DOTD FORM: 24-102

(Revised June 1, 2021)

PROPOSAL TO PROVIDE CONSULTANT SERVICES

1. Contract title as shown in the advertisement	**IDIQ for Bridge Inspection Services Statewide**
2. Contract number(s) as shown in the advertisement	**4400023510, 4400023511, and 4400023512**
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)	HDR Engineering, Inc.
5. Prime consultant license number (as registered with the Louisiana Professional Engineering and Land Surveying Board (LAPELS) if registration is required under Louisiana law)	EF.0001231
6. Prime consultant mailing address	4970 Bluebonnet Blvd, Suite C Baton Rouge, LA 70809-3089
7. Prime consultant physical address (existing or to be established, if location is used as an evaluation criteria)	4970 Bluebonnet Blvd, Suite C Baton Rouge, LA 70809-3089
8. Name, title, phone number, and email address of prime consultant's contract point of contact	Wesley Jacobs, PE – Hydraulic Structures Program Lead (225) 465-6361, wesley.jacobs@hdrinc.com
9. Name, title, phone number, and email address of the official with signing authority for this proposal	David C. Weston, Vice President, Gulf Coast Area Manager (713) 622-9264, david.weston@hdrinc.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: 2/24/2022
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): Firm(s)' %: No DBE Goal

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

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

The 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. The crosswalk from the old categories to the new categories can be found at the link below:
http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/CCS/General%20Information/CPPR%20Crosswalk%20to%20New%20Evaluation%20Disciplines.pdf. (same link as in the advertisement)

Sub-consultants are allowed to be used for this proposal. Fill in the table by identifying only those evaluation disciplines consistent with the approach and methodology proposed in Section 19 of the DOTD Form 24-102*, the name of each firm that is part of the proposal, and the percentage of work in each past performance evaluation discipline to be performed by that firm. The percentage estimated for each evaluation discipline is for evaluation purposes only and will not control the actual performance or payment of the work. The percentages for the prime and sub-consultants must total 100% for each past performance evaluation discipline, as well as the overall total percent of the contract.						
Evaluation Discipline(s)	% of Overall Contract	HDR Engineering, Inc.	C. H. Fenstermaker & Associates, L.L.C	Collins Engineers, Inc	Thompson Engineering, Inc., of Louisiana	
Bridge	95.0%	65.0%		20.0%	15.0%	
Survey	2.5%		100.0%			
Roadway	2.5%		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%	61.8%	5.0%	19.0%	14.2%	

13. **Firm Size:**

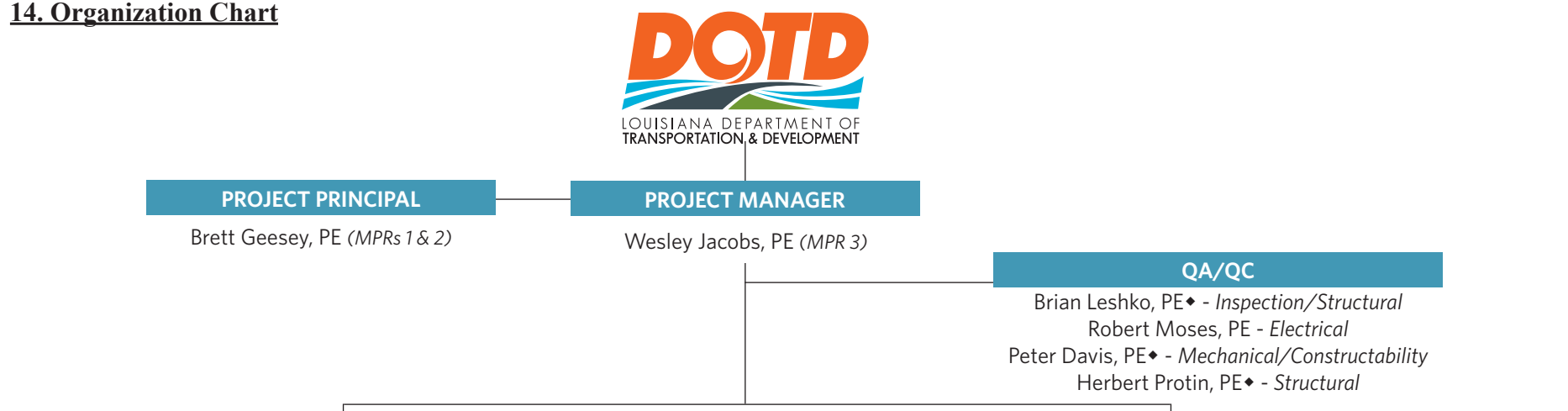
For all firms that are part of this team, indicate the approximate number of personnel to be committed to this contract, by DOTD Job Classification and the total number of personnel within the firm that could provide support, if needed. If a specialized job classification is required and not included on the DOTD job classification list, specify "Other (xxxx)" and include the classification title inside the parentheses. The DOTD Job Classification(s) to be used can be found at the following link: http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/CCS/Job_Qualification/Job%20Classifications%20with%20Descriptions.pdf

Firm name	DOTD Job Classification	Number of personnel committed to this contract	Total number of personnel available in this DOTD Job Classification (if needed)
HDR Engineering, Inc.	Principal	1	10
	Supervisor-Engineer	9	46
	Supervisor-Other	3	6
	Engineer	7	15
	Engineer – Other	8	52
	Designer	1	6
	Senior Technician	1	1
	CADD	2	6
C. H. Fenstermaker & Associates, L.L.C.	CAD-Operator	0	4
	Engineer	2	31
	Inspector	0	8
	Party Chief	0	23
	Engineer Intern	0	21
	Principal	1	6
	Surveyor	5	9
Thompson Engineering, Inc., of Louisiana	Inspector – Certified	3	5
	Engineer	1	17
	CADD Drafter	0	4
	Designer	0	5
	Supervisor Engineer	0	2
Collins Engineers, Inc	Principal	1	4
	Supervisor-Engineer	2	9

	Engineer	1	8
	Engineer - Other	3	26
	Senior Technician	1	3

(Add rows as needed)

14. Organization Chart



INSPECTION, ENGINEERING AND CONSTRUCTION SUPPORT

STRUCTURAL
Ronald Sanchez, PE (*MPR 3*)
Wesley Jacobs, PE *(MPR 3)*
David Knickerbocker, PhD, PE *(MPR 3)*
Michael Lamont, PE *(MPR 3)*
Erin O'Malley, PE *(SPRAT 3)*
Matt Bruno, PE◆ *(SPRAT 3)*
Peter Harrison, PE *(SPRAT1) (MPR 3)*
Jason Abendroth, PE
Keith Salais, PE *(SPRAT 1)*
Ryan Hedlund, PE
Bernard Frankl, PhD, PE
Brian Zeiger, PE◆ *(SPRAT 1)*
John Christopher Taylor, PE◆
Riley Boone, PE◆ *(SPRAT 1)*
Keith Smith, PE◆
Jay Davison, PE
Nick Hartman, PE
Charlie Weston
Michael Seal, PE *(SPRAT 3)*
Beau Kamrath, PE *(SPRAT 3)*
Drew Garceau, PE *(SPRAT 3)*
Jon Wittrock, PE◆ *(SPRAT 1)*
Michael Spencer, PE◆*(SPRAT 3)*
Christopher Thrift *(SPRAT 3)*
Daniel Stromberg, PE, SE *(ADCI)*
Barritt Lovelace, PE◆ *(SPRAT 1)*

MECHANICAL
Matt McGuire, PE
Mike Carlton, PE
Diana Jandreski, PE
Matthew Cassera, PE◆
Joseph Jacobus, PE◆

ELECTRICAL
Jonathan Kohler, PE
Raphael Costa, PE
Megan Tatara, PE◆
Jose Gonzalez, PE◆
Carlos Larco

SUPPORT

PROTECTIVE COATINGS SPECIALIST
Gregory Mieczkowski

ROADWAY/TRAFFIC CONTROL
Kimberly McDaniel, PE, PTOE*+
Diane Hammonds, PE, PTOE*++
Dax Douet, PE*+

CONSTRUCTION SUPPORT
Jonathan Beaugh

NON-DESTRUCTIVE TESTING
Drew Garceau, PE *(SPRAT 3)*
Jon Wittrock, PE◆ *(SPRAT 1)*

SURVEYING
Travis Bodin, PLS, PMP *(MPR 5)*+
Bradford Millett, PLS, EI *(MPR 5)*
Justin Bordelon, PLS *(MPR 4)*+
Lance Fontenot
Brett Dufour

CADD SERVICES
Jason Clary
Jonathan Beaugh

LEGEND

◆ Licensed Professional Engineer in a U.S. state, not Louisiana
\+ Traffic Engineering Process and Report Course
\+ Traffic Control Supervisor
\+ Traffic Control Traffic Control Technician
ADCI = Association of Diving Contractors International - Commercial Diver
SPRAT 1 = Society of Professional Rope Access Technicians - Level 1 Certification
SPRAT 3 = Society of Professional Rope Access Technicians - Level 3 Certification
(MPR #) = Minimum Personnel Requirement

Subconsultants
Collins Engineers, Inc.
C. H. Fenstermaker & Associates, L.L.C.
Thompson Engineering, Inc., of Louisiana

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	Brett Geesey, PE	HDR Engineering, Inc.	Professional Engineer PE.0035172	LA	03/31/2022
2	Brett Geesey, PE	HDR Engineering, Inc.	Professional Engineer PE.0035172	LA	03/31/2022
3	Wesley Jacobs, PE	HDR Engineering, Inc.	Professional Engineer PE.0030774	LA	09/30/2022
3	Peter Harrison, PE	HDR Engineering, Inc.	Professional Engineer PE.0039771	LA	09/30/2023
3	David Knickerbocker, PhD, PE	HDR Engineering, Inc.	Professional Engineer PE.0040004	LA	03/31/2022
3	Michael Lamont, PE	HDR Engineering, Inc.	Professional Engineer PE.0045309	LA	09/30/2023
3	Ronald Sanchez, PE	HDR Engineering, Inc.	Professional Engineer PE.0036556	LA	03/31/2022
4	Justin Bordelon, PLS	C. H. Fenstermaker & Associates, L.L.C.	Professional Land Surveyor / License No. PLS.0005271	LA	03/31/2024
5	Travis Bodin, PLS, PMP	C. H. Fenstermaker & Associates, L.L.C.	Professional Land Surveyor / License No. PLS.0005067	LA	03/31/2022
5	Bradford Millett, PLS, EI	C. H. Fenstermaker & Associates, L.L.C.	Professional Land Surveyor / License No. PLS.0005245	LA	03/31/2023

(Add rows as needed)

16. **Staff Experience:**

Firm employed by	**HDR Engineering, Inc.**		
Name	**Wesley Jacobs, PE**	Years of relevant experience with this employer	6
Title	Hydraulic Structures Program Lead	Years of relevant experience with other employer(s)	17
Degree(s) / Years / Specialization		BS / 1998 / Civil Engineering	
Active registration number / state / expiration date		PE.30774 Louisiana, Exp. 9/30/2022	
Year registered	2003	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		Project Manager and Bridge Support. **Meets MPR 3.**	

Wes has over 23 years of demonstrated expertise in several aspects of civil and structural design/inspection, including bridges (high-level river crossings, movable bridges, overpasses, rail bridges with common elements such as complex geometry, PPC girder, steel plate girder, curved steel plate girders, pier design/protection, cofferdams, column and pile bent design), sign structures, urban/rural roadway/drainage design, levees, retaining walls, floodwalls, sector gates, miter gates, and closure gates (hwy/rail). Through this experience, he has gained a solid foundation of expertise pertaining to civil and structural design due to the complexity of the projects completed including CMAR/ECI and D/B (estimated construction cost totaling more than $10 billion). His responsibilities have included independent technical review, plan production, structural design, seismic review, forensic analysis, civil design, geometrics, drainage design, structural inspection, specification development, cost estimation and project management.
Training: Maintenance and Rehabilitation of Historic Bridges - completed on 4/12/2016

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-Ongoing	**Louisiana Dept. of Transportation and Development (LADOTD) - LADOTD Statewide In-Depth Complex Bridge Inspections	Statewide LA** – *HDR Project Manager and Engineering Lead (Sub-consultant).* Wes is leading the main span inspections (field work and report preparation) of the Jackson Street Lift Bridge spanning the Red River and the lift bridges spanning Teche Bayou. The team performed structural, mechanical and electrical inspections of the towers, main span truss, substructure, and machinery using rope access and manlift methods for in-depth inspection techniques.
04/21-05/21	**Florida Dept. of Transportation (FDOT) - NE 79th Street Causeway Bascule Bridge Rehabilitation	Miami, FL** – *Senior Structural QC reviewer*. Wes reviewed the final P&S rehab design of a single leaf bascule bridge and control house spanning the Intracoastal Canal.
05/11-06/14	**USACE New Orleans District - LPV 145 – Bayou Bienvenue Movable Swing Span Bridge - Steel Swing Span (H-04-47839)	New Orleans, LA** – *Project Manager and Engineering Lead*. Wes was responsible for the development of the preliminary design, final design, plans, specifications, and engineering construction services for a 135 ft unequal arm steel swing span structure. The swing span is supported by a reinforced concrete pivot pier (designed with timber fender protection) with prestressed concrete pile foundations. The approach spans were comprised of concrete slab spans that tied into an existing limestone access road. The bridge was designed using LaDOTD Bridge Design Manual and AASHTO-LRFD specifications.
01/11-01/12	**Valero Port Arthur Refinery - Taylor Bayou (Joint Outfall Canal) Movable Bridge - Steel Swing Span	Port Arthur, TX** – *Project Manager and Lead Bridge Engineer*. Wes was responsible for the development of the preliminary designs, plans of an unequal arm steel swing span bridge (129 ft) supported by a pivot pier on steel pipe pile foundations with PPC girder approach spans. Due to close similarities to recent projects in Louisiana, the project is being designed using LaDOTD design criteria and specifications.
01/10-08/11	**LADOTD - Chef Menteur Bridge Replacement EA, S.P. No. 700-36-0125	Orleans Parish, LA** – *Structural Lead*. Wes was responsible for the development of high level (75 ft vertical clearance) fixed bridge alternatives for the replacement of a historical swing span bridge in Orleans Parish. The span arrangements were comprised of PPC AASHTO Type 3 (80 ft), BT 78 (130 ft)

	approach spans with steel composite girders for the main span (200 ft and 270 ft). Wes developed conceptual designs for deep river concrete piers with water level footings supported by large diameter PPC cylinder piles.
11/10-07/12	**ASARCO Smelter - Bridge Inspection and Load Rating | El Paso, TX, TX 2010 -** Lead Structural Engineer. Wes was responsible for the inspection and analysis of two bridges located on the site of the old ASARCO smelter in El Paso, TX. The first bridge consisted of 7 simple riveted steel girder spans totaling 375 feet supporting a concrete deck. The substructure was steel truss systems ranging with various heights from 20ft to 80 ft. The I-10 overpass bridge was a continuous steel plate girder spanning 277 feet supported by three concrete column bents on pile foundations. The bridges were inspected, and field measurements taken to verify as-built dimensions. Load rating and analysis was performed to determine if large, loaded dump trucks could safely traverse the bridges with operational recommendations for truck speed and lane placement.
01/02-05-03	**City of Shreveport - Benton Road Railroad Overpass | Shreveport, LA** – *Project Engineer.* The project consisted of preliminary and final design of this RR Overpass project. Wes designed a 12-span prestressed concrete girder/pile bent structure with bobtail and skewed spans crossing the railroad main line. The total bridge length was approximately 800 feet across KCS Railroad. His responsibilities also included project management for final portion of project.
01/11-05/15	**TxDOT/LADOTD – US 84 Sabine River Bridge | Logansport, LA** – *Structural Lead and Engineer of Record.* Wes developed the final design, plans and specifications for two bridge structures (eastbound and westbound) using AASHTO-LRFD specifications. The bridges were comprised of the new Tx shapes (Tx62's and Tx70's). The span lengths ranged from 120 ft to 160 ft. The substructure was comprised of multi-column reinforced concrete bents with strutted columns at the main channel locations. The bents were supported by drilled shaft foundations. Although not a navigable channel at this location, the bridges were designed with adequate geometry to provide the necessary freeboard above the 100-year flood levels in addition to superelevation rotation on the eastbound structure.
06/03-05/05	**LADOTD - US 171 South Railroad Overpass | Mansfield, LA** - *Engineer of Record*. Wes was responsible for the final design that included twin bridge structures in concentric curves with bobtail and skewed spans crossing the KCS railroad main line for the TIMED program. Each bridge was approximately 700 ft long. The spans were comprised of precast prestressed concrete girders supported by precast prestressed concrete pile bent substructure.
01/02-06/03	**LADOTD – Ouachita River Main Span | Columbia, LA** – *Jr. Project Engineer*. Wes supported the final design of the main span. Specifically, designed the three span 630 ft welded composite steel plate girders, deep river pier design (including barge impact) with aesthetically tapered cap and columns, monolithic shaft wall, pipe pile foundation, cofferdam and tremie seal.
02/04-04/05	**TXDOT – IH-35 Southbound Frontage Road Connector | Waco, TX** – *Engineer of Record*. Wes was responsible for the final design of this curved steel plate girder roadway overpass. The bridge was comprised of two continuous steel plate girder units, 360 feet and 420 feet, respectively. The spans were designed using AASHTO Standard Bridge specifications for Curved Girders as well as a straight girder case using AASHTO-LRFD specifications. Reinforced concrete hammer-head bents founded on drilled shaft foundations were used for the substructure. His responsibilities included design of the curved steel girder units as well as developing and sealing the girder details.
04/00-06/02	**LADOTD – Eastbound Red River Bridge at Barksdale | Shreveport, LA** - *Jr. Project Engineer*. Wes designed the re-decking and widening of the main (1,490 ft total with a center span of 375 feet) and approach spans (1,200 ft) structures (welded-composite haunched plate girder –floor beam system and prestressed concrete girder spans, column bents, and pile foundations).
05/99-01/01	**LADOTD – Black River Bridge Approach Spans | Jonesville, LA** - *Jr. Project Engineer*. Wes supported the preliminary and final design of this $30 million project in central Louisiana. Specifically, designed the rural roadway, subsurface drainage and approach spans (4 lanes of traffic – approximate bridge length 2,200 feet) that included precast prestressed concrete BT-72 girder superstructure (100 feet average span length), multi-column bent substructure, and precast-prestressed concrete pile foundations.

Firm employed by	**HDR Engineering, Inc.**		
Name	**Jason Abendroth, PE**	Years of relevant experience with this employer	4
Title	Senior Engineer	Years of relevant experience with other employer(s)	10
Degree(s) / Years / Specialization		BS / 2008 / Civil Engineering	
Active registration number / state / expiration date		PE 0038198 Louisiana, Exp. 03/31/2022	
Year registered	2013	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		Bridge Inspection and Design Services	

Jason has experience in the inspection, engineering, and design of structures ranging from bridges (concrete, steel, movable), flood control (sector, lift, sluice, and vehicular gates; pump stations, T-Walls, L-Walls, I-walls) and municipal sewage lift stations. Experience in other engineering disciplines includes geotechnical analysis and design for earthen levees and retaining walls. He has also completed the FHWA-NHI Bridge Inspector Certification.

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).
05/20-08/21	**Louisiana Department of Transportation and Development (LADOTD) – LADOTD Statewide In-Depth Complex Bridge Inspections | Statewide LA** – *QA/QC Reviewer*. Jason reviewed the main span inspection reports of the Jackson Street Lift Bridge spanning the Red River and the lift bridge spanning Teche Bayou. The team performed structural, mechanical and electrical inspections of the towers, main span truss, substructure and machinery using rope access and manlift methods for in-depth inspection techniques.
2016-2017	**LADOTD - Statewide Inventory and Inspection of Sign Trusses | Statewide LA** – *Assistant Project Manager*. Jason performed team coordination, data collection and inspection work for this five-year contract with LADOTD to perform over 1,500 sign truss inspections throughout Louisiana. He prepared and reviewed the inspection reports after the inspections were completed. Inspections included steel and aluminum welds, high stress moment connections, and fracture critical elements in accordance with FHWA guidelines.
01/10-08/11	**LADOTD - Chef Menteur Bridge Replacement EA, S.P. No. 700-36-0125 | Orleans Parish, LA** – *Jr. Engineer*. Jason assisted in the development of high level (75 feet vertical clearance) fixed bridge alternatives for the replacement of a historical swing span bridge in Orleans Parish. The span arrangements were comprised of PPC AASHTO Type 3 (80 feet), BT 78 (130 feet) approach spans with steel composite girders for the main span (200 feet and 270 feet). He developed conceptual designs for deep river concrete piers with water level footings supported by large diameter PPC cylinder piles.
01/11-05/15	**TxDOT/LADOTD - US 84 – Logansport – Sabine River Bridge Replacement S.P. No. 021-01-0004 | Logansport, LA** – *Jr. Structural Engineer*. Jason assisted in the development of the final design, plans and specifications for two bridge structures (EB and WB) spanning the Sabine River in Logansport, LA using AASHTO-LRFD specifications. He designed the new TX PPC girder shapes (Tx62's and Tx70's). The span lengths ranged from 120 ft to 160 ft. The substructure was comprised of multi-column reinforced concrete bents with strutted columns at the main channel locations. The bents were supported by drilled shaft foundations.
01/10-02/11	**TxDOT Austin – FM 112 East and West Brushy Creek Relief Bridges | Austin, TX** – *Jr. Engineer.* Jason assisted in the development of the final designs and plans for this bridge replacement project. The east and west creek bridges are 213 ft and 163 ft in length respectively. Each bridge is comprised of three PPC Type C girder spans varying in length from 40 ft to 65 ft. The superstructure is

	supported by reinforced concrete column bents founded on drilled shafts. The bridge was designed using split phased construction due to the existing structure location. The bridge was designed using TxDOT standard and LRFD specifications. Jason designed the PPC girders, column bents and drilled shaft foundations for the Westbound bridge.
06/08-12/09	**TxDOT Waco – US 84 at Mexia – Union Pacific RR Overpass | Waco, TX** – *Jr. Engineer*. Jason assisted with the design of the replacement of this railroad overpass. The bridge was comprised of prestressed concrete girders and concrete column bents supported by drilled shafts. The bridge geometry was set to accompany the required horizontal and vertical clearances for Union Pacific Railroad. The overall bridge length was 715 ft and 81 ft wide to accommodate four lanes of traffic using split-phased construction. He designed sections of the PPC girders, concrete column bents and drilled shaft foundations.
03/09-02/10	**TxDOT Austin – SH 195 – CR 228 Overpass | Austin, TX** – *Jr Engineer.* Jason assisted in the final design of this roadway overpass. His responsibilities included design of twin bridge structures with skewed spans set in a horizontal curve. He checked the design the three-span continuous units comprised of Type C prestressed concrete girders and designed the reinforced concrete column bents and drilled shaft foundations.
01/11-02/12	**LADOTD – US 11 Bridge – Environmental Assessment | Orleans Parish, LA** – *Jr. Engineer*. Jason assisted in the development of alternatives including a high level fixed span bridge on multiple alignments. He assisted with the preliminary designs including sizing steel plate girders, sizing prestressed concrete girders, bent and column layouts and pier and pile layouts.
03/11-05/14	**USACE New Orleans District - LPV 145 – Bayou Bienvenue Movable Swing Span Bridge - Steel Swing Span | New Orleans, LA** – *Structural Engineer*. Jason was responsible for the design of the steel girder superstructure, the concrete substructure and foundations. The approach spans were comprised of concrete slab spans that tied into an existing limestone access road. The bridge was designed to provide vehicular access to LPV 145 which is a six-mile isolated levee reach in Chalmette, LA. The timber fender system for the new bridge was designed to tie into the existing system at the sector gate. The bridge was designed using LADOTD Bridge Design Manual and AASHTO-LRFD specifications.

Firm employed by	**HDR Engineering, Inc.**				
Name	**Jonathan Beaugh**		Years of relevant experience with this employer	8	
Title	CADD Technician		Years of relevant experience with other employer(s)	27	
Degree(s) / Years / Specialization		N/A			
Active registration number / state / expiration date		N/A			
Year registered	N/A	Discipline	N/A		
Contract role(s) / brief description of responsibilities		CADD Services and Construction Support			

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).
09/20-03/21	**Port Freeport – General Re-Evaluation Report Civil Engineering | Brazoria, TX** – *CADD Technician*. Provided AutoCAD drafting and design, and volume calculations for ship channel widening.
10/20-Ongoing	**USACE Galveston District, Freeport SATOC Hurricane Flood Control | Freeport, TX** – *CADD Technician.* Provided OpenRoads Designer drafting and design, and calculations.
04/18-04/20	**USACE New York District - PH USACE Green Book Design Seg C3-C4 | Middlesex County, NJ** – *CADD Technician*. Provided AutoCAD drafting and design. The project entailed production of plans and specifications for levees, floodwalls, interior drainage features and a road closure gate.
10/20-10/20	**Alaska Dept. of Transportation & Public Facilities – St. George FEMA Breakwater | St. George, AK** – *CADD Technician.* Provided AutoCAD drafting for as-built post construction documentation.
2019-2020	**USACE - Cedar Rapids, IA, 16th Avenue Floodgate Closure, Cedar Rapids, IA** – *CADD Technician*. Provided AutoCAD drafting and design services.
07/17-12/19	**Santa Clara Valley Water District - Calero Dam Seismic Retrofit Project Design Consultant Service | Santa Clara, CA** – *CADD Drafting*. Provided 3D AutoCAD drafting and design, and volume calculations. HDR prepared designs, specifications, construction documents, and cost estimates for the District's Calero Dam Seismic Retrofit Project.
03/17-10/19	**King County - Lower Russell Road Levee Setback Project Kent | King, WA** – *CADD Technician.* Provided 3D AutoCAD design and volume calculations for floodwall.
06/18-07/18	**Canadian National Railway - Wetland Delineation and Bridge Assessment | St. Charles Parish, LA –** *CADD Technician*. Created permit exhibits via AutoCAD and prepared volume calculations.
2017	**Northstar Port Arthur - Berth 3 Upgrades Midstream | Port of Port Arthur, TX** - *Construction Inspection.* Provided construction administration support and oversight for renovations and upgrades to the existing berth. Upgrades included installation of robust mooring structures, including foundation support. Other responsibilities included observation of construction, including material testing, and documented observations in progress reports.
2016	**UGI - Oyster Point As-Built Services | East Hempfield, PA** - *Construction Inspector.* Provided construction administration support for the installation of a 12" high pressure gas transmission and distribution pipeline in East Hempfield, PA.
2014-2015	**Moorhead Public Service - High Service Pump Station Construction Phase | Moorhead, MN** - *Construction Inspection.* Provided construction administration and inspection support of ongoing construction, recorded observations in daily logs, and coordinated between the engineer and construction contractor. This project included a new High Service Pump Station with additional dry chemical storage, a vertical turbine can-type pump and emergency power generator, and additional chemical storage.

Firm employed by **HDR Engineering, Inc.**			
Name	**Riley Boone, PE (SPRAT 1)**	Years of relevant experience with this employer	8
Title	Bridge Engineer	Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization		BS / 2013 / Civil Engineering	
Active registration number / state / expiration date		PE 131800 Texas, Exp. 06/30/2022	
Year registered	2018	Discipline	Civil/Structural Engineering
Contract role(s) / brief description of responsibilities		Structural Inspection	

Riley has been involved in the design and inspection of both bridges and maritime related structures; however, since 2019, his primary focus has been on the inspection of bridges and related structures. Riley has been involved with the inspection of a wide variety of bridges and types of inspections, including routine, fracture critical, condition assessment and inspections following a natural disaster. **Certificates:** FHWA-NHI-130056: Safety Inspection of In-Service Bridges

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
07/17–Ongoing	**Texas Department of Transportation (TxDOT – Bridge Division) – Fracture Critical In-depth Bridge Inspections | Statewide TX** – *Assistant Bridge Inspector.* Riley has performed inspections on a wide variety fracture critical bridges throughout the state of Texas including, but not limited to, large and small steel truss bridges, extradosed bridges, two girder superstructures, steel plate caps and steel box caps. Access methods include rope access, ladders, under bridges inspection vehicles, bucket trucks and manlifts.
09/21–Ongoing	**Montana Department of Transportation – Fracture Critical Bridge Inspections | Statewide MT** – *Assistant Bridge Inspector.* Riley has performed several inspections on small truss bridges and plate caps throughout the state of Texas. Access methods include rope access and ladders.
02/17–09/19	**TxDOT – Routine Bridge Inspections | Statewide TX** – *Assistant Bridge Inspector.* Riley inspected 300+ bridges and culverts throughout the state of Texas. His responsibilities included photo documentation, field observations/documentation, repair recommendations and report preparation.
09/19–Ongoing	**TxDOT – Routine Bridge Inspections | Statewide TX** – *Bridge Inspector.* Riley has been the lead inspector on 800+ bridges and culverts throughout the state of Texas.
10/17–11/19	**TxDOT – On-System Condition Assessments | Statewide TX** –*Bridge Inspector.* Riley inspected several condition assessment inspections which included an in depth visual and hands on inspection of bridge elements and noting defects.
05/19–10/19	**TxDOT Dallas – Scour Evaluations | Dallas District, TX** – *Technical Lead/Evaluator.* Riley led a team of engineers to evaluate 400+ bridges in the Dallas District to determine the current and future vulnerability to scour of each bridge and provided repair and preventative recommendations to protect the bridge from further scour.

Firm employed by **HDR Engineering, Inc.**				
Name	**Matthew (Matt) Bruno, PE (SPRAT 3)**		Years of relevant experience with this employer	13
Title	Senior Bridge Engineer / Inspector		Years of relevant experience with other employer(s)	1
Degree(s) / Years / Specialization			BS / 2008 / Civil Engineering	
Active registration number / state / expiration date			PE 51856 Colorado, Exp. 10/31/2023	
Year registered	2013	Discipline	Civil Engineering	
Contract role(s) / brief description of responsibilities			Structural Inspection	

Matt has successfully supported numerous bridge projects in analysis, design, rating and inspection. He has specialized training and certification in the application of rope access and advanced climbing techniques. He uses access techniques that include industrial rope access, underbridge inspection cranes, manlifts bucket trucks and confined-space entry. He has hands-on experience with in-depth/fracture critical bridge inspections including: the Golden Gate Bridge (CA); the Rio Grande Gorge Bridge (NM); the Fremont Bridge, St. John's Bridge and Steel Bridge (OR); the Rainbow Bridge, Fred Hartman Bridge, Margaret Hunt Hill Bridge and Corpus Christi Harbor Bridge (TX); the Wheeling Suspension Bridge, Shenandoah Bridge and East Huntington Bridge (WV); and the Navajo Bridge, Gillespie Bridge and Glen Canyon Dam Bridge (AZ). These were hands-on, NBIS in-depth and fracture-critical bridge inspections. verifying and coding SI&A information, determining Condition Ratings, and coding PONTIS ratings for CoRe elements.
Certificates: Matt has completed courses in NHI Safety Inspection of In-Service Bridges and Fracture Critical Inspection Techniques for Steel Bridges. He is certified as a SPRAT Level 3 Rope Access technician for bridge inspections. He has also completed FHWA-NHI 130053 and FHHA-NHI 130087.

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).
2009-2011	**Texas Department of Transportation (TxDOT) Bridge Division - Fracture Critical In-Depth Inspection | Corpus Christi, TX** - *Bridge Inspection Team Leader.* HDR provided in-depth and fracture critical inspection of the Corpus Christi Harbor Bridge. Conventional and industrial rope access techniques were utilized. Matt served as the rope access supervisor providing rigging and safety support for the inspection as the Level 3 on-site.
2008-Ongoing	**Oregon Department of Transportation – Statewide Bridge Inspection On-Call Services | Statewide OR** – *Bridge Inspection Team Leader and Assistant Team Lead.* HDR provided in-depth fracture critical, fatigue prone and routine inspections of the Steel Bridge (vertical lift), Morrison Bridge (bascule), St. John's Bridge, Ross Island Bridge, Fremont Bridge and East/West interchange structures, East/West Marquam interchange structures and Banfield interchange structures. Matt helped develop the field notes; in-depth fracture critical, fatigue prone and routine inspection reports; bridge inspection (PONTIS) reports; and photo logs. Conventional access and industrial rope access techniques were utilized throughout all inspections.
2015-Ongoing	**Golden Gate Bridge Highway and Transportation District – Golden Gate Bridge Inspection | San Francisco, CA** – *Bridge Inspection Team Leader.* HDR performed fracture critical inspections on the Golden Gate Bridge on the South Approach Viaduct, Fort Point Arch, Main Span, and North Approach Viaduct in 2015, 2017, and 2019. In 2021, previous elements of the bridge were inspected again with the addition of inspection of 200+ floorbeams in the Main Suspension Spans. Inspection of the floorbeams and truss members was completed using industrial rope access only. HDR performed close-up inspections on the Golden Gate Bridge Towers in 2018. Inspection of the towers was completed using industrial rope access only. This was an element level inspection using the new coding guidelines. Prior to the inspection, Matt compiled and produced the field notes for the inspectors to improve efficiency and allow for ease of inspecting. While on the inspection, Matt was one of the Team Leaders on site.

2012-Ongoing	**Alaska Department of Transportation & Public Facilities (AKDOT&PF) – Fracture Critical Bridge Inspections and Special Bridge Inspections | Statewide, AK** – *Bridge Inspection Team Leader and Assistant Team Leader.* HDR has performed fracture critical and routine inspections for AKDOT&PF since 2012. These structures were comprised of steel, timber and/or concrete. Matt participated and/or led multiple fracture critical inspections of marine facilities and trusses. Ground and industrial rope access techniques were used to complete the inspections. He also completed load rating of many marine structures of varying complexities and assisted AKDOT&PF in writing their Bridge Load Rating manual. LARSA, BRASS, MathCAD, Excel, and other software was used to complete the load ratings.

Firm employed by	**HDR Engineering, Inc.**				
Name	**Mike Carlton, PE**		Years of relevant experience with this employer	6	
Title	Senior Mechanical Engineer		Years of relevant experience with other employer(s)	13	
Degree(s) / Years / Specialization			BS / 1995 / Mechanical Engineering		
Active registration number / state / expiration date			PE.0043927 Louisiana, Exp. 3/31/2022		
Year registered	2019	Discipline	Mechanical Engineering		
Contract role(s) / brief description of responsibilities			Mechanical Engineering		

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).
06/20-04/21	**Virginia Dept. of Transportation (VDOT) – Route 156 over James River, Benjamin Harrison Lift Bridge	Hopewell, VA** – *Senior Mechanical Engineer*. Mike was responsible for the quality control reviews for the project. He performed quality reviews of the mechanical rehabilitation design plans, calculations, specifications and cost estimates for the mechanical rehabilitation of this lift bridge. Work included replacement of the counterweight cables, existing clutch, floating shaft and couplings.
01/20-04/20, 12/20-02/21, 08/21-Ongoing	**Louisiana Dept. of Transportation and Development (LADOTD) – LADOTD Statewide In-Depth Complex Bridge Inspections	Terrebonne Parish, Loreauville and Alexandria, LA** – *Lead Mechanical Engineer Inspector*. Mike was responsible for performing the detail inspection of the **Little Caillou Bayou lift bridge, Bayou LaCarpe lift bridge, Teche Bayou lift bridge and Red River lift bridge's** mechanical systems, and providing findings and recommendation report.
03/19-12/21	**LIRC Railroad	LIRC Ohio River Vertical Lift Bridge 108.11 Rehabilitation	Louisville, KY** – *Mechanical Engineer Lead Inspector.* Mike provided in-depth inspection of a span drive vertical lift bridge. He performed strain gauge measurements and analysis, inspected and evaluated the lift bridge's mechanical systems and prepared a detailed inspection report and recommendations for repairs and improvements. *Senior Mechanical Engineer.* Mike performed the design of the plans, specifications, cost estimate and construction support for the replacement of the counterweight ropes, counterweight rope equalization system and counterweight guides. Construction support included review of shop drawings, RFI's and field support during construction. He also performed field support during the installation of the new operating rope drive system.
12/16-Ongoing	**CSX Transportation – Movable Bridge On-call Engineering Services (Lift Bridges)	Statewide AL** – *Senior Mechanical Engineer*. Mike was responsible for construction support of a span drive vertical lift bridge on the Mobile River (Alabama). Work included review of RFI's and shop drawings. He performed the design of a remote engagement system for the auxiliary drive reducer, as well as shop drawing review of the design.
04/10-03/11	**Canadian National Railroad - Vertical Lift Bridge Over the Des Plaines River	Joliet, IL** – *Lead Mechanical Engineer*. Mike performed the inspection, design of the plans, specifications, cost estimate and post design for new span lock assemblies located at each end of the tower driven lift span. Post design included reviewing submittals, RFI's, performing shop inspection and testing of the assemblies and field testing of the new span lock assemblies after installation.

12/16-02/17	**Ruhlin Corporation - Willow Avenue Lift Bridge Emergency Repair | Cleveland, OH** – *Mechanical Engineer*. As the contractor's engineer, Mike was responsible for providing procedures and construction support for the emergency replacement of a counterweight shear bearing that had failed on a tower drive vertical lift bridge (Willow Ave). Procedures included jacking the counterweight, removing/reinstalling the counterweight sheaves, removal/reinstallation of the sheave assembly and removal/reinstallation of the bearing assembly.
12/13-02/14, 01/15-02/15	**Ruhlin Corporation - Norfolk Southern Vertical Lift Bridge Over the Cuyahoga River | Cleveland, OH** – *Mechanical Engineer*. As the contractor's engineer, Mike was responsible for providing procedures and construction support for the replacement of the operating rope drum sheaves and machinery on a span drive vertical lift bridge. He was responsible for writing procedures and overseeing installation of the drum assembly, installation of the drive wire ropes and balancing between the four drive systems. One drive system was replaced at a time, two in total.
01/14-02/14	**Ruhlin Corporation - Norfolk Southern Vertical Lift Bridge Over the Calumet River | Chicago, IL** – *Mechanical Engineer*. As the contractor's engineer, Mike was responsible for providing procedures and construction support for the replacement of the counterweight ropes on a tower drive vertical lift bridge. He was responsible for writing procedures, overseeing installation of the wire ropes and performing wire rope tension balancing after installation. Procedures included jacking the counterweight, removal/installation of the counterweight ropes and tension equitation of the counterweight ropes after installation.
07/08-06/09	**Minnesota Department of Transportation - Vertical Lift Bridge Over the St Croix River | Stillwater, MN** – *Lead Mechanical Engineer*. Mike performed the design of the replacement counterweight support machinery for a vertical lift bridge. Work included replacement of the counterweight sheaves, counterweight sheave trunnions and trunnion bearing bushings; replacement of the counterweight wire ropes and operating wire ropes; installation of new automated pedestrian barriers and miscellaneous mechanical repairs.
11/03-06/04	**Ohio Department of Transportation - Vertical Lift Bridge Over the Cuyahoga River | Cleveland, OH** – *Lead Mechanical Engineer.* Mike performed the design of the replacement East Barrier Gate for a vertical lift bridge (West 3rd Street) due to impact damage. He reviewed shop drawings and RFI's for the drive system machinery replacement for the lift span.
08/10-04/13	**Wisconsin Department of Transportation – Bascule Bridge over the East Twin River | Two Rivers, WI** – *Lead Mechanical Engineer.* Mike performed the design, specifications, cost estimate and post design services for the operating machinery and rear lock assemblies of a new single-leaf rolling bascule bridge (17th Street). The design included calculations for operating loads on the drive machinery, sizing the various components of the drive machinery and design of the rear lock system that positively locked in place and loaded rear of the span, creating a positive toe reaction at the live load shoes at the tip of the span. Post design work included shop drawing review, responding to RFI's and field inspection of the installed machinery.
05/04-08/08	**Wisconsin Department of Transportation – Bascule Bridge over the Fox River | Oshkosh, WI –** *Lead Mechanical Engineer*. Mike performed the design, specifications, cost estimate and post design services for the operating machinery and rear lock assemblies of a new double-leaf rolling bascule bridge (Wisconsin Street). The design included calculations for operating loads on the drive machinery, sizing the various components of the drive machinery and design of the rear lock system. Post design work included shop drawing review, responding to RFI's and field inspection of the installed machinery.

Firm employed by	**HDR Engineering, Inc.**		
Name	**Matthew Cassera, PE**	Years of relevant experience with this employer	6
Title	Mechanical Engineer	Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization		BS / 2014 / Mechanical Engineering	
Active registration number / state / expiration date		PE 24GE05576800 New Jersey, Exp. 04/30/2022	
Year registered	2019	Discipline	Mechanical Engineering
Contract role(s) / brief description of responsibilities		Mechanical Engineering Support	

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).
02/19-05/20	**Virginia Dept. of Transportation (VDOT) – Route 156 over James River, Benjamin Harrison Lift Bridge | Hopewell, VA** – *Mechanical Engineer*. Matthew was responsible for the design of new upper and lower span buffers. He performed design calculations, provided specifications, cost estimates, and worked with suppliers and the client to choose economical options based on different design alternatives.
02/17-04/18	**CSX Transportation – Movable Bridge On-call Engineering Services (Lift Bridges) | New Johnsonville, TN** – *Mechanical Engineer*. Matthew was responsible for field condition inspection, design and construction support of a span drive vertical lift bridge on the Kentucky Lake (Tennessee). Work included design of new auxiliary span drive machinery, brake supports and limit switches; and review of RFI's and shop drawings.
04/17-08/18	**CSX Transportation – Movable Bridge On-call Engineering Services (Lift Bridges) | Mobile, AL** – *Mechanical Engineer*. Matthew was responsible for field condition inspection and design of new machinery for a span drive vertical lift bridge over the Mobile River. Work included field visits to the bridge, design of replacement wire rope rollers, design of new remote actuator for auxiliary span drive machinery and shop drawing review.
08/16-07/18	**Triborough Bridge & Tunnel Authority (TBTA) MP-03 Electrical and Mechanical Rehabilitation at the Marine Parkway Bridge | Queens, NY** – *Mechanical Engineer*. Matthew was responsible for inspection, design, shop testing and construction support for rehabilitation of vertical lift bridge over Jamaica Bay. Work included shop testing for reducers, field support for trunnion friction mitigation, clutch inspection and span balance testing, brake support design, CAD support, and buffer cylinder sizing.
01/21-Ongoing	**Texas Dept. of Transportation (TxDOT) – TxDOT Movable Bridges Asset Maintenance | Rio Hondo, TX** – *Mechanical Engineer*. Matthew was responsible for on-site machinery maintenance support and creation of two-year Routine Maintenance Contract for Rio Hondo vertical lift bridge over the Arroyo Colorado. Contract deliverables include plans, specifications and cost estimates for the maintenance work.
08/16-11/16	**NYC Department of Transportation – Roosevelt Island Vertical Lift Bridge | NYC, NY** – *Mechanical Engineer*. Matthew was responsible for engineering support regarding partial replacement and repair of span drive reducer clutch on vertical lift bridge over the East River. Work included field support during testing, coordination with reducer manufacturer, and report deliverables for repair alternatives.

Firm employed by	**HDR Engineering, Inc.**		
Name	**Jason Clary**	Years of relevant experience with this employer	2
Title	Structural CADD Technician	Years of relevant experience with other employer(s)	26
Degree(s) / Years / Specialization	NA		
Active registration number / state / expiration date	NA		
Year registered	NA	Discipline	NA
Contract role(s) / brief description of responsibilities	CADD 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).
01/20-Ongoing	**City of Cedar Rapids - East Side Flood Risk Reduction Reach 2 | Cedar Rapids, IA** – *Structural CADD Technician.* Jason developed structural details for multiple segments of pile supported concrete floodwalls and creating surfaces for civil layout using Power InRoads V8I and Microstation. Jason developed a 3D model with renderings to present to the client. Jason created a new alignment for the floodwall and gates that stretch along the river in downtown Cedar Rapids. He worked with civil closely to create profiles and cross sections along the alignment. Jason created structural plan views, sections, details and compiled a complete package.
01/20-Ongoing	**USACE St. Paul District - UPRR Flood Gate Design | Cedar Rapids, IA** – *Structural CADD Technician.* Jason worked on the final design of four rail closure gates (ranging from 28 ft – 69 ft openings) including concrete T-walls tie-ins. The steel roller floodgates and T-walls sections were supported by steel H-pile foundations driven to bedrock and include sheet pile seepage cutoff walls. Close coordination was required with Union Pacific and CRANDIC Railroad entities. Project features were designed incorporating USACE HSDRRS Design. Jason created surfaces from survey information for floodwall profiles on existing grade for the design of new flood gate systems using Microstation and InRoads. He created a 3D model, with renderings, of the flood wall and gates. Jason created plans, sections, elevations, details and title sheets for a completed package.
01/21-Ongoing	**Pacificorp – Swift Hydroelectric Project | Skamania County, WA** – *Structural CADD Technician.* The project consists of the Swift Dam Spillway Gates Structural Retrofit. This was an as-built project that was designed using original hand drawn drawings. Jason created an overall plan, demolition plan, end frame sections and details, trunnion sections and details and a lifting device sections and details. Jason utilized Autocad 2018 during this design.
04/21-Ongoing	**USACE Santa Clara County - San Francisco Bay Shoreline Gate Closure Structure | Santa Clara County, CA –** *Structural CADD Technician.* The project consists of final design of one rail closure gates (40 ft opening) including concrete T-walls tie-ins. The swing gate floodgates and T-walls sections are supported by steel H-pile foundations with a sheet pile seepage cutoff. Project features were designed incorporating USACE HSDRRS Design Guidelines. Jason created floodwall profiles on existing grade for the design of new flood gate systems using Autocad 2018. Jason also created gate monolith plan, gate monolith elevations and sections, structural steel swing gate plan, elevations and details, hinge details, foundation details, foundation location plan and pile schedule.
04/20-04/20	**Port of Freeport – Channel Development Reach 2 | Freeport TX –** *Structural CADD Technician.* The Jason developed structural details for multiple areas of pile supported concrete flood walls, created surfaces for the civil layout using OpenRoads 2020. Jason worked closely with the civil group to create profiles and cross sections along the alignment. He created structural plans, sections, details and compiled a complete package. Using OpenRoads Jason was able to collect data from a trimble handheld and bring in the program to create a surface.

Firm employed by	**HDR Engineering, Inc.**		
Name	**Raphael Costa, PE**	Years of relevant experience with this employer	6
Title	Electrical Engineer	Years of relevant experience with other employer(s)	14
Degree(s) / Years / Specialization		MBA/2009/Business Administration | MS/2004/Electrical Engineering | BS/2001/Electrical Engineering	
Active registration number / state / expiration date		PE.0043993 Louisiana, Exp. 3-31-2022	
Year registered	2019	Discipline	Electrical Engineering
Contract role(s) / brief description of responsibilities		Electrical Engineering	

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).
06/20-02/21	**Virginia Dept. of Transportation (VDOT) – Route 156 over James River, Benjamin Harrison Lift Bridge | Hopewell, VA** – *Senior Electrical Engineer*. Raphael was responsible for the quality control reviews for the project. Performed quality reviews of the electrical systems rehabilitation design plans, calculations, specifications, and cost estimates for the rehabilitation of this lift bridge.
01/20-02/21	**Louisiana Dept. of Transportation and Development (LADOTD) – LADOTD Statewide In-Depth Complex Bridge Inspections | Statewide LA** – *Lead Electrical Engineer Inspector*. Raphael was responsible for performing the detail inspection of the Teche Bayou and Red River Lift Bridges' electrical systems including power, controls and lighting systems, and providing findings and recommendation report.
03/19-Ongoing	**LIRC Railroad – LIRC Ohio River Vertical Lift Bridge 108.11 Rehabilitation | Louisville, KY** – *Electrical Engineer Lead Inspector.* Raphael performed the in-depth inspection of a span drive vertical lift bridge. He performed strain gauge measurements and analysis, inspected and evaluated the lift bridge's electrical systems and prepared detailed inspection report and recommendations for repairs and improvements. Senior Electrical Engineer responsible for the quality control reviews for the design phase of the project. He performed quality reviews of the electrical systems rehabilitation design plans, calculations, specifications, and cost estimates.
12/16-Ongoing	**CSX Transportation – Movable Bridge On-call Engineering Services (Lift Bridges) | Statewide AL, SC and TN** – *Senior Electrical Engineer.* Raphael was responsible for the quality control reviews for the project. He performed quality reviews of the scoping and assessment report, electrical systems rehabilitation design plans, calculations, specifications, and cost estimates for the rehabilitation of four lift bridges. Electrical rehabilitation scope included replacement of the controls systems with introduction of remote control capabilities, and electrical power distribution improvements to the Mobile River (Alabama), Tailrace (South Carolina), New Johnsonville (Tennessee), and Joliet Vertical Lift Bridges.
02/16-08/18	**MTA Bridges & Tunnels – Miscellaneous bridge Design Services | Statewide, NY** – *Senior Electrical Engineer*. Raphael was responsible for the quality control reviews for the project. He performed quality reviews of the scoping and assessment report, electrical systems rehabilitation design plans, calculations, specifications, and cost estimates for the rehabilitation of the lift bridges.
01/15-01/16	**Alabama Dept. of Transportation (ALDOT) - Wintzell Memorial Lift Bridge Assessment and Rehabilitation | Mobile County, AL** – *Project Manager and Lead Electrical Engineer*. Raphael was responsible for the project including detailed inspections of the existing electrical systems and recommendation report for the 104 ft long vertical-lift bridge.
12/14-04/15	**Union Pacific Railroad – Steel Bridge Electrical Rehabilitation | Portland, OR** – *Senior Electrical Engineer*. Raphael was responsible for the quality control reviews for the project. He performed quality reviews of the scoping and assessment report, electrical and

	control systems rehabilitation design plans, specifications, and cost estimates for the rehabilitation of the lift bridge. This historical bridge is composed of a double deck lift span carrying railroad, roadway and pedestrians across the Willamette River.
08/11-04/13	**Camargo Correa Construction – Barcelona Inner Harbor Lift Bridge | Barcelona, Venezuela** – *Lead Electrical Engineer.* The project scope included feasibility studies and preliminary design for a 90 meters long lift span carrying four lanes of vehicular traffic and light rail. Raphael was responsible for the electrical and controls systems study and design and performed peer review to the final design completed by a local consulting firm.
12/10-09/14	**CONCEPA – Guaiba Lift Bridge Inspection and Rehabilitation| Brazil** – *Lead Electrical Engineer.* Tasks for this 56 m vertical lift bridge included electrical, mechanical and structural inspection, repair design, bridge operators' training, emergency response and maintenance assistance. Raphael was responsible for electrical and controls systems inspections, rehabilitation design, and construction support.
02/11-09/14	**America Latina Logística - Railway Movable Bridges Services | Brazil** – *Lead Electrical Engineer.* Tasks for two railroad lift bridges included electrical, mechanical and structural inspection, repair design, bridge operators' training, emergency response and maintenance assistance. Raphael was responsible for electrical and controls systems related tasks including rehabilitation design.
06/07-04/12	**JMI - Pont Mobile Bacalan-Bastide | Bordeaux, France** – *Lead Electrical Engineer.* Design-Build project for the Pont Bacalan-Bastide Bridge over the Garonne River for a vertical lift bridge with 117 m of length and 43 m of width, and a design lift height of 50 m. The scope included design and field construction support for the bridge operation and control machinery as well as coordination of the bridge mechanisms with the fixed portions of the structure. Raphael was responsible for the design and post design services for the electrical and control systems including a remote-control station located on the east bank.
03/06-10/08	**New Jersey Dept. of Transportation - Route 71 & Route 88 Lift Bridges Rehabilitation | Statewide, NJ** – *Electrical Engineer.* The rehabilitation involved the complete replacement of the tractor type barrier gates with new barrier gates and new barrier gate platforms, and control systems improvements as required to provide safe and reliable operating systems. Raphael was responsible for the detailed inspections, design of repairs and improvements, and construction support services for the electrical systems.
11/05-07/09	**New York City Dept. of Transportation - Roosevelt Island Vertical Lift Bridge | New York City, NY** – *Electrical Engineer.* Raphael performed final design for a 2,877 ft long bridge over the East River having a 418 ft long vertical-lift span. He was responsible for design, and construction support services associated with rehabilitation of the bridge's electrical and control systems.
02/02-12/04	**Florida Dept. of Transportation (FDOT) - Main Street Lift Bridge Rehabilitation | Jacksonville, FL** – *Electrical Engineer.* Performed scoping inspections, the detailed design, and construction support for the electrical systems upgrades to this span driven vertical lift bridge. Upgrades included new lightning protection system, control systems improvements, variable speed drive replacement, installation of a new automatic sewage system to the existing control house bathroom located in the lift span truss.
10/14-06/18	**CSX Transportation – Movable Bridge On-call Engineering Services (Swing Bridges - Alabama) | Statewide AL** – *Senior Electrical Engineer.* Raphael was responsible for performing the scoping and assessment reports, preparation of electrical systems rehabilitation design plans, calculations, specifications, and cost estimates, and construction inspection report for the rehabilitation of three swing bridges (3 Mile Creek and Chickasaw). Electrical rehabilitation scope for bridges included replacement of the controls systems including introduction of remote control capabilities, replacement/repair of motor and drive systems, and modifications/ improvements to the power distribution systems. He was also responsible for performing quality reviews of the electrical systems design plans, calculations, specifications, cost estimates for the replacement of the Bayou Sara Swing Bridge.

Firm employed by	**HDR Engineering, Inc.**			
Name	**Peter Davis, PE**		Years of relevant experience with this employer	22
Title	Movable Bridge Program Leader		Years of relevant experience with other employer(s)	26
Degree(s) / Years / Specialization			MS / 1974 / Mechanical Engineering | BS / 1972 / Civil Engineering	
Active registration number / state / expiration date			PE 24GE0428500 New Jersey, Exp. 4/30/2022	
Year registered	2001	Discipline	Mechanical Engineering	
Contract role(s) / brief description of responsibilities			QA/QC Reviewer for Mechanical/Constructability	

Peter has over 48 years of experience in the inspection, assessment, design and maintenance of complex Infrastructure systems. The first 20 years of his career was in emergency service contracting for movable bridges, railroads, and hydraulic structures (lock & dam gates). He currently manages complex infrastructure inspection and design projects for public agencies, and freight railroads. Peter is active in ACEC, AREMA Committee 10 and was the past Secretary for Heavy Movable Structures. He has authored multiple technical papers on predictive maintenance and life cycle costs for hydraulic structures and movable bridges and was the co-editor of the AREMA bridge inspection handbook. He is an active instructor for the AREMA Bridge Inspection and Scour four-day training program.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
02/01-Ongoing	**Virginia Dept. of Transportation (VDOT), Moveable Bridge On-Call Contract | Statewide VA –** *Project Senior Mechanical Engineer/Constructability Specialist.* Peter is responsible for the technical leadership and quality assurance for this project. The bridges include vertical lift (counter weight rope replacement, capital plan development, misc steel repairs etc.), swing span, and bascule designs. These responsibilities included responding to emergencies (operational failures), conducting field inspections, preparing rehabilitation scoping reports, permitting package preparation, rehabilitation designs/contract document preparation, maintenance planning and providing contractor oversight during construction. This project has included over 90 task orders.
11/20-11/20	**VDOT - Route 156 over James River, Benjamin Harrison Lift Bridge | Hopewell, VA** – *Senior Mechanical Engineer.* Peter provided technical support for counterweight rope replacement.
08/16-08/16	**CSX Transportation, Movable Bridge On-call Engineering Services (Lift Bridges) | New Johnsonville, TN -** *Technical Lead and QC Review.* Peter was technical lead and QC review of operating rope replacement and span drive upgrades for the New Johnsonville vertical lift bridge. He developed an operating rope replacement procedure and trained CSX staff to perform this work.
08/14-07/18	**CSX Transportation – Movable Bridge On-call Engineering Services (Swing Bridges - Alabama) | Statewide AL** – *Technical Lead.* Peter is the Technical Lead for the Bayou Sara bridge replacement project. Work included field investigation, rehabilitation scope development, substructure analysis and superstructure replacement design and support during construction. When CSX requested that the rail outage window be reduced from 24 to 14 hours, Peter was responsible for developing the construction staging plan to allow replacement of the superstructure within the new window. This project is an example of the engineering driven by constructability and outage constraints.
03/14-Ongoing	**Vermont Agency of Transportation - North Hero Grande Isle Bridge | North Hero, VT** – *Project Manager.* Peter managed the scope development, replacement design, construction support and development of an electronic bridge management system. The first phase of the project included, inspection of the existing facility, preparation of the bridge scoping report which included 4(f) and Section 106 investigations, public outreach and development of options to meet the purpose and need statement. This FHWA funded project is utilizing the CMGC delivery method. Peter is leading the design team in cooperation with the CM contractor. A new twin leaf trunnion bascule bridge with an adjusted profile has been selected. Due to the extensive 70 mile detour route, an economic analysis was performed justifying a temporary movable bridge. The bridge management system is based upon the

	ARCGIS platform which maintains a database of bridge system components, their condition, maintenance needs and product information. A work order system is connected to the database produces monthly work orders for both maintenance and NBIS inspection tasks.
03/11-09/20	**Port Authority of New York and New Jersey (PANYNJ) – Cross Harbor Freight Program | NJ/NY** – *Program Manager.* This contract included 11 separate design and construction projects, and 7 subconsultants. The work performed under this program includes assessment, design and construction support of two rail yards, rehabilitation of one transfer bridge (single leaf bascule). The facility was destroyed by Superstorm Sandy. Peter was tasked with leading both the design and construction teams to return the system to service which included the rehabilitation design of a pontoon bridge. The system was returned to service in 52 days.
05/10–9/12	**CXS Transportation – Movable Bridge On-call Engineering Services (Lift Bridges) | Hurricane, AL** – *Technical Lead.* Peter's responsibilities included field investigation, rehabilitation scope development, replacement design and support during construction including resident engineering for the Mobile River Bridge. This Truman Hobbs and ARRA funded project required HDR to coordinate cost allocation between the Coast Guard, CSX and the contractor. The project included replacement of an existing swing span with a new vertical lift span, as well as modification of both approach trusses. The change out of the swing span to the new lift span was required to occur during a 36-hour river and rail outage since the track is a main line.
07/07–12/13	**New York City Dept. of Transportation - Roosevelt Island Vertical Lift Bridge | New York City, NY –** *Movable Bridge Expert and Chief Mechanical Inspector.* Peter was responsible for shop and field inspection during construction and start-up of this tower drive vertical lift bridge. The project included complete electrical, mechanical, and structural rehabilitation. In addition, he served as the owner expert regarding technical issues during construction and start-up.
04/05-08/13	**New York City Dept. of Transportation - Ward's Island Pedestrian Bridge over the Harlem River | New York, NY** – *Project Manager.* Peter was responsible for the rehabilitation of this Tower Drive Vertical Lift Bridge. This project involved the complete rehabilitation of the mechanical and electrical systems including wire rope replacement and machining of the counterweight sheaves.
2007-2010	**New Jersey Dept. of Transportation - I-280 Stickle Bridge | Newark, NJ –** *Chief Mechanical Inspector.* Peter was responsible for shop drawing and field inspection during construction and start-up of this tower drive vertical lift bridge. The project included complete electrical and partial mechanical rehabilitation. In addition, he was the owner expert regarding technical issues.
06/06-08/09	**Norfolk Southern Corporation - Calumet River Bridge | Chicago, IL –** *Project Principal.* Peter worked with the client to develop the rehabilitation scope based upon outage limitations and constructability issues. The project consisted of electrical rehabilitation of this tower drive vertical lift bridge, including an analysis to determine the most cost-effective drive system to use (Wound Rotor Motors versus Flux Vector) based upon construction costs and ease of maintenance. The rehabilitation design included replacement of the motors drive, aerial cable system, wiring and conduits, limit switches, control desk and MCC. Construction staging was key to this project since rail outages were not allowed with only short-term river outages
03/07-03/08	**New Jersey Dept. of Transportation - Route 1 & 9 | Newark, NJ –** *Project Manager/Lead Mechanical Engineer.* Peter was responsible for the performance evaluation of this tower drive vertical lift bridge over the Passaic River. The work included diagnosis of operational anomalies by performing extensive mechanical and electrical testing of the bridge during operation. Based upon finding of this work, the design consultant and the contractor worked together to make system modification to the bridge electrical drive systems. HDR has since been retained to design a deck replacement for this bridge.

Firm employed by	**HDR Engineering, Inc.**		
Name	**Bernard Frankl, PhD, PE**	Years of relevant experience with this employer	4
Title	Structural Engineer	Years of relevant experience with other employer(s)	12
Degree(s) / Years / Specialization		PhD / 2017/ Structural Engineering | MSCE / 2008 / Civil Engineering | BSCE / 2006 / Civil Engineering	
Active registration number / state / expiration date		PE 11324 South Dakota, Exp. 05/31/2022	
Year registered	2012	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		Structural Engineering Support	

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).
04/21-08/21	**Michigan Dept. of Transportation – Route US 31 over Manistee River, Manistee Bascule Bridge | Manistee, MI** – *Lead Load Rating Engineer*. Bernard was responsible for the development and implementation of the load rating of approach spans and bascule spans of the Manistee Bascule Bridge. He determined appropriate software and rating approach, guided junior engineers in the load rating procedures and performed a detailed check on the load rating calculations for accuracy, quality and compliance with state and national load rating specifications.
08/18-08/20	**Federal Highway Administration (FHWA) – Reference Guide for Load Rating of Tunnel Structures | Washington, DC** – *Author/Document Creator*. Structural Engineer for development of reference guide for FHWA that covers the technical aspects of load rating of tunnel structures and provides practical, representative step-by-step examples. This reference guide provides sufficient technical details and breadth appropriate for explaining the load rating specifications and guidelines governing U.S. highway tunnel structures, namely the AASHTO Manual for Bridge Evaluation and FHWA TOMIE Manual. Bernard developed examples that were used to help illustrate the requirements, procedures and methods. Bernard also developed a set of PowerPoint slides to facilitate effective deployment of the reference guide and its contents.
02/20-07/20	**Florida Dept. of Transportation – Fort Lauderdale Tunnel Rating under New River | Fort Lauderdale, FL** – *Lead Rating Engineer.* Bernard was responsible for the development and implementation of the load rating of Fort Lauderdale Tunnel under New River. He determined appropriate software and rating approach, guided junior engineers in the load rating procedures, as well as, performed a detailed check on the load rating calculations for accuracy, quality and compliance with state and national load rating specifications.
03/18-10/18	**Kansas Dept. of Transportation – Major Steel Bridge Rating Program | Statewide KS** – *Rating Engineer.* The project consisted of developing rating models for 43 steel girder bridge units. These bridge units consisted of complex geometries and load evaluations. Bernard developed several models and formulated the capacity of several complex girder orientations and connections, including critical path evaluation and advanced steel stability analysis.
08/20-03/21	**Wyoming Dept. of Transportation – Bridge over Snake River | Jackson, WY** – *Rating Engineer.* Bernard performed a detailed check on load rating of a 1,000 ft, steel girder bridge. This work included geometry, loading and specification validations to confirm the bridge complied with state and national load rating specifications.

Firm employed by	**HDR Engineering, Inc.**		
Name	**Brett Geesey, PE**	Years of relevant experience with this employer	15
Title	Associate Vice President	Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization		BS / 2005 / Mechanical Engineering ME / 2006 / Ocean Engineering	
Active registration number / state / expiration date		PE.0035172 Louisiana, Exp. 3/31/2022	
Year registered	2009	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		Project Principal **(Meets MPR 1 & 2)**	

Brett manages a team of engineers and scientists and has experience in project management and design of various engineering projects. He has experience in the analysis of complex coastal processes, applied design and preparation of detailed plans and specifications. His project experience includes dredging, marsh restoration, shoreline protection, numerical wave and circulation modeling and the evaluation of coastal processes and their interaction with structures.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
2008–Ongoing	**Louisiana Coastal Protection and Restoration Authority - Rockefeller Refuge Gulf Shoreline Stabilization | Cameron Parish, LA** – *Project Manager/Coastal Engineer.* Brett has been involved in a variety of roles for the ME-18 project since 2008. He provided coastal engineering design and construction administration for the demonstration portion of the project. He led the post-construction monitoring efforts for the demonstration project which led to the selection of the current project design. After the demonstration project, Brett was the Project Manager and Lead Project Engineer for the design of the three-mile shoreline protection project that is currently under construction. He is currently performing construction administration of the project.
2017-Ongoing	**Louisiana Coastal Protection and Restoration Authority – Bayou Terrebonne Ridge and Marsh Creation Project (TE-0139) | Terrebonne Parish, LA** – *Project Manager.* The project includes design of 126 acres of earthen ridge and 1,370 acres of marsh creation along 8 to 10 miles of existing ridge. Brett is providing project management for the current design phase including data gap analysis, data collection, numerical modeling, borrow area identification and design, engineering and design, stakeholder engagement and regulatory permitting assistance.
2015 - 2018	**Port Freeport - Freeport Harbor Channel Improvement General Reevaluation Report | Freeport, TX** – *Design Engineer.* Brett provided oversight for the H&H analysis for the General Reevaluation Report of the Freeport Harbor Channel Improvement Project in support of Port Freeport's cost share agreement with the USACE. Tasks included an assessment of the proposed modifications with regards to sedimentation, sea level rise, wave impacts, overtopping and resiliency and hydrodynamics. He also provided assistance with overall civil engineering tasks for the proposed modifications, assessed dredged material quantities and options for placement areas.
2009-2014	**Louisiana Department of Wildlife and Fisheries - Rockefeller Wildlife Refuge Marsh Creation | Cameron Parish, LA** – *Project Manager/Coastal Engineer.* Brett designed and provided construction administration for the creation of over 170 acres of intertidal marsh complex through placement of material hydraulically dredged from nearby oil field canals. He performed conceptual design through final design. The newly created marshes were part of a mitigation bank agreement that will allow the refuge to sell mitigation credits for impacts to wetlands within the refuge.

Firm employed by	**HDR Engineering, Inc.**		
Name	**Jose Gonzalez, PE**	Years of relevant experience with this employer	14
Title	Senior Electrical Engineer	Years of relevant experience with other employer(s)	14
Degree(s) / Years / Specialization		BS / 1992 / Electrical Engineering	
Active registration number / state / expiration date		PE 58896 Florida, Exp. 2/28/2023 | PE Puerto Rico 12702, Exp. 12/19/2022	
Year registered	2002-FL / 1993-PR	Discipline	Electrical Engineering
Contract role(s) / brief description of responsibilities		Electrical Engineering Support	

Jose is responsible for preparing power distribution designs, one line diagrams and performing Quality Control (QC) reviews of electrical plans and specifications of several movable bridges. Reviews included the power service, electrical distribution from main service disconnect, panelboards, drive panels with variable frequency drives and loads. Also, the reviews included the control wiring diagrams and control panels, consoles and mounting details.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
08/18-08/18	**Florida Dept. of Transportation (FDOT) Movable Bridge On-call Engineering Services (Bascule Bridges Assessments) | District 4, Ft Lauderdale, FL** – *Professional Electrical Engineer.* HDR was contracted to prepare a Guidance for Submarine Duct Systems along with the required Technical Special Provisions (TSP) specifications. Jose was responsible for the Quality Control review of the Guidance for Submarine Duct Systems and the TSP specifications.
03/17-03/17	**CSX Transportation – Movable Bridge On-call Engineering Services (Bascule Bridges - Florida) | Putnam County, FL** – *Professional Engineer.* Jose was responsible for Quality Control review of the electrical plans and specifications of the Buffalo Bluff Crossing St. Johns River project. The reviews included the power service, electrical distribution main service disconnect, panelboards, drive panels with variable frequency drives, terminal enclosures, submarine cable or duct system, Control House power and lighting systems. The reviews also included the control wiring diagrams and control panels, consoles and electrical equipment mounting details.
03/17-04/17	**Florida Dept. of Transportation – NE 79th Street Causeway Bascule Bridges Rehabilitation | Miami, FL** – *Professional Engineer.* Jose was responsible for Quality Control review of the electrical plans and specifications. The reviews included the power service, electrical distribution main service disconnect, panelboards, drive panels with variable frequency drives, terminal enclosures, submarine cable or duct system and Control House power and lighting systems. The reviews also included the control wiring diagrams and control panels, consoles, and electrical equipment mounting details.
07/18-08/18	**Pinellas County – Park Blvd Bascule Bridge Rehabilitation| Indian Shores, FL** – *Professional Engineer.* Jose was responsible for Quality Control review of the electrical plans and specifications. Reviews included the power service, electrical distribution main service disconnect, panelboards, drive panels with variable frequency drives, terminal enclosures, submarine cable or duct system and Control House power and lighting systems. The reviews also included the control wiring diagrams and control panels, consoles, and electrical equipment mounting details.
03/17-04/17	**CSX Transportation – Movable Bridge On-call Engineering Services (Swing Bridges - Alabama) | Statewide, AL** – *Professional Electrical Engineer.* Jose was responsible for designing the one line power diagram to replace existing single phase drive panel and

	motors with new three phase drive panel and motors which were powered by a single phase utility power service. The design included utilizing Variable Frequency Drives to run large three phase motors and a Rotary Phase Converter to run large and small three phase motors from a single phase power service for the Chickasaw Swing Bridge.
11/12-10/15	**Dare County - Bonner Bridge Replacement Design-Build | Dare County, NC –** *Senior Electrical Engineer.* Jose was responsible for design of the Solar Powered Navigational Lighting System and interior LED box girder maintenance lighting system, including a report for the selection of LED lighting, solar arrays and battery system to power the box girder maintenance lighting system and navigational lighting.
08/10-10/17	**FDOT District 4 - SR A1A (Flagler Memorial Bascule Bridge) from Olive Ave. to Cocoanut Row Palm Beach County | Palm Beach County, FL –** S*enior Electrical Engineer.* Jose was responsible for design of the roadway lighting system for the design build project to replace the Flagler Memorial Movable Bridge SR 1A1.

Firm employed by **HDR Engineering, Inc.**				
Name	**Peter Harrison, PE (SPRAT 1)**		Years of relevant experience with this employer	8
Title	Bridge Inspection Section Lead		Years of relevant experience with other employer(s)	19
Degree(s) / Years / Specialization			BS / 1998 / Civil Engineering	
Active registration number / state / expiration date			PE 0039771 – Louisiana, Exp. 09/30/23	
Year registered	2015	Discipline	Civil Engineering	
Contract role(s) / brief description of responsibilities			Bridge Inspection **(Meets MPR 3)**	

Peter has over 27 years in bridge design, inspection and project management. He has experience in the inspection and repair of multiple construction materials including steel, concrete and timber and a diverse group of structure types including segmental concrete, truss, cable stayed, tied arch and movable bridges.

Training Certificates: FHWA-NHI-130055, NHI 130078, FHWA-NHI-130053, FHWA-NHI-130110, FHWA-NHI-130124

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).
2016–Ongoing	**Texas Department of Transportation (TxDOT) - Bridge-Fracture Critical Bridge Inspection | Statewide, TX** – *Bridge Inspector/Team Leader.* Peter led the field inspection and report preparation for the Statewide Fracture Critical Bridge Inspection Contracts for TxDOT, totaling 770 bridges to date comprised of 3,130 fracture critical components.
2014-2015	**Louisiana Department of Transportation and Development (LADOTD) - LA 12 Sabine River Bridge Stage 0 Bridge Evaluation | Calcasieu, LA** – *QA/QC Reviewer.* In a sub-consultant role, HDR analyzed the feasibility of rehabilitation and/or replacement of a historic swing-span bridge on the Texas-Louisiana border. The 327-ft five-span bridge contains four concrete approach spans and one steel girder movable span which has been immobilized. Peter provided QA/QC for the bridge inspection, load rating calculations and the report summarizing inspection, load rating and alternatives analysis.
2009	**Nebraska Department of Roads (NDOR) - Fracture Critical Inspection and Rating | Statewide NE** - *Inspection Team Leader.* Peter led the inspection and load rating of 108 fracture critical bridges throughout the state of Nebraska. Load ratings were performed to determine inventory and operating loads in accordance with NDOR standards using LARS rating software. Most bridges were pony trusses of varying length.
2008-2009	**Nebraska Department of Roads (NDOR) - Timber Bridge Inspection and Load Rating | Statewide NE** – *Inspection Team Leader and Load Rating Engineer.* Peter led the inspection and rating of 87 timber bridges throughout the state of Nebraska. Load ratings were performed to determine inventory and operating loads in accordance with NDOR standards using LARS rating software.
2011	**Alabama State Port Authority - Alabama State Docks Inspection and Rating | Mobile, AL** – *Bridge Inspector.* Peter inspected and load rated Alabama State Docks Bascule Bridge over Three Mile Creek in Mobile, AL. This railroad structure consisted of four steel spans including a 135'-9" bascule main span.
2012	**Caltrans - Inspection and Rating | San Jose, CA** – *Bridge Inspector.* Peter inspected and load rated eight railroad structures. These structures were of steel and timber construction and included one timber structure with heavy fire damage.
1996	**Kansas Turnpike Authority - Fracture Critical Bridge Inspection | KS** – *Bridge Inspector.* Peter performed in-depth structural inspection and reporting for 15 steel fracture critical structures over Interstate 35.

2015; 2016-Ongoing	**Golden Gate Bridge Highway and Transportation District - Golden Gate Bridge Fracture Critical Bridge Inspection | San Francisco, CA** – *Bridge Inspector.* Peter inspected fracture critical members that are difficult to access were performed within "arm's length" using industrial rope access. The inspection of 179 truss members, 168 floorbeams, 3 girder spans and portions of the main cables were completed within three weeks using a team of up to seven inspectors and seven rigging technicians.
2007-2008	**City of Omaha - Bob Kerrey Pedestrian Bridge | Omaha, NE** – *Resident Engineer*. The project consists of a serpentine cable stay pedestrian bridge over the Missouri River. The structure consists of two 253-ft back spans, 506-ft main cable stayed spans and a multiple two steel girder approach spans. Peter served as the on-site resident engineer during construction.
2006-2007	**City of Wichita - Wichita Pedestrian Bridges | Wichita, KS** – *Resident Engineer*. The project consisted of 251'-6" and 331'-6" cable-stayed pedestrian bridges over the Arkansas and Little Arkansas Rivers. Peter served as the on-site resident engineer during construction.
2003	**Puente Chiapas | Chiapas, Mexico** – *Bridge Inspector.* Peter provided real-time analysis and on-site inspection of the contractor's proposed launching system of an orthotropic steel box girder with launched spans of 168 meters (551-ft) and a completed bridge length of 1,208 meters (3,963-ft).

Firm employed by **HDR Engineering, Inc.**					
Name	**Ryan Hedlund, PE**		Years of relevant experience with this employer	8	
Title	Bridge Engineer		Years of relevant experience with other employer(s)	4	
Degree(s) / Years / Specialization			MS / 2009 / Civil Engineering | BS / 2006 / Civil Engineering		
Active registration number / state / expiration date			PE.0037794 Louisiana, Exp. 09-30-2023		
Year registered	2013	Discipline	Civil Engineering		
Contract role(s) / brief description of responsibilities			Bridge Inspection		
Ryan has been involved with multiple bridge design projects around the Gulf Coast. He has experience with project management, the design of prestressed concrete girder bridge superstructures, slab span bridges and bridge substructures and the inspection of and rating analysis of bridge structures in addition to other project specific structural needs, including retaining walls and highway signage.					

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).
01/22-Ongoing	**Mississippi Department of Transportation (MDOT) - I-55 from Church Road to SR 302 | Desoto County, MS** - *Project Manager.* HDR is currently working with MDOT to produce Phase B design and plans for two bridges on I-55. The project includes one bridge replacement, one bridge widening and seismic retrofit, six retaining walls, two culvert extensions and foundation design for high-mast lighting. Ryan serves as both the project manager for the structures-focused contract for this project as well as the lead structures designer.
2021	**MDOT - SR 25 between SR4 and CR 23 (Bridge No. 189.3) | Tishomingo County, MS** - *Bridge Design Lead.* HDR developed Phase A ROW Plans for the replacement of an existing bridge over railroad tracks. Critical design considerations included the large skew required at the crossing over the tracks and the extensive vertical and horizontal clearances required to accommodate the railway. Ryan developed preliminary plans for the three-span crossing which utilized prestressed concrete Florida-I Beams.
2017	**Pennsylvania Department of Transportation (PennDOT) - Rapid Bridge Replacement Program | Various Locations, PA** - *Design Engineer*. This multi-year public-private partnership initiated by the PennDOT aims to upgrade and replace 558 aging, structurally deficient bridges throughout Pennsylvania. Replacing the bridges will provide motorists with new, modern structures and allow PennDOT to remove them from their structurally deficient list. The bridges are primarily crossings on smaller state highways, many in rural areas, rather than interstate bridges or large river crossings. HDR served as the lead design firm on this project. Ryan reviewed shop drawings for spread and adjacent prestressed box beams, MSE walls and precast concrete panel walls.
2019	**MDOT - SR 395 Widening | Neshoba County, MS** - *Project Manager*. HDR prepared Phase A ROW Plans for the replacement of two bridges on SR 395 between SR 19 and the Winston County Line. Ryan performed the office project management task and provided project oversight.
2016	**Alabama Department of Transportation (ALDOT) - Cochrane-Africatown USA Bridge Inspection | Mobile, AL -** *Bridge Inspector.* HDR was selected by ALDOT in 2016 under a special task order to perform the inspection of the cable-stayed main span including towers, stays, anchors, superstructure and substructure followed by the development of an inspection report and recommendations for maintenance. HDR's experienced 12-person inspection team used a man-lift operating from traffic closures on the deck to efficiently access the adjacent portions of the towers up to and including the top strut, as well as various industrial rope access

	techniques to access other components of the main span unit. Ryan was a part of the team inspecting the bridge above and below the deck via the man-lift and inside the towers via ladders and platforms.
2015-2018	**Florida Department of Transportation (FDOT) Bartow District 1 - I-75 at Bee Ridge Road Interchange | Sarasota, FL** - *Design Engineer.* HDR was responsible for the reconstruction design of the existing I-75 at Bee Ridge Road Partial Cloverleaf Interchange to provide for an ultimate interchange that provides for the ultimate I-75 typical section. The ultimate typical section provides for a ten-lane facility with two express lanes and three general use lanes in each direction. The interchange improvements will also require extension of a double box culvert four bridge widenings two bridge replacements and a new SB diversion ramp. Ryan designed the substructure for a two-span, 280-ft long, Acrow temporary bridge over Bee Ridge Road to be utilized for maintenance of traffic during construction. He performed a preliminary design of the superstructure and substructure for four prestressed concrete girder bridge locations, and he performed a rating analysis of existing structures to be widened.
2015	**FDOT District 5 - I-4 Ultimate | Orlando, FL** - *Design Engineer.* This project will reconstruct 21 miles of mainline Interstate 4 in Orange and Seminole counties. Variable priced express lanes will be constructed in the median of the existing facility, and the general use lanes will be completely reconstructed. The express lanes will be operated with variable tolls, which are adjusted throughout the day to improve traffic flow. The project also includes reconstructing 15 major interchanges and constructing more than 145 bridges. Ryan assisted in preliminary design and checked the substructure pile loads.
2014	**Louisiana Department of Transportation and Development (LADOTD) - LA 89: Bayou Parc Perdu Bridge and Creek Bridges | New Iberia, LA** - *Design Engineer.* Ryan designed two new bridge structures according to AASHTO LRFD requirements: one in a vertical and horizontal curve using LADOTD Quadbeam prestressed concrete girders and the other utilizing existing LADOTD slab span standards. Work also included the design of deck and overhang system and the new substructure bent caps.
2014	**LADOTD - LA 4: Deer Creek Bridge | Winnsboro, LA** - *Design Engineer.* Ryan performed an LRFD design of a new bridge using LADOTD Quadbeam prestressed concrete girders. He also designed the deck and overhang system and substructure bent caps.
2013	**LADOTD - Saline Bayou Bridge | Natchitoches Parish, LA** - *Design Engineer.* Ryan designed a new bridge structure including the deck system and using AASHTO Type IV prestressed concrete girder beams. He also calculated the required guardrail length and the superelevation transition for the bridge.

Firm employed by	**HDR Engineering, Inc.**			
Name	**Diana Jandreski, PE**		Years of relevant experience with this employer	2.5
Title	Mechanical Engineer		Years of relevant experience with other employer(s)	5.5
Degree(s) / Years / Specialization			MS / 2015 / Civil Engineering Concentrated in Structures | BS / 2014 / Mechanical Engineering	
Active registration number / state / expiration date			PE.0045009 Louisiana, Exp. 03/31/2023	
Year registered	2020	Discipline	Mechanical Engineering	
Contract role(s) / brief description of responsibilities			Mechanical Engineer Support	
Training: NHI Course No. 130053 - Bridge Inspection Refresher Training (2020); NHI Course No. 130055 - Safety Inspection of In-Service Bridges (2016); NHI Course No. 130078 - Fracture Critical Inspection Techniques for Steel Bridges (2015); NHI Course No. 130087 - Inspection and Maintenance of Ancillary Highway Structures (2015)				

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).
10/20-02/21	**Virginia Dept. of Transportation – Route 156 over James River, Benjamin Harrison Lift Bridge | Hopewell, VA** – *Mechanical Engineer.* Diana was responsible for the construction inspection for the project. Construction activities included main drive clutch coupling, shaft and bearing replacements, main and auxiliary counterweight wire rope replacements, and ariel cable and outrigger installation for this tower drive vertical lift bridge. Responsibilities included daily on-site inspection of construction work performed and documentation through reports and photos. Additional responsibilities included machinery parts and installation quality checks and rope tension testing verification.
06/20-03/21	**CSX Transportation – Movable Bridge On-call Engineering Services (Swing Bridges - Alabama) | Statewide AL** – *Mechanical Engineer.* Diana was responsible for mechanical rehabilitation design of this electro-mechanical swing bridge. Responsibilities included design of span drive system, span stop assembly, and limit switch details with plans, calculations, construction support and shop drawing review. (Chickasaw). Responsibilities also included site visit for assessment and coordination for machinery platform with structural elements (3 Mile Creek).
01/20-08/20	**CSX Transportation – Schuylkill Swing Bridge Rehabilitation and Automation | Philadelphia PA** – *Mechanical Engineer.* Diana was responsible for mechanical rehabilitation design of this electro-mechanical swing bridge. Responsibilities included design of span buffer assembly improvements and span jacking design including center pivot girder strengthening with plans and calculations.
1/19-Ongoing	**CSX Transportation – Movable Bridge On-call Engineering Services (Swing Bridges - Florida) | Florida** – *Mechanical Engineer.* Diana was responsible for mechanical rehabilitation design of three electro-mechanical swing bridges including Little Manatee, Alafia and St. Lucie. Responsibilities included design of improvements to existing pivot bearing, main pinion bearing, span stop, end balance wheel assemblies and limit switch designs with plans and calculations. Responsibilities also include construction support and shop drawing review.
08/19-Ongoing	**Florida Dept. of Transportation (FDOT) District 1 and 7, District 4, and District 6 –Bridge Consultant Services | Statewide FL** - *Mechanical Inspector:* Diana was responsible for annual routine and interim bridge inspections for local government owned bridges. She inspected and evaluated movable bridge mechanical and drive elements using the FDOT report format and Element Level inspection.

08/19-04/20	**LIRC Railroad | LIRC Ohio River Vertical Lift Bridge 108.11 Rehabilitation | Louisville, KY** – *Mechanical Engineer.* Diana was responsible for the rehabilitation design for counterweight rope replacement for this span drive vertical lift bridge, including development of counterweight jacking scheme design and main sheave trunnion bearing cap replacement with design plans and calculations.
08/20-09/20	**Alabama Dept. of Transportation | Wintzell Memorial Lift Bridge Assessment and Rehabilitation | Mobile County, AL** – *Mechanical Engineer.* Diana was responsible for strain gauge testing of this cross tower vertical lift bridge for span balance determination using strain gauges welded to the machinery shafts. Responsibilities included field strain gaging installation and data acquisition followed by data review and calculations. Responsibilities also included observation of span balance adjustments in field followed by post testing, data review and calculations to confirm proper span balance.
02/20-08/20	**City of Victoria - Johnson Street Bridge Inspection and Asset Maintenance Program | British Columbia, Canada** - *Lead Mechanical Engineer*. Diana was responsible for program development of the asset maintenance and inspection program for this unique single leaf through truss, direct hydraulic drive bascule bridge. She inspected and evaluated movable bridge mechanical and structural elements of the main span, approach spans and independent pedestrian bridge. Mechanical systems included a hydraulic power unit to drive hydraulic motors and in-line operating machinery.
04/18-07/18	**Alameda County - Condition Assessment of Three Structures | Alameda, CA** - *Mechanical Inspector.* Diana was responsible for condition assessment for future work program budgeting of mechanical components for three movable structures; single leaf Strauss style and two thru-truss double leaf trunnion style double leaf bascule bridges. The inspection included mechanical components involved with operation of main drive systems, support systems, span lock system, traffic gates by gear tooth, bearing clearance, brake, and span lock measurements and visual inspection of additional mechanical components. The components included electro-mechanical systems as well as hydraulic systems.
10/18-07/18	**New Jersey Transit Railroad – Raritan River Bridge | Perth Amboy, NJ** - *Mechanical Designer.* Diana was responsible for mechanical components on the bridge design for replacement of existing swing span with new vertical lift span. Responsibilities included plans and calculations for temporary and permanent works of counterweight jacking system and the span guide assembly designs.
07/17-11/17	**Conrail - Author Kill Bridge In-Depth Inspection | Elizabeth, NJ** - *Mechanical Inspector.* Responsible for condition assessment of mechanical components of the tower drive vertical lift bridge. The inspection included mechanical components involved with operation of main drive systems, support systems and span lock systems as well as in-depth inspections of main sheave trunnion roller bearing assemblies and counterweight ropes for future counterweight rope and main sheave trunnion bearing replacement recommendations. The components included electro-mechanical systems.
06/17-09/17	**Union Pacific Railroad – Steel Bridge Special Inspection | Portland, OR** - *Mechanical Inspector:* Diana was responsible for the special inspection of the double deck, span drive/tower span, vertical lift bridge including determination of span alignment for ongoing upper deck rail track replacement work. Inspection included assessment of drive machinery and counterweight ropes, span guides and live load bearings, as well as a cursory inspection of additional machinery components.
11/16-04/17	**Chatham-Kent - Condition Assessment of Three Structures | Wallaceburg, Ontario, Canada** - *Mechanical Inspector:* Diana was responsible for the condition assessment of the mechanical components of three movable structures; a single leaf bascule, double leaf bascule and a bobtail swing bridge. The inspection included mechanical components involved with the operation of the main drive systems, support systems, span lock systems and traffic gates. The components included electro-mechanical and hydraulic systems.

Firm employed by	**HDR Engineering, Inc.**		
Name	**Joseph Jacobus, PE**	Years of relevant experience with this employer	12
Title	Mechanical Engineer	Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization	NA		
Active registration number / state / expiration date	PE 54417 Washington, Exp. 12/01/2023		
Year registered	2016	Discipline	Mechanical Engineer
Contract role(s) / brief description of responsibilities	Mechanical Engineering Support		

Joseph has 12 years of experience in the design, inspection, and construction of mechanical, electrical, and structural systems for heavy movable structures. This includes experience with highway, railway, and infrastructure systems as well as lock, dam, and navigation structures.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
06/18-08/18	**BNSF - Bridge 36.8 over the Duwamish River | Seattle, WA** – *Mechanical Designer.* Joseph provided design for the replacement of the counterweight pin. The bridge is an abt style bascule bridge and required a unique jacking scheme to remove the existing pin and install a new pin.
06/18-08/18	**Ohio Dept. of Transportation, Port Clinton Bascule Bridge Replacement | Ottawa County, OH** – *Mechanical Construction Consultant.* Joseph provided installation expertise in the field for the mechanical system installation for a replacement of the dual leaf bascule bridge**.**
09/15-03/20	**Multnomah County - Burnside Bridge Rehabilitation | Portland, OR** – *Mechanical Designer.* Burnside Bridge is a Strauss underneath counterweight bascule bridge over the Willamette River. Joseph provided design for the rehabilitation of the spanlocks and bridge balancing.
05/19-03/20	**BNSF Railroad - Orwood Bridge Fender Replacement | Contra Costa County, CA** - *Deputy Project Manager.* Orwood Bridge is an ab bascule bridge. BNSF had identified the fender system as needing replacement and contracted HDR for engineering services to provide contract documents, provide construction support, and perform construction management. Joseph's responsibilities included coordination between engineering disciplines and oversaw the production of the contract documents.
08/14 – 12/16	**Sonoma Marin Area Rail Transit - New Haystack Bridge | Sonoma County, CA** – *Mechanical Inspector.* New Haystack Bridge is a relocated rolling bascule bridge which is replacing the existing swing bridge over the Petaluma River. HDR is a technical advisor to the owner. Joseph performed drawing review and construction inspection.
02/13-07/14	**AMTRAK - Pelham Bay Pinion Repair | New York, NY** – *Engineering Technician.* Pelham Bay is a Rolling Bascule Rail Bridge. The purpose of the contract is to rehabilitate the operating machinery including the main pinion and the secondary open gear set. Joseph performed design and preparation of contract drawings.
03/12-02/13	**PJSI Consultants - Terengganu Bridge | Terengganu, Malaysia** – *Engineering Technician.* Terengganu Bridge is a proposed double leaf bascule bridge to connect the peninsulas of Maura North and Maura South. The bridge's operating system is hydraulically driven. Joseph performed calculations, design and preparation of contract drawings and specifications for the mechanical systems.
10/11-08/14	**PANYNJ - Greenville Yards Cross Harbor Freight Program Rehabilitation | Jersey City, NJ** – *Engineering Technician.* The project's scope is to rehabilitate and upgrade the transfer bridge facility through multiple design contracts. performed design and preparation of the contract documents for the mechanical systems.

Firm employed by	**HDR Engineering, Inc.**		
Name	**David Knickerbocker, PhD, PE**	Years of relevant experience with this employer	7
Title	Movable Bridge Practice Lead	Years of relevant experience with other employer(s)	15
Degree(s) / Years / Specialization	PhD / 2005 / Structural Engineering | MS / 2001 / Structural Engineering | BS / 1998 / Civil and Environmental Engineering		
Active registration number / state / expiration date	PE.0040004 Louisiana, Exp. 3/31/2022 Also Registered in these States: AL, FL, GA, MA, MD, NC, NH, NJ, NY, SC, TX, VA, WA		
Year registered	2015 LA | 2007 NJ	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities	Structural Engineering Support **(Meets MPR 3)**		

David Knickerbocker is HDR's Movable Bridge Practice Lead, serving bridge owner agencies as technical project manager and senior structural engineer. He has managed and executed inspection, existing bridge rehab design, and new bridge design projects of a broad range of size and complexity, and through each stage of development – including project scoping, calculations and preparation of preliminary and final plans and construction support – for movable highway and railroad bridges. David is also a qualified bridge inspection team leader with extensive structure inspection experience including preparation and quality control review of inspection and load rating reports.

The majority of David's 22 years' structural engineering experience has focused on multiple types of movable bridges, encompassing design, analysis, inspection and load rating, structural steel detailing, bridge rehabilitation, complex construction staging and jacking scheme development, seismic assessment and design, construction support services, value engineering, bridge/span type selection analysis and structural engineering research. In recent years, he has served increasingly on asset management programs for movable bridge inventories, including assessment inspections, load ratings, design plans development and construction support for resulting repair and rehab contracts. **Certified** FHWA-NHI-130055 Safety Inspection of In-Service Bridges (2011; Refresher Course 2017)

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).
09/17-03/21	**CSX Transportation - Movable Bridge On-call Engineering Services – Gulf-Area Corridor Bridges | Statewide AL, MS, LA** - *Structural Task Manager/Senior Structural Engineer.* The program entailed the rehabilitation projects achieving state of good repair of inventory movable bridges and automating them for remote operation capability. David worked on seven bridges involving scoping investigations, rehab design and construction support encompassing steel and coating repairs, electrical utility supports, access platforms/stairways, and 1 span replacement (Bayou Sara Swing Bridge 658.3).
09/18-01/19 and 06/20-09/20	**Virginia Dept. of Transportation (VDOT) – Route 156 over James River, Benjamin Harrison Lift Bridge | Hopewell, VA** – *Task Manager/Structural Engineer.* David directed the load rating of the lift span and flanking tower spans through truss main members, gusset plates and floor systems; and generation of demand-capacity ratios for the tower truss members. This included report production and coordination of quality reviews. He assessed ASCE ice-on-cable and wind loads. He produced demand and capacity calculations and detailed plans for aerial cable anchorage frame.
10/20-03/21	**Texas Dept. of Transportation (TxDOT) – TxDOT Movable Bridge Asset Maintenance | Rio Hondo and Bridge City, TX** – *Structural Lead.* David provided oversight of inspection report production, content, repair and improvement recommendations, and cost estimate for two movable bridge facilities: Rio Hondo Vertical Lift Bridge and the Cow Bayou Swing Bridge.

06/19-02/20	**Michigan Dept. of Transportation – Houghton-Hancock Vertical Lift Bridge Rehab	Hancock, MI** – *Advisor/Quality Control Engineer.* David advised and performed review for vertical-lift span rehabilitation design including span guides, rocker bearings, structural steel repairs, addressing plug weld for fracture/fatigue considerations, and roadway joint replacement, with associated staging.
12/18-04/20	**Port Authority of New York/New Jersey – Cross-Harbor Freight Program- 65th Street Transfer Bridge Rehabilitation, Brooklyn, NY** – *Inspection Team Leader/Lead Structural Engineer.* The project includes replacement of counterpart Jersey City transfer bridge, production of increased-capacity barges, and rehab/realignment of the Greenville Yard (Jersey City). David was responsible for comprehensive structural inspection and summary report for existing 100-ft long 2-track mechanically-elevated rail car transfer bridge between transport barge and grade track. He was also responsible for rehabilitation design, including analysis of material loss-induced capacity reductions, criteria comparison, fatigue assessment, and development of structural steel repair contract drawings package.
04/19-06/19	**Mississippi DOT – SR-605 Bascule Bridge Biennial Inspection, Biloxi, MS** – *Inspection Team Leader.* The project included routine comprehensive inspection of 14-span, 1400-ft long 4-lane roadway bridge with 180-ft long twin double-leaf Scherzer rolling-lift deck-girder bascule span over the navigation channel. David was responsible for inspection in general, including coordination among mechanical, electrical, approach structure and movable structure inspection teams. He coordinated with bridge operation and DOT personnel and provided administration of safety policies and procedures. He managed the report development from each associated discipline.
01/19-11/19	**LIRC Railroad – LIRC Ohio River Vertical Lift Bridge 108.11 Rehabilitation	Louisville, KY** – *Movable Bridge Structural Advisor.* David performed site visit in preparation for design phase, reviewed and advised on counterweight shoring scheme analysis and design for purposes of counterweight ropes replacement.
03/18-08/18	**FDOT District 4 – Movable Bridge Program Assessment Inspections	Districtwide FL** – *Inspection Team Leader.* Program of multi-discipline assessment inspections for 34 of FDOT District 4's movable bridge inventory, for systematic review and recommendation toward improvements in overall service, including functionality and safety. David was responsible for inspection, evaluation and report production and delivery on the 34 movable bridges' structural elements and roadway features toward optimal operation, useability, maintenance and safety.
03/12-06/12	**Massachusetts Dept. of Transportation – Fore River Bridge	Quincy, MA** – *Lead Structural Engineer.* David performed accelerated structural design of the 324-ft long by 77-ft wide vertical lift truss, in a design-build tender package. The design components in the preliminary detailed design included reinforced concrete deck floor system, truss members, detailed gusset plates, bracing systems, sway frames, portal frames and lifting girders.
06/12-03/13	**Triunfo Concepa – Guaiba Vertical Lift Bridge Assessment and Weighing	Porto Alegre, Rio Grande do Sul, Brazil** – *Lead Structural Engineer/Lead Designer/Analyst.* David performed assessment and weighing of the lift span, including structural inspection of orthotropic-deck lift span, piers, towers, and counterweights. *Lead Designer/Analyst*: He produced detailed procedure and fabrication plans for weighing of lift span and counterweights. He oversaw execution of jacking procedure for span weighing on-site.
04/07-08/07 (design phase) **10/09-02/12 (construction)**	**New York City Dept. of Transportation (NYCDOT) – Roosevelt Island Vertical Lift Bridge	New York, NY** – *Structural Engineer.* David performed design of replacement 'droop' cables support and routing, and improved access walkways along the top of the lift span through truss, and at utility junctions for access, on the rehabilitation of a 418-ft long roadway through-truss lift span over the East River. *Construction phase:* He performed structural construction support services, including shop drawing review for machinery supports, design of fender repairs, replacement of conduit supports and utility walkways and review of structural submissions.

Firm employed by	**HDR Engineering, Inc.**		
Name	**Jonathan Kohler, PE**	Years of relevant experience with this employer	9
Title	Electrical Engineer	Years of relevant experience with other employer(s)	5
Degree(s) / Years / Specialization		BS / 2007 / Electrical Engineering	
Active registration number / state / expiration date		PE. 0039625 Louisiana, Exp. 9/30/2022	
Year registered	2015	Discipline	Electrical and Computer Engineering
Contract role(s) / brief description of responsibilities		Electrical Engineering Inspection and Design Services	

Jonathan has over 14 years of experience on over 75 movable bridges providing inspections and designs for electrical power distribution and control system designs specifically for movable bridges. His responsibilities include designing, specifying, and inspecting equipment for electrical distribution and control systems. These projects have provided experience power distribution, lighting and motor controls, motor control centers, flux vector drives, motor starters, camera systems and movable bridge control systems that are relay or programmable controller (PLC) based. In addition to inspections and design services, he also excels at troubleshooting and recommending emergency repairs.

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).
09/21-Ongoing	**Michigan Dept. of Transportation (MDOT) – Veterans Memorial Bridge Inspection	Bay City, MI** – *Lead Electrical Engineer.* Jonathan was responsible for the in-depth inspection of the electrical components, including the power distribution and control systems. Inspections included motor insulation testing and the recording power (voltage and amperage) for each motor to determine loading and for comparison to the strain gauge testing. This inspection serves as the basis for future rehabilitation scopes of work.
10/20-Ongoing	**Texas Dept. of Transportation (TxDOT) - Movable Bridges Asset Management	Rio Hondo, TX** – *Lead Electrical Engineer.* Jonathan was responsible for the in-depth inspection of the Rio Hondo tower drive vertical lift bridge electrical components, including the power distribution and control systems of this swing span. The inspections also consisted of insulation testing and three-phase voltage and current measurements for the motors. Jonathan prepared a condition report and recommendations with preliminary cost estimates. These inspections serve as the basis for future rehabilitation scopes of work. In addition to the inspection and report, an operations and maintenance manual was created to assist the DOT for maintenance activities.
05/20-Ongoing	**Michigan Dept. of Transportation – Houghton-Hancock Vertical Lift Bridge	Houghton, MI** – *Lead Electrical Engineer.* Jonathan was responsible for the electrical design that included the replacement of the existing main and auxiliary motors with inverter duty motors. Additional electrical designs that Jonathan provided included heat tracing for hydraulic intermediate retractable bearings, cable reel replacement, re-indexing bridge height rotary cam limit switches, updating bridge control schematics and the requirements for modifying the PLC and VFD programming for the new motors.
11/20–Ongoing	**BNSF Railway – Berwick Vertical Lift Bridge	Morgan City, LA** – *Project Manager and Lead Electrical Engineer.* Jonathan was responsible for preparing the specifications for the replacement of the existing PLC and HMI. The specifications include modifications to the HMI programming to allow the bridge tenders to operate the bridge from the HMI screen. The design includes the installation of new position resolvers for the bridge tender to monitor skew when performing manual operations. Additional tasks were added for the replacement of the existing VFD's and motor encoders.

08/20-11/20	**Lake County Indiana – Dickey Road Detailed Inspection	East Chicago, IN** – *Lead Electrical Engineer.* Jonathan provided a detail inspection of the electrical and control systems of this double leaf hydraulically operated bascule. During the course of the inspection, the bridge no longer operated as desired. He identified two issues with the bridge - a disconnected proportional valve on the northeast hydraulic unit and a failed relay on the southeast hydraulic unit speed controller. Both items were corrected, and the bridge operated as intended.
01/20-03/21	**Canadian Pacific Railway – Hastings Vertical Lift Bridge	Hastings, MN** – *Project Manager and Lead Electrical Engineer.* Jonathan was responsible for control designs for the new span locks. The existing electro-mechanical type span locks were replaced with hydraulic operated span locks.
02/20-12/21	**Union Pacific Railroad – Bencia-Martinez Vertical Lift Bridge	Martinez, CA** – *Lead Electrical Engineer*. Jonathan was responsible for the design to replace the existing medium voltage cable that runs approximately 1,400 ft from the shore to the movable span. The design included replacement of the existing medium voltage bare copper aerial cable.
02/11-11/13	**Canadian National Railway – Leighton Bridge 1.73 (Old EJ&E Bridge 198)	Joliet, IL** – *Project Manager and Lead Electrical Engineer.* Jonathan was responsible for the inspection of the electrical components of this vertical lift bridge. The bridge has a PLC based control system with VFD's controlling the main drive motors. A relay-based control system with auxiliary motors are utilized for auxiliary operations. The bridge is currently remotely controlled through the Railway Signal System.
02/19-10/19	**Canadian National Railway – Bridge 552 Mechanical and Electrical Inspection	Morris, IL** – *Project Manager*. Jonathan was responsible for the inspection of this vertical lift bridge. The bridge has a PLC based control system with VFD's controlling the motors. In reviewing the measurements and VFD operations, Jonathan determined that the bridge was significantly counterweight heavy. Subsequent strain gauge testing confirmed that the bridge was counterweight heavy. Jonathan developed a report on the condition of the bridge with recommendations and cost estimate associated with the recommendations was also created.
07/11-06/13	**North Carolina Dept. of Transportation - Carteret County Bridge R110 Radio Island Railroad Bridge	Morehead City, NC** – *Lead Electrical Engineer.* Jonathan provided electrical designs and construction support services for a bascule railroad bridge. The bridge was previously operated by a diesel engine, while the new design included an electric motor controlled by a VFD. Jonathan's design included a new power distribution and automatic relay based control system. The relay based control system was designed to operate the bridge locally at the bridge house or remotely from the shore approximately 1,500-ft away.
03/16-Ongoing	**Canadian Pacific Railway - Mississippi River Swing Span (Tomah Bridge 283.40)	La Crescent, MN** – *Project Manager/Lead Electrical Engineer.* Jonathan was responsible for designing and installing several new mechanical and electrical updates on this 110+ year old swing bridge. For this multi-year project, the mechanical design included replacing the existing centering latch, main pinions, rail lift/eccentric motors and supports and several limit switches throughout the span. Jonathan's electrical design included the installation of new VFD's and a PLC based controlled system. Additional design provided included a control designs for the end lifts, a new alignment ram and new rail lifts to assist with bridge alignment and a new rail lift system. He provided on-site testing and commissioning services.
08/13-10/15	**BNSF Railway - Bridge 32.06 Over Bayou Des Allemands	Des Allemands, LA** – *Lead Electrical Engineer.* Jonathan was responsible for developing electrical and control designs for this swing span railroad bridge. Previously, the bridge utilized a diesel motor located on the span for operations. The swing span was replaced, and a new power distribution and control system was installed. Jonathan designed the PLC based control system to be capable of operating the span locally at the bridge or remotely from the control house on the shore. In addition to the design, also served as resident engineer during construction, providing construction oversight and inspection.

Firm employed by	**HDR Engineering, Inc.**		
Name	**Michael Lamont, PE, SE, P.Eng**	Years of relevant experience with this employer	9
Title	Major Bridges Technical Director	Years of relevant experience with other employer(s)	21
Degree(s) / Years / Specialization	BS / 1991 / Civil Engineering		
Active registration number / state / expiration date	PE.0045309 Louisiana, Exp. 09/30/2023		
Year registered: 2021	Discipline: Structural Engineer		
Contract role(s) / brief description of responsibilities	Structural Engineer **(Meets MPR 3)**		

Experience Summary: Mike has over 29 years of complex bridge engineering experience, including concrete and steel arches, segmental box girders and 20 years of cable-stayed bridge experience. He is well-versed in state-of-the-art seismic and wind design practices, with hands-on involvement in seismic analysis, wind-tunnel testing, and developing seismic and wind mitigation measures on several major bridge projects. In addition, Mike is an industry recognized leader in balancing aesthetic features and signature bridge architecture into the main span design with cost and constructability. He has extensive complex and signature cable-stayed bridge design and construction experience, and an eye for detail and the skill to know where to focus attention for maximum benefit. Additionally, Mike specializes in innovative construction methods and constructibility.

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).
09/18-06/21	**Florida Dept. of Transportation District 6, HDR/Archer Western/de Moya JV - I-395 Signature Bridge (P3) | Miami, FL** – *Engineer of Record*. Mike provided technical direction and engineering management to the design team producing the structural modelling, analysis and design of the signature bridge across Biscayne Boulevard near the project's eastern limit, a signature feature of the overall $800 million I-395/I-95/SR 836 interstate reconstruction project. "The Fountain" is a twin deck cable-supported structure consisting of six arches spanning 1,025 feet across two busy roadways.
06/13-06/15	**Fluor/American Br/Granite/Traylor Bros, Westchester-Rockland County - The New NY Bridge (Tappan Zee Hudson River Crossing) | New York City, NY** – *Design Engineer*. Mike was responsible for the design of the innovative precast pier cap shells used on nearly 60 approach piers on this $3.9 billion design-build project, which replaced the existing bridge over the Hudson River between Westchester and Rockland Counties. The precast pier cap shells served as forms to be filled with cast-in-place concrete, and were designed to perform compositely as part of the final structural section using rigorous analyses and careful detailing. Design of these components required consideration of intermediate construction stages and locked-in construction forces, using staged construction analyses. The 100-year service life requirements of the project necessitated consideration of crack widths, service level rebar stresses, and time-dependent effects.
09/15-08/17	**Alabama Dept. of Transportation, I-10 Mobile River Bridge Preliminary Design | Mobile, AL** – *Main Span Design Lead*. The project featured a new six-lane cable stay bridge over the Mobile River, with a 1,350-ft long main span, providing 215-ft of vertical and 800-ft of horizontal clearance to the navigation traffic within the busy port. Mike was responsible for the preliminary design of three options for the cable-stayed crossing, which required the consideration of hurricane-force winds, deep foundation construction, cantilever erection loads and vessel collision.
11/16-05/18	**SNC-Lavalin/Vinci/American Bridge - Gordie Howe International Bridge Pursuit (P3) | Windsor, Ontario** – *Main Bridge Design Manager.* Mike was in charge of the main bridge design team during the pursuit design of this $6B international crossing. The team's design for the river crossing included a 2,800 ft cable-stayed main span over the Detroit River. The proposed design provided a 125-year design life, and included an innovative modular design for the orthotropic box girder superstructure which allowed the deck to be erected using a top-down method, keeping the busy navigation channel free and minimizing potential construction delays.

01/15-07/15	**West Virginia Dept. of Transportation - Wellsburg Bridge 30% Design | Wellsburg, WV** – *Cable-Stayed Design Lead.* This project involved the preliminary design of the proposed Ohio River Bridge. Three design alternatives were studied including a cable-stayed design, a tied arch design and a truss design. The design plans were developed to a 30% level and provided to the client along with a report including cost estimates of each design alternative. Mike led the design work of the 1,550-ft long cable-stayed bridge option, which features an 850 ft main span.
07/14-03/15	**Archer Western Contractors - US 181 Harbor Bridge Replacement Pursuit (Design-Build) | Corpus Christi, TX** – *Lead Bridge Engineer.* The project consisted of a $900 million replacement bridge over the Corpus Christi Ship Channel and reconstruction of the US 181-IH 37 downtown interchange. Mike was lead designer for the New Harbor Bridge, a cable-stayed bridge with a 1,520-ft main span, which received the highest technical score of the four short-listed proposers.
08/12-02/13	**Port Authority of NY/NJ - Bayonne Final Design | Bayonne, NJ** – *Design QC Engineer.* The project increased the navigational clearance under the Bayonne Bridge, which is the third longest steel arch bridge in the world. New precast segmental approach spans were utilized with the existing raised arch bridge to increase the navigational clearance from 150-ft to 200-ft. Mike was responsible for final design quality control of the superstructure pier and end diaphragms of the precast segmental approaches and provided a design review of the balanced cantilever construction sequence and gantry loadings.
08/12-06/13	**Minnesota Dept. Of Transportation - Saint Croix River Crossing Final Design | Stillwater, MN** – *Main Span Independent Design Lead.* Mike led a detailed independent design check of the main span, including foundation design, pier and tower design, transverse analysis of the multi-cell concrete box girder, cable design and erection analysis. He coordinated weekly comment resolution meetings with the design team and the peer reviewer to compare analysis and design results. This replacement bridge features a 3,365 ft long extradosed main span with carefully crafted aesthetic criteria.
09/08-08/12	**B.C. Ministry of Transportation - Port Mann Bridge Final Design |Vancouver, BC, Canada** – *Superstructure Design Lead.* This project features an $850 million crossing of the Fraser River which replaced an existing steel tied-arch bridge. The new Port Mann Bridge, opened to traffic in October 2012, is a unique 10-lane twin roadway bridge supported on single mast pylons. Mike served as Superstructure Design Lead of the cable-stayed superstructure and was also responsible for the erection engineering of the structure. The main span consists of twin steel/concrete composite decks supported by four planes of cables, radiating out from the 520-ft tall center pylons. With a 1,542 ft main span, the bridge is currently the second longest cable-stayed bridge in North America and the widest bridge in the world. The project was designed, built and financed under a public-private-partnership model using design-build delivery, and received a 2016 Engineering Excellence Honor Award from the ACEC.
01/08-06/11	**Washington Dept. of Transportation – Aurora Avenue Bridge Load Rating / Seismic Retrofit | Seattle WA –** *Engineer of Record***.** This 2,955-ft long historic bridge, also known as the George Washington Bridge, was built in the early-1930's and includes both concrete and steel truss spans. Mike was Engineer of Record for load rating of the 800-ft cantilever truss span crossing Lake Union in Seattle, including steel spans, concrete approach spans and gusset plates. The load rating was performed in accordance with WSDOT LRFR and NBI requirements as well as FHWA Bridge Design Guidance No. 1 for rating of gusset plates. Mike also served as Engineer of Record for two phases of seismic retrofit design, including the addition of seismic dampers, friction pendulum bearings, and FRP column strengthening.

Firm employed by	**HDR Engineering, Inc.**				
Name	**Carlos Larco**		Years of relevant experience with this employer	5	
Title	Electrical Designer		Years of relevant experience with other employer(s)	2	
Degree(s) / Years / Specialization			BS / 2015 / Electrical Engineering		
Active registration number / state / expiration date			NA		
Year registered	NA	Discipline	NA		
Contract role(s) / brief description of responsibilities			Electrical Support		

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).
04/20-Ongoing	**LIRC Railroad - LIRC Ohio River Vertical Lift Bridge 108.11 Rehabilitation | Louisville, KY** - *Electrical Designer:* Carlos is responsible for O&M manual review and improvements, creating sequences of operations, and troubleshooting guidelines.
12/18-Ongoing	**CSX Transportation - Movable Bridge On-call Engineering Services (Lift Bridges) | Various Locations, AL, SC and TN** – *Electrical Designer*. Carlos was responsible for scoping and assessment reports, electrical and control systems rehabilitation design plans, calculations, specifications, cost estimates and construction inspection reporting for Mobile River (AL), Tailrace (SC), New Johnsonville (TN) and Joliet (IL) Vertical Lift Bridges. His work included control systems replacement, power distribution system replacement, flux vector drive installation, remote control implementation and other miscellaneous electrical system improvements.
09/20-04/21	**Texas Dept. of Transportation (TxDOT) – TxDOT Movable Bridges Asset Maintenance | Bridge City, TX** – *Electrical Inspector.* Carlos was responsible for in depth inspection of the Cow Bayou Swing Bridge. The work involved included visual inspection of the electrical equipment on the bridge, observation of several operations, interlock testing and the inspection report. The inspection report included issues found during the inspection and recommended repairs.
08/19-Ongoing	**Hillsborough County – Columbus Drive Swing Bridge Assessment and Rehabilitation Design | Hillsborough County, FL** – *Electrical Designer.* Carlos is responsible for design of the electrical systems and controls for the new auxiliary system and submarine cable terminal cabinet rehabilitation. The work involved the initial assessment report, auxiliary drive system design, submarine cable terminal cabinet improvements and other miscellaneous electrical system improvements.
05/20-Ongoing	**Martin County – Hobe Sound Bascule Bridge Rehabilitation | Martin County, FL** – *Electrical Designer.* Carlos is responsible for scoping and assessment reports, electrical and control systems rehabilitation design plans, calculations, specifications, cost estimates and construction inspection reporting. The work includes total control system replacement, flux vector drive installation, submarine cable replacement and electrical system rehabilitation.

Firm employed by **HDR Engineering, Inc.**			
Name	**Brian Leshko, PE, CBSI, NCTI**	Years of relevant experience with this employer	24
Title	Infrastructure Inspection & Management Program Leader	Years of relevant experience with other employer(s)	13
Degree(s) / Years / Specialization		MCE / 1994 / Structural Dynamics | MS / 1990 / Structural Engineering | BSCE / 1985 / Civil Engineering	
Active registration number / state / expiration date		PE. 98874 Texas, Exp. 03/31/2022	
Year registered	1992	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		QA/QC for Inspection/Structural	

Brian has successfully served in leadership and management positions on numerous complex bridge and tunnel inspection projects for state DOTs and public agencies, including Project Manager on five consecutive TxDOT Fracture Critical Bridge and Tunnel Inspection contracts since 2010, as well as Principal Investigator for NCHRP Project 20-07/Task 337, "Proposed AASHTO Guidelines for Inspecting Complex Components of Bridges." Certified: FHWA-NHI 130055 and FHWA-NHI 130078

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).
2020	**Louisiana Department of Transportation and Development - LADOTD Statewide Bridge Inspections | Alexandria, LA** – *Quality Control Reviewer.* Brian reviewed the deliverable inspection report sections developed by HDR for our prime consultant including the vertical lift bridge (1) main span decks (concrete and steel open-grid) topside and underside, sidewalks topside and underside, expansion and open deck joints, concrete and metal barrier; (2) main span structural steel comprising the through truss, floor system, fracture critical members and fatigue sensitive details, towers and bearings; and (3) main span piers 3 and 4 each with a concrete pier wall in the river with concrete pedestals.
2008-2011	**Texas Department of Transportation (TxDOT) - Corpus Christi Harbor Bridge Inspection | Corpus Christi, TX** – *Bridge Inspector.* Brian was responsible for an in-depth inspection, load rating and development of rehabilitation plans, specifications and estimates for this 1,782-ft deck truss and through truss structure constructed in 1959. The detailed "arms-length" inspection of the bridge in 2008 required access by man-lifts, under bridge inspection vehicles and industrial rope access techniques. Brian signed and sealed the Condition Evaluation Report dated January 2009.
2010-2021	**TxDOT Bridge Division - Fracture Critical Bridge Inspection | Statewide, TX** – *Project Manager and Inspection Team Leader.* Brian was responsible for field inspection and reports for four consecutive 2-year TxDOT Statewide Fracture Critical Bridge Inspection Contracts (2010-2012, 2012-2014, 2014-2016 and 2016-2018) and the recent 3-year TxDOT Statewide Fracture Critical Bridge and Tunnel Inspection Contract (2018-2021). To date, 1,560 fracture critical bridge inspection reports highlighting 6,248 fracture critical component members, as well as one tunnel inspection report, have been prepared for and accepted by TxDOT per initial draft submissions. He performed QC reviews of, and signed and stamped, each deliverable. The work included the inspection of TxDOT's inventory of cable-stayed bridges: the Fred Hartman Bridge (twin 78-ft roadways, northbound and southbound) over the Houston Ship Channel, comprised of a five-span structure with three cable-stayed spans (482-ft/1,250-ft/482-ft) and two simple flanking spans of 130.5-ft, for a total length of 2,475-ft; and the Veterans Memorial Bridge (54-ft roadway, eastbound) over the Neches River, comprised of three cable-stayed spans (280-ft/640-ft/280 ft).
2007, 2017 & 2019	**Oregon Department of Transportation - Statewide Major and Complex Bridge Inspections | Statewide OR** – *Inspection Team Leader.* Brian led the in-depth, fracture-critical, and fatigue-prone detail inspections of the Fremont Bridge. The 2,159-ft long twin-deck steel tied-arch bridge consists of two 448-ft-4" back spans and a 1,255'-4" main span. The tied arch supports the back spans on spandrel columns and transitions to cable suspenders over the Willamette River. In June 2007, he inspected the exterior of east approach steel

	box beams from a bucket truck. In June 2017 & June 2019, he inspected the exterior of the arch rib connection to suspender cables and lateral bracing connections from a high-reach hydraulic lift.
2015-Ongoing	**Golden Gate Bridge Highway and Transportation District - Golden Gate Bridge Fracture Critical Bridge Inspection | San Francisco, CA** – *QA/QC Manager for field work.* Inspections of fracture critical members that are difficult to access were performed within "arm's length" using industrial rope access. For the 2015, 2017 and 2019 cycles, the inspection of 244 truss members, 177 floorbeams, nine girders, 250 deck pedestals and 450-ft of the main cables were completed within two weeks using a team of 12 inspectors and 12 rigging technicians. In 2018, this same team of rope access inspectors and rigging technicians performed the first ever close-up visual inspection of the 746-ft tall main suspension span towers in less than nine days. For the 2021 and future 2023 cycles, the inspection of 2,220 truss members, 396 floorbeams, three girder spans and portions of the main cables are being completed one week per month using a team of approximately 10 inspectors and 10 rigging technicians from May-November.
2007-2020	**Alaska Department of Transportation & PF - Fracture Critical and Special Bridge Inspections | Statewide, AK** - *Engineer-in-Charge, Inspection Team Leader and QA/QC Reviewer for successive contracts.* Each bridge, the majority in remote locations throughout Alaska, were inspected using rope access techniques, without traffic lane closures, in accordance with client requirements. • 2007 – Engineer-in-Charge and Inspection Team Leader for 12 FCM highway bridge inspections (11 trusses and one 2-girder span). • 2008 – Engineer-in-Charge and Inspection Team Leader for 36 FCM marine ferry terminal and seaplane transfer bridge inspections. • 2012 – Engineer-in-Charge and Inspection Team Leader for 7 FCM marine ferry terminal transfer bridge inspections and load ratings. • 2012 – QC Reviewer of 21 FCM marine ferry terminal inspection reports and load rating reports. • 2014 & 2018 – QC Reviewer of 20 & 10 FCM marine ferry terminal and seaplane float facility transfer bridge inspections. • 2015 & 2016 – QC Reviewer of 6 & 8 FCM steel truss and two-girder highway bridge inspections. • 2017 & 2019 – QC Reviewer of 5 FCM marine ferry terminal transfer & 4 FCM steel truss/steel box girder bridge inspections. • 2020 – QC Reviewer of 2 Special Inspections and 6 FCM Inspections (docks and ramp structures with plate caps and box girders).
2009-2012	**New Hampshire Department of Transportation - Portsmouth-Kittery Bridge Inspection and Cost Analysis (BICA) including Procurement Services for the Memorial Bridge Replacement | Portsmouth, NH and Kittery, ME** – *Inspection Team Leader.* Brian led the In-Depth NBIS bridge inspection and preparation of a condition report for the I-95 High-Level Bridge carrying Interstate 95. This structure consists of a three-span through truss arch, nineteen steel girder approach spans with 61 pin & hanger assemblies and fourteen steel girder approach spans with 42 pin and hanger assemblies. The three main spans over the river are 294-ft, 756-ft and 294-ft. The total length of structure, including the three main spans and 33 approach spans, is 4,503-ft. The I-95 High-Level Bridge was inspected from September to October 2009.
2016	**Alabama Department of Transportation - Cochrane-Africatown USA Cable-Stayed Bridge In-depth and Special Inspection | Mobile, AL** – *Quality Control Reviewer.* Brian reviewed the deliverable inspection report highlighting the hands-on inspection of the stay cables and concrete pylons supporting the 7291-ft structure with a navigation clearance of 140 ft reaching a height of greater than 360-ft over the water. To inspect the cables and the exposed interior and exterior portions of the concrete pylons, HDR deployed a two-person manlift team, a two-person under bridge inspection team, a two-person confined space entry team and a 10-person industrial rope access team simultaneously, completing the field inspection in a six-day continuous period in July 2016**.**
2019	**Virginia Department of Transportation - Movable Bridge On-Call Contract | Hopewell, VA** – *Inspection Team Leader.* Brian led the December 2019 emergency inspection of the Benjamin Harrison Memorial Bridge, a vertical lift bridge carrying State Routes 106/156 over the James River, to determine whether the foundation of a tower was moving under truck traffic over the bridge. Instrumentation for real time monitoring was installed following the field inspection.

Firm employed by	**HDR Engineering, Inc.**		
Name	**Matt McGuire, PE**	Years of relevant experience with this employer	18
Title	Movable Bridge Program Manager	Years of relevant experience with other employer(s)	4
Degree(s) / Years / Specialization		MBA / 2007 / Business Administration | BS / 2000 / Mechanical Engineering	
Active registration number / state / expiration date		PE.0043785 Louisiana, Exp. 03/31/2022	
Year registered	2019	Discipline	Mechanical Engineering
Contract role(s) / brief description of responsibilities		Mechanical engineering support.	

Matt has 22 years of experience in the design, inspection, emergency troubleshooting and construction of mechanical, electrical, and structural systems. This includes experience with highway, railway, and infrastructure systems in the forms of movable bridges, travelers, transfer bridges and tunnels. Matt's experience also includes the inspection of over 100 movable bridges including experience in SPRAT rope access inspections (of which he is now retired), and he is a National Certified Tunnel Inspector (NCTI). He is an industry recognized leader and active in the Heavy Movable Structures organization and the Technical Committee Chairman for Machinery and Mechanisms. He has also authored the FHWA Specification for the National Tunnel Inventory (SNTI), classes for certifying tunnel inspectors (NHI 130110 and 130125) and is a certified NHI instructor.

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).
03/20-05/21	**Louisiana Department of Transportation and Development - LADOTD Statewide Bridge Inspections | Alexandria, LA** – *Mechanical QC Reviewer*. Matt reviewed the mechanical and electrical inspection report developed for the Gills William Long Bridge spanning over the Red River. The movable span is a truss style vertical lift bridge which carries two lanes of traffic and one pedestrian sidewalk on the south side of the movable span. Access to the bridge control house, which is located on the west tower, is located on the north side of the span. The report provided the condition assessment of the movable span machinery and results of the operational testing performed during inspection. Matt provided review comments and worked with the primary authors to resolve comments on the inspection report.
05/15	**TxDOT Bridge Division - FCI 2014-2016 WA#6 | Waco, TX** – *Bridge Inspector.* Matt performed rope access inspection of the pier caps of two different structures that were part of On-system fracture critical inspections in Fort Worth, Waco and Austin Districts as well as Off-system fracture critical bridge inspections in Fort Worth and Waco Districts. A total of 95 elements on 29 structures were inspected. Matt performed the inspection of the various types of pier caps, noted deficiencies and documented conditions using photos and field notes.
03/12	**Oregon DOT - Statewide Major and Complex Bridge Inspections | Portland, OR** – *Bridge Inspector.* Matt provided support in the superstructure inspection of the through truss upper deck movable span on Steel Bridge. Inspection of the lift span upper deck truss was performed at night under roadway closures with the use of a man lift. Inspection of the approach span trusses was performed by Matt using rope access methods. Inspection also included bucket truck work on the Banfield and Morrison interchanges of I-5 and I-84. Previous deficiencies were noted, and any additional deficiencies were added to the current inspection findings.
01/14	**Oregon DOT - Statewide Major and Complex Bridge Inspections | Portland, OR** – *Bridge Inspector.* Matt provided support in the inspection of suspension and hanger cables of the St. John's suspension bridge. Inspection of the vertical cables was performed by Matt using rope access methods. Matt also led the two-man team which inspected the suspension cables by walking the full length of both cables using fall protection equipment. Previous deficiencies were noted, and any additional deficiencies were added to the current inspection findings.

05/09-05/12	**NHDOT – Portsmouth-Kittery Bridge Inspection and Cost Analysis (BICA) | Portsmouth, NH** – *Mechanical Engineer.* The project included the inspection and rehabilitation design for two vertical lift bridges. Matt led an in-depth scoping inspection of the mechanical and electrical systems, including span operation and wire rope tension tests. Matt issued a report with design alternatives and rehabilitation costs for each of the two bridges. He also performed cost estimating to help develop further bridge replacement alternatives for the two bridges.
12/12-06/13	**Union Pacific Railroad - Mechanical and Electrical Inspection of 27 Movable Bridges | Various States** – *Project Manager, Lead Mechanical Inspector.* Matt coordinated and performed the inspection of 27 movable bridges across the country, in seven groups of bridges. Bridges inspected consisted of vertical lift and swing spans. A standardized inspection form was developed, along with an electronic, fast turn-around method for report submission. An electrical and mechanical inspection of the movable span machinery was performed including operational tests of each bridge. A report was presented to the client outlining the identified deficiencies and recommendations with estimated costs for repairs.
09/09-06/15	**Virginia DOT - Movable Bridge On-Call Contract |Various Locations, VA** – *Senior Mechanical Engineer.* Through the course of the on-call contract, Matt has performed various roles from emergency troubleshooting, design, analysis and mechanical QC review. The following are some example project works: 1) Matt witness and commented on the operation of the primary span drive gear boxes for the two, twin leaf Scherzer bascule bridges known as the Berkley Bridges in Norfolk Harbor. During night operations of the bridges, he witnessed the operation of primary gear boxes which include inspection of the internal condition of the boxes using inspection hatches. He prepared a report on the condition of the gear boxes and recommendations were made for the continued monitoring of the gear box condition. 2) Matt was called in as part of a mechanical/electrical team to help support the state in troubleshooting the operation of High Rise twin leaf bascule bridge on an interstate highway after the bridge failed to move during an operation. His inspection of the bridge found broken machinery support anchors for one of the leaves main motors. He prepared emergency repair design documents for a back-up motor and the repair of the existing machinery support to get the bridge operational in a short time frame turnaround. 3) Matt provided a quality check and quality assurance review of peer engineer's design on the Coleman Bridge swing span. Calculations were performed to determine wind speeds associated with particular wind loads on the swing span. The wind loads were then used to perform a machinery and wind analysis for the operating machinery of the swing span. Comments were issued and resolved with the design engineer. 4) Matt was called in as part of a mechanical/electrical team to help support the state in troubleshooting the operation of the Benjamin Harrison tower driven vertical bridge after the bridge became out of skew during an operation. The troubleshooting team worked with the maintenance staff to identify the electrical and field instrument problems which resulted in the bridge controls improperly adjusting for skew. The field devices were adjusted and test operations confirmed the proper performance of the bridge controls after the adjustments to the field devices.
10/14-05/15	**Port of Hood River – Port of Hood River On-Call, Multiple Task Orders | Hood River, OR** – *Movable Bridge Lead.* As a follow-up to the recent inspection, HDR helped plan the future work on the tower driven vertical lift bridge. Matt authored several reports to help with the budgetary planning for the future of the bridge. His inspection work included rope access inspection of the bridge wire ropes, as well as documenting the problems with control system interlocks. Matt was in charge of the reporting, including the tabulation and review of previous deficiencies, project summaries for potential future projects and a projected spending plan for the movable span. His recommendations include the repair of bridge electrical systems and the implementation of a predictive/preventative maintenance program for the bridge.

Firm employed by	**HDR Engineering, Inc.**		
Name	**Gregory Mieczkowski**	Years of relevant experience with this employer	18
Title	Coatings Lead	Years of relevant experience with other employer(s)	18
Degree(s) / Years / Specialization		N/A	
Active registration number / state / expiration date		N/A	
Year registered	N/A	Discipline	N/A
Contract role(s) / brief description of responsibilities		Protective Coatings Specialist	

Gregory has over 35 years of experience in the selection, specification, application, and inspection of industrial coatings. **Training Certs:** NACE Level III Certified Coating Inspector # 9254; SSPC C-1 and C2; SSPC C-3 Lead Abatement Inspector; "Lead" Competent Person Training (OSHA 1923.62)

Experience dates (05/03–5/21)	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).
03/20-09/20	**Nebraska Department of Transportation (NDOT) – I-680 Westbound Mormon Bridge | Omaha, NE** – *Coatings Lead.* Gregory provided full-time on-site inspection services during surface preparation and coating application. Responsibilities included hosting progress meetings and verifying work performed by the contractor was in accordance with governing documents. Prior to the construction phase, Gregory evaluated existing coatings to provide information in generating appropriate specifications for the project.
03/19-10/19	**Nebraska Department of Transportation (NDOT) – I-680 Eastbound Mormon Bridge | Omaha, NE** – *Coatings Lead.* Gregory provided full-time on-site inspection services during surface preparation and coating application. Responsibilities included hosting progress meetings and verifying work performed by the contractor was in accordance with governing documents. Prior to the construction phase, Gregory evaluated existing coatings to provide information in generating appropriate specifications for the project.
06/18-08/18	**Texas Dept. of Transportation (TxDOT) – TxDOT Movable Bridges Asset Maintenance | Rio Hondo, TX** – *Coatings Lead.* Gregory provided full-time on-site inspection services on the Rio Hondo Lift Bridge during surface preparation and coating application. Responsibilities included hosting progress meetings and verifying work performed by the contractor. Prior to the construction phase, Gregory evaluated existing coatings to provide information in generating appropriate specifications
03/17-08/17	**Nebraska Department of Transportation (NDOT) – N 51 Decatur Bridge | Decatur, NE** – *Lead Abatement Project.* Gregory provided full- time on-site inspection services during surface preparation and coating application. Responsibilities included hosting progress meetings and verifying work performed by the contractor was in accordance with governing documents. Prior to the construction phase, Gregory evaluated existing coatings to provide information in generating appropriate specifications for the project.
04/17-06/17	**Nebraska Department of Transportation (NDOT) – Veterans Memorial Bridge | Omaha, NE** – *Lead Abatement Project.* Gregory provided part-time on-site inspection services during surface preparation and coating application. Responsibilities included participating in progress meetings and verifying work performed by the contractor was in accordance with governing documents.
07/10-07/10	**Colorado Dept of Transportation (CDOT) Region 3 – Redcliff Bridge | Redcliff, CO** – *Inspection.* Gregory provided warranty inspection services and on-site inspection of repairs during surface preparation and coating application. Responsibilities included verifying work performed by the contractor was in accordance with governing documents. Prior to the construction phase, Gregory evaluated existing coatings to provide information in generating appropriate specifications for the project.

Firm employed by	**HDR Engineering, Inc.**		
Name	**Robert Moses, PE**	Years of relevant experience with this employer	7
Title	Regional Business Group Director	Years of relevant experience with other employer(s)	23
Degree(s) / Years / Specialization		BS / 1991 / Electrical Engineering	
Active registration number / state / expiration date		PE. 27626 Louisiana, Exp. 3/31/2022	
Year registered	1998	Discipline	Electrical Engineering
Contract role(s) / brief description of responsibilities		QA/QC for Electrical	

Robert has 30 years of global experience in the delivery of inspection, design and construction support projects involving structural, mechanical and electrical engineering services for movable bridges and other heavy civil facilities. He has been involved in the inspection, rehabilitation and/or design of over 200 movable bridge projects, including swing bridges, vertical lift bridges, bascule bridges, pontoon bridges, rolling lift bridges and other variations. He has served as Lead QA/QC Engineer, Project Manager, Project Engineer and/or Lead Engineer on numerous national and international movable bridge projects, including inspections, rehabilitation designs and designs for new construction. Over a 20-year span, he has served as Secretary, Vice President, President and Chairman of Heavy Movable Structures, Inc., the premier movable bridge professional organization.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
08/20–Ongoing	**Texas Dept. of Transportation (TxDOT) – TxDOT Movable Bridges Asset Maintenance | Rio Hondo, TX** – *Project Manager.* Robert led the in-depth inspection, development of the operations and maintenance program and oversight of implementation of the asset maintenance program for the Rio Hondo Vertical Lift Bridge.
08/19-Ongoing	**Michigan Dept. of Transportation - Rehabilitation of the Houghton Lift Bridge | Houghton, MI** – *Project Manager.* Robert managed the structural, mechanical and electrical engineering services to assess and design repairs to the 60-year old vertical lift bridge. The assessment and load rating of select structural components in need of repair was performed along with design for repair details for the superstructure. The mechanical and electrical system design services included replacement of the lift span main and auxiliary motor drives.
01/16–12/17	**CSX Transportation – Movable Bridge On-call Engineering Services (Lift Bridges) | Statewide AL, SC and TN** – *Program Manager.* Robert provided project leadership, communicated with the client, and led technical program for the Mobile River, Tailrace and New Johnsonville vertical lift bridges. He led the design of the remote operating systems and mechanical/electrical upgrades for the three vertical lift bridges. He coordinated communication with the US Coast Guard to secure approval of remote operation.
1/15-12/19	**Virginia DOT - Movable Bridge On-Call Contract | Statewide VA -** *Technical Advisor.* Robert was responsible for providing technical direction and oversight of movable bridge engineering services. He performed technical reviews of reports, plans, specifications and cost estimates. He participated in meetings with VDOT to provide technical input and share related experience.
06/16–12/17	**New York City DOT (NYCDOT) – Roosevelt Island Vertical Lift Bridge | New York, NY** – *Project Manager.* Robert provided project leadership, communicated with the client, and led technical development for the inspection and commissioning oversight of the tower drive vertical lift bridge.

01/15-06/17	**Triborough Bridge and Tunnel Authority (TBTA) – MP-03 Electrical and Mechanical Rehabilitation at the Marine Parkway Bridge | Queens, NY** – *Quality Control Reviewer.* Robert provided quality control review for design of the rehabilitation of the mechanical and electrical systems for the tower drive vertical lift bridge. The rehabilitation design includes a major gear drive component replacement design and a new PLC-based control system and flux vector motor-drive system.
09/13-12/14	**Maine Dept. of Transportation - Sarah Mildred Long Lift Bridge | Portsmouth, NH / Kittery, ME** – *Project Electrical Engineer.* Robert was responsible for the inspection of the PLC-based control system and flux vector motor-drive system. The project also included diagnosis of operating issues, interpretation of strain gauge span balance measurements and recommendations for operational improvements.
03/12-09/12	**City of Bay City - Independence Bridge | Bay City, MI.** *Project Electrical Engineer*. Robert led the rehabilitation of a double-leaf rolling lift Truman Parkway bridge built in 1973. He was responsible for designing rehabilitation of tail locks and modifications to the electrical system.
03/04-02/08	**Jean Muller International - Vertical Lift over the Garonne River | Bordeaux, France –** *Project Engineer*. Robert was responsible for developing mechanical / electrical operating system concepts in a design competition for the combination vehicular and transit rail vertical lift bridge. He oversaw final design for Design Build vertical lift bridge.
01/18-05/19	**CSX Transportation – Movable Bridge On-call Engineering Services (Swing Bridges – Louisiana) | Statewide LA** – *Program Manager.* Robert provided project leadership, communicated with the client, and led the technical program for the Chef Menteur and Rