dallas, TX:** Project Manager for a fracture critical inspection of the 1.6-mile-long steel two-girder structure connecting I-35, I-45, and US 75 with local city streets, visual examination of substructure elements, and a visual and exploratory study of the PT deck. Oversaw instrumentation and field load testing for finite element method model calibration and trial retrofit installations. Developed fatigue retrofit contract documents and provided on-site construction observation and technical support throughout construction.
03/14–12/14	**S. Halsted Street over the Little Calumet River, Chicago, IL:** Project advisor performing QA/QC for load ratings and gusset plate rehabilitation design to address live load rating concerns for this steel truss bridge.
09/13–09/13	**Grand Avenue Bascule Bridge, Chicago, IL:** Project Engineer for gusset plate condition assessment, load ratings, and preliminary retrofit development for members of this double leaf bascule bridge with inadequate live load capacity.
04/10–04/11	**Hylebos Bridge, Tacoma, WA:** Project Engineer conducting the visual inspection of the double-leaf bascule bridge in preparation for its rehabilitation.
02/10–08/10	**Scherzer Rolling Lift Bridges, Joliet, IL:** Project Manager for fracture critical inspections, gusset plate load rating, and repair recommendations of three lift bridges over the Illinois River.
03/08–06/09	**I-5 Columbia River Bridge, Portland, OR:** Project Engineer for span balance and counterweight adjustments of lift span bridge. Documented number and location of concrete blocks, cored counterweights to determine voids, oversaw instrumentation of operating rope turnbuckles and pinion shafts, inspected bearings and guide rollers.

Firm employed by **Wiss, Janney, Elstner Associates, Inc.**					
Name	John R. Williams, PE			Years of relevant experience with this employer	3
Title	Supervisor			Years of relevant experience with other employer(s)	23
Degree(s) / Years / Specialization			BS /Engineering Science / The Pennsylvania State University / 1996		
Active registration number / state / expiration date			***In addition to LA, Mr. Williams is licensed in 13 other states and 5 Canadian Provinces.***		
Year registered	2020	Discipline	**PE LA**, License No.: PE.0044300 / expires 09/30/2022		
Contract role(s) / brief description of responsibilities			**Movable Bridges Mechanical Design**		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
07/19–ongoing	**Danziger Lift Span Bridge, US 90, over the Industrial Canal, New Orleans, LA:** Senior Mechanical Engineer for the inspection of portions of the lift span contributing to reported operational issues, an in-depth inspection of the lift bridge machinery systems, and development of repairs to restore the bridge's long-term functionality and reliability. Assisted with the development of a unique monitoring and sensor installation plan, the installation of instrumentation and monitoring equipment, and the creation of a web-accessible reporting platform to evaluate the bridge's operations over an extended period. Lead the development of plans and specifications to address emergency failed pinion bearing repairs. Performed strain gage testing to measure span balance, implemented weight changes and air buffer repairs to improve seating of the span, and determined through testing that the span drive differentials on both towers were not functioning properly, requiring work with the manufacturer to properly adjust the associated clutches.
08/15–ongoing	**3rd Street Bascule Bridge over Islais Creek, San Francisco, CA:** Project Manager and Lead Mechanical Engineer for the design of a replacement bridge that included new span operating machinery, new span support machinery for the new leaf to be supported by the existing substructure and development of complex construction staging to address constraints for the number and duration of outages for MUNI light rail services. The project started with a detailed scoping inspection including a rating assessment of the structure, mechanical, and electrical systems that identified critical deficiencies leading to the decision to replace the bascule span superstructure in its entirety.
07/20–1/20	**St. Claude Avenue Bridge Construction Engineering Services, New Orleans, LA:** Project Manager and Senior Mechanical Engineer for construction engineering services on an expedited basis to assist with the replacement of the second link pins which connect the counterweight truss to the balance link. Services included balance testing, design of the counterweight support system, development of a sequence of work for supporting the structure, unloading and removing the pins, completing the repairs and restoring the bridge to service within a marine navigation closure that was controlled by repairs to the adjacent lock. Mechanical engineering services were provided on an expedited basis due to the short time-period between the award of the project and the start of the marine navigation closure.

10/14–07/19	**St. Peters Canal Swing Bridge Replacement, Cape Breton, NS, Canada:** Project Manager and Engineer of Record overseeing the mechanical and hydraulic machinery design for this new hydraulically operated center bearing swing bridge. Responsibilities included design and backchecking of design calculations, plans preparation and detailing, and preparation of contract specifications and construction cost estimates during design. Responsibilities during construction included coordination of a team of mechanical and electrical engineers and inspectors to review and approve construction submittals and provide complete shop and field inspection of all mechanical/electrical aspects of the rehabilitation project.
08/08–08/18	**Columbus Road Lift Bridge, Cleveland, OH:** Senior Mechanical Engineer for the rehabilitation project with the objective to maintain the historic character of the structure while significantly reducing maintenance requirements and improving overall system efficiency. A scoping inspection of the mechanical machinery determined suitability for continued long-term service and compliance with current AASHTO code requirements. The new mechanical design provides for complete replacement of all span support machinery, span drive machinery, and span locks.
07/14–02/18	**Burlington Canal Lift Bridge, Hamilton, ON, Canada:** Movable Bridge Construction Specialist and Heavy Machinery Specialist for the contractor as part of a major electrical and minor mechanical rehabilitation of this critical vertical lift bridge. The electrical scope of work included complete replacement of the electrical power and control systems for the bridge including an aerial cable installation and skew control of the lift span. The mechanical scope of work included replacement of the high-speed end of the span drive machinery (brakes, speed reducer, shaft, and couplings). The scope of work required the contractor's engineer to sign and seal all submittals including shop drawings.
03/10–11/17	**Sir Ambrose Shea Lift Bridge Replacement, Placentia, NL, Canada:** Project Manager and Mechanical Engineer of Record responsible for the design of span drive machinery, span lock machinery and span support machinery for a new tower drive lift bridge. Duties included preparation and review of all relevant calculations (sized motor, gear tooth strength calculations, sized brakes, shaft calculations for moment and torsion, sized couplings, designed machinery base plates, sized span lock bars, sized span lock and lockbar actuator, performed fatigue analysis of trunnion shaft, and sized trunnion bearings), and preparation of design drawings, specifications, and cost estimates as part of design. During construction, responsibilities included review of contractor's shop drawings and procedures for conformance to contract requirements, disposition of non-conformance reports, and responding to requests for information or changes.
02/04–11/13	**Mystic Bridge Rehabilitation, Connecticut DOT, Groton, CT:** Project Manager and Senior Mechanical Engineer for the rehabilitation of the historic single leaf, mechanically operated Brown bascule bridge. The mechanical design included upgrades to the capacity of the span drive machinery and design of a custom vehicular safety barrier gate to rise out of the roadway to protect errant vehicles from entering the waterway with the bridge raised yet remain visually unobtrusive with the bridge seated and open to vehicular traffic. Responsibilities included design and backchecking of design calculations, plans preparation and detailing, and preparation of contract specifications and construction cost estimates.

Firm employed by **Wiss, Janney, Elstner Associates, Inc.**					
Name	Gareth T. Rees, PE			Years of relevant experience with this employer	3
Title	Principal			Years of relevant experience with other employer(s)	51
Degree(s) / Years / Specialization			College Associateship Electrical Engineering (Bsc electrical equivalent) / 1968 / Polytechnic of Wales (now University of South Wales).		
Active registration number / state / expiration date			***In addition to LA, Mr. Rees is a licensed P.E. in 17 other states, the UK, and 6 Canadian Provinces.***		
Year registered		Discipline	PE LA, License No.: PE.0040754 / expires 09/30/2022		
Contract role(s) / brief description of responsibilities			**Lead Electrical Engineer (MPR 6)**		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
07/19–ongoing	**Danziger Lift Bridge - New Orleans, LA:** Lead Electrical Engineer for the inspection of relevant portions of the main lift span contributing to reported operational issues, an in-depth inspection of the lift bridge machinery and electrical systems, and development of repairs to restore the long-term functionality and reliability of the bridge. Prepared a new lift span skew control system design after the existing Selsyn components were removed from the bridge, developed electrical controls for the clutches with the span drive differentials, and provided recommendations for rehabilitation of the bridge.
08/15–ongoing	**3rd Street Bascule Bridge over Islais Creek, San Francisco, CA:** Senior Electrical Engineer for the design of a replacement bridge that included the design of new electrical power and control systems to be integrated with the MUNI light rail traction power and signal system.
03/20–12/20	**Skew Detection System Replacement on Vertical Lift Bridges, LA:** Principal Investigator to review alternatives for skew control, monitoring, and indication for tower drive vertical lift bridges based on effective management of skew and minimizing advanced electronic equipment. The study included a literature review, interviews with current owners and maintainers of vertical lift bridges, and interviews with industry control specialists experienced in skew control systems. As a result of the study, a preferred system of skew control that combines the use of direct skew measurement with an inclinometer for skew monitoring and trip indication, and indirect measurement of skew using encoders for controlling skew during operation was recommended. To minimize maintenance, mean-time-to-repair, and to limit dependency on PLC systems, it was recommended that control integration be achieved using SMART relays (that contain self-diagnostics) that may easily be replaced in the event of an issue.
03/18–02/20	**Charles Berry (Erie Ave) - Lorain 6 Bascule Bridge Rehabilitation, Lorain, OH:** Movable Bridge Project Coordinator for the rehabilitation of the operating and support systems for this historic double leaf deck truss bascule bridge including complete replacement of the drive machinery and electrical power and controls control systems. Services included review, coordination and integration of the mechanical, electrical, and structural systems, review of all shop drawings for fit-up and constructability; shop inspection of critical components; field oversight during construction for critical assemblies;

	verification of final alignment of machinery; shop and field acceptance testing of the electrical system installation, commissioning of the installed operating systems, strain gage operational testing and power recordings to confirm satisfactory performance of the newly installed systems, and development of the Operations and Maintenance Manual.
04/13–10/19	**Fort Madison Toll Bridge, Fort Madison, IA:** Engineer of Record and Project Manager for the rehabilitation of this double decker swing span bridge. The first phase was the design of a new aerial and submarine power cable installation, the new installation to be configured as redundant power sources. The design of the submarine cable installation included surveying of the existing submarine cable, routing of the new cable, and designing and specifying the cable. The work also included excavation requirements and developing an approved trenching system. The design and contract documents were developed based on staged construction to satisfy marine, railroad, and highway operations as well as Coast Guard and emergency services with respect to bridge operating outages. Construction services were also performed.
03/10–11/17	**Sir Ambrose Shea Lift Bridge, Placentia, NL, Canada:** Engineer of Record for the design of a replacement tower drive vertical lift bridge with two duty motors and brakes in each tower and two sets of span locks. The bridge operator's control house is located at roadway level and remote from the bridge with CCTV surveillance and fiber optic communications to the towers. The PCL-based control system was designed with Hot standby redundant PLC's, a human machine interface (HMI), and control console and a redundant fiber optic communications transmission backbone. The electric services are distributed to state-of-the-art intelligent MCC's in each of the bridge towers and have internal communications capabilities and interface directly with the bridge control system PLC for bridge operation, drive monitoring, and data acquisition.
06/14–06/16	**East Roundbunch Road over Cow Bayou, Orange County, TX:** Lead Electrical Engineer responsible for designing new drives, controls, and field devices for the span drive machinery and the end wedge machinery as part of a rehabilitation of this historic structure to provide long-term reliable service. Span drive machinery was comprised of components with a proven history of utilization on movable bridges and was powered by an electric motor. Design and integration of new traffic control features, bridge and maintenance lighting, and a CCTV system were also included.
01/14–12/14	**Haystack Bascule Bridge over Petaluma River, Petaluma, CA:** Engineer of Record and Lead Electrical Engineer for the relocation, rehabilitation, and reassembly of a single leaf rolling lift bascule railroad bridge. The designed bridge electrical systems consist of modern PLC logic control and flux vector variable frequency drives. The electric service and standby generator for bridge back-up power are located on one side of the navigable channel with the bridge operating system on the other. An under-channel installation was developed to connect the electric service equipment and associated communications to the bridge operating system. The system design included communications, fire life safety system design as well as the integration of the bridge operating system with the railroad train control.
10/10–02/12	**Port Severn Swing Bridge 60 Rehabilitation, Port Severn, ON, Canada:** Lead Electrical Engineer for a bridge inspection, condition survey, engineering analysis and preparation of plans, specifications, and cost estimate.

Firm employed by **Wiss, Janney, Elstner Associates, Inc.**				
Name	Steven L. Lauer, PE		Years of relevant experience with this employer	11
Title	Supervisor-Other		Years of relevant experience with other employer(s)	
Degree(s) / Years / Specialization			BS, 2009, Civil Engineering, Purdue University MS, 2010, Civil Engineering, Purdue University	
Active registration number / state / expiration date				
Year registered	2015	Discipline	PE IL, License No.: 062-068057 / expires 11/30/2023	
Year registered	2016	Discipline	SE IL, License No.: 081-007838 / expires 11/30/2022	
			NBIS Certified Team Leader/Program Manager	
			NHI 130078 - Fracture Critical Inspection Techniques of Steel Bridges	
			NHI 130055 - Safety Inspection of In-Service Bridges (& Refresher 130053)	
			Society of Professional Rope Technicians/ Level I	
			Transportation Worker Identification Credential (TWIC)	
			Indiana Bridge Load Rating Engineer, IN000551-2022-ATL-F-LRE	
Contract role(s) / brief description of responsibilities			**Bridge Inspections**	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
07/19–ongoing	**Danziger Lift Span Bridge, US 90, over the Industrial Canal, New Orleans, LA:** Project Engineer assisting in the development of a unique monitoring and sensor installation plan, the installation of instrumentation and monitoring equipment, and the creation of a web-accessible reporting platform to evaluate the bridge's operations over time. The monitoring was designed to assess bridge span lift operations and included laser distance devices, linear potentiometers, strain gages, temperature measurements, ultrasonic distance measurements, and Wi-Fi cameras.
02/22–ongoing	**Luling Bridge Deck Overlay Repair Consultation, St. Charles Parish, LA:** Project Engineer assisting with the development of a long-term monitoring system to evaluate the performance of the repairs the orthotropic deck overlay system comprising and epoxy underlayment with a SFRC overlay on the cable-stayed spans.
01/21-ongoing	**Washington Ave Bridge over the Mississippi River, Minneapolis, MN:** Project Engineer responsible for finite element modeling of the bridge structure, load rating, and the design and installation of the instrumentation system capable of recording strain, displacement, rotation, and temperature. Various scan rates record structure behavior during daily and long-term thermal cycles and live load events. The double-deck bridge has a pedestrian level, and the vehicular level was retrofitted to include light rail transit by adding trusses between the original girders and now has bearing seat distress.
08/21-ongoing	**Blackhawk Bridge carrying Iowa 9 over the Mississippi River, Lansing, IA:** Project Manager responsible for the wireless pier monitoring instrumentation system. Data is remotely accessed and presented on a website for the owner. This work

	followed our routine, in-depth, element-level, fracture critical, inspections that included ultrasonic testing (UT) of pins for the three truss spans and approach spans. An inspection report and repair recommendations were developed.
06/21-04/22	**SR 62 over Pigeon Creek, Evansville, IN:** Project Engineer responsible for bearing pad inspection and corresponding instrumentation system designed to aid in determining the cause of walking elastomeric bearings.
10/19–11/21	**Sherman Minton Bridge - I-64 over the Ohio River, New Albany, IN:** Project Engineer for instrumentation and monitoring, crack arrest hole retrofit installation, and Team Leader of fracture critical and routine inspections of truss members using rope-access and structure climbing techniques of the double-deck bridge having tied arch trusses as the main spans and an approach span combination of deck/through trusses.
05/21–10/21	**I-40 Hernando Desoto Bridge, Emergency Repairs, Memphis, TN:** Project Engineer assisting the contractor in the tie girder fracture repairs for the I-40 Bridge, which was closed due to a partial section fracture. Installed emergency instrumentation utilizing rope-access techniques, mobilizing personnel and equipment to have a working web-accessible system with over 25 sensors functional in a week. Participated in the development of measurement and reporting procedures to be used during tensioning and de-tensioning of the temporary jacking system used for the tie girder repairs.
06/21	**I-294 under St. Charles Road, Berkley, IL:** Project Manager for the evaluation of steel multi-beam structure directly exposed to vehicular fire to determine its fitness to return to service. Performed limited inspection, field hardness testing, and steel core extraction for benchtop hardness testing at WJE's Northbrook, IL laboratory and unilateral static tensile tests.
10/18–01/19	**Sunshine Bridge over the Mississippi River, St. James Parish, LA:** Project Engineer for the development and implementation of a monitoring plan to provide information regarding redistribution of loads during the installation of repairs to the truss bottom compression chord damaged by impact. Assisted with the design of the jacking system, review of member repair design, site observations, preparation of shop and jacking procedure drawings, field technical assistance, and chord jacking operations oversight.
02/17-12/17	**Joe Page Vertical Lift Span over the Illinois River, Hardin, IL:** Project Manager responsible for bearing reaction determination via load cells and dynamic strain gage balance testing.
08/16-08/17	**Michigan Avenue Bascule Bridge over the Chicago River, Chicago, IL:** Project Manager for construction project balance calculations and dynamic strain gage balance testing of this double deck, quadruple-leaf, bascule truss bridge with single-unit, side-by-side leaf pairs.
05/11–12/15	**Transport of Long Prestressed Concrete Girders, LA:** Project Engineer for the dynamic monitoring of two long prestressed girders during transport from the precast yard to their final installation at the bridge site. Performed field instrumentation to monitor dynamic strain and inertial motion, which provided acceleration and rotational orientation of the girder with wireless communication. Evaluated data using dynamic 3D model with sensor mapping and interactive geolocation to correlate significant strain events with position and transport activity. Assisted in preparation of report to LADOTD and LTRC. Monitoring included wireless data collection from video, strain gages, thermocouples and gyroscopes.

Firm employed by **Wiss, Janney, Elstner Associates, Inc.**.				
Name	Leonard L. Phelps		Years of relevant experience with this employer	37
Title	Supervisor-Other		Years of relevant experience with other employer(s)	8
Degree(s) / Years / Specialization			BS, 1979, Biology, University of Illinois BA, 1979, Chemistry, University of Illinois MS, 1991, Chemistry, DePaul University	
Active registration number / state / expiration date				
Year registered	2021	Discipline	SSPC (AMPP) Certified Protective Coatings Specialist, 2021-014-012 / expires 12/31/2025	
Contract role(s) / brief description of responsibilities			**Primary Coating Inspector and Paint Lead**	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
04/21–11/21	**Pacific Highway Land Port of Entry Envelope Renovation, Blaine, WA:** Lead Chemist, as part of the building envelope upgrade, provided project advice regarding the coating specification, minimum adhesion rating for tests on canopy coating, coating tape adhesion test results, and coating submittals.
08/21	**I-255 Jefferson Barracks Bridge over the Mississippi River, Emergency Repairs, Mehlville, MO:** The twin structures consist of a main span 910-ft long tied-arch structure with a steel box arch and a 12-foot-deep steel I-shaped tie girder. WJE completed bridge rehabilitation plans for both structures with construction ongoing. As Lead Chemist, assisted with bridge cable specification development and guidance regarding metalizing of the hanger cables that have experienced corrosion in the splash zone. The specification included trial testing to determine the proper blast media to prepare the surface without substantially removing the existing galvanized coating.
04/15	**I-20/I-55 Bridge over the Pearl River, Fatigue Retrofits, Jackson, MS:** The twin I-20/I-55 structures consist of precast prestressed concrete girder approach spans and a 3-span continuous welded plate girder river crossing with a maximum span length of 130 ft. MDOT retained WJE to develop and install fatigue retrofits to address distortion-induced cracking and to correct observed section loss in the girders at the abutments. As Lead Chemist, provided guidance for the surface preparation which included coatings containing lead and painting of the bridge repairs. Also advised on bridge coating repair issues including the removal of a holding primer prior to the application of a permanent coating system.
10/11–03/14	**Airport Cooling Tower, Location Withheld for Client Confidentiality:** Blistering and delamination of the polyurethane-based liner from interior concrete surfaces of upper and lower precast concrete cells of a cooling tower prompted a field investigation of the liner system, which included observations of the liner, sealant, and panel-to-panel conditions, as well as measurement of in-wall concrete relative humidity, determination of liner adhesion and coating thickness measurements. Samples of the liner and concrete substrate were also obtained and reserved for laboratory studies by Mr. Phelps. Laboratory studies of selected samples included visual, microscopic, and petrographic examinations; analyses by SEM/EDS;

	and analyses by infrared spectroscopy, and x-ray diffraction. Studies for acid-soluble chloride contents and conformational coating thickness were also conducted. The primary contributing cause to these delaminations was exposure of water to the backside of the liner at open, breached, weathered, and split sealant joints. Water at the backside interface can move past the backer rod to the sealant and create breaches in the sealant joints by freezing/ice jacking. Irregularities associated with installation techniques and methods may also contribute to the formation of mid-field blisters. Drawings and specifications were prepared to remediate the failed coating.
06/11–04/14	**Reeds Island Bridge, Hilo, HI:** Served as Primary Coating Inspector and Lead Chemist to prepare specifications for preparation and shop painting of new galvanized steel, and for the painting and repair of site elements in a damp, wet environment due to average rainfall of about 130 inches of rain per year and waterway below. Led efforts to perform site inspections of shop and field surface preparation and coating application. The field coating application was in a wet environment due to frequent Hilo rainfall, and waterway below.
10/12–11/12	**Iowa Department of Transportation, Various Locations:** Served as a Primary Coating Advisor and Reviewer for the inspection and evaluation of weathering steel patinas for thirty-one bridges as part of research project to evaluate the performance of weathering steel bridge structures to identify types of structures that are most vulnerable to chloride contamination, identify locations on individual structures that are most susceptible, identify possible testing methods or inspection techniques, evaluate the effectiveness of water washing, and develop prioritization for washing based on the type and condition of the structure.
09/05–10/07	**State of Hawaii, Aloha Stadium, Honolulu, HI:** Primary Coating Inspector and Lead Chemist responsible for assessing the condition of the substrate and extant coatings applied to structural weathering steel of the Aloha Stadium. Subsequently developed specifications for the preparation and coating (zinc-rich primer; epoxy stripe, filler, and intermediate; and fluoropolymer finish-- brush, roller, and airless spray) of the salt contaminated structural weathering steel. Performed numerous site inspections of multiple phases of work required to prepare and coat the steel in a salt environment.
03/1999–08/1999	**Chicago Skyway, Chicago, IL:** Project Manager and Primary Coating Inspector performing a condition assessment of existing coatings and underlying steel substrate of the Calumet Bridge, viaducts, overpasses, and ramps. Adhesion testing, coating thickness measurement, review of substrate condition, and assessment of original substrate preparation were done.
12/1996	**Bridge of the Americas, Panama City, Panama:** Primary Coating Inspector overseeing the coating condition survey for the bridge condition evaluation of the riveted tied-arch bridge that runs east to west and spans a mile and a half over the Panama Canal. For the condition survey of the coating covering the bridge steel (an oil-based primer pigmented with red lead and top coated with aluminum pigmented alkyd-based coating), witnessed tests conducted by contractor on the existing coating system and he conducted random on-site evaluations of the existing coating on accessible areas of the bridge, including surface chloride analyses, peel-adhesion tests, and coating thickness tests. Performed a review of the coating specifications and proposed a method of surface preparation and a recoating system.

Firm employed by Bridge Diagnostics, Inc. (BDI)					
Name	Shane Boone, PHD			Years of relevant experience with this employer	7
Title	Vice President – Nondestructive Evaluation			Years of relevant experience with other employer(s)	13
Degree(s) / Years / Specialization			PHD / 2008 / Civil Engineering / Utah State University MS / 2005 / Structural Engineering / University of Tennessee BS / 2002 / Civil Engineering / University of Tennessee		
Active registration number / state / expiration date			N/A		
Year registered	N/A	Discipline	N/A		
Contract role(s) / brief description of responsibilities			**QA/QC, NDT & Instrumentation**		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
07/16-Present	Dr. Boone has spent more than 20 years in the government, academic, and private sectors of specialized infrastructure inspection and monitoring. He specializes in the research, development and application of nondestructive testing & evaluation technologies and monitoring for civil infrastructure. Previously, Dr. Boone managed NDE programs at the Federal Highway Administration (FHWA) and Oak Ridge National Laboratory. He serves as the chair of the American Society for Nondestructive Testing's Structural Materials Technology Conference, chair of the ASNT Infrastructure Committee, and sits on TRB's Field Testing and NDE of Transportation Structures committee. He is a certified ASNT Level II inspector.
01/17 - Present	**Retainer Contract for Testing of Unknown Foundations Statewide (DOTD Contract No. 4400009224)** – Dr. Boone is the Subject Matter Expert (SME) for the NDE to determine the unknown foundations of up to 1,900 bridges in Louisiana. The project utilizes multiple methods of NDE including ultraseismic testing, parallel seismic survey, sonic echo/impulse response, and guided wave. To date, thousands of piles have been tested to determine the embedded depth for subsequent NBIS 113 scour evaluation and reporting. BDI has assisted DOTD in FHWA reporting of these items by uploading all reports into AssetWise.
01/19 - Present	**IDIQ Contract for Nondestructive Evaluation of Structures Statewide (DOTD Contract No. 4400015262) –** Dr. Boone is the SME for statewide NDE of structures for DOTD under this contract. Scope items include testing of bridge decks, concrete substructures, steel elements such as welds and pin and hanger assemblies, unknown foundations, tunnels, culverts, and other highway transportation infrastructure. Dr. Boone assists DOTD with identifying proper technologies for application and best methods for analysis and reporting of findings into DOTD's AssetWise.
11/19 – Present	**NDE and Remote Inspection of I-10 over the Bonnet Carre Spillway, LA –** BDI is performing NDE of the bridge deck utilizing ground penetrating radar (GPR), deck acoustic response (SounDAR), infrared thermography

	(IR), and high-resolution imaging (HRI) to determine the deck integrity and NBIS/NBE reporting quantities. In addition, BDI is performing the NBIS inspection of the substructure utilizing remote inspection techniques with drones and other technology to report to FHWA. Dr. Boone is the SME for this inspection.
08/19 – 07/20	**NDE of City Park Lake Bridge LA –** Dr. Boone was the principal investigator for NDE of the City Park Lake Bridge in Baton Rouge, LA. NDE technologies included ground penetrating radar (GPR), deck acoustic response (DAR), infrared thermography (IR), high-resolution video (HRV). Remote inspection was performed on the substructure utilizing visual inspection and IR.
08/19 – 12/19	**NDE of Vicksburg Bridge, LA –** Dr. Boone was the principal investigator for NDE of the Vicksburg Bridge carrying I-20 over the Mississippi River near Vicksburg, MS. NDE technologies included ground penetrating radar (GPR), deck acoustic response (DAR), infrared thermography (IR), high-resolution video (HRV).
11/19 – 02/20	**Ultrasonic Testing of the US1 Simmesport Bridge, LA –** BDI performed inspection of 4 pins of the US1 bridge that carries US1 over the Atchafalaya River near Simmesport, LA. BDI utilized ASNT certified inspectors to perform ultrasonic testing (UT) and magnetic particle testing (MT) to determine their integrity. Dr. Boone was the SME for this inspection**.**
08/19 – 12/21	**US Army Corps Evaluation of Advanced Weld Inspection Methods –** As USACE's ongoing want to improve inspection techniques, BDI was awarded a Task Order under its IDIQ to identify and determine best practices for steel weld inspection utilizing advanced ultrasonic testing (UT) methods such as phased array ultrasonic testing (PAUT) and total focus method / full matrix capture (TFM/FMC). These advanced methods improve the reliability and repeatability of weld inspection and flaw sizing for fitness for service level analysis. Dr. Boone was the subject matter expert for this project and helped develop the testing means and methods that were performed on eight lab samples and four comprehensive in-field bridge weld inspections. Based on these findings, USACE expanded the scope to scan further areas of concern on one of the bridges.

Firm employed by **Bridge Diagnostics, Inc. (BDI)**					
Name	Brett Commander, PE			Years of relevant experience with this employer	32
Title	Vice President / Principal Engineer			Years of relevant experience with other employer(s)	1
Degree(s) / Years / Specialization			MS / 1989 / Structural Engineering / University of Colorado BS / 1986 / Civil Engineering / University of Colorado		
Active registration number / state / expiration date			Professional Engineer: 35864 / LA / 3/31/2023		
Year registered	2010	Discipline	Civil Engineer		
Contract role(s) / brief description of responsibilities			**Principal Engineer – NDT & Instrumentation**		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
10/89-Present	Mr. Commander has more than 30 years of experience with testing, monitoring, and evaluating measured structural responses on over 1,000 structures. He has performed/oversaw complete structural analyses and load ratings on over 500 highway and railway bridges using a variety of design codes such as AASHTO and AREMA, and many state-specific codes including Louisiana specifications. Mr. Commander also has designed/oversaw capacity testing projects of concrete and steel structures using various NDE techniques as well as implemented hundreds of structural monitoring systems.
11/12 – Present	**US-90 Bayou Ramos Bridge Load Testing and Monitoring, LA** – Due to unexpected cracking in PS concrete AASHTO beams, BDI performed load tests and load ratings to determine cause and effect of cracks in continuous multi-span PS/C girders. Load ratings were completed according to DOTD specifications. After the completion of the initial evaluation, monitoring systems were installed on the structure to monitor the state of two sections of structure. Structural Health Monitoring is still ongoing. As technical advisor/principal engineer, Mr. Commander oversaw live-load and thermal load monitoring that was performed during and after repairs to evaluate the performance of retrofit.
11/04 – 12/04 11/11 – Present	**Bonnet Carre Spillway Load Testing, Rating, and Monitoring, LA** –BDI used its Integrated Approach to determine if a 500-ton load could cross the bridge safely. BDI then installed an event-based monitoring system that helps DOTD capture weigh-in-motion data, strains induced by heavy loads, and photos of heavy load. Health Monitoring is still ongoing. Over multiple contracts, Mr. Commander was the principal-in-charge on this project in its many phases which included responsibilities such as testing program oversight, structural analysis, load rating of structure for atypical load configurations, on-site data interpretation, report creation and submittal, and providing recommendations for future crossings.
07/21 – Present	**NDE of the Whiskey Bay and Piot Channel Bridge Decks, LA** – NDE 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

	IR/HRI, CWSF GPR and SounDAR from BDI's mobile NDE testing van. IR/HRI bridge deck data was also collected via drone. BDI also performed substructure inspection to satisfy LADOTD's NBI requirements of the structure with IR/HRI via drone. The data will be used to quantify and locate areas for repair and preservation, and to report NBE and NBI data to FHWA. Mr. Commander is providing QA/QC and PE Review.
07/19 – 01/20	**St. Claude Lift Bridge Balance and Operation Testing, LA –** Mr. Commander was project principal engineer responsible for counterweight/span balance and friction calculations as well as structural performance evaluation on a double heal trunnion Strauss Bascule Bridge. Strain gauge testing and various instrumentation tasks were performed during investigation of a bearing failure on the span to counterweight link including strain gage testing on the link frame as well as on counterweight balance procedures.
06/14 – Present	**Phinney Avenue Bridge Load Testing, Rating and NDE, WA** – As part of BDI's SDOT On-Call, BDI was contracted by Seattle DOT to perform diagnostic load tests and structural reinforcement investigation on the Phinney Ave bridge in Seattle, WA. Instrumentation, load tests, and reinforcement investigation were performed with the overall goal of these tests was to better understand the structures' load distribution, reinforcement details, and in turn provide refined load ratings. Mr. Commander acted as the principal engineer and oversaw testing plan development, field-verified model calibration, load ratings performed according to SDOT/WSDOT specifications, and reporting.
08/18 – 12/20	**Live Load Testing and Field-Verified Load Rating of 16 Bridges, VA –** As part of BDI's VDOT On-Call, BDI provided load testing and field-verified load rating of 16 structures in the Fredericksburg and Richmond districts of VDOT. BDI was responsible for the design of load testing requirements, development of instrumentation plans, execution of field work and load testing, data analysis, finite element (FE) model creation and calibration, and eventual load rating per VDOT and AASHTO requirements. Mr. Commander acted as principal engineer and subject matter expert for this project and responsibilities included overseeing testing program development.

Firm employed by **Bridge Diagnostics, Inc. (BDI)**					
Name	Jesse Sipple, PHD, PE			Years of relevant experience with this employer	8
Title	Testing, Monitoring, and Engineering Program Manager			Years of relevant experience with other employer(s)	9
Degree(s) / Years / Specialization			PHD, Civil Engineering, Tufts University, 2013 MS, Civil Engineering, University of New Hampshire, 2008 BS, Civil Engineering, University of New Hampshire, 2007		
Active registration number / state / expiration date			#41028 / Louisiana / 03/31/2023		
Year registered	2016	Discipline	Civil Engineer		
Contract role(s) / brief description of responsibilities			**Testing, Monitoring, and Engineering Manager**		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
01/14-Present	Dr. Sipple oversees the testing, monitoring, engineering, and on-going monitoring groups of BDI's Services. The projects performed by these groups range from large SHM systems on signature structures, complex testing and analysis of constructed systems, and maintenance and support of in-service systems. In addition to managerial oversight, Dr. Sipple also oversees the quality control aspects of these projects.
11/21-Present	**Off-System Bridge Ratings and Evaluation, LA (Contract 4400010099) –** BDI is preforming live-load testing of ten bridges throughout the state of Louisiana, including seven culvert and three reinforced concrete bridges of varying types to provide realistic load rating results for those structures. The process includes developing instrumentation plans, instrumenting, load testing, and load rating each bridge. Load rating reports will be provided for each of the load tested structures. Dr. Sipple is an analysis engineer and reviewer for this project.
07/18–09/18	**Collier County Bridge Load Testing, FL –** BDI performed diagnostic load tests on the FDOT Bridge 034190 which spans over a small drainage ditch in a residential area in Immokalee, Florida. The overall goal of these tests was to better understand the structure's transverse distribution, provide refined load ratings, and reevaluate the current posting levels. Load tests were performed, and the collected structural responses were used to generate a field-verified finite-element model (FEM). This field-verified FEM was then used to compute refined load ratings. Dr. Sipple acted as project manager for this project.
06/18–03/19	**Phinney Avenue Bridge Load Rating and NDE, WA –** BDI was contracted by SDOT to perform diagnostic load tests and structural reinforcement investigation on the Phinney Ave bridge that spans over North 57th St in Seattle, WA. Instrumentation, load tests, and reinforcement investigation were performed with the overall goal of these tests was to better understand the structures' load distribution, reinforcement details, and in turn provide refined load ratings. Dr. Sipple acted as the project manager for this project.

07/19–12/19	**St. Claude Lift Bridge Balance and Operation Testing, LA** – Dr. Sipple was the quality control manager for counterweight/span balance and friction calculations as well as structural performance evaluation on a double heal trunnion Strauss Bascule Bridge. Strain gauge testing and various instrumentation tasks were performed during investigation of a bearing failure on the span to counterweight link.
08/18–12/20	**Live Load Testing and Field-Verified Load Rating of 16 Bridges, VA** – BDI provided load testing and field-verified load rating of 16 structures in the Fredericksburg and Richmond districts of VDOT. BDI was responsible for the design of load testing requirements, development of instrumentation plans, execution of field work and load testing, data analysis, finite element (FE) model creation and calibration, and eventual load rating per VDOT and AASHTO requirements. Dr. Sipple acted as quality control manager for this project.
04/18-10/19	**Sunshine Truss Emergency Monitoring, LA -** In 2018, the Sunshine Truss Bridge was struck by a crane barge, significantly damaging a bottom chord member. As part of the Modjeski and Masters response team, BDI installed a laser displacement sensor within 48 hours of the event to monitor the behavior of the damage member. Once a monitoring plan was developed and approved by the team, BDI installed strain gages along nearby chord members that were used to evaluate the state of the structure before, during and after the replacement of the damaged bottom chord member. Dr. Sipple acted as project manager responsible for monitoring plan development and project oversight.
02/20-12/20	**LA507 Over I-20 ABC Span Move Monitoring, LA** - During the replacement of this bridge, accelerated bridge construction was utilized where spans were cast nearby and moved into place during short outages. Dr. Sipple was a field/analysis engineer responsible for monitoring plan implementation, instrumentation, monitoring during span moves, on-site data interpretation, and data processing and reporting.
01/22-Present	**Varina-Enon Bridge Structural Health Monitoring, VA –** Virginia Department of Transportation contracted BDI to provide a comprehensive structural health monitoring (SHM) system on the Varina-Enon bridge. The project includes the design, installation, and operation of the SHM system. Dr. Sipple is a senior engineer contributing to system design, architecture, and installation support in his current capacity on this project.

Firm employed by **Bridge Diagnostics, Inc. (BDI)**					
Name	Charles Young, PE			Years of relevant experience with this employer	4
Title	Nondestructive Evaluation Program Manager			Years of relevant experience with other employer(s)	7
Degree(s) / Years / Specialization			MS / 2017 / Structural Engineering / Drexel University BS / 2012 / Architectural Engineering / Drexel University		
Active registration number / state / expiration date			Professional Engineer: 42773 / LA / 3/31/2023		
Year registered	2018	Discipline	Civil Engineer		
Contract role(s) / brief description of responsibilities			**NDT & Instrumentation**		

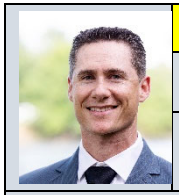
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
05/18-Present	Mr. Young has 11 years of experience in nondestructive evaluation and testing (NDE/NDT), and structural monitoring and testing. BDI, Mr. Young is responsible for project management, analysis, and field services related to NDT of civil infrastructure. He works closely with a multifaceted group of engineers and technicians to perform NDE on bridges, dams, culverts, pavements, and other civil infrastructures. Mr. Young is heavily involved in testing and instrumentation of existing structures using NDE methods (acoustic, ultrasonic, electromagnetic, and electrochemical), performing dynamic and digital signal processing and analysis, and numerical and finite element modelling of complex structures.
05/18 – 12/21	**Nondestructive Evaluation of Unknown Bridge Foundations, LA –** This project aims at performing NDE of more than 500 bridges in the state of Louisiana to determine the unknown or undocumented depths of bridge foundation piles. A proofing step was performed on six bridges to estimate the depth of timber, concrete, and steel piles. Multiple BDI testing and analysis methods including Sonic Echo/Impulse Response (SE/IR), Ultraseismic (US), and Parallel Seismic Survey (PSS) were utilized. Mr. Young was the project manager.
10/18 – 08/19	**Sunshine Truss Emergency Monitoring, LA –** In 2018, the Sunshine Truss Bridge was struck by a crane barge, significantly damaging a bottom chord member. As part of the M&M response team, BDI quickly deployed a laser displacement sensor to monitor the behavior of the damage member. Once a monitoring plan was developed and approved by the team, BDI installed strain gages on nearby chord members that were used to evaluate the state of the structure before, during and after the replacement of the damaged bottom chord member. Mr. Young acted as an installation technician, and site supervisor for this project.
01/19 - Present	**Bonnet Carre Spillway Inspection and Nondestructive Evaluation, LA –** This project involves an NHI routine inspection of the Bonnet Carre Spillway Bridge and targeted nondestructive evaluation techniques at various critical portions of the structure. This work was performed under an IDIQ Contract for Non-destructive Evaluation of Structures for DOTD. Also included were supplemental inspection access techniques including unmanned aerial

	systems (UAS). Nondestructive evaluation includes a multi-technology bridge deck assessment including Deck Acoustic Response, Ground Penetrating Radar, Infrared Thermography, and High-Resolution Imagery. Mr. Young is the project engineer and lead bridge inspector for this project.
08/19 – 07/20	**City Park Lake Bridge Inspection and Nondestructive Evaluation, LA –**NHI routine inspection of the City Park Lake Bridge and targeted nondestructive evaluation. This work was performed under an IDIQ Contract for Non-destructive Evaluation of Structures for DOTD. Nondestructive evaluation included a multi-technology bridge deck assessment including Deck Acoustic Response, Ground Penetrating Radar, Infrared Thermography, and High-Resolution Imagery. Also included in the nondestructive evaluation is Infrared Thermography of the superstructure and substructure of the bridge. Mr. Young was the project manager.
08/19-12-21	**US Army Corps Evaluation of Advanced Weld Inspection Methods –** As USACE's ongoing want to improve inspection techniques, BDI was awarded a Task Order under its IDIQ to identify and determine best practices for steel weld inspection utilizing advanced ultrasonic testing (UT) methods such as phased array ultrasonic testing (PAUT) and total focus method / full matrix capture (TFM/FMC). These advanced methods improve the reliability and repeatability of weld inspection and flaw sizing for fitness for service level analysis. Mr. Young helped develop the testing means and methods that were performed on eight lab samples and four comprehensive in-field bridge weld inspections. Based on these findings, USACE expanded the scope to scan further areas of concern on one of the bridges.
06/20-09/20	**West Seattle High Bridge, WA –** BDI was contracted by Seattle DOT to provide a nondestructive testing and structural health monitoring program to help evaluate performance of the structure during first phase of retrofitted internal post-tensioning. The monitoring program helped the Seattle DOT make decisions and resulted in the next phase of strengthening to open the bridge by 2022. Mr. Young acted as the Task Order Manager and Lead Field Engineer for this project.

Firm employed by **Bridge Diagnostics, Inc. (BDI)**					
Name	Brice Carpenter, PE			Years of relevant experience with this employer	13
Title	Senior Engineer / Engineering Department Lead			Years of relevant experience with other employer(s)	2
Degree(s) / Years / Specialization			MS / 2009 / Civil Engineering / New Mexico State University BS / 2007 / Structural Engineering / New Mexico State University		
Active registration number / state / expiration date			Professional Engineer: 39341 / LA / 3/31/2023		
Year registered	2014	Discipline	Civil Engineer		
Contract role(s) / brief description of responsibilities			**NDT & Instrumentation**		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
07/09-Present	During his tenure and more than 250 bridges tested and load rated using advanced techniques, Mr. Carpenter has become BDI's Engineering Lead responsible for testing plan oversight, data processing and investigation, structural analysis, load rating, and reporting. Mr. Carpenter has been involved with the testing, monitoring, and evaluation of hundreds of structures of various types (steel, reinforced concrete, prestressed concrete, in simple to complex geometry and configurations) using a variety of design codes such as AASHTO, AREMA, and many state-specific codes including Louisiana specifications. Mr. Carpenter also has years of experience in capacity testing of concrete and steel structures using various NDE techniques.
11/12-Present	**US-90 Bayou Ramos Bridge Load Testing & Monitoring, LA –** Due to unexpected cracking in PS concrete beams, BDI performed load tests and load ratings to determine cause and effect of cracks in continuous PS/C girders. After the initial evaluation, monitoring systems were installed on the structure to monitor two sections of structure. Health Monitoring is still ongoing. As lead analysis engineer, Mr. Carpenter performed field-verified load ratings and acts as the project engineer for monitoring system maintenance and troubleshooting.
11/11-Present	**Bonnet Carre Spillway Load Testing and Monitoring, LA –** In 2004, BDI used its Integrated Approach to determine if a 500-ton load could cross the bridge safely. Based on provided configurations, BDI determined the "superload" could cross with stresses below its serviceability limit. In 2011, BDI installed an event-based monitoring system that helps DOTD capture weigh-in-motion data, strains induced by heavy loads, and photos of heavy load. Mr. Carpenter performed superload load ratings and reporting for DOTD and currently acts as the project engineer for monitoring support to DOTD.
07/19–12/19	**St. Claude Lift Bridge Balance and Operation Testing, LA –** Project engineer and field/analysis engineer responsible for counterweight/span balance and friction calculations, and structural performance evaluation on a double heal trunnion Strauss Bascule Bridge. Strain gauge testing and various instrumentation tasks were performed during investigation of a bearing failure on the span to counterweight link.

08/16-05/17	**Live Load Testing of Eight Culverts and Testing, LA –** BDI worked in coordination with LSU, LTRC, and DOTD to perform comprehensive diagnostic live-load tests that allowed these structures to be better evaluated based on induced live-load effects, observed distribution, and general fixity at the culvert walls. BDI manufactured the structural testing system used for this testing based on LSU's specifications and needs. Mr. Carpenter acted as a project and testing engineer on this project.
07/09-11/12	**Load Testing and Rating of 35 Rhode Island Bridges, RI –** BDI performed field testing on 35 bridges located throughout the state of Rhode Island. For all of the structures, BDI collected and reviewed the strain, displacement, and NDE (GPR) data and provided it directly to AECOM for evaluation. For select bridges, BDI also used the field data to calibrate finite element models and develop accurate load ratings using the AASHTO Manual of Bridge Evaluation. Mr. Carpenter acted as analysis and rating engineer responsible for data processing and review, structural analysis, load rating, and reporting.
11/20-06/21	**Terminal 5 Bridge Load Testing and Rating, WA –**Terminal 5 bridge is used by heavy truck traffic to and from the Port of Seattle, WA. As part of BDI's SDOT On-call, instrumentation and load tests were performed on PSC beam and steel girder spans (curved and straight) with the overall goal of to better understand the structures' load distribution and behavior and in turn provide refined load ratings. Mr. Carpenter acted as the lead analysis/rating engineer responsible for data processing, model calibration, and load ratings and reporting according to SDOT/WSDOT specifications.
05/15 – 10/15 02/18 – 08/18	**Truss Monitoring on US 84 Over the Mississippi River, MS –** During the pin replacements on the Natchez cantilever truss over the Mississippi River, BDI performed Structural Health Monitoring (SHM) on the critical truss members and temporary load path systems during pre, during, and post construction. Mr. Carpenter acted as project field and analysis engineer in charge field prep, field installation, data analysis and reporting.



Firm Employed by	Moffatt & Nichol		
Name	Chace Hulon, PE, ADCI	Years of relevant experience with this employer	8
Title	Program Manager and NBIS Team Leader	Years of relevant experience with other employer(s)	9

Degree(s) / Years / Specialization			BS / 2005 / Civil Engineering / Norwich University, Vermont
Active registration number / state / expiration date			Professional Engineer: 39701 / LA / Exp. 09/30/23
Year registered	2009	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities			NBIS Team Leader/ ADCI-certified Dive Supervisor / SPRAT Rope Access Technician

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
11/19 – Present	LADOTD IDIQ for In-Depth Inspection of Complex Bridges, Statewide, Louisiana. MN Project Manager and Team Leader for one of the current five-year retainer contracts as a major subconsultant to HNTB, contracted to perform in-depth bridge inspections on complex, signature, long-span bridges throughout Louisiana. Performed the inspections of both cable-stayed bridges in Louisiana (Audubon and Luling) with rope access techniques to inspect a total of 208 cables between the two bridges, their Gensui Dampers, and anchorages. Performed the inspection of the I-10 Horace Wilkinson Bridge completely utilizing rope access techniques and rolling lane closures to greatly minimize traffic impacts. Performed a supplemental inspection of the GNO Cantilever Truss Bridges in New Orleans utilizing rope access techniques. Performed a fracture critical inspection of the Green Bridge, a steel tied arch in New Orleans utilizing rope access and UAS access techniques. Performed the inspection of the I-10 Bridge over the Calcasieu River in Lake Charles utilizing rope access on FCM's and UAS access techniques on columns. Hands-on management and implementation of the QC review plan is vital to the continued success of this project. 10938.00
1/20 – Present	LADOTD IDIQ for Statewide In-Depth Bridge Inspection of Complex Structures, Louisiana. MN Project Manager and Team Leader for one of the current five-year retainer contracts as a major subconsultant to Gresham Smith, contracted to perform in-depth bridge inspections on complex, movable, long-span, and precast segmental box girder bridges throughout Louisiana. Performed and lead the structural, mechanical, and electrical inspections of six (6) movable bridges utilizing detailed, nondestructive and laboratory testing methods with hand sketches. Hands-on management and implementation of the QC review plan is vital to the continued success of this project. 10801.00

09/14 – Present	LADOTD IDIQ for Underwater Bridge Inspection, Statewide, Louisiana. Project Director and Team Leader for the third cycle of contracts in which we have performed 1,375 underwater NBIS bridge inspections statewide. Bridge types included movable bridges, long-span bridges with caissons and deep foundations, timber bridges with multiple bents in the water, culverts and multi-span bridges up to 14 miles in length. Assisted DOTD with several emergency response requests within hours utilizing local team members. 8346.00, 9840.00, 211288.00
02/21-Present	LADOTD Underwater Bridge Inspections (2020-2025) - Task 1, Statewide, Lousiana. Project Principal for routine underwater inspections of 75 bridges including major bridges over large waterways with deep foundations and dynamic channel conditions. All diving inspections were augmented with acoustic imaging technology for bridges over large waterways with high-risk environmental conditions. Hydrographic surveys were performed using the HydroLite-TM and MatLab for accurate and repeatable channel soundings at these bridge sites

	Firm Employed by	Moffatt & Nichol		
	Name	Herodotos A. Pentas, PhD, PE	Years of relevant experience with this employer	1<
	Title	Senior Bridge Engineer	Years of relevant experience with other employer(s)	32

Degree(s) / Years / Specialization			PhD / 1990 / Civil Engineering, Louisiana State University MS / 1986 / Civil Engineering, Unversity of Alabama at Birmingham BS / 1984 / Civil Engineering, Unversity of Alabama at Birmingham
Active registration number / state / expiration date			Professional Engineer: #24660 / LA also FL, MS, & TX
Year registered	1992	Discipline	Civil and Structural
Contract role(s) / brief description of responsibilities			Bridge Rating Services

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
2017	West Drive & Lock #2 Road Bridges Inspection & Load Analysis, St. Tammany Parish, Louisiana. Project manager for inspection, load analysis, and rating of timber bridge and concrete bridges by applying AASHTO and LADOTD Standards.
2016	Hickory Street Bridge Inspectioin, St. Tammany Parish, Louisiana. Project manager for bridge inspection, load analysis, and recommendations of improvements of timber plank bridge with damaged pile supports.
1997	LADOTD S.P. No. 737-99-0441 & 737-99-0158, Assessment of Bridge Damage by Watercraft, Divisions 2, 3, & 7, Louisiana. PM for baseline inspections of fender systems/substructures of 134 bridges to determine damages caused by marine vessels. Provided damage assessment, repair plan preparation, cost estimates, repair procedure, & report. Project received national attention due to its effectiveness & execution.
1996	LADOTD S.P. No. 700-99-0118, Structural Load Rating, 118 Bridge, Louisiana. Project manager for load rating of 118 bridges throughout the state. A majority of the bridges were prestressed concrete and steel plate girder design.
1996	LADOTD S.P. No. 700-99-0264, Bars Re-Rate, Louisiana. Project manager for conversion of all existing BARS load rating WSM and LFM files to VIRTIS database and running of converted BARS files to verify VIRTIS rating results for 493 structures. Analyzed with finite element method, three structures for three super-load permit vehicles and recommended distribution factor, influence line, permit laod review procedure, and examples for typical complex members (truss span, steel & prestressed girder, steel and reinforced concrete cap beam.
1993	LADOTD S.P. No. 700-30-0002, Complex Structures Load Rating, 37 Bridges, Louisiana. As Project Manager, led analysis and rating of 37 complex steel and concrete bridges using both working stress and load factor methods. Structure types

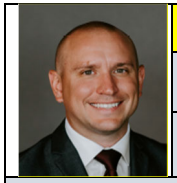
	included simple and mult-span steel curved plate girders, simple and multi-span normal and skewed box girders, and curve box girders.
1993	LADOTD S.P. No. 359-02-0012, Clear Lake Bridge Design, Louisiana. Project engineer for preliminary and final design for LA 1226 bridge over Clear Lake, a five-span continuous unit utilizing AASHTO Type IV precast prestressed concrete girders supported by 30-in-diam concrete pile bents.
1992	LADOTD S.P. No. 033-03-0033, Red River Bridge, Louisiana. Project engineer for preliminary and final design of superstructure, piers, and piles of LA Highway 107 over Red River at Moncla. Superstructure consisted of four-span steel composite girders. Substructure consisted of reinforeced concrete piers. Performed the ship impact analysis for piers and related analysis of bridge.

Firm Employed by	Moffatt & Nichol		
Name	Steven Armstrong, PE, ADCI	Years of relevant experience with this employer	8
Title	NBIS Team Leader	Years of relevant experience with other employer(s)	2

Degree(s) / Years / Specialization			MS / 2021 / Civil Engineering / University of New Orleans BS / 2015 / Civil and Environmental Engineering / University of New Orleans
Active registration number / state / expiration date			Professional Engineer: 44405 / LA / Exp. 09/30/22
Year registered	2020	Discipline	Civil
Contract role(s) / brief description of responsibilities			NBIS Team Leader / FAA Remote Drone Pilot / SPRAT Rope Access Technician / ADCI-certified Diver

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
11/19 – Present	LADOTD IDIQ for Statewide In-Depth Bridge Inspection, Louisiana. Team Member for one of the current five-year retainer contracts as a major subconsultant to HNTB, contracted to perform in-depth bridge inspections on complex, signature, long-span bridges throughout Louisiana. Performed the inspections of the Audubon cable-stayed bridge with rope access techniques to inspect a total of 136 cables, the HDPE protection, and anchorages. Performed the inspection of the I-10 Horace Wilkinson Bridge (New Bridge) completely utilizing rope access techniques and rolling lane closures to greatly minimize traffic impacts. Performed draft inputs and consolidated notes from multiple teams to present proper data consistently throughout the report. 10938.00
1/20 – Present	LADOTD IDIQ for Statewide In-Depth Bridge Inspection of Complex Structures, Louisiana. Team Member for one of the current five-year retainer contracts as a major subconsultant to Gresham Smith, contracted to perform in-depth bridge inspections on complex, movable, long-span, and precast segmental box girder bridges throughout Louisiana. Performed the structural inspections of six (6) movable bridges along with the M&E team. Utilized nondestructive UT methods to accurately document section loss in fracture critical members. Performed draft inputs and consolidated notes from multiple teams to present proper data consistently throughout the report. 10801.00
09/14 – Present	LADOTD IDIQ for Underwater Bridge Inspection, Statewide, Louisiana. NBIS Team Leader for the current five-year retainer contract to perform Levels I, II, and III underwater bridge inspections in accordance with NBIS and AASHTO Manual for Bridge Element Inspection. Responsible for leading underwater inspection teams to complete field work, inspection reports,

	and quality control reviews. Bridge types inspected consisted of movable bridges, truss bridges, timber stringer bridges, cable-stayed bridges, and single and multi-span girder bridges up to fourteen miles in length. Site conditions included salt and fresh waters, with varying levels of current, having low to no visibility. UAI techniques were utilized to locate structural deficiencies and identify bottom conditions. 8346.00, 9840.00, 211288.00



Firm Employed by	Moffatt & Nichol		
Name	Jeffrey Gazarek, ADCI	Years of relevant experience with this employer	6
Title	NBIS Team Leader and Safety Officer	Years of relevant experience with other employer(s)	10

Degree(s) / Years / Specialization	Commercial Diving with Concentration in Subsea Inspection / 2005 / Divers Institute of Technology
Active registration number / state / expiration date	N/A
Year registered: N/A — Discipline	N/A
Contract role(s) / brief description of responsibilities	NBIS Team Leader / Safety Officer / Equipment Manager / SPRAT Rope Access Technician / ADCI-certified Diver

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
09/14 – Present	LADOTD IDIQ for Underwater Bridge Inspection, Statewide, Louisiana. NBIS Team Leader for the third cycle of contracts in which we have performed 1,375 underwater bridge inspections statewide. Responsible for leading dive operations for underwater inspection teams to complete field work, writing inspection reports, and performing quality control reviews. Bridge types inspected consisted of movable bridges, truss bridges, timber stringer bridges, cable-stayed bridges, and single and multi-span girder bridges up to fourteen miles in length. Site conditions included salt and fresh waters, with varying levels of current, having low to no visibility. UAI techniques were utilized to locate structural deficiencies and identify bottom conditions. 8346.00, 9840.00, 211288.00
04/16 – Present	LADOTD IDIQ for Statewide Ancillary Sign Inventory and Inspection, Louisiana. Team Leader and Rope Access Supervisor for both five-year retainer contracts. Performed ~40% of 1700 sign truss inspections throughout Louisiana. Utilized fall protection and rope access techniques with rescue plan development. Performed non-destructive testing on all anchor rods at all cantilever structures, base plates with excessive standoff distances, and where deficiencies or impacts were observed at steel and aluminum welds. Drafted and reviewed inspection reports per the quality management plan. Monitored the TTC lane closures and reviewed the TTC plans for over 10 lane closures throughout the state. 8973-00 & 11168.00
11/14 – Present	MDOT 2014 & 2021 Underwater Bridge Inspection Contract, Districts 1 & 2, Mississippi. NBIS Bridge Inspector performed underwater inspections of 12 bridges in accordance with NBIS and MDOT PONTIS Inspection Manual. Bridges inspected were constructed of concrete, steel, and timber, and high-resolution scanning sonar was used on selected bridge elements.

	Responsible for pre-inspection planning, scheduling, field work, performing NDT and soundings, diving operations, drafting reports, sketches, and repair recommendations. 8601.00 &
11/19 – Present	LADOTD IDIQ for Statewide In-Depth Bridge Inspection, Louisiana. Team Member for one of the current five-year retainer contracts as a major subconsultant to HNTB, contracted to perform in-depth bridge inspections on complex, signature, long-span bridges throughout Louisiana. Performed the inspection of the I-10 Horace Wilkinson Bridge (New Bridge) completely utilizing rope access techniques and rolling lane closures to greatly minimize traffic impacts. 10938.00

Firm Employed by	Moffatt & Nichol		
Name	Joshua Martinez, PE, ADCI	Years of relevant experience with this employer	7
Title	NBIS Team Leader and Diver	Years of relevant experience with other employer(s)	5

Degree(s) / Years / Specialization			MCE / 2013 / Structural Engineering, North Carolina State University BCE / 2009 / Structural Engineering, United States Air Force Academy
Active registration number / state / expiration date			Professional Engineer: 42085 / LA / 3/31/22
Year registered	2013	Discipline	Civil
Contract role(s) / brief description of responsibilities			NBIS Team Leader / SPRAT Rope Access Technician / ADCI-certified Diver

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
06/17 – Present	LADOTD IDIQ for NBIS Underwater Bridge Inspection Retainer Contract, Statewide. NBIS Team Leader for the current five-year retainer contract to perform Levels I, II, and III underwater bridge inspections in accordance with NBIS and AASHTO Manual for Bridge Element Inspection. Site conditions included salt and fresh waters, with varying levels of current, having low to no visibility. UAI techniques were utilized to locate structural deficiencies and identify bottom conditions. Responsible for leading underwater inspection teams to complete field work, inspection reports, and quality control reviews. 9840.00
09/13 – 06/17	LADOTD 2013 NBIS Underwater Bridge Inspection Retainer Contract, Statewide. NBIS Inspector for the previous five-year retainer contract to perform Levels I, II, and III underwater bridge inspections in accordance with NBIS and AASHTO Manual for Bridge Element Inspection. Responsible for underwater inspection field work, inspection reports, and quality control reviews. UAI techniques were utilized to locate structural deficiencies, identify potential undermining, observe the limits of scour, and document the limits of riprap installations. 8346.00
03/17 – Current	Statewide Topside Inspection of Bridges for the North Carolina Department of Transportation, North Carolina. NBIS Team Leader responsible for topside inspection of bridges under two, consecutive, multi-year, on-call contracts. Inspected single and multi-span bridges as well as concrete, steel, and timber. Mr. Martinez was responsible for rating the overall bridge condition and determining critical maintenance items per state requirements. He also developed and generated reports rating to the element base level. Mr. Martinez familiarized himself with several inspection vehicles including a bucket truck, snooper, and under-bridge platform. He served as engineer reviewer for reports to ensure accuracy and proper rating per National Highway Institute (NHI) guidance. 9240.00 & 10011.00

Firm employed by **Vectura Consulting Services, LLC**					
Name	Sheelagh Brin Ferlito, PE, PTOE			Years of experience with this firm/employer	6
Title	Principal			Years of experience with other firm(s)/employer(s)	27
Degree(s) / Years / Specialization			B.S. / 1988/ Civil Engineering		
Active registration number / state / expiration date			PE.0025383 / LA 9/30/2023		
Year registered	1993	Discipline	Civil		
Contract role(s) / brief description of responsibilities			**Traffic Signal Design Supervisor / QC for TMP**		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
07/19 – current	**H.004791 DOTD Belle Chasse Bridge & Tunnel Replacement PPP (Belle Chasse, LA)** Brin is the project manager for the **temporary and permanent traffic signal plans** for the intersections of LA 23 at Burmaster St and at Engineers Rd. She based her traffic signal plans on design year volumes that were developed using growth rates from the New Orleans Regional Planning Commission Travel Demand Model. This project is the first ever Public-Private-Partnership performed by Louisiana DOTD. She coordinated the detour plans based on the sequence of construction as part of the **Level 2 Transportation Management Plan (TMP**).
02/20 – 11/21	**H.010616 DOTD I:20 LA 544 Overpass Replacement (Ruston, LA)** Brin is the project manager for the **Transportation Management Plan (TMP)** as part of a design for a bridge replacement and three roundabouts in Ruston, LA. The TMP was a **Level 2** and included evaluation of 10 Sequence of Construction Phases. Detours included rerouting traffic to other interchanges at nighttime only, rerouting traffic from I-20 to the off ramp and on ramp at nighttime only, and rerouting traffic to service roads in vicinity of the project. Brin coordinated the queue analysis with DOTD to determine when lane closures would be allowed utilizing 24-hour tube counts. She will also coordinate the development of temporary traffic signal plans for this project as well.
07/18 – 04/19	**LA 1 Pedestrian Crosswalk Study and Traffic / Pedestrian Signal Design West Baton Rouge Parish, Addis, LA** Brin developed a Pedestrian Crosswalk Study and **Traffic Signal Construction Plans** for the intersection of LA 1 at LA 990 in Addis, LA. The study was based on DOTD Traffic Engineering Manual Crosswalk Guidelines followed by traffic signal design plans based on DOTD requirements. The study included traffic and pedestrian traffic data collection, a speed study, crash analyses, intersection analyses and progression analyses. The signal plans included pedestrian signal equipment, signal timing parameter calculations, crosswalk striping, signs, DOTD pay items, estimated quantities, and construction cost. Brin also assisted with the Parish with the DOTD Permit Request for Intersection Control Devices on a State Right of Way.
09/16-04/17	**H.004957.5 I-12 To Bush - LA 3241 (I-12 – LA 36) Corridor Study (St. Tammany Parish, LA)** Brin was the project manager of a formal DOTD traffic study for the new alignment of LA 3241 with the purpose of obtaining both existing and projected future traffic variables in accordance with standard operating procedures typically performed in these types of analyses. The traffic study included **alternative analyses** to improve the safety and efficiency of the roadway consistent with the latest DOTD policies related to access management and complete streets. Specific access management features examined included intersection improvements, median openings, and U-turns, spacing and type of openings, signalization of intersections and roundabouts. Brin developed the safety analyses report for the project
08/12-05/13	**H.009998 LA 935 Safety / Stage 0 Study (Ascension Parish, LA)** Brin developed the safety analyses report for the **Stage 0 Study**. She coordinated and collected existing traffic data using Jamar equipment. She used HCS and Interactive Highway Safety Design Model (IHSDM) Software for the analyses. She developed MicroStation drawings with scaled aerials to show crash diagram locations as well

	as proposed alternate layouts. Histograms developed in Excel were used to show the comparison of various crash conditions with statewide averages. Crash records for 3 years were obtained from crash1 database.
06/02-04/04	**SPN 737-94-0030 Shreveport ITS Near-Term Phase 3A (Shreveport, LA)** Brin developed the construction plans for the **design of ITS** equipment on a 22 mile stretch of I-220 in Shreveport, LA. The project included 36 closed circuit television cameras, 5 dynamic message signs, and 143 radar vehicle detectors. Project included plan preparation of communications diagrams, fiber optic allocation diagrams, fiber optic termination diagrams, telecommunication facilities, power services, wireless transmitters and receivers, related conduit and end equipment, general notes, special details, estimated construction cost and terrain analyses.
06/01-08/03	**SPN 737-94-0028 Shreveport ITS Near-Term Phase 1 (Shreveport, LA)** Brin designed **ITS equipment construction plans** for a 10 mile stretch of I-20 in Shreveport, LA. Equipment included 17 Video cameras, 8 Dynamic Message Signs and 66 radar counters. This project included plan preparation of communications diagrams, fiber optic allocation diagrams, fiber optic termination diagrams, telecommunication facilities, power services, wireless transmitters and receivers, related conduit and end equipment, general notes, special details, estimated construction cost and terrain analyses.

Firm employed by **Vectura Consulting Services, LLC**				
Name	Laurence Lucius Lambert, II, PE, PTOE, PTP		Years of experience with this firm/employer	6
Title	Supervisor		Years of experience with other firm(s)/employer(s)	18
Degree(s) / Years / Specialization			B.S./1997/Civil Engr. M.S./2006/Civil Engr. (Transportation focus) M.B.A./2010	
Active registration number / state / expiration date			PE.0029901 / LA / 3/31/2024	
Year registered	2001	Discipline	Civil	
Contract role(s) / brief description of responsibilities			**Traffic Signal Design QC / TMP Supervisor**	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
02/21 - 03/21	**H.013256.5 I-10 ITS Scott to Lake Charles (Southwest Louisiana)** Laurence was the lead traffic engineer for a Level 2 **Traffic Management Plan** (TMP) for the construction of ITS equipment along I-10. The plan included a safety strategy that included a CAT Scan, LOS determination utilizing Citrix data, lane closure recommendations based on a queue analysis and public information strategies.
04/18 – 12/21	**H.010960.5 LA 30 Roundabouts at Tanger & I-10 Gonzales (Ascension, LA)** Laurence provided a Quality Control review of the **temporary construction and sequence of construction plans**. Vectura also provided Quality Control review of **signing and striping plans** at 30% and 60% plan sets to ensure the **roundabouts** conformed to the Pavement Markings Details Sheet PM-09 and the Manual on Uniform Traffic Control Devices (MUTCD) details on roundabouts.
10/17 - 10/18	**H.013025 LA 182 (University Avenue) Corridor Planning Study (Lafayette, LA)** Laurence was the lead transportation engineer for a **Corridor Planning Study** for LA 182. The scope focused on improving safety and mobility for pedestrian, bicycle, and transit users. Laurence collected AM & PM peak vehicle turning movement counts as well as pedestrian and bicycle counts. Laurence coordinated with the Acadiana Planning Commission to **develop growth rates and design year volumes**. Laurence then performed Highway Capacity Manual analysis for 5 intersections along the intersection analyses for the signalized and roundabout controlled alternatives. Included in the study was a **safety analyses** of five intersections and the intermediate segments. Based on the results of the safety analysis, Laurence provided design criteria to the design team for improving safety of pedestrians, bicycles, and vehicles.
03/18-06/18	**H.006474.1 Shreveport Immediate ITS Phase 2b (Shreveport, LA)** Laurence was the task leader for Procurement and Alternative Analysis Configuration portions of the Systems Engineering Analysis (SEA) that complied with Code of Federal Regulations Title 23, 940.11). The Procurement task consisted of investigating the methods of procurement for the deployment project where the procurement options for the pros and cons for each method were documented. The Alternatives Analysis Configuration consisted of analyzing three possible project configurations where the pros and cons of the needed equipment and communication options were documented.
09/16 - 04/17	**H.004957.5 I-12 To Bush - LA 3241 (I-12 – LA 36) Corridor Study (St. Tammany Parish, LA)** Laurence was the lead traffic engineer for a **DOTD traffic study** for the new LA 3241 alignment with the purpose of obtaining both existing and projected future traffic variables in accordance with standard operating procedures typically performed in these types of analyses. Laurence worked closely with the NORPC and District 62 to develop design year volumes using data the TransCAD model. The traffic study examined concepts that improved the safety and efficiency of the roadway consistent with the latest DOTD policies related to access management. Laurence, along with Brin, **collected 7-day, 24-hour counts** w/ classification on mainlines, turning movement counts for morning and evening peak periods and speed data for mainlines. Laurence also developed a VISSIM **traffic simulation model** of the preferred alternative.
04/11 - 09/11	**SPN 424-04-0032 US 90 at Louisiana 85 Design-Build Maintenance of Traffic Plan (Iberia Parish, LA)** Laurence developed a **Maintenance of Traffic** plan that accommodated the bridge and road widening, but also maintain passage of large trucks and freight through the heavily travelled corridor crucial for agricultural goods and farming. Laurence was the Lead Traffic Engineer for one of the

	first design-build projects undertaken by DOTD, which included the construction of a grade separated, diamond interchange to replace the existing US 90 intersections with Louisiana 85 in Iberia Parish to upgrade this future I-49 corridor to interstate standards.
06/10 - 10/10	**SPN 454-02-0071 I-12 Widening Design-Build Amite River Bridge to Juban Road Maintenance of Traffic Plan (Livingston Parish, LA)** Laurence was responsible for designing a **Maintenance of Traffic** plan that would keep drivers informed of real time traffic situations through a comprehensive traffic management system. Four lanes (two lanes in each direction) were to remain open during peak travel times throughout the length of the project. Temporary lane closures only occurred at night.
04/07-12/07	**SPN 737-99-0799 Baton Rouge to New Orleans ITS-TIM Phase 1 Design Build Project (Jefferson and St. John the Baptist Parishes)** Laurence was the project manager for an ITS Design-Build project, where Laurence **represented the DOTD ITS Section**. Laurence was responsible for developing a Systems Engineering Analysis that was used to solicit proposals from Design-Build teams. Laurence also assisted the DOTD ITS Section with the development of the Scope of Services Package (SOSP) that was used during the procurement process.
09/06-09-07	**EBR 06-CS-HC-00012 Downtown Baton Rouge Signal Project (Baton Rouge)** Laurence was the Project Manager to develop construction plans to upgrade 29 signals in downtown Baton Rouge as part of the EBR Green Light Plan. He coordinated numerous utility conflicts during construction since current utility plans were not readily available in an old part of town. He made several signal pole foundation location adjustments based on numerous field visits with utility companies.

Firm employed by **Bluewing Civil Consulting, LLC**					
Name	Simon A. Guillory, CFM, PE			Years of relevant experience with this employer	7
Title	Principal			Years of relevant experience with other employer(s)	15
Degree(s) / Years / Specialization			ME, 2010 – Civil Engineering, Water Resource Engineering | BS, 2008 – Civil Engineering		
Active registration number / state / expiration date			LA PE 37874 – Expires 9/30/2023		
Year registered	2008	Discipline	Civil Engineering		
Contract role(s) / brief description of responsibilities			**H&H Engineer**		

Mr. Guillory brings 12 years of experience in watershed, floodplain and stormwater drainage hydrologic and hydraulic design, analysis, reporting and public outreach and engagement. These past experiences which are similar to the LWI Region 5 project have provided him an excellent understanding of watershed, riverine and surface flow modeling and analysis, and stakeholder engagement. Mr. Guillory's experience also includes FEMA CLOMR/LOMR studies and reports, floodway encroachment analyses (no-rise studies), various DIAs and detention analyses. Additionally, he has experience with NEPA project compliance and is assisting multiple local agencies with LWI CDBG applications and coordination.

03/20-Current	**Lower Vermilion River Watershed Plan | Vermilion Parish, LA**. *Project Manager, Engineer-of-Record.* NRCS Watershed Plan/EA to evaluate a tide/surge and freshwater protection system. Scope of the project includes an assessment of environmental resources and anticipated project impacts. Project administration in accordance with NEPA requirements. BWC are utilizing HEC-RAS 5.0 to develop a 2D floodplain model of the appx 15,000 acre project area. Project lead responsible for all aspects of the project including management of scientific sub-consultants; stakeholder engagement and coordination; NEPA conformance, etc. Also acting as Engineer-of-record for H&H analysis and modeling.
11/18-Current	**Calcasieu Parish Consolidated Gravity Drainage District 1 –Urban Flood Study | Sulphur, LA**. *Project Manager, Engineer-of-Record.* Study of the Maplewood Subdivision in Sulphur, LA for localized flooding issue and analyzing alternatives to provide flood relief for local residents. The Maplewood area has seen an increase in residential and commercial development and natural drainage outfalls have decreased in capacity due to floodplain encroachments. BWC are utilizing 1D and 2D models to analyze the recent development impacts on the existing drainage networks and design drainage improvements. This study identified drainage improvements along Prater Rd and BWC are currently assembling bid package for this improvement. Project lead responsible for all aspects of the project including H&H analysis, field investigations, report preparation, stakeholder coordination and engagement, and solution development.
04/19-Current	**Calcasieu Parish Consolidated Gravity Drainage District 1 –David Bayou Watershed Flood Study | Sulphur, LA**. *Project Manager, Engineer-of-Record.* Study of the David Bayou Watershed in Sulphur, LA for localized flooding issue and analyzing alternatives to provide flood relief for local residents. As surrounding development has increased, a central and historic neighborhood of Sulphur, LA is experiencing increased flood risk and impacts. BWC are utilizing 1D/2D integrated stormwater models, field-collected survey data, and historic high water marks to analyze the existing area and develop CIPs to mitigate flood risk. Project lead responsible for all aspects of the project including H&H analysis, field investigations, report preparation, stakeholder coordination and engagement, and solution development.
11/19-02/20	**Jeff Davis Parish Consolidated Drainage District 1 –Bayou Serpent H&H Study | Northwestern Jeff Davis Parish, LA**. *Project Manager, Engineer-of-Record.* Develop hydrologic and hydraulic models to analyze the Manual Rd. Bridge crossing of Bayou Serpent in northwestern Jeff Davis Parish. BWC are developing hydrologic and hydraulic models to analyze this crossing to develop

	recommendations for improving hydraulic efficiency. Potential improvements include bridge replacement and floodplain culverts. Led development of H&H analysis and drainage solution.
08/20-Current	**Jeff Davis Parish Consolidated Drainage District 9 –East Lacassine Bayou H&H | Welsh, LA** *Project Manager, Engineer of Record.* Riverine H&H study to assess conditions of bayou, analyze stream geometry and bridge crossings, and develop recommendations to lower floodplain profile. Led development of H&H analysis and drainage solution.
01/19-Current	**Calcasieu Parish Consolidated Gravity Drainage District 1 –David Bayou Watershed Flood Study | Sulphur, LA**. *Project Manager, Engineer-of-Record.* Study of the David Bayou Watershed in Sulphur, LA for localized flooding issue and analyzing alternatives to provide flood relief for local residents. As surrounding development has increased, a central and historic neighborhood of Sulphur, LA is experiencing increased flood risk and impacts. BWC are utilizing 1D/2D integrated stormwater models, field-collected survey data, and historic high water marks to analyze the existing area and develop CIPs to mitigate flood risk. Project lead responsible for all aspects of the project including H&H analysis, field investigations, report preparation, stakeholder coordination and engagement, and solution development.
11/20-Current	**LWI Modeling Contract Region 5 | Southwest LA**. *Project Manager, Engineer-of-Record.* Collection of existing watershed datasets, models, and studies; and proposition of modeling design approach, schedule and costs. Identify and execute data gap analysis for regional or local models (models, data, surveys, historical floods, high water marks, environmental concerns) in the Mermentau and Vermilion HUC's of Region 5; assisting with data documentation; identifying stakeholders; and working with HDR on scoping of subsequent data acquisition and community stakeholder engagement. Hydraulic Model development for Bayou Lacassine and tributaries, or others designated by HDR.
01/19-Current	**Calcasieu Parish Police Jury –Sara St. Bridge Replacement (Recall #070043) | Sulphur, LA** *Project Manager, Engineer-of-Record..* Project includes engineering, plan preparation and utility coordination for the reconstruction of Sara St. Bridge. Assisted with the utility coordination. Identified potential conflicts with existing utilities, and began coordination with third party utilities and landowners for relocation of utilities to the existing bridge or proposed roadway conflict.
04/19-12/19	**DOTD –I-49 South Design-Build | Lafayette, LA**. *Drainage Engineer-of-Record*. Drainage engineer-of-record for the I-49 South Design-Build Team. The scope of the project converted approximately 1.5 miles of existing US 90 in Broussard, LA into Interstate roadway according to all applicable AASHTO regulations. Fenstermaker serves as the chief design sub-consultant to prime contractor James Construction Group. This is the initial phase of the I-49 South Project from Lafayette to New Orleans. My duties involved preparation of signed and sealed drainage plan and profile sheets and Drainage Report for the project.
09/21-Current	**Jeff Davis Parish Police Jury – St. Mary St. Bridge Replacement (Recall # 072706) | Elton, LA** *Project Manager, Engineer of Record.* Project included development of an engineered bid package for replacement of existing precast, slab span bridge supported by timber substructure, with skewed timber replacement bridge. Scour Analysis was performed as well and included watershed runoff analysis and bridge scour analysis using HEC-RAS version 5.0.7.

Firm employed by **Bluewing Civil Consulting, LLC**					
Name	Chase Berard, PE			Years of relevant experience with this employer	4
Title	Professional Engineer			Years of relevant experience with other employer(s)	4
Degree(s) / Years / Specialization			BS, 2014 – Civil Engineering		
Active registration number / state / expiration date			LA PE 43038 – Expires 3/31/2023		
Year registered	2014	Discipline	Civil Engineering		
Contract role(s) / brief description of responsibilities			**H&H Engineer**		

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

11/18-Current	**Calcasieu Parish Consolidated Gravity Drainage District 1 –Urban Flood Study | Sulphur, LA**. *Project Engineer.* Study of the Maplewood Subdivision in Sulphur, LA for localized flooding issue and analyzing alternatives to provide flood relief for local residents. The Maplewood area has seen an increase in residential and commercial development and natural drainage outfalls have decreased in capacity due to floodplain encroachments. BWC are utilizing 1D and 2D models to analyze the recent development impacts on the existing drainage networks and design drainage improvements. This study identified drainage improvements along Prater Rd and BWC are currently assembling bid package for this improvement. Project lead responsible for all aspects of the project including H&H analysis, field investigations, report preparation, stakeholder coordination and engagement, and solution development.
04/19-12/19	**DOTD –I-49 South Design-Build | Lafayette, LA**. *Project Engineer*. The scope of the project was to bring this particular intersection of HWY 90 to interstate standards as part of the state's long term goal to convert HWY 90 corridor into I-49 from North of Lafayette all the way to New Orleans. My work consisted of breaking the project up into multiple phases that could be constructed while maintaining traffic throughout the entire project. I used Inroads to model all traffic switches and detours to determine the grades of all temporary pavements and to make sure the detours/traffic switches were still compliant with LADOTD roadway design criteria and AASHTO design guidelines.
01/19-Current	**Calcasieu Parish Police Jury –Sara St. Bridge Replacement (Recall #070043) | Sulphur, LA** *Project Engineer.* Project includes engineering, plan preparation and utility coordination for the reconstruction of Sara St. Bridge. Assisted with the utility coordination. Identified potential conflicts with existing utilities, and began coordination with third party utilities and landowners for relocation of utilities to the existing bridge or proposed roadway conflict.

17. **Firm Experience:**

Firm name	**Huval & Associates, Inc.**	Past Performance Evaluation Discipline(s)*	**Bridge**
Project name	I-220/I-20 Interchange Imp & BAFB Access Design-Build Project	Firm responsibility (prime or sub?)	Prime
Project number	H.003370	Owner's name	LADOTD
Project location	Shreveport, Louisiana	Owner's Project Manager	Corey Landry, P.E.
Owner's address, phone, email	1201 Capitol Access Rd. Baton Rouge, LA 70804-9245; (225)-379-1065; peggy.paine@la.gov		
Services commenced by this firm (mm/yy)	08/18	Total consultant contract cost ($1,000's)	$4,411
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$2,166

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

* If there is more than one past performance evaluation discipline included in the proposal, then indicate which past performance evaluation discipline(s) this project is being used to represent.

HUVAL, as Lead Designer, teamed with James Construction Group for the I-220/I-20 Interchange Imp & BAFB Access Design-Build Project and was selected by LADOTD February 2019.

The I-220/I-20 Interchange Imp & BAFB Access Design-Build Project consists of extending I-220 as a 4-lane freeway (Barksdale Access Road) south over I-20 to proposed ramp gores for ramps W-S and S-E at Musselshell Bayou then continuing south as a 4-lane rural arterial, crossing over the KCS RR, ending on BAFB property. Included is a modification of the existing I-220/I-20 interchange to also provide direct access from I-20 to Barksdale Access Road. Cost of the project is $72 million. Saving $10 million for the LADOTD, a HUVAL-developed Alternative Technical Concept (ATC) was accepted by LADOTD and incorporated into the project. This ATC changed the IMR concept for the I-220/Barksdale Road northbound exit to I-20 westbound entrance (Ramp NB-WB) from an elevated semi-direct flyover ramp (Ramp S-W in the IMR) to an at-grade loop ramp. This ATC partial cloverleaf design extends the collector-distributor road for the I-20 westbound exit to the I-220 southbound entrance (Ramp WB-SB) included in the IMR concept in order to connect NB to WB traffic to the I-220 southbound to I-20 westbound entrance ramp (Ramp SB-WB).

HUVAL's responsibilities for the I-220 interchange project include Lead Designer, project management, roadway geometrics, bridge design, sequence of construction, and traffic control plans.

HUVAL also is providing construction engineering support for James Construction Group during the construction phase of the project.

HUVAL performed 100% of the work for this project in Louisiana.

***Key Project Members*:**

Thomas Gattle, Design Manager

Justin Peltier, Lead Bridge Design

Rudy McLellan, Design Quality Manager

Bob Schmidt, Traffic

Reid Romero, Bridge Design

Colby Guidry, Design and Construction Liaison

Nicholas Helminger, Traffic & Road Design

Firm name	**Huval & Associates, Inc.**	Past Performance Evaluation Discipline(s)*	**Bridge**
Project name	Belle Chasse Bridge & Tunnel Replacement Public-Private Partnership Project	Firm responsibility (prime or sub?)	Prime

Project number	H.004791	Owner's name	LADOTD
Project location	Belle Chasse, Louisiana	Owner's Project Manager	Nicholas Olivier, P.E.
Owner's address, phone, email	1201 Capitol Access Rd. Baton Rouge, LA 70804-9245; (225)-379-1133; nicholas.olivier@la.gov		

Services commenced by this firm (mm/yy)	08/18	Total consultant contract cost ($1,000's)	$8,538
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$6,494

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)
* If there is more than one past performance evaluation discipline included in the proposal, then indicate which past performance evaluation discipline(s) this project is being used to represent.

***Key Project Members*:**
David S. Huval, Sr., Principal
Bob Schmidt, Design Manager
Thomas Gattle, Roadway Design
Michelle Helminger, Roadway Design
Rudy McLellan, Lead Bridge Design
Matthew Hebert, Bridge Design
Colby Guidry, Design QC

HUVAL is the Lead Designer on the Traylor/Massman DBJV and Plenary Infrastructure team for the new Belle Chasse Bridge Public-Private Partnership Project, including urban arterial approach roadways and toll system.

HUVAL led the winning design by crafting an alternative technical concept (ATC) including numerous access management, Complete Streets, super street, and traffic signal design features. Green Infrastructure design of the multi-acre infield area of the new bridge significantly reduces runoff from the project. This winning ATC significantly reduced the amount of new right-of-way and displacements needed to construct the project and simultaneously improves traffic operations in the constricted corridor.

The Belle Chasse Project consists of replacing an existing vertical lift bridge/tunnel pair on Belle Chasse Highway (LA 23) with one four-lane fixed span bridge over the Gulf Intracoastal Waterway (GIWW). This project will improve connectivity from Lapalco Boulevard (LA 248) to Woodland Highway (LA 406). The project includes a toll on the new bridge to help fund construction cost as well as operations and maintenance for the duration of the toll.

The Rio Grande Railroad is directly adjacent to the project corridor and also crosses the GIWW. It requires numerous at-grade roadway crossings, signalized intersections, and navigation protection and lighting. HUVAL has coordinated these elements of the project with the Railroad to enable the project to meet contracted schedule requirements.

Huval & Associates, Inc. performed **100%** of the work for this project in Louisiana.

Firm name	**Huval & Associates, Inc.**		Past Performance Evaluation Discipline(s)*	**Road**	
Project name	I-49 @ Verot School Road		Firm responsibility (prime or sub?)	Prime	
Project number	H.011235.5	Owner's name	LADOTD		
Project location	Broussard, Louisiana		Owner's Project Manager	Cory Landry, P.E.	
Owner's address, phone, email	1201 Capitol Access Rd., Baton Rouge, LA 70804, (225) 379-1065, cory.landry@la.gov				
Services commenced by this firm (mm/yy)	6/16	Total consultant contract cost ($1,000's)		$3,064	
Services completed by this firm (mm/yy)	Present	Cost of consultant services provided by this firm ($1,000's)		$713	

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

* If there is more than one past performance evaluation discipline included in the proposal, then indicate which past performance evaluation discipline(s) this project is being used to represent.

HUVAL leads a group of firms providing preliminary engineering and related services to construct 2.4 miles of mainline freeway and an interchange at the intersection of I-49 South/US 90 and Verot School Road. The project consists of an above grade bridge structure on Verot School Road that traverses over the I-49 South/US 90 mainline roadway and the parallel railroad. The project also includes one-way frontage roads on both sides of the mainline roadway, a two-way collector service road east of the mainline roadway, and a new alignment of Verot School Road from the interchange to an existing bridge structure approximately 600' west of its intersection with LA 182 (Pinhook Road). A roundabout will be utilized as the intersection between the reconstructed and realigned Verot School Road and South College Drive.

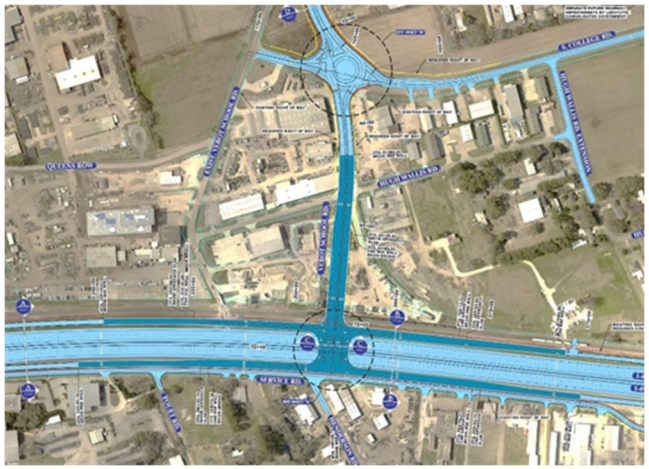
Huval was given a Notice to Proceed in July of 2016 which began Phase 1 of the design project. Phase 1 consisted of a topographic survey, SUE services, traffic engineering analysis, conceptual roadway design and bridge design, preliminary geotechnical study and public meeting and outreach. The goal of Phase 1 was to analyze and update the Record of Decision (ROD) Conceptual Layout and assess the limits of the updated concept compared to that of the ROD Concept. Phase 2, the Preliminary Plan portion of the project, began in May of 2018 and will complete in March 2022.

During the Preliminary Plans portion, as the prime consulting firm, Huval is responsible for overall project management, lead bridge design, roadway design and drainage design.

HUVAL is performing 100% of this work in the State of Louisiana.

***Key Project Members*:**

David Huval, Sr., Principal, Structural Design
Thomas Gattle, Project Manager
Nick Helminger, Design Engineer
Michelle Helminger, MOT, Design
Justin Peltier, Design Engineer



Firm name	**Huval & Associates, Inc.**			Past Performance Evaluation Discipline(s)*	**Bridge**
Project name	Retainer Contract for Bridge Preservation Statewide			Firm responsibility (prime or sub?)	Prime
Project number	4400002537	Owner's name	LADOTD		
Project location	Louisiana Statewide			Owner's Project Manager	Kurt Brauner, P.E.
Owner's address, phone, email	1201 Capitol Access Rd., Baton Rouge, LA 70804-9245, (225) 379-1933, Kurt.Brauner@la.gov				
Services commenced by this firm (mm/yy)	08/12	Total consultant contract cost ($1,000's)			$6,000
Services completed by this firm (mm/yy)	07/17	Cost of consultant services provided by this firm ($1,000's)			$4,800

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

As the Prime, HUVAL is responsible for Preliminary and Final Plans, Surveying Services, Bridge/Structural Inspection and Evaluation, Design Peer Review, Load Rating of Bridges, and Construction Services. Projects performed using LRFD and LRFR design. Completed and On-going Task Orders include:

Bayou Tigre Rack and Pinion Dispute, T.O. H.002751.6: Independent Review of LADOTD's design, contract plans, specifications, construction-related services, field measurements of rack and gear installation, and related documents, as well as reviewing the contractor's fabrication and installation of the bridge machinery. Following review, a non-biased position statement regarding the dispute between LADOTD and contractor was issued.

LA 182 & LA 58 Movable Bridge Rehab, T. O. H.010006.5: Preliminary Plans for two movable bridges in Lafourche and Terrebonne Parishes including rehabilitation necessary for bridges to remain in service for 30-40 additional years. Includes structural, mechanical, electrical, architectural, and paint system and concrete surface improvement.

Jeanerette End Wedge Repair, T.O. 009467.5: Site Visit and Evaluation, Preliminary Plans and Final Plans for the rehabilitation of this swing span bridge on LA 671 in Iberia Parish. The intent of this Project is to correct any mechanical and electrical deficiencies of the bridge end wedge system, balance wheels, live load shoes, and center pivot bearing.

Bayou Lafourche Bridge, T.O. H.000174: Final Plans, Design Calculations and Structural Monitoring Instrumentation for this slab span bridge structure in Ouachita and Richland Parish. Structural Monitoring Instrumentation is being performed by a Sub-Consultant to Huval. The AccelBridge System was used as the post-tensioning method to achieve the required compression force between the transverse deck panel joints.

KCS Railroad Overpass near Ada, T.O. H.000126: Engineering Construction Services for the KCS Overpass Bridge as well as developing self-curing admixture (SCA) and underwater self-consolidating concrete (UWSCC) for the trial deck and drilled shafts and providing construction support of using these materials for the KCS overpass bridge.

I-10: Ramah – WBR P/L, T.O. H.010318: Final Plans for phased replacement of eight existing 20ft. approach slabs with new 40ft. reinforced concrete approach slabs along I-10 in Iberville Parish.

***Team Members to be Utilized on Retainer*:**
David S. Huval, Sr., Supervisor Engineer
Thomas Gattle, Project Manager/Lead Design
Colby Guidry, Lead Bridge Design, Ratings, Bridge Inspections
Justin Peltier, Bridge Design, Inspections
Malcolm Huval, Movable Bridge Design, Construction Support
Lee Hupperich, Movable Bridge Design
Reid Romero, Bridge Design, Ratings

Huval & Associates, Inc. is performing **100%** of the work for this project in the State of Louisiana.

Firm name	**Huval & Associates, Inc.**		Past Performance Evaluation Discipline(s)*	**Bridge**	
Project name	LA 336-1: Bayou Teche Bridge at Breaux Bridge Rehab		Firm responsibility (prime or sub?)	Prime	
Project number	H.011485.5	Owner's name	LADOTD		
Project location	Breaux Bridge, Louisiana		Owner's Project Manager	Chris Guidry, PE.	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70804, 225-379-1933, chris.guidry@la.gov				
Services commenced by this firm (mm/yy)	01/17	Total consultant contract cost ($1,000's)		$500	
Services completed by this firm (mm/yy)	Present	Cost of consultant services provided by this firm ($1,000's)		$500	

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

* If there is more than one past performance evaluation discipline included in the proposal, then indicate which past performance evaluation discipline(s) this project is being used to represent.

Huval & Associates, Inc. (HUVAL) was originally contracted to perform an evaluation of the existing historic structure to determine the level of rehabilitation required to restore the bridge to a like new condition while preserving the historical features of the bridge. The bridge is listed as a Preservation Priority and HUVAL worked closely with the DOTD Bridge Design and Environmental Sections to ensure the requirements of the Programmatic Agreement were followed. The evaluation included a hands-on inspection of all components, a live load rating and a final report which summarized the findings and provide the DOTD with repair recommendations and estimated construction costs.

After finalizing the required repairs, Huval was issued a contract to prepare final rehabilitation plans to implement these repairs.

The design details included the replacement or rehabilitation of the following:

- Electrical equipment
- Paint system for structural steel
- Stringer bearings for approach spans
- Steel grid deck
- Rehab of movable traffic barriers
- Tower drive machinery rehab
- Span Locks
- Air Buffers
- Weighing and balancing of the movable span
- Epoxy overlay of the approach spans
- Modification of the bridge railing and sidewalk to comply with ADA requirements.

HUVAL is currently performing engineering construction services for the project.

Key Project Members:

David S. Huval, Sr., Principal,
Justin Peltier, Bridge Design Engineer
Lee Hupperich, Movable Design Engineer
Colby Guidry, Bridge Design QC/QA

HUVAL performed 100% of the work for this project in Louisiana.

Firm name	**G.E.C., Inc.**	Past Performance Evaluation Discipline(s)*	**Bridge**
Project name	**Bascule Control System Replacement**	Firm responsibility (prime or sub?)	Prime
Project number	H.009323	Owner's name	GNOEC
Project location	St. Tammany and Jefferson Parishes, Louisiana	Owner's Project Manager	Carlton Dufrechou
Owner's address, phone, email	PO Box 7656, Metairie, LA, (504) 835-3118, cdufrechou@gnoec.org		
Services commenced by this firm (mm/yy)	01/11	Total consultant contract cost ($1,000's)	$ 1,740
Services completed by this firm (mm/yy)	12/15	Cost of consultant services provided by this firm ($1,000's)	$ 771

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

- GEC designed a replacement control system to allow operator control of the bascule bridge system at the North Channel of the Lake Pontchartrain Causeway. The project involved replacing the existing Programmable Logic Controller (PLC) control system which is no longer supported with a new modern PLC bridge control system. The control system must retain all mechanical interlocks as well as operating procedural interlocks. Many older components were replaced with more modern equivalents, i.e. leaf angle measurement with new electronic synchro transmitters. The new synchro devices allowed the leaf angles to be transmitted and displayed on the operator HMI touch screens.
- The roadway lighting system was replaced to meet current NEC requirements. additionally, a user manual was created to help in the operations and to train new operators. The bascule bridge system consisted of controlling four leaves, two for northbound lanes and two for southbound lanes. The replacement PLC control system has redundant automatic failover PLCs to allow bridge operation to continue even if one PLC should fail.
- As part of this project, GEC was involved in the startup and shakeout of the new PLC control system until it met all the requirements of the specifications and operational restrictions and interlocks. As part of the startup, all mechanical, electrical and operational interlocks were tested.
- Firm Members Involved: **Cary Bourgeois, Barry McCoy, Jeff Robinson, Varaprasad Venkata, Tom Coerver**

The Construction Engineering and Inspection portion of this project earned an LADOTD Consultant Technical Evaluation rating of 4.8 out of 5 possible points.

Firm name	**G.E.C., Inc.**	Past Performance Evaluation Discipline(s)*	**Bridge**
Project name	US 71/165 Fort Buhlow Bridge and Approaches	Firm responsibility (prime or sub?)	Prime
Project number	700-28-0004	Owner's name	LADOTD
Project location	Alexandria/Pineville, Louisiana	Owner's Project Manager	Joechim Umeozulu, PE
Owner's address, phone, email	1201 Capital Access Road, Baton Rouge, LA, (225) 379-1386, umeozulu@la.gov		
Services commenced by this firm (mm/yy)	09/95	Total consultant contract cost ($1,000's)	$ 9,400
Services completed by this firm (mm/yy)	06/13	Cost of consultant services provided by this firm ($1,000's)	$ 9,000
Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)			

- For this Red River Bridge replacement project, GEC completed feasibility, line and grade, and traffic studies, an environmental assessment (EA), and preliminary and final bridge and roadway plans.
- GEC performed a bridge study which involved preliminary design of plans and sections for a new bridge spanning the Red River. Alternate designs utilizing precast, pre-stressed concrete girder spans, steel girder spans, and segmental concrete box girder spans were developed. Based on the bridge study and in conjunction with LADOTD, a bridge configuration for final design was chosen.
- The final bridge design consists of twin bridges, approximately 3005 feet long, crossing the Red River in the northbound and southbound directions of US 71/165. The final design uses a combination of Type BT pre-stressed girder spans, simple steel plate girder spans, and three-span continuous steel plate girder units spanning the Red River. The simple span steel girder bridge is 225 feet long, has a girder web depth of 8 feet, and crosses an existing levee.

GEC completed final bridge and roadway plans with a traffic study and line and grade study with Environmental Assessment for a new bridge spanning the Red River in Alexandria.

- The actual Red River Crossing is accomplished with the three continuous steel spans of 300 feet, 400 feet, and 300 feet. In plan, girders transitioned from a parallel straight girder configuration to a curved splayed configuration. Girder web depths were set at approximately 12 feet. Specially designed rocker bearings help accommodate bridge movements. The main river supports consist of column bent caps founded on single massive continuous piers supported by an array of 188, 24" diameter steel pipe piles. The Red River spans provide a minimum navigational vertical clearance of 52 feet above the 2% flow line.
- In addition to preparing detailed construction documents for the Red River Bridge replacement project, GEC also provided construction support for the project including responding to RFIs, shop drawing and bridge component submittal reviews, and assisting the Contractor with overcoming unexpected detrimental field conditions. Construction of the Red River Bridge project at Fort Buhlow was completed successfully in 2013.
- Firm Members Involved: **Cary Bourgeois, Jeff Robinson, Keith Rebello, Varaprasad Venkata**

Firm name	G.E.C., Inc.	Past Performance Evaluation Discipline(s)*	Environmental
Project name	Consulting Engineer, Environmental Services	Firm responsibility (prime or sub?)	Prime
Project number	N/A	Owner's name	GNOEC
Project location	St. Tammany and Jefferson Parishes, Louisiana	Owner's Project Manager	Carlton Dufrechou
Owner's address, phone, email	PO Box 7656, Metairie, LA 70010, (504) 835-3118, cdufrechou@gnoec.org		
Services commenced by this firm (mm/yy)	1991	Total consultant contract cost ($1,000's)	$ 1,000 (annual fee)
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$ 1,000 (annual fee)

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

For over 31 years, GEC has served as the Consulting Engineer for the Greater New Orleans Expressway Commission (GNOEC) Lake Pontchartrain Causeway. In this role, GEC has provided a multitude of services to support the maintenance, improvement, and operations of the Lake Pontchartrain Causeway Bridge, including environmental program management oversight. GEC manages regulatory stakeholder solicitation, environmental field investigations and assessments, and National Environmental Policy Act (NEPA) documentation. Recent projects, documented as Categorical Exclusions, include:

- H.009324, North Shore Toll Plaza Lane Modification (August 2011)
- H.009322, Piling Restoration-Transformer Platforms (July 2012)
- H.009323, North Channel Bascule Control System Replacement (July 2012)
- H.009325, South Channel Fender Repair / Structural Improvements (July 2012)
- H.005970, Replace Damaged Traffic Signs (NB/SB) (September 2012)
- H.005971, Modifications to Cable Tray Support System (September 2012)
- H.005973, Realignment of Northbound Bridge Span (September 2012)
- H.005972, Modifications to the Nine Mile Turnaround Spans (September 2016)
- H.011231, North Toll Plaza Scour Protection (April 2014)
- H.011206, Cable Support Tray Repairs (April 2014)
- H.011217, Demolition of the Nine Mile Turnaround (April 2014)

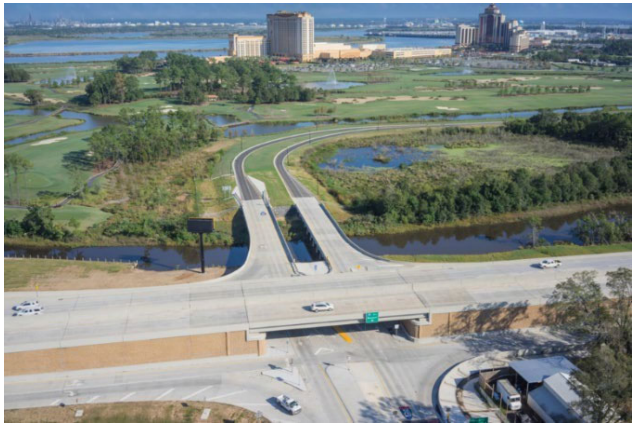
For this ongoing contract, GEC routinely utilizes LADOTD's Environmental of Standard Practice guidance regarding Stage 0 – Feasibility and Stage 1 – Planning/Environmental processes.

GEC documented these projects in accordance with LADOTD's Environmental of Standard Practice guidance regarding Stage 0 – Feasibility and Stage 1 – Planning/Environmental processes. GEC prepared preliminary Purpose and Need Statements, assessed alternatives, and identified potential environmental constraints using the Department's Environmental Determination Checklist. GEC prepared and conducted regulatory Solicitations of Views (SOVs), prepared responses to regulatory comments/guidance, conducted wetland delineations, prepared wetland/water body survey reports and prepared Coastal Use Permit applications.

GEC prepared Spill Prevention, Control, and Countermeasure (SPCC) Plans for the Causeway Bridge and Nine Raw Sugar Mills in Louisiana. GEC prepares, maintains, and updates SPCC Plans in accordance with requirements contained in 40 CFR Part 112 and LAC 33:IX.9 to detail contingency planning, operating procedures, and BMPs to prevent and control the discharge of pollutants resulting from spill events.

Firm Members Involved: **Jeff Robinson, Laura Carnes, Barry McCoy, Cary Bourgeois**

Firm name	**GeoEngineers, Inc.**	Past Performance Evaluation Discipline(s)*	**Geotech**
Project name	**I-210 at Cove Lane Interchange (Design and Construction)**	Firm responsibility (prime or sub?)	Prime
Project number	H.010151	Owner's name	Louisiana Department of Transportation and Development
Project location	Route I-210, Lake Charles, LA	Owner's Project Manager	Benjamin Fernandez
Owner's address, phone, email	P.O. Box 94245, Baton Rouge, LA 70816; 225.379.1821; Benjamin.Fernandez@la.gov		
Services commenced by this firm (mm/yy)	08/12	Total consultant contract cost ($1,000's)	Unknown
Services completed by this firm (mm/yy)	07/15	Cost of consultant services provided by this firm ($1,000's)	$2,470

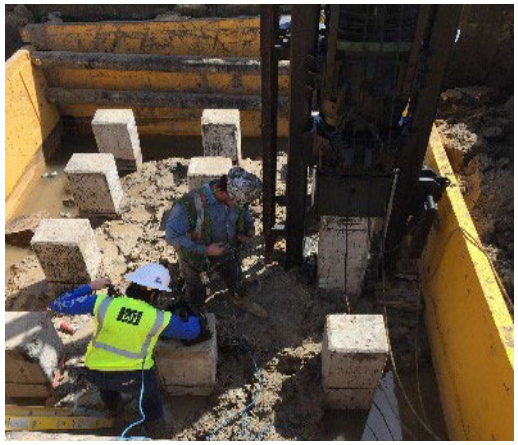


GeoEngineers completed a geotechnical engineering evaluation, design and construction monitoring for the new Interstate 210 (I-210) overpass of Cove Lane in Lake Charles, Calcasieu Parish. This fast-track project required our team to mobilize five different drill rigs for explorations and staff from offices across the country in orderto meet the schedule requirements. We completed engineering analyses and provideddesign and construction recommendations for about 8,000 driven pile foundations, MSE walls and wick-drain/surcharge design to reduce post-construction embankmentsettlement, in accordance with AASHTO LRFD specifications for highway bridges. GeoEngineers provided a complete geotechnical investigation, including 128explorations (43 drilled soil borings and 85 CPTs) to depths in the range of 20 to 120 feet and associated soil laboratory testing for the I-210 overpass structure with approach embankments and ramps, which is aligned within a very crowded corridor between Cline Canal and private property. The proposed embankment overpass structure used a tight urban diamond configuration with a roundabout for the new Cove Lane interchange. The team used Pile Driving Analyzer (PDA) equipment to evaluate and monitorinstallation of one pile every 50 of the 8,000 piles the contractor placed. In addition, our numerous detailed records provided valuable information to the DOTD and team members during the project. The work for this large project had to be performed very close to live traffic. Safety measures were heighted even more to ensure the safety of everyone working on the project and to the ongoing traffic. *Team members: Wendy Allen, James Aronstein, Cody Hatch, Larry Sant, and David Sauls.*

Firm name	**GeoEngineers, Inc.**		Past Performance Evaluation Discipline(s)*	**Geotech**	
Project name	**Design-Build US90 @ LA318 Interchange**		Firm responsibility (prime or sub?)	Sub	
Project number	S.P. H.004932	Owner's name	Louisiana Department of Transportation and Development		
Project location	St. Mary Parish		Owner's Project Manager	Timothy Nickel, PE	
Owner's address, phone, email	P.O. Box 94245, Baton Rouge, LA 70816; 225.379.1110; Timothy.Nickel@la.gov				
Services commenced by this firm (mm/yy)	05/15	Total consultant contract cost ($1,000's)		Unknown	
Services completed by this firm (mm/yy)	04/18	Cost of consultant services provided by this firm ($1,000's)		$734	

The US90/LA318 Interchange project was in preparation for the conversion of US90 to future I-49 in St. Mary Parish and included construction of access ramps between US90 and LA318, realignment of the frontage road for local access parallel to US90, and elevating US90 over LA318. As part of the design-build team with Gilchrist Construction Company, GeoEngineers provided geotechnical engineering design services and construction recommendations. Our work included completing preliminary designs for compliance with AASHTO LRFD and LADOTD standards. GeoEngineers also provided geotechnical design to the bridge, road and contractor teams as needed throughout the duration of the design-build construction process. Areas of geotechnical design includethe following:

- Review of project geology and explorations previously completed.
- Providing explorations and laboratory testing for foundation, embankment andpavement design.
- Engineering analysis and recommendations for driven pile foundations for highwayoverpass bridges and drainage culvert design.
- Engineering analysis and recommendations for wick drains and surcharge to reduce post-construction embankment settlement, including field monitoring.
- Field monitoring of pile dynamic testing including WEAP and PDA analysis.



Team members: James Aronstein, Cody Hatch, Larry Sant, and David Sauls.

Firm name	**Civil Design & Construction, Inc.**		Past Performance Evaluation Discipline(s)*	**Surveying**	
Project name	LA 58: Petit Caillou Bridge Rehabilitation / Sarah Bridge		Firm responsibility (prime or sub?)	Sub	
Project number	H.010006.5-3	Owner's name	LADOTD		
Project location	Terrebonne Parish, LA		Owner's Project Manager	Thomas Gattle (Huval & Assoc)	
Owner's address, phone, email	922 W. Point Des Mouton Rd., Lafayette, LA 705007 / 337-234-3798 / tgattle@tgattle@huvalassoc.com				
Services commenced by this firm (mm/yy)	04/17	Total consultant contract cost ($1,000's)		N/A	
Services completed by this firm (mm/yy)	07/17	Cost of consultant services provided by this firm ($1,000's)		$31	

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)
* If there is more than one past performance evaluation discipline included in the proposal, then indicate which past performance evaluation discipline(s) this project is being used to represent.

Project Description: The purpose of this project is to provide a structural, architectural, mechanical, and electrical rehabilitation of the movable bridge and approaches that shall allow it to remain in service for an additional 50 years with routine maintenance along with various other repairs and updates to the site. CD&C was tasked with performing the topographic survey and DTM for this movable bridge structure and site.

CD&C's Role: CD&C performed a topography survey along LA 58 from Little Caillou Road to Bayside Drive within the existing right of way. Also, CD&C located all utilities within the designated areas of the bridge site and cross-sectioned this large bayou up and downstream of the bridge. Utilities were marked by LA One Call. **3D Terrestrial Scanning** was used in conjunction with single beam hydrographic surveying in addition to traditional means and methods to collect data for the project. To obtain all critical information for design the bridge had to be scanned at both raised and lowered positions.

Members Involved: CD&C employees involved in the project included Ralph Burgess, PLS, Survey Manager; Christopher Ballard, PLS Survey Project Manager; Trent Norris, 3D Scanning Technician; John Ewing, Survey Technician

Performed in LA: 100%

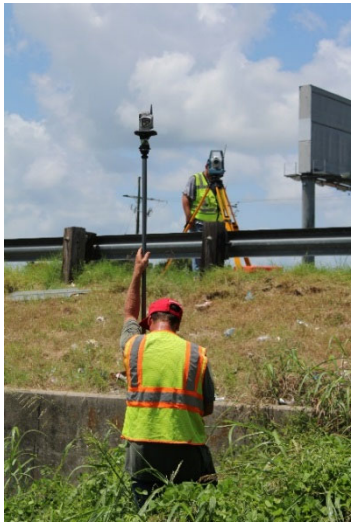
Firm name	**Civil Design & Construction, Inc.**		Past Performance Evaluation Discipline(s)*	**Surveying**	
Project name	I-10: LA 415 to Essen Lane on I-10 and I-12		Firm responsibility (prime or sub?)	Sub	
Project number	H.004100	Owner's name	LADOTD		
Project location	West and East Baton Rouge, LA		Owner's Project Manager	Nicholas Olivier	
Owner's address, phone, email	1201 Capital Access Rd, Baton Rouge, LA 70802 / 225-379-1232 / Nicholas.olivier@la.gov				
Services commenced by this firm (mm/yy)	01/18	Total consultant contract cost ($1,000's)		N/A	
Services completed by this firm (mm/yy)	on-going	Cost of consultant services provided by this firm ($1,000's)		$296	

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

* If there is more than one past performance evaluation discipline included in the proposal, then indicate which past performance evaluation discipline(s) this project is being used to represent.

Project Description: This project is located in West Baton Rouge and East Baton Rouge Parishes in the cities of Port Allen and Baton Rouge, LA. A complete Topographic survey including all utilities (ASCE 38-02, QL "B") with depths and all drainage is required, along with Finish floor elevations of all buildings that fall within the survey limits. The survey begins 1,500 feet West of the western most entrance/exit ramps of the LA 415 and I-10 Interchange. From the I-10, I-12 split the survey shall proceed in southerly and easterly directions along the existing main alignment of I-10 for approximately 1.5 miles & I-12 for approximately 1.5 miles to end the route limits. **CD&C's Role:**

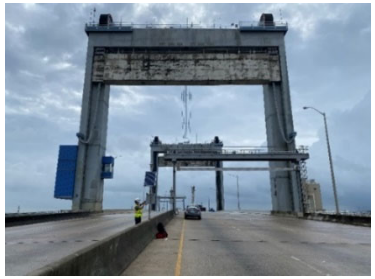
CD&C as a sub-consultant on this project is responsible for topographic surveying the portion of I-10 in West Baton Rouge Parish beginning at the start of the project limits to a point just before the approach of the I-10 Bridge and the limits of the project along LA 415. **This work included using 3D Scanning for the bridge at I-10 bridge @ LA 415 as well as scanning every 500' for control verification and incorporation of the Mobile Lidar for the I-10 pavement.**



Members Involved: Karla E. Weston, P.E.; Ralph Burgess, PLS, Christopher Ballard, PLS; Phil Dupree, Party Chief; Jacob Stoehr, Party Chief; Trent Norris, 3D scanning technician; John Ewing, Survey Tech;

Performed in LA: 100%

Firm name	**Wiss, Janney, Elstner Associates, Inc.**	Past Performance Evaluation Discipline(s)*	**Bridge**
Project name	Danziger Lift Bridge Repair	Firm responsibility (prime or sub?)	Prime
Project number	Contract 4400009424, H.000303	Owner's name	Louisiana Department of Transportation and Development
Project location	New Orleans. LA	Owner's Project Manager	Mark Bucci
Owner's address, phone, email	1201 Capitol Access Rd., 6th floor, Baton Rouge, LA 70802; (225) 379-1321; ZhengZheng.Fu@LA.GOV		
Services commenced by this firm (mm/yy)	07/19	Total consultant contract cost ($1,000's)	$1,386
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$1,347 (to date)



The Danziger Lift Bridge is an electro-mechanical, tower drive vertical lift bridge that opened to vehicular traffic in 1984. The bridge was reportedly experiencing operational issues, which included the movable span no longer fitting into the available space between the towers as well as one corner of the bridge not seating properly. WJE was tasked with performing an inspection of relevant portions of the main span contributing to the reported operational issues, an in-depth inspection of the lift bridge machinery and electrical systems, and development of repairs to restore the long-term functionality and reliability of the bridge. WJE installed instrumentation and monitoring equipment during the field investigation to evaluate the bridge's operations over an extended period. Based on the findings from our investigation, WJE prepared emergency repair plans and specifications to address some of the operational issues with the bridge. Significant findings and the associated remedies included the following.

- Improving the lift span riding surface on the steel orthotropic deck with the installation of polyester polymer concrete repairs.
- Identification of pinion shaft bearing damage and the subsequent restoration of the pinion shafts and bearings.
- Addressing the contact of the lift span during warm temperatures with the approach spans by monitoring the joint movements and identifying that daily thermal movements of the approach spans were causing the issue, and that by cleaning the expansion joints, the issue was alleviated.
- Design of a new lift span skew control system after existing components were removed from the bridge and could not be relocated or replaced in kind.
- Design of electrical controls for the clutches associated with the span drive differentials.
- Strain gage testing to measure span balance and implementation of counterweight changes to improve seating of the span.
- Strain gage testing also showed that the span drive differentials on both towers were not functioning properly requiring coordination with the manufacturer to properly adjust the clutches in the differentials.
- Inspection of trunnion bearings and the installation of an automated acoustic monitoring system to assess bearing performance until scheduled replacements are required.

Members involved: J. McGormley (Project Manager), S. Lauer (Project Engineer), M. ElBatanouny (Project Engineer), J. Williams (Project Mechanical Engineer), G. Rees (Project Electrical Engineer).

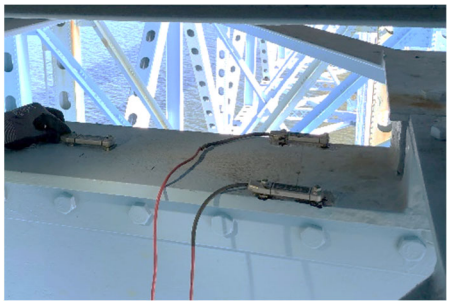
Firm name	**Wiss, Janney, Elstner Associates, Inc.**		Past Performance Evaluation Discipline(s)*	**Bridge**	
Project name	East Roundbunch Road over Cow Bayou		Firm responsibility (prime or sub?)	Prime	
Project number		Owner's name	Texas Department of Transportation – Bridge Division		
Project location	Orange County, TX		Owner's Project Manager	Courtney Holle, PE	
Owner's address, phone, email	Austin, TX, (512) 416-2717, Courtney.Holle@txdot.gov				
Services commenced by this firm (mm/yy)	06/14	Total consultant contract cost ($1,000's)		$3,409	
Services completed by this firm (mm/yy)	06/16	Cost of consultant services provided by this firm ($1,000's)		$1,048	

WJE provided the mechanical and electrical engineering for the replacement of all machinery on this center bearing swing span bridge. WJE was also responsible for the structural engineering and overall rehabilitation project. Moveable bridge services included a scoping inspection, bridge design report, preparation of plans, specifications, and cost estimate for all machinery, as well as provision of construction services. The intent of the project was to rehabilitate this historic design structure to provide long-term reliable service. Essential design objectives were to replace the deteriorated and outmoded machinery systems with current state-of-the-art systems that would require less maintenance and be more reliable and efficient than the existing drive which had experienced failures and was in a state of advanced wear. The mechanical design provided complete details for new span drive machinery and support machinery in accordance with the current AASHTO requirements. The span drive machinery was comprised of components with a proven history of utilization on movable bridges and was powered by an electric motor. The support machinery included a new bronze plain center bearing, balance wheels, and a wedge at each corner driven by an electro-mechanical drive train. The design also included center pier live load support rollers. The machinery and structure were protected from risks due to over-travel with energy absorbing end of travel bumpers at the full open and the full closed positions. Elastomeric bumpers were provided as a simple low-cost solution with minimal maintenance requirements. The electrical design included the provision of new drives, controls, and field devices for the span drive machinery and the end wedge machinery. Electrical design details also included design and integration of new traffic control features, bridge and maintenance lighting, and a CCTV system.

Members involved: G. Rees (Electrical Engineering), J. Williams (Mechanical Engineering).

Firm name	**Bridge Diagnostics, Inc. (BDI)**	Past Performance Evaluation Discipline(s)*	**Bridge**
Project name	Norris Bridge Pin and Hanger NDT, Emergency & Ongoing Monitoring	Firm responsibility (prime or sub?)	Prime
Project number		Owner's name	Virginia Department of Transportation (VDOT)
Project location	Whitestone, Virginia	Owner's Project Manager	Annette Adams
Owner's address, phone, email	1401 East Broad Street, Richmond, VA 23219, 540-273-1008, annette.adams@vdot.virginia.gov		
Services commenced by this firm (mm/yy)	10/17	Total consultant contract cost ($1,000's)	Unknown
Services completed by this firm (mm/yy)	Present	Cost of consultant services provided by this firm ($1,000's)	$445.8

In 2017 BDI performed an inspection of one hundred forty-six (146) pin and hanger assemblies. The inspection utilized visual and ultrasonic testing methods including straight beam ultrasonic testing (UT) and phased array ultrasonic testing (PAUT) in accordance with the American Society of Nondestructive Testing (ASNT) and Federal Highway Administration (FHWA) Guidelines for Ultrasonic Inspection of Hanger Pins. During this NDT inspection, BDI obtained irregular results on two of the pins. It was not immediately known what the defect was within the pin so the structure was load posted for 15 tons until a load test and monitoring could be added to the catch system. Within 48 hours of discovering the abnormality, BDI designed, built, and installed a wireless strain gage monitoring system on the catch system at these areas. All of the data was transmitted to BDI's monitoring website and displayed on a web-based platform. The system is also providing alerts via SMS, email, and telephone call if/when thresholds are exceeded. Once the construction was complete, BDI removed all instrumentation.



As a risk mitigation step, VDOT decided to expand the monitoring system to all catch systems on the structuutre as well as perform load tasting for several deficient truss bays. This ongoing monitoring program is set to alert the DOT of any change in stress state the catch system experiences, indicating an in-depth inspection of these areas is required. In 2020, BDI was again tasked to perform NDT on all of the pins, similar to the 2017 inspection. No change in condition were found this time, but the catch system monitoring will be left in place indefinitely.

Scopes of Work Relevant to the contract:

- Assessment of Instrumentation Needs and Instrumentation Plan
- Field Instrumentation Installation
- Instrumentation and Nondestructive Testing
- Data Acquisition and Communication
- Instrumentation Maintenance and Problem Resolution
- Load Testing, Data Analysis

Key Members: Brett Commander, Principal-in-Charge; Shane Boone, Steel NDT Subject Matter Expert

Firm name	**Bridge Diagnostics, Inc. (BDI)**	Past Performance Evaluation Discipline(s)*	**Bridge**
Project name	IDIQ Contract for Complex Bridge Load Rating Services Task 5 – Off-System Bridge Ratings and Evaluation Statewide	Firm responsibility (prime or sub?)	Sub

Project number	4400010099	Owner's name	Louisiana Department of Transportation and Development
Project location	Various, Louisiana	Owner's Project Manager	Wei Peng
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802, (225) 379-1486, wei.peng@la.gov		

Services commenced by this firm (mm/yy)	10/21	Total consultant contract cost ($1,000's)	Unknown
Services completed by this firm (mm/yy)	Present	Cost of consultant services provided by this firm ($1,000's)	$456

As part of the scope of Task Order 5 of this contract, BDI performed live-load testing and field-verified load ratings on ten (10) off-system structures. These structures were selected from a list of structures that were determined to require load posting based on load ratings previously performed in this contract and included three (3) reinforced concrete slab bridges and seven (7) metal culverts of various types/configurations. These selected structures are intended to be representative of a larger sample set of similar structures that the results are intended to make broader assumptions about the group of bridges as a whole.

Live load tests were performed to aid in evaluating the structures in their current condition. The overall goal of these tests was to better understand the structure's behavior and in turn provide field-verified load ratings for each structure. To achieve this goal, the collected structural responses were used to generate a field-verified finite-element model (FEM) of the structure.

This field-verified FEM was then used to compute field-verifed load ratings according to the AASHTO Manual for Bridge Evaluation (MBE) and the LADOTD Bridge Design and Evaluation Manual (BDEM).

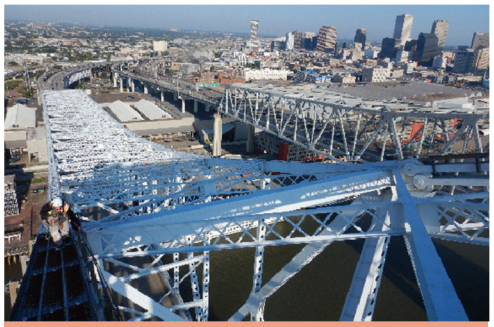
Key Members: Brett Commander, Principal Engineer; Brice Carpenter, Lead Analysis/Rating Engineer; Jesse Sipple, QC Engineer/Project Manager

Scopes of Work Relevant to the contract:

- LADOTD Project
- Assessment of Instrumentation Needs
- Instrumentation Plan Preparation
- Field Instrumentation Installation
- Data Acquisition and Communication
- Instrumentation Maintenance and Problem Resolution
- Load Testing, Data Analysis, and Load Rating

Firm name	**Moffatt & Nichol**	Past Performance Evaluation Discipline(s)*	**Bridge**
Project name	**IDIQ for In-Depth Inspection of Complex Bridges, Statewide, Louisiana.**	Firm responsibility (prime or sub?)	Sub
Project number	4400009104	Owner's name	Louisiana Department of Transportation and Development
Project location	Louisiana	Owner's Project Manager	Stephanie Doolittle, PE
Owner's address, phone, email	1212 East Highway Drive, Baton Rouge, Louisiana 70802 / 225.379.1329 / stephanie.doolittle@la.gov		
Services commenced by this firm (mm/yy)	03/20	Total consultant contract cost ($1,000's)	$5,000
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$600

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



M&N is providing inspection services on complex and movable bridges

As part of the current five-year retainer contract, M&N has and is performing the in- depth bridge inspections on complex and movable bridges throughout Louisiana. As a major subconsultant, M&N is performing complete in-depth inspections (fulfilling both routine & fracture critical inspection types). Level III inspections of submerged elements in accordance with the FHWA, BIRM, AASHTO MBE, AASHTO BEIM, and the LADOTD Bridge Inspection Manual (BIM) are being provided as needed. Bridge types include cantilever trusses, cable-stayed bridges, movable swing span bridges, and bascule bridges. Management, communication, and implementation of the QC plan is an instrumental component to this project.

- M&N performed the routine in-depth inspection of the Audubon Bridge, specifically to inspect 136 main cables and four 450-ft-high concrete towers. Professional rope access techniques were used to safely access each cable within arm's reach. Element quantities were recalculated, and additional defects were added with repair recommendations, but no serious deficiencies or critical findings were present.
- M&N performed the in-depth, routine, and fracture critical NBIS inspection of the Horace Wilkinson Bridge, specifically to inspect the main truss spans above the guardrail. Professional rope access techniques were used to safely access each non-redundant steel tension member. Element quantities were recalculated, and additional defects were added, but no serious deficiencies or critical findings were present. This is the first inspection to be completed without requiring lane closure; its success will afford consultant use for all biennial inspections.
- M&N performed the in-depth, routine, and fracture critical inspections of the Greater New Orleans Bridges and the Green Bridge, specifically to inspect the main truss spans. Professional rope access techniques were used to safely access each non-redundant steel tension member. Element quantities were updated, and additional defects were added with repair recommendations.
- M&N performed the in-depth and routine inspection of the Luling Bridge, specifically to inspect all bladders at the upper Gensui Dampers and at the lower friction dampers at 72 cables. Professional rope access techniques were used to safely access each cable within arm's reach.

10938.00

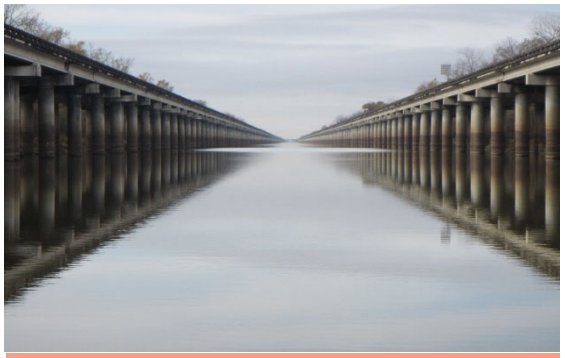
Nature of firm's responsibility: Subconsultant; Responsibilites include underwater inspections in accordance with current FHWA, CFR, AASHTO, and LADOTD standards and guidelines.

Firm members involved include: Chace Hulon, PE; Steven Armstrong, PE; Jeffrey Gazarek; Joshua Martinez, PE

Firm name	**Moffatt & Nichol**	Past Performance Evaluation Discipline(s)*	**Bridge**
Project name	**Retainer Contract for Underwater Bridge Inspections, Statewide**	Firm responsibility (prime or sub?)	Prime
Project number	4400003533	Owner's name	Louisiana Department of Transportation and Development
Project location	Louisiana	Owner's Project Manager	Haylye Brown, PE
Owner's address, phone, email	1212 East Highway Drive, Baton Rouge, Louisiana 70802 / 225.379.1500 / haylye.brown@la.gov		
Services commenced by this firm (mm/yy)	03/14	Total consultant contract cost ($1,000's)	$3,243
Services completed by this firm (mm/yy)	12/17	Cost of consultant services provided by this firm ($1,000's)	@2,822

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

As part of the previous five-year retainer contract, Moffatt & Nichol has performed 10 task orders related to underwater bridge inspections throughout Louisiana. Teams of ADCI-certified engineer- divers provided Level I, II, & III underwater inspections in accordance with the National Bridge Inspection Standards and LADOTD PONTIS Inspection Manual. 687 bridges were inspected statewide. Bridge types inspected consisted of movable swing span bridges, bascule bridges, truss bridges, timber stringer bridges, cable-stayed bridges, single and multi-span girder bridges up to 8 miles in length, constructed of concrete, steel and timber materials. Site conditions included salt, brackish, and freshwater and riverine conditions with varying levels of current having low to no visibility.



NBIS underwater bridge inspections performed for LADOTD

Underwater Acoustic Imaging (UAI) was performed in response to emergency investigations following major flood events to inspect scour around the substructure units.

Report submittals included a description of each structure and elements inspected and existing conditions, shoreline conditions, presence of debris in the waterway, with NBIS ratings for Item 60 - Substructure and Item 61 – Channel condition, element level condition states for all elements inspected, and recommendations for repair and maintenance. Three Quality Control reviews were performed for each bridge report by the inspection team and Quality Assurance reviews were performed on 5% of the reports by an independent NBIS team leader.

8346.00

Nature of firm's responsibility: Prime Consultant; Overall responsibility for entire contract.
Firm members involved include: Chace Hulon, PE; Steven Armstrong, EI; Josh Martinez, PE; Jeffrey Gazarek

Firm name	**Vectura Consulting Services, LLC**	Past Performance Evaluation Discipline(s)*	**TM**
Project name	I-10 ITS Scott to Lake Charles	Firm responsibility (prime or sub?)	sub
Project number	H.013256.5	Owner's name	DOTD
Project location	I-10 (District 07)	Owner's Project Manager	Roy Esteven, PE
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802, 225-379-2527, Roy.Esteven@LA.gov		
Services commenced by this firm	01/21	Total consultant contract cost ($1,000's)	unknown
Services completed by this firm	03/21	Cost of consultant services provided by this firm ($1,000's)	$20,162

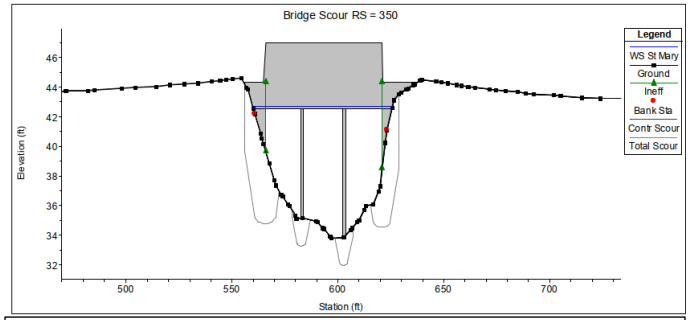
Vectura performed a Level 2 **Traffic Management Plan** (TMP) for the construction of ITS equipment along I-10. The plan included the following activities:

- safety strategy that included a CAT Scan,
- LOS determination utilizing Citrix data,
- lane closure recommendations based on a queue analysis,
- cost estimate,
- and public information strategies.

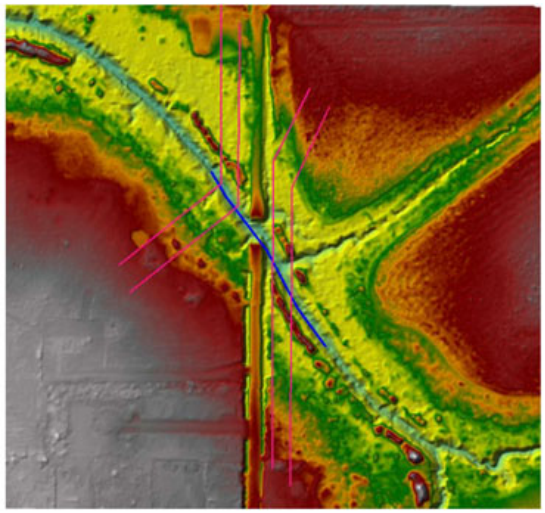
Personnel Utilized on this project: Laurence Lambert, Prasanth Malisetty, Reece Rodrigue, & Kristen Farrington (100% performed in Louisiana)

Firm name	**Bluewing Civil Consulting, LLC**		Past Performance Evaluation Discipline(s)*	**Road**	
Project name	St. Mary St. Bridge Replacement (Recall #072706)		Firm responsibility (prime or sub?)	Prime	
Project number	222003	Owner's name	Jeff Davis Parish Police Jury		
Project location	Elton, LA		Owner's Project Manager	Randy Ringuet	
Owner's address, phone, email	321 E Plaquemine St. Jennings, LA 70546/ 337-824-4792/randy@jdppj.net				
Services commenced by this firm (mm/yy)	11/20	Total consultant contract cost ($1,000's)		$10	
Services completed by this firm (mm/yy)	Current	Cost of consultant services provided by this firm ($1,000's)		$10	

Project include engineering, bid package production, and utility coordination for the reconstruction of St. Mary St. Bridge. Analysis also included scour analysis as required by LA DOTD.



St Mary St Bridge scour analysis cross-section



St. Mary Bridge RAS Model Plan

Key Project Members:
Alex Guillory, CFM, PE, Principal
Drewe Burns, PE
Aaron Enlund, H&H Engineer Technician
Ty Westerman, H&H Engineer Technician

18. Approach and Methodology:

Introduction

The IDIQ contract for the preservation of bridges statewide uniquely plays to the strengths of Huval and Associates. HUVAL, as prime consultant on this contract, has assembled a team that can and will meet all tasks set forth in this project advertisement. Our approach is based on the experience, knowledge, and expertise we have gained over the course of 34 years as a company. HUVAL, as a trusted provider to the LA DOTD, has continuously held a bridge retainer contract with the state since 2001. With this experience, and working in conjunction with our selected subconsultants, HUVAL is in a position to provide all services required of this contract with the utmost reliability and excellence.

HUVAL specializes in complex bridge design, project management, and construction services for LA DOTD's most challenging projects. The bridge preservation contract requires a strong structural project manager and staff to guide the design and engineering portion of these projects.

HUVAL has a unique understanding of the contract responsibilities through experience working with LA DOTD throughout the state on numerous projects over the years. This experience includes new bridge design, existing bridge rehabilitation, existing bridge preservation, and existing bridge inspection. A personal understanding of the type of existing structures and constraints allows HUVAL to provide context sensitive solutions to preserving existing bridges.

In addition to our unique project understanding, the core strengths of our team members and subconsultants position our team ahead of any other. Our team members and their responsibilities are as follows:

HUVAL ***Team Prime Consultant and Bridge and Roadway Design Lead.***

HUVAL specializes in complex bridge design, bridge rehabilitation, project management and roadway design for LA DOTD's most challenging projects.

GEC Gulf Engineers & Consultants ***Roadway Lighting, Bridge and Road Design, Environmental and Permitting Lead***

Gulf Engineers and Consultants is a Louisiana based firm that will perform bridge and road design, roadway lighting and environmental and permitting services.

BDI ***Instrumentation and NDT Lead***

Bridge Diagnostics Inc. are leading experts and focused on structural nondestructive testing / evaluation, load testing, monitoring, and evaluation services.

WJE ***Coatings, Sampling and Electrical Engineering Lead***

Wiss, Janey, Elstner Associates, Inc. is an employee-owned interdisciplinary engineering, architecture, and materials science firm. WJE will perform paint and coatings sampling and design as well as any electrical engineering related to movable bridges.

moffatt & nichol ***Bridge and Underwater Inspections***

Moffat and Nichol will perform bridge inspections as well as subsurface / underwater inspections on this contract.

GeoEngineers ***Geotechnical Services Lead***

Geoengineers will perform all geotechnical services including shallow and deep soil borings, soil analysis and other construction related analysis.

Surveying Lead.

Civil Design & Construction (CD&C) is a woman owned land surveying and engineering firm. CD&C and their highly skill staff are experts and will perform all surveying duties to LA DOTD standards.

Hydraulics Lead

Bluewing Civil Consulting is a Louisiana based design firm that specializes in and will perform hydraulic modeling for complex watersheds and scour analysis for bridges for the contract.

Traffic Engineering and Analysis

Vectura Consulting Services, LLC is a Louisiana based DBE firm specializing in transportation and traffic engineering services and will perform these services for the contract.

Bridge Preservation IDIQ Understanding and Approach

HUVAL's approach to the statewide bridge retainer contract will be the same as it has been over our previous bridge retainer contracts. Projects will be prioritized and tailored to assure that the appropriate staff is available to execute each task order proficiently and expeditiously as needed. Many projects under bridge retainer Task Orders are priority repair projects requiring immediate attention under tight timeframes. HUVAL has a distinguished record of preparing plans for emergency projects under these conditions.

The task orders for this retainer contract, as in past retainer projects, can include a wide range of services. Typical services requested will include Bridge Design Services that may include paint sampling and coating, instrumentation, and non-destructive testing. Depending on the Task Order needs, additional engineering services such as Geotechnical Services, Road Design, Traffic Engineering, Surveying, Title Work Services, Bridge Inspection Services, Environmental and Permitting Services may be required. Task Orders, under a retainer contract, also serve a wide variety of movable and fixed bridge types. HUVAL has the experience and expertise that accommodates all types of bridges as proven under our past Bridge retainer contracts with the LA DOTD.

For certain specialty design tasks, HUVAL has enlisted a team of qualified and experienced subconsultants to complete any Task Order that may arise under this retainer contract.

For HUVAL, communication and coordination are paramount in task completion. Communication with the DOTD happen as needed with major project milestones and design issues being discussed in meetings. It is important to keep the owner abreast of any potential impacts affecting cost and schedule. Submittals and deliverables are presented through the correct manner outlined by the LA DOTD.

Quality control is a priority for HUVAL and all processes and procedures are internally reviewed to make sure that all tasks are meeting stringent standards. QC does not just occur at milestones when plans are reviewed before submittal, it occurs throughout the design and detailing process. This limits potential errors and keeps projects moving in the right direction while accomplishing the project schedule. It is of the utmost importance that we (HUVAL) get the job done and get it done right.

Typical Task Order Process

HUVAL has performed over a hundred Task Orders under Bridge Preservation retainer contracts over many years. HUVAL is up to date with current LA DOTD guidelines and design criteria and Task Order procurement processes. For LA DOTD projects, there is no "learning curve" with HUVAL.

There are many types of Task Order projects under a Bridge Preservation retainer contract and over the years HUVAL has seen them all. Depending on the type of Task Order and required schedule, the actual project deliverable process can vary. Emergency project milestones may go straight to final plans with minimal submittals and reviews. For these projects, getting traffic back on the bridge is of the utmost importance. For other projects that do not have critical schedules, the typical preliminary and final plan design process is utilized as outlined in the LA DOTD Roadway and Bridge Design Manuals.

Regardless of the Task Order, the procurement process to obtain a Notice to Proceed is the same. The LA DOTD will contact the HUVAL Project Manager (PM) about a project and provide general information about the project. The HUVAL PM will then assess the project needs and requirements and assign staff and team members to the project. Upon

assessment of the project and coordination with the LA DOTD PM, HUVAL will provide a scope of work for review and concurrence from the LA DOTD. Once the scope is approved, HUVAL will provide a detailed man-hour estimate for tasks required for the project. It should be noted that prior to providing a scope and man-hour estimate, HUVAL will spend time going through the provided reference information and reports to provide a scope that requires minimal, if any, supplemental agreements for extra work to the Task Order.

Upon the Notice to Proceed from the LA DOTD, HUVAL and its team of subconsultants will begin work. As previously discussed, the submittal milestones and work tasks can vary pending on the needs of the project. Task Orders within retainer contracts can consist solely of bridge inspection and ratings, feasibility studies and analysis. Most common are bridge repair and/or bridge replacement projects. Below is a description of tasks for a typical Bridge Repair Task Order and a typical Bridge Replacement Task Order.

BRIDGE REPAIR

Bridge repairs are often emergency or critical type projects where schedule is critical. For these projects, often the typical preliminary and final plan milestones are condensed. This is at the discretion of the LA DOTD PM and HUVAL PM and this is when it is important for the LA DOTD to have a proven and trusted consultant like HUVAL. That trust and past performance assurance can alleviate certain milestone submittals such as 30% and 60% plan submittals.

Even with a reduced milestone schedule, bridge repair Task Orders tend to follow these stages:

- Bridge Assessment and Study: This may include an inspection and rating of the bridge structure to determine the extents of bridge elements requiring repair. Inspections may include paint sampling, underwater inspection, and instrumentation. Included in this study are repair recommendations, preliminary construction cost estimates and other impacts assessments such as that to traffic. If needed, any topographic surveying or structural surveys begin in this stage of the project. It should be noted that if the inspection and rating warrant it, then a bridge may be recommended for replacement.
- Preliminary Plans: This process begins after the Study Phase and includes preliminary repair details and associated plans defining the extent of the project. This includes impacts to traffic and any temporary traffic mitigation that may be required during construction. Environmental impacts are assessed in this phase along with any permitting submittals that are required. Before conclusion of the Preliminary Plan phase of the project, a Plan-in-Hand meeting is conducted with representatives from LA DOTD Headquarters and Districts along with any other project stakeholders, and their input and comments are addressed.
- Final Plans: Under the Final Plan stage, repair details, project sequencing and traffic coordination are finalized along with the quantities and specifications. With many bridge repair projects, non-standard specifications are often created to accommodate specific needs of the project. Upon review of the Final Plans, the repairs plans are released for bid.
- Construction Services: During the construction process, the engineer may be called upon to review shop drawings, erection means and methods and answer RFIs. HUVAL has extensive experience in construction erection design which allows for quick turn around on complex reviews.

Additional tasks are occasionally needed for bridge repair projects and may include geotechnical services and hydraulic analysis. These services are performed during the Study Phase and Preliminary Plan stage of a project as these items are typically needed for the Final Design.

BRIDGE REPLACEMENT

When bridge repairs aren't enough to extend the life of the structure or meet load capacity needs, the bridge is recommended for replacement. Replacement of the bridge structure is not usually as challenging as a bridge repair, but it does have its own unique set of challenges. The bridge replacement process is more like a typical LA DOTD project requiring more aspects of engineering and more review milestones. Bridge replacement Task Orders tend to follow the stages discussed below:

- Bridge Assessment and Study: If the bridge inspection and ratings show that repairs aren't sufficient, then the bridge is recommended to be replaced. During the Study Phase, different bridge types and sizes are analyzed and impacts to the surroundings and traffic are assessed. Necessary topographic surveying, channel hydraulic analysis, geotechnical services, environmental and permitting services are performed if warranted. Upon completion of the Study Phase, a preferred bridge type and alignment are established.

- Preliminary Plans: This process begins after the study phase and includes preliminary design of the preferred alternative. Depending on the project schedule, deliverable milestones are established. Roadway and Traffic designs are performed to determine project extents and potential right-of-way impacts. Environmental, right-of-way and/or easement impacts are assessed and mitigated or acquired during the Preliminary Plan phase of a project. Before conclusion of the Preliminary Plan phase of the project, a Plan-in-Hand meeting is conducted with representatives from LA DOTD Headquarters and Districts along with any other project stakeholders, and their input and comments are addressed.
- Final Plans: Under the Final Plan stage, full bridge calculations, details and plans are provided. Roadway and traffic design are finalized along with any remaining environmental and permitting needed prior to plan completion. A construction cost estimate is provided and upon final plan signature, the plans are released for bid.
- Construction Services: During the construction process, the engineer may be called upon to review shop drawings, erection means and methods and answer RFIs. HUVAL has extensive experience in construction erection design which allows for quick turn arounds on complex reviews.

Task Order Project Timeframes

As discussed, Task Order timeframes depend on the individual project and priority it is assigned by the LA DOTD. Under past and current retainer contracts, HUVAL has performed emergency repairs for fire damage, vehicular impact, barge impacts, storm damage and scour damage that required both bridge repair and replacement. Many of the projects begin with an advanced Notice to Proceed and were completed and let to bid within the required critical timeframe.

Examples of these projects are as follows:

LA 443: Tangipahoa River Bridge Replacement: Comprised of replacing the existing bridge that was closed to due to scour damage from the 2016 storms with a new LG girder bridge over the Tangipahoa River. This project was completed and let to bid 8 weeks after the NTP.

I-10 Fire Damage Repairs: This project consisted of repairing I-10 over the Bonnet Carre Spillway that was closed due to fire damage from a truck wreck. Steel girders were designed and provided to temporarily support traffic and reopen the bridge. Permanent repair is on-going.

Southern University Ravine Mitigation: This project consisted of site inspections and temporary design to save existing buildings and campus infrastructure from collapse due to continuous erosion. Emergency permitting was required and fast-tracked to begin construction within weeks. Permanent ravine repairs are on-going.

Sunshine Bridge Repairs: HUVAL was tasked with the emergency repair of the Sunshine Bridge that was closed due to damage incurred by barge impact. HUVAL, along with their subconsultants developed repair methods and plans withing a few weeks.

Other Task Order projects under retainer contracts may not be emergency type projects but do have specific letting commitments made by the LA DOTD. For these projects, submittal milestones are developed in the scope of work and adhered to. Timeframes for most non-emergency Task Order projects vary but are predominately completed and let to bid within 9 to 12 months.

Team Abilities

The HUVAL Team consists of subconsultants that have working experience with both HUVAL and LA DOTD. Each member was chosen to provide not just expertise shown in the RFQ, but to add depth to the Team in all categories. The HUVAL Team is prepared and ready to undertake all types of projects across all areas of infrastructure and bridge engineering.

19.. **Workload:**

For all contracts where a firm on the team is a prime consultant or sub-consultant and where a) the consultant selection was made by DOTD, and b) a contract was executed by the consultant and the contracting entity by the date the advertisement for this proposal was posted, list all work meeting the following criteria:

1) one of the team's firms is responsible for the performance of the work;
2) authorization to perform the work has been provided, as provided in the contract between the consultant and the contracting entity;
3) the work has not yet been performed and invoiced; and
4) the work is not currently suspended for an indefinite period of time.

For indefinite delivery/indefinite quantity (IDIQ) contracts, list open Task Orders individually.
List only the portion of the fees attributable to firms on the team.

Firm(s)	Past Performance Evaluation Discipline(s) *	State project number	Project name	Remaining Unpaid Balance**
Huval	Bridge	S.P. H. 011235	I-49 South @ Verot School Road Lafayette Parish – Design Phase Supp. #1&2	$57,046
Huval	Bridge	S.P. H.004774.5	Kanas Lane-Garrett Road Connector – Supp #1	$10,448
Huval	Bridge	S.P. H.009497.6	LA 106: Bayou Bouef - Construction Services	$18,549
Huval	Bridge	S.P. H.011808.5	LA 10: Company Canal – Construction Services	$27,715
Huval	Bridge	S.P. H.010000.6-2	US 171 Over Calcasieu River – Construction Services	$48,693
Huval	Bridge	S.P. H.011485.6	LA 336-1 Bayou Teche Bridge @ Breaux Bridge Construction Services	$93,851
Huval	Bridge	S.P. H. 012650.6	Bridge Repair District 62 - Construction Services	$25,337
Huval	Bridge	S.P. H.012451.6	Dist. 04 Bridge Repairs - Construction Services	$20,456
Huval	Bridge	S.P. H.010006.5	LA 58 Petit Caillou Bridge Rehabilitation	$1,481
Huval	Bridge	S.P. H.002868.5	Ambassador/BNSF Frontage Road Bridges	$4,547
Huval	Bridge	S.P. H.003370	I-220/I-20 Interchange IMP & BAFB Access	$216,000
Huval	Bridge	S.P. H.008226	Cheniere Spillway & Bridge Replacement	$0
Huval	Bridge	S.P. H.004791	LA 23: Belle Chasse Bridge and Tunnel (HBI)	$1,640,604
Huval	Bridge	S.P. H.001352.5	Comite Diversion Bridge at LA 67 – Construction Services	$104,625
		S.P. H.002273.5	Comite Diversion Bridge at LA 19 & LA 19 Railroad – Const. Services	
Huval	Bridge	S.P. H.004100	I-10 CMAR – Segment 1 Design	$4,201,929
Huval	Bridge	S.P. H.014560.5	LA 94: Vermillion River Bridge Replacement	$113,452

Huval	Bridge	S.P. H.014747	Southern University Ravine Project	$300,192
Huval	Bridge	S.P.H.014052-2	LA 151: I-20 Overpass Deck Replacement	$66,887
Huval	Bridge	S.P.H.014587.6	LA 302: Kerner Ferry Bridge	$17,223
G.E.C., Inc.	Planning	SP# 4400016958	Road Transfer Program Management, Statewide (Note: Unlikely to bill this entire amount)	$1,743,721
G.E.C., Inc.	Planning	Contract #'s 4400006551, 4400006552 and 4400006553	Retainer Contracts for Comprehensive Strategic Advisory Related to Louisiana Transportation Authority (LTA) Participation In Public-Private Partnerships (PPP) (Sub to HNTB) (No Task Orders Issued)	N/A
G.E.C., Inc.		SP# H.004273.5	I-49 Connector (Lafayette Regional Airport to I-10/I-49/US 167 Interchange) (Sub to Stantec)	
	Road		Geometrics	$70,810
	Bridge		Bridge Study	$98,664
	Environmental		Environmental	$22,584
	ITS		ITS	$19,447
	Other		Program Management ($131,219), Electrical ($301,419)	$432,638
	Geotechnical		Geotechnical (Task Closed)	$51,213
G.E.C., Inc.		S.P.# H.004100	I-10 Baton Rouge Widening CMAR Segment 1 (Sub to Huval)	
	Bridge		Bridge	$205,112
	ITS		ITS	$168,789
	Other		Project Management ($435,309), Retaining Walls ($211,202), Sound Walls ($128,334) & Electrical ($1,409,387)	$2,184,232
G.E.C., Inc.		S.P.# H.013897	I-10 & I-12 College Drive Flyover Ramp Design-Build Project (Sub to Boh Bros.)	
	Road		Road	$412,410
	Bridge		Bridge	$174,700
	ITS		ITS	$28,665
	Other		Project Management ($100,002), Sound Walls ($44,640) & Electrical ($16,335)	$160,977
G.E.C., Inc.	Bridge	SP# H.008145.5	Leeville to Golden Meadow (Phase 2) Route LA 1 Relocated (Sub to HNTB)	$0
G.E.C., Inc.		SP# H.003074.5	Williams Blvd – Veterans Blvd., Route I-10, Jefferson Parish, LA	

	Bridge		Bridge	$148,795
	Other		Electrical	$85,372
G.E.C., Inc.	Bridge	Contract # 4400010099	Retainer Contract for Off-System Complex Bridge Load Rating (Sub to Forte & Tablada)	
		TO# H.012485.1	Rating of Off-system Bridge Structures	$19,056
		TO# H.092481.5	Off-System Load Testing and Evaluation	$14,800
G.E.C., Inc.	ITS	Contract # 4400009327	Retainer for Intelligent Transportation Systems	
		TO# H.014512	Monroe Regional ITS Architecture Update (Note: Contract Expired. Remaining amounts will not be billed.)	$44,245
		TO# H.012381.5-1	Fiber Optic Mapping and Management (Note: Contract Expired. Remaining amounts will not be billed.)	$38,242
G.E.C., Inc.	Other	Contract # 4400011354	IDIQ Contract for Electrical Statewide	
	(Electrical)	TO# H.013442.6	I-10: Crowder Boulevard Interstate Lighting	$47,379
		TO# H.013617.5	I-610E Interchange Lighting	$40,366
		TO# H.014552.5	I-49: LA 31 Interchange Lighting (Opelousas) (Note: Survey T.O. Work performed by GOTECH.)	N/A
		TO# H.014553.5	I-49: LA 3233 Interchange Lighting (Opelousas) (Note: Survey T.O. Work performed by GOTECH.)	N/A
		TO# H.012469.5	US 190: BRB-Navigation Light Replacement	$7,449
		TO# H.014556.5	I-49: US 190 Interchange Lighting (Opelousas) (Note: Survey T.O. Work performed by GOTECH.)	N/A
		TO# H.014557.5	I-49: Judge Walsh Drive Interchange Lighting (Opelousas) (Note: Survey T.O. Work performed by GOTECH.)	N/A
G.E.C., Inc.	Other (Electrical)	S.P. # H.004774.5 & H.007300.6	Kansas Lane - Garrett Road Connector and I-I-20 Improvements, Ouachita Parish (Sub to Lazenby & Associates, Inc.)	$2,100
G.E.C., Inc.	CE&I/OV	Contract # 440013710	Retainer Contract for CE&I, Statewide with the Majority of Work in District 03	
		TO# H.003014.6	I-10 Widening and Reconstruction (LA 37 to ATCR BR.) St. Martin and Lafayette Parishes	$53,035
		TO# H.010601.6	I-10 Widening and Reconstruction (LA 328 - LA 347)	$347,341
G.E.C., Inc.	CE&I/OV	Contract # 4400023074	IDIQ for CE&I Services and Staff Augmentation, District 61	
		TO# H.010724.6	Pecan Island Road Over the Chenal, Pointe Coupee Parish	$155,876

G.E.C., Inc.	CE&I/OV	S.P. # H.011670.6	I-10/Loyola Interchange Improvements, Jefferson Parish	0
G.E.C., Inc.	CE&I/OV	Contract No. 4400019950	IDIQ for CE&I, Statewide, with Majority of Work in District 03	
		TO# H.002735.6	Bayou Vermillion Bridge	$113,708
		TO# H.003003.6	I-10: I-49 - LA 328	$60,355
		TO# H.002151.6	Bayou Parc Perdue and Creek Bridges	$187,825
G.E.C., Inc.	CE&I/OV	Contract # 440005410	Retainer Contract for CE&I w/Painting Inspection & Environmental Monitoring, Statewide (Sub to GPI)	
		TO# H.009479.6	W. Larose Vertical Lift Bridge Rehab., Route LA 1	0
G.E.C., Inc.	CE&I/OV	Contract # 440014315	Retainer Contract for Painting Inspection & Environmental Monitoring with CE&I, Statewide (Sub to GPI)	
		TO# H.003370.6	1-220/1-20 Interchange IMP & BAFB Access	$168,580
		TO# H.010000.6	US 1 71 : Calcasieu River Bridge Repairs	$195,517
G.E.C., Inc.	CE&I/OV	Contract # 4400017329	Retainer Contracts for Innovative Procurement and Alternative Delivery Support Services (Sub to HNTB Corporation) (No Task Orders Issued)	N/A
GeoEngineers	Geotech	H.003370	DB I-20 Barksdale/GT OV-QA	$79,902
GeoEngineers	Geotech	H.004791	P3 Belle Chasse Bridge & Tunnel	$302,064
GeoEngineers	Geotech	H.011670	Loyola Dr/I-10 Interchange	$2,000
GeoEngineers	Geotech	H.002176	LA10 Bridges	$184,038
GeoEngineers	Geotech	H.001779	Jimmy Davis Bridge Prelim Explorations	$166,919
Civil Design & Construction, Inc.	Surveying	4400017597	Rural Bridge Replacement Initiative (Districts 03, 07, 61, & 62)	$7,235
Civil Design & Construction, Inc.	Surveying	4400017091/ TO-2	LWI Statewide Modeling R5 – Task Order #2	$148,086
Civil Design & Construction, Inc.	Surveying	4400017091/ TO-3	LWI Statewide Modeling R5 – Task Order #3	$246,123
Wiss, Janney, Elstner Associates, Inc.	Bridge	Contract 4400009424 H.000303.6	Contract 4400009424, Task Order No. H.000303.6, Danziger Bridge Repair	$38,315

Wiss, Janney, Elstner Associates, Inc.	Bridge	Contract 4400009424, Task Order 5	Contract 4400009424, Task Order No. 5, Elastomeric Bearing Pad Testing	$44,646
Wiss, Janney, Elstner Associates, Inc.	Bridge	H.014280	Contract No. 4400017263, H.014280 Bayou Ramos	$142,599
Wiss, Janney, Elstner Associates, Inc.	Bridge	H.014673	I-49, US 165: Debonded PPC Girder Rehab I-49/US165, Rapides Parish	$24,498
Wiss, Janney, Elstner Associates, Inc.	Bridge	H.012617.6	I-310: I-10 to US 90, Hale Boggs Memorial (Luling) Bridge, Deck Overlay Repair Consultation, Instrumentation Services	$221,747
Wiss, Janney, Elstner Associates, Inc.	Bridge	Contract 4400001762, H.014899.6	I-10/310 Bonnet Carré Fire Damage Repair	$37,618
Bridge Diagnostics, Inc.	Bridge	H.009730.5 44 17163	IDIQ Non Destructive Evaluation of Structures via SounDAR Whiskey Bay and Pilot Channel – Task Order 10	$47,869
Bridge Diagnostics, Inc.	Bridge	H.014703.5 44-17163	IDIQ for Non-Destructive Evaluation of Structures Calcasieu Parish – Task Order 9	$24
Bridge Diagnostics, Inc.	Bridge	H.009730.5 44-17163	IDIQ I-10 for Non Destructive Evaluation of Structures Atchafalaya Floodway and I-10 over Whiskey Bay Pilot Channel Bridge decks – Task Order 8	$69,198
Bridge Diagnostics, Inc.	Bridge	H.012280.1 44-09224	IDIQ for testing of Unknown Foundations, Statewide – Task Order 3 – 1802005	$0.00
Bridge Diagnostics, Inc.	Bridge	H.009730.5 44-17163	Retainer for Non Destructive Evaluation of Structures Task Order 1 General Services BDI1904004	$3,679
Bridge Diagnostics, Inc.	Bridge	H.009730.5 44-17163	Retainer for Non Destructive Evaluation of Structures Task Order 7 Bonnet Carre Spillway 2006002	$94,864
Bridge Diagnostics, Inc.	Bridge	H.009859.5 44-02791	Bonnet Carre & Bayou Ramos Monitoring System Maintenance	$0.00
Bridge Diagnostics, Inc.	Bridge	H.010603.6 44-02538	Mississippi Bridge at Vicksburg GPS Monitoring – 150901	$2,933

Bridge Diagnostics, Inc.	Bridge	H.012485.1 44-10099	IDIQ for Bridge Load Rating Services Statewide	$0.00
Moffatt & Nichol (subconsultant)	Bridge	H.009730.5	In-Depth Inspection of Complex Bridges, Task Order 4 (10801.04)	$252,121
Moffatt & Nichol (subconsultant)	Bridge	H.009730.5	In-Depth Inspection of Complex Bridges, Task Order 5 (10801.05)	$654,279
Moffatt & Nichol (prime)	Bridge	H.009730.5	IDIQ Contract for Underwater Bridge Inspection, Statewide (10801.05)	$726,212
Moffatt & Nichol	Bridge	H.011331.5	LADOTD Inventory and Inspection of Sign Trusses (11168.00)	$420,203
Moffatt & Nichol (subconsultant)	Bridge	H.009730.5	LADOTD In-Depth Bridge Inspection, Task Order 3 (10938.04)	$473,944
Moffatt & Nichol	Data Collection	H.971294.1	LADOTD RIMS (7634.01)	$79,996
Vectura Consulting Services, LLC	Traffic	H.010616	I-20: LA 544 Overpass Replacement	$4,959
Vectura Consulting Services, LLC	Traffic	H.005168.2	New Orleans Rail Gateway Jefferson Highway EA	$52,436
Vectura Consulting Services, LLC	Traffic	H.005168.2	New Orleans Rail Gateway Avondale EA	$228,799
Vectura Consulting Services, LLC	CE&I	H.007160	EBR Computerized Traffic Signal, Ph VB	$61,450
Vectura Consulting Services, LLC	Traffic	H.004791	Belle Chasse Bridge & Tunnel Replacement PPP	$21,999
Vectura Consulting Services, LLC	Traffic	H.012030.5	KCS RR Overpasses HBI	$28,026
Bluewing Civil Consulting, LLC	Other	4400017091	Louisiana Watershed Initiative (LWI) Modeling Contract	$168,020

(Add rows as needed) DO NOT SUM

* The only past performance evaluation disciplines to be used are: Road, Bridge, Traffic, CE&I/OV, Geotech, Survey, Environmental, Data Collection, Planning, Right-of-Way, CPM, ITS, Appraiser and Other. If a firm has more than one past performance evaluation discipline for any single project, the firm can use multiple rows to express the remaining unpaid balance per evaluation discipline.

** Round to the nearest dollar. **Do not** round to the nearest thousands. If there are no active contracts with a remaining unpaid balance, place N/A in the Remaining Unpaid Balance column. LEAVING THE "REMAINING UNPAID BALANCE" COLUMN BLANK IS NOT ACCEPTABLE.

20. **Certifications/Licenses:**

If the advertisement requires submission of licenses and/or certificates, include them here. Otherwise, leave this section blank.

The American Traffic Safety Services Association

Hereby recognizes that

Glenn McCall

has attended

Traffic Control Supervisor Refresher-LA State Specific Training Course

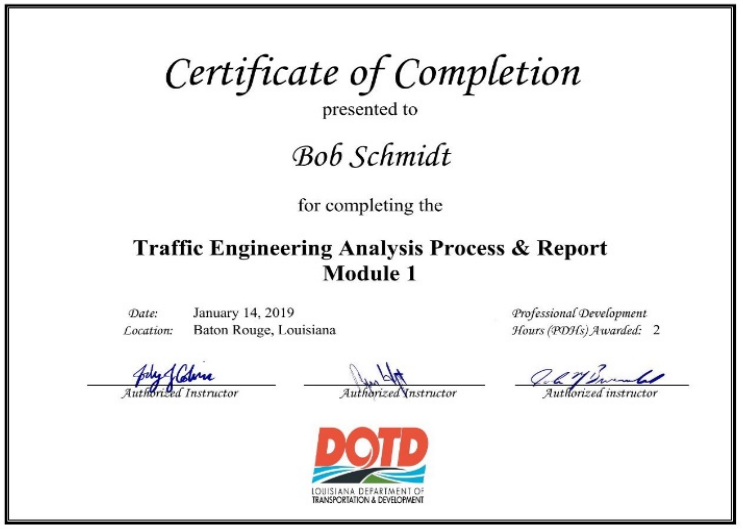
09/28/2018 to 09/28/2018
Date

Lafayette, LA
Location

ATSSA
SAFER ROADS SAVE LIVES

Training & Products Dept. Director

President, CEO



Certificate of Completion

presented to

Bob Schmidt

for completing the

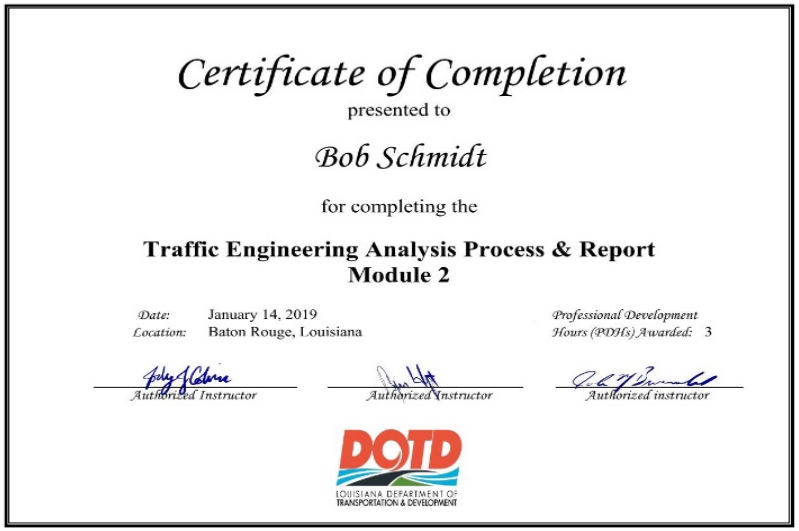
Traffic Engineering Analysis Process & Report
Module 1

Date: January 14, 2019
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 2

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Bob Schmidt

for completing the

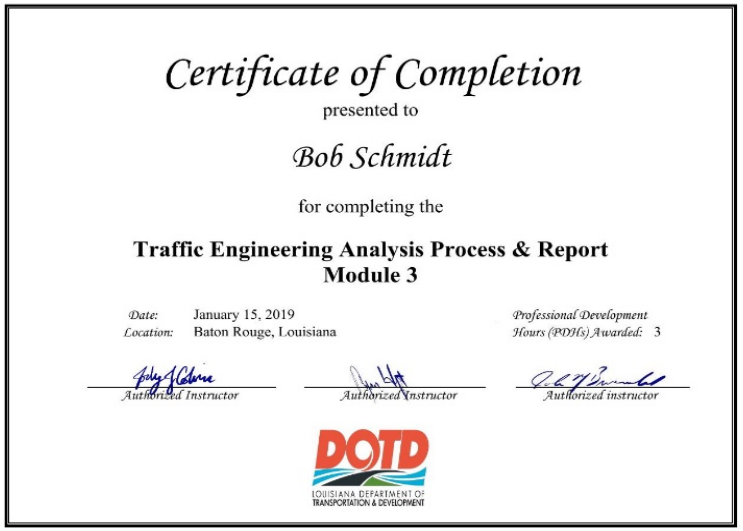
Traffic Engineering Analysis Process & Report
Module 2

Date: January 14, 2019
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Bob Schmidt

for completing the

Traffic Engineering Analysis Process & Report
Module 3

Date: January 15, 2019
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Brin Ferlito

for completing the

Traffic Engineering Analysis Process & Report
Module 1

Date: June 4, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 4

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Brin Ferlito

for completing the

Traffic Engineering Analysis Process & Report
Module 2

Date: June 11, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 4

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Brin Ferlito

for completing the

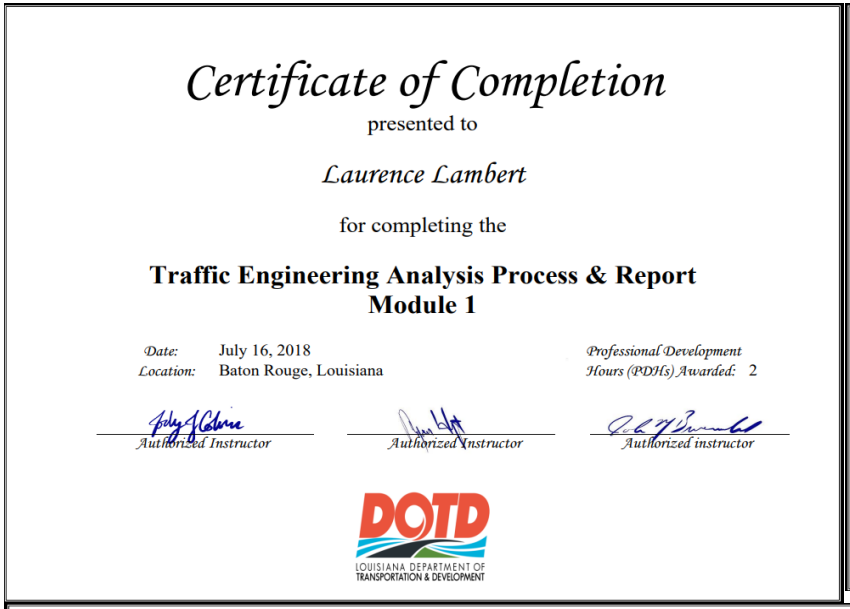
Traffic Engineering Analysis Process & Report
Module 3

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

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Laurence Lambert

for completing the

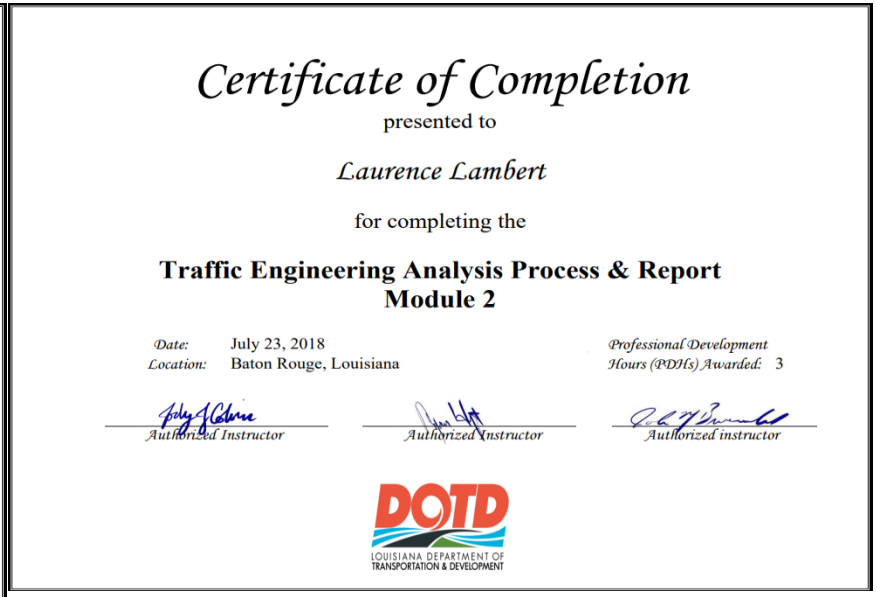
Traffic Engineering Analysis Process & Report
Module 1

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

Professional Development Hours (PDHs) Awarded: 2

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Laurence Lambert

for completing the

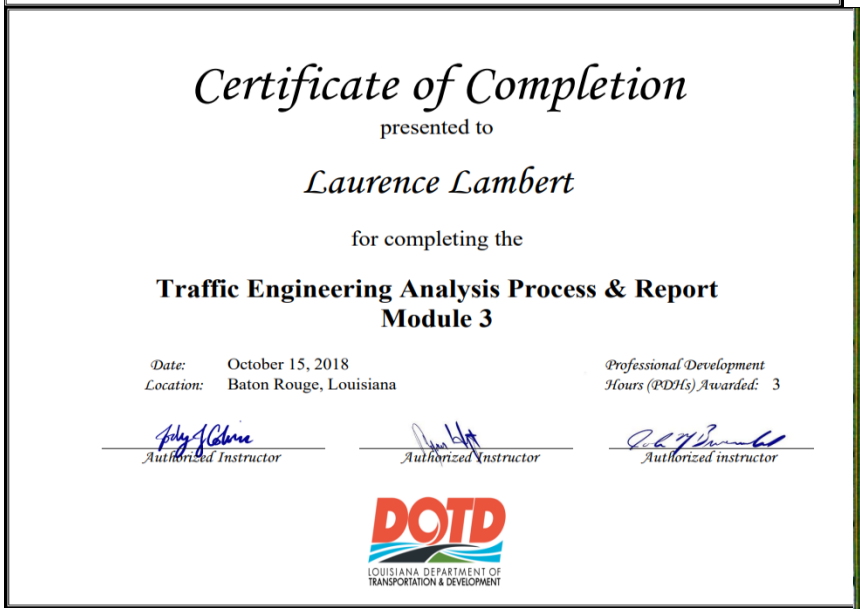
Traffic Engineering Analysis Process & Report
Module 2

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

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Laurence Lambert

for completing the

Traffic Engineering Analysis Process & Report
Module 3

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

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

The American Traffic Safety Services Association

Hereby recognizes that

Laurence Lambert

has attended

Traffic Control Supervisor Refresher-LA State Specific

Training Course

07/27/2018
Date

Baton Rouge, LA
Location

ATSSA
SAFER ROADS SAVE LIVES

Training & Products Dept. Director

President, CEO


ATSSA
AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION
SLOW
This is to affirm that
LAURENCE LAMBERT
has satisfied the requirements
to be designated as a
CERTIFIED FLAGGER
Expiration Date 7/25/2022
State Issued in LA
Verification available by calling 1-877
4637 or at http://www.flagger.com

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

If the advertisement requires submission of a QA/QC plan or Work plan, include them here. Otherwise, leave this section blank.

HUVAL

IDIQ CONTRACT FOR BRIDGE PRESERVATION

BRIDGE QUALITY MANAGEMENT PLAN

Prepared for:

Contract No. 4400023921, 4400023922, 4400023923, 4400024185, 4400024186, 4400024187, 4400024188, 4400024189

Prepared by:

HUVAL & ASSOCIATES, INC.

Table of Contents

1. INTRODUCTION

The HUVAL Design Team has a goal of providing timely, efficient, and high-quality bridge engineering services to its clients. Safety is a top priority for the Team and its staff of qualified professionals. Successful completion of a project requires top-quality planning, teamwork, management, and a thorough review of all plans and documents.

In order to best serve the LADOTD, we have developed this Quality Control / Quality Assurance (QC/QA) plan. Since the LADOTD is our primary client, we have incorporated the QC/QA requirements of the LADOTD into this plan in order to produce quality sets of plans. According to the LADOTD's Construction Plans Quality Control / Quality Assurance Manual, a quality set of plans should have the following characteristics (The 5 C's): complete, consistent, clear, correct, and constructible. Our goal is to meet and exceed the requirements presented under the LADOTD Bridge Design Section Policy on Quality Control and Quality Assurance and the Guidance on QC/QA in Bridge Design in Response to NTSB Recommendation (H-08-17) in order to achieve the desired result of a quality set of plans.

The following QC/QA plan is proposed as a general document/guideline and may be modified based upon the specified scope of an individual project/task order and input from the LADOTD. The QC/QA Plan has been made to assure the LADOTD that the Huval Design Team understands the complexities associated with each project and are prepared to produce an accurate and complete submittal. The process assures that quality a set of Construction Plans will be submitted for Bid, thus, minimizing Plan Revisions and Plan Changes.

1.1 Definition of Terms and Positions

Quality Control (QC): Procedure for checking the accuracy and consistency of the calculations and the drawings, detection and correcting design omissions and errors before the design plans are finalized and verifying the specification for the load-carrying members are adequate for the service and operation loads.

Quality Assurance (QA): Procedures of reviewing the work to ensure the quality controls are in place and effective in preventing mistakes, and consistency in the development of bridge design plans and specifications; those actions, procedures, and methods employed at the management and senior technical levels to observe and ensure that prudent quality procedures are in place and are being carried out and that the desired result of a quality product is achieved.

Designer: Engineer directly responsible for the development of design calculations, drawings, special provisions and cost estimates. Must be either a licensed professional engineer or engineer intern.

Design Checker: Engineer responsible for performing a full technical review of the design calculations, special provisions, drawings, and cost estimates. Must be either a licensed professional engineer or engineer intern, however, if the designer is a engineer intern the design checker must be a professional engineer.
Detailer: Individual responsible for preparing drawings. This individual/s is responsible for development of the drawing through the use of required CAD technology.

Reviewer: Engineer responsible for ensuring that the QC process has been followed as outlined. The Reviewer is responsible for ensuring that submittals are complete and in accordance with LADOTD Bridge Design practices, policies and procedures

Engineer of Record: Qualified Engineer responsible for stamping the Final set of Plans and assuring that QC/QA certification is signed by all responsible parties.

Team Leader: Project Manager or Task Assignee responsible for overseeing the project and staff on the project. Responsible for conducting audits and ensuring quality control plans are adhered to for each discipline.

Constructability Review: A design review performed by the Contractor or appropriate construction services personnel to assess the feasibility of the proposed design from a construction perspective.

Design Criteria: Document agreed to by the LADOTD and Consultant prior to design that establishes the design guidelines and procedures to be used for the design of the project. The Design Criteria shall include a Checklist that lists all the criteria, factors, software and general guidelines to be used for each discipline required for this project. The Checklist is based upon the LADOTD Bridge Design Section Policy on Quality Control and Quality Assurance Appendix A: Design Criteria Checklist.

2. BRIDGE DESIGN TEAM AND CONSULTANT RESPONSIBILITIES

As the Prime Consultant, HUVAL has selected experienced staff and Sub-consultant firms with qualified personnel to assist in the design of the required bridge structures for the project. Huval shall have the role of the project manager, Lead Bridge Designer and will also be responsible for the scope development of individual task orders. Huval shall also be responsible for QC/QA of the bridge/structural plans and design calculations.

2.1 File Management

Refer to Quality System Procedure (QSP) No. 9 of the QA/QC Plan for document and file management control requirements.

2.2 CADD

All drawings shall be performed in Microstation V8i and be CADD Conformed to LADOTD standards. HUVAL will be responsible for assuring that these requirements are met by all Consultants.

2.3 LADOTD Roles

Quality control is the sole responsibility of the Design Team. The Team shall be responsible for completing quality control in accordance with this document and the QM prior to all submissions. LADOTD's role shall be limited to providing comments on the substance provided and not completely reviewing the plans for errors and omissions.

3. DESIGN CRITERIA AND SOFTWARE

The following sections discuss the Design Team's procedures for Design Criteria and Software determination.

3.1 Design Criteria

Design criteria will be created based on the requirements of the Bridge Design and Evaluation Manual. If applicable the design criteria shall include but not be limited to;

- Governing Design and Construction Specifications and Other References
- Design Assumptions and Design Exceptions
- General Information
- Hydraulic Design Criteria
- Design Factors
- Design Loads
- Limit States
- Bridge Barrier
- Guardrail
- Approach Slab
- Deck and Deck Drainage
- Bearings
- Joints
- Superstructure
- Substructure
- Piles
- Geotechnical Design
- Electrical/ Lighting Design
- As-Designed Rating Criteria
- Software

The design criteria will be submitted to LADOTD for review and approval prior to the start of design. The design criteria will be updated as necessary but resubmitted to LADOTD for review and approval.

Design memorandums will be issued to the Team for all major decisions that affect the design.

3.2 Software

The Design Team shall adhere to LADOTD policies regarding software by using only design software which is pre-approved by the LADOTD. Design and drafting software to be used on the Project shall be listed in the design criteria. In the event software has not been pre-approved by the LADOTD, the Design Team shall adhere to the following stipulations in order to seek LADOTD approval of the software to be used.

A synopsis of the software shall be submitted to the Bridge Design Engineer Administrator for approval prior to use. The synopsis shall include the name of the software and the developer, a general description of the functions, a certification from the software developer stating that it is maintained in accordance with the latest AASHTO LRFD Bridge Design Specifications, and an account of the requester's experience and the experience of other organizations or agencies that use the software. Data/results from in-house software will not be accepted as part of the deliverable.

4. DESIGN QUALITY MANAGEMENT PLAN

4.1 Quality Management Overview

A specific Quality Control/Quality Assurance process has been established for the design of all bridges for the projects. This shall include design and detail reviews among the designated design team responsible for the design.

Detailed procedures for QC and QA are described in the following sections.

4.2 Quality Control Process (QC)

Design Calculations and Plans

Quality control starts with the Designer. The Designer is responsible for producing and reviewing all calculations and details prior to being checked. It is the responsibility of the Designer to develop and check the details and plans produced by the Detailers.

The design checker is the engineer responsible for performing a full technical review of the design calculations, drawings, special provisions including Non-Standard items, and cost estimate. The design checker must be licensed by the State of Louisiana a professional engineer or certified as an engineer intern; however, if the designer is an engineer intern, the design checker must be a professional engineer. The detail checker is the individual responsible for performing a full review of the CAD drawings. The detail checker can be a designer or a detailer. The design checker and detail checker shall not be the ones who perform the original design and detailing.

During the design check process, the design checker must verify the accuracy of the designer's calculations, pay items, quantities, special provisions including Non-Standard items, and cost estimate. The design checker may perform a redline check of the designer's calculations or produce an independent set of calculations and compare the results; the supervisor or team leader shall determine which method to use

depending on the complexity of the project. Regardless of the checking method employed, the designer's calculations are the calculations of record and must be updated to correct any errors or omissions discovered by the design checker. The calculations of the design checker should also become a part of the calculation of record when independent checking calculations are produced. The design checker should also ensure that the drawings adequately and accurately present the design information.

During the detail check process, the detail checker must ensure the drawings are in accordance with the design information and CAD standards. All dimensions and quantity calculations must be verified.

The checker may begin the checking process at the completion of the entire design/detail process or may check components of the designer/detailer's work as it is completed. Likewise, the checker may provide feedback at the completion of the entire checking process or as each component of check is completed. Any discrepancies that arise should be resolved between the designer/detailer and the checker, and the calculations and plan details should be corrected accordingly. If the designer/detailer and the checker are unable to resolve their discrepancies, the issue should be brought to the attention of the supervisor or team leader.

The Design Checker shall review the calculations, document for correctness and completeness, and verify that the design is properly reflected in the plans and details.

- Items needing correction are marked in red.
- Correct items are highlighted in yellow.
- Correct full paragraphs (or pages) marked with a yellow diagonal or check mark
- For software calculations, the design checker may prepare an independent model or conform the correctness of the input/out using the designers software file.

When the checker is complete, all calculations and details should be highlighted and sent back to the designer. Any discrepancies are to be resolved prior to completion of the calculation package and noted.

Upon completion of the submittal by the Designer and Design Checker, the Reviewer shall review the calculation documents along with the details used to develop the calculations. The Reviewer is responsible for checking the plans for completeness and accuracy prior to a submittal. The Reviewer shall document their review.

- Agreement shown with a blue check mark
- Disagreement are discussed are shown in red.
- The review is sent back to the Designer. Any disagreements are to be resolved prior to completion of the submittal.

All reviews and comments shall be recorded and documented by the EOR.

4.3 Quality Assurance Process (QA)

QA is defined as the procedures of reviewing the work to ensure the quality control procedures

are in place and effective in preventing mistakes, and consistency in the development of bridge design plans and specifications. Prior to submitting the plans to the Quality Manager (QM), the Reviewer is responsible for ensuring that the QC process is complete and that the design calculations, drawings, special revisions, and cost estimates are in accordance with LADOTD Bridge Design practices, policies and procedures.

The Reviewer shall verify the constructability of the plans and that critical structural areas are accurate and designed properly. The Reviewer provides the designer with any concerns or deficiencies observed in the design and plans. These issues are resolved prior to formal submittal to the DQM.

Upon completion of the QA process, the plans are submitted to the QM in accordance with the overarching Comite project CMAR QA/QC Plan.

5. CERTIFICATIONS

5.1 Certifications and Forms

The Design Team shall create pertinent QC/QA forms for this project and shall require that the QC/QA process is followed, and the forms are signed by the responsible parties. Huval shall document and file these forms for each deliverable where required.

5.2 Sealing of Plans

The Engineer of Record (EOR) is the Louisiana-licensed professional engineer who is assigned by the Design Unit Leader to seal the calculation, plans, and special provisions.

APPENDIX

- Design Criteria Checklist
- Final Calculation Book Checklist
- QA Information Package Checklist
- QC/QA Certification
- Consultant Submittal QC/QA Certification
- Quality Audit Checklist
- Sample Check Print Stamps

Design Criteria Checklist

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

__ **Cover sheet**

The following information must be included on the cover sheet:

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

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

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

__ **Design Assumptions and Design Expectations**

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

__ **General Information**

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

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

__ **Design Factors**

The ductility factor η_D, redundancy factor η_R, and operational importance factor η_I shall be listed in this section.

__ **Design Loads**

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

__ **Limit States**
All applicable limit states for this project shall be listed in this section.

__ **Bridge Barrier**
The design criteria, types, and test levels for bridge barriers shall be listed in this section. Standard plans and special details should be listed if they are utilized.

__ **Guardrail**
The design criteria, types, and test levels for guardrails shall be listed in this section. Standard plans and special details should be listed if they are utilized

__ **Approach Slab**
Design criteria for approach slab shall be included in this section. Standard plans and special details should be listed if they are utilized.

__ **Deck and Deck Drainage**
All design criteria for deck and deck drainage design shall be included in this section. Standard plans and special details should be listed if they are utilized.

__ **Bearing**
All bearing types and design criteria for each bearing type shall be included in this section. Standard plans and special details should be listed if they are utilized.

__ **Joint**
All joint types and design criteria for each type shall be included in this section. Standard plans and special details should be listed if they are utilized.

__ **Superstructure**
All superstructure types and design criteria for each type shall be included in this section. Standard plans and special details should be listed if they are utilized.

__ **Substructure**
All substructure types and design criteria for each type shall be included in this section. Standard plans and special details should be listed if they are utilized.

__ **Piles and Drilled Shafts**
All pile types, sizes, and structural design criteria shall be included in this section. Standard plans and special details should be listed if they are utilized.

__ **Geotechnical Design**
All geotechnical design shall be included in this section. Standard plans and special details should be listed if they are utilized.

__ **Mechanical Design**
All mechanical design criteria shall be included in this section if applicable. Standard plans and special details should be listed if utilized.

__ **Electrical Design**
All electrical design criteria shall be included in this section if applicable. Standard plans and special details should be listed if they are utilized.

__ **As-Designed Bridge Rating Criteria**
All as-designed bridge rating criteria shall be included in this section.

Final Calculation Book Checklist

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

__ **Cover Sheet**

The following information must be included on the cover sheet:

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

__ **Final Calculation Book Check List**
__ **QC/QA Certifications**
__ **Peer Review Resolution Agreement (if peer review is performed)**
__ **Design Criteria**
__ **Final Hydraulic Analysis Report from Hydraulic Engineer**
__ **Final Geotechnical Analysis Report from Geotechnical Engineer**
__ **Superstructure Design Calculations**
__ **Substructure Design Calculations**
__ **Quantity Calculations**
__ **Special Provisions/NS-Items**
__ **Construction Cost Estimate**
__ **As-Designed Rating Report**
__ **List of All Final Electronic Design Files and File Locations (ProjectWise directory name)**

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

__ **A PDF File of the Calculation Book**
__ **All Electronic Design Files**
__ **A PDF File of the As-Designed Rating Report Only**

QA Information Package Checklist

Project No.: TBD
Project Description: TBD

_____ Calculation Book

_____ Plans

_____ Special Provisions

_____ Cost Estimate

_____ Other Documents _____

QC/QA Certification

Project No.: TBD
Project Description: TBD
We, the undersigned designers, detailers, checkers and reviewers for this project, have reviewed and accepted the calculations, plans, quantities, special provisions, and cost estimate prepared for the project. We certify that the work for which we are responsible has been completed in accordance with the LADOTD Bridge Design Section policy on QC/QA.

Team Members	Name	PE Registration No.	Responsible Plan Sheets	Responsible Special Provisions	Construction Cost Estimate	Signature
Designers						
Design Checkers						
Detailers						
Detail Checkers						
Reviewers						
EOR						

Consultant Submittal QC/QA Certification

Project No.: TBD
Project Description: TBD

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

_____
Submittal Description

_____	_____	_____
Supervisor or Team Leader Name	Signature	Date

QUALITY AUDIT CHECKLIST

AUDITED AREA:	DATE(S) OF AUDIT:
AUDITOR:	AUDIT:

AUDIT ITEM	REFERENCE	METHOD OF VERIFICATION	CONFORMS	
			YES	NO
1. Have computer programs utilized been validated?	QMP Group D	Review validation records.		
2. Are calculation check prints available?	QMP Group B	Review originals and check prints		
3. Were calculations checked prior to drawing checking?	QA Folder, QMP Log	Review check prints.		
4. Are drawing check prints available?	QMP Group E	Review record set and check prints.		
5. Are check prints of specifications available?	QMP Group A	Review record set and check prints.		
6. Is checking of input to computer programs being accomplished?	QMP Group B	Review originals and check prints		
7. Are check prints of studies or report-type documents available?	QMP Group A	Review check prints.		

8. Are procedures for marking up check prints being followed? Checker - Yellow/Red Backchecker - Green Updater - Blue Verifier - Yellow	QA Folder	Review check prints.		
10. Are check prints properly signed and dated?	QA Folder	Review check prints.		
11. Are plan reviews completed?	QMP Log	Review package to verify that comment sheets are available.		
12. Are the review comments incorporated into the final documents or disposed of as otherwise noted?	QA Folder	Review for verification that Design Reviews comments have been incorporated. Review for verification that comments from prior Design Reviews have been incorporated.		
13. Are check prints of graphic elements available?	QMP Group C	Review check prints.		
14. Are all checklists validated?	QMP Group D	Review check prints.		

SAMPLE CHECK PRINT STAMPS

CHECKING PRINT

Checked by_____ Date_____

Back Checked by_____ Date_____

Corrected by_____ Date_____

Tracing Signed by_____ Date_____

AUXILIARY

CHECKING PRINT NO.____

Checked by_____ Date_____

Back Checked by_____ Date_____

Corrected by_____ Date_____

Tracing Signed by_____ Date_____

22. **Sub-consultant information:**

If one or more sub-consultants will be used, provide the name, address, point of contact and phone number for each. Otherwise, leave this section blank.

Firm Name (as registered with Louisiana's Secretary of State)	**Address**	**Point of Contact and email address**	**Phone Number**
G.E.C., Inc.	8282 Goodwood Blvd. Baton Rouge, LA 70806	Cary Bourgeois, PE cbourgeois@gecinc.com	(225) 612-4121
GeoEngineers, Inc.	11955 Lakeland Park Boulevard, Suite 100 Baton Rouge, Louisiana 70809	Larry Sant, PE Lsant@geoengineers.com	225.663.1522 (Office); 509.570.6081 (Cell)
Civil Design & Construction, Inc.	PO Box 857, Port Allen, LA 70767/3251 Southern Pacific Rd.	Karla E. Weston, PE kweston@cdcbr.com	225-765-1802
Wiss, Janney, Elstner Associates, Inc.	330 Pfingsten Road, Northbrook, IL 60062	Jonathon McGormley, PE jmcgormley@wje.com	847.753-7234
Bridge Diagnostics, Inc.	740 S. Pierce Ave, Unit 15 Louisville, CO 80027	Scott Aschermann, PE scotta@bditest.com	(303)494-3230
Moffatt & Nichol, Inc.	301 Main Street, Suite 800 Baton Rouge, LA 70801	Chace Hulon, PE chulon@moffattnichol.com	225-610-1932
Vectura Consulting Services, LLC	8000 Innovation Park Drive, Baton Rouge, LA 70820	Brin Ferlito, PE bferlito@vecturacs.com	225-223-6685
Bluewing Civil Consulting, LLC	604 Saint John St. Lafayette, LA 70501	Alex Guillory, PE alex@bluewingcivil.com	337-419-0911

(Add rows as needed)

23. **Location:**

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

N/A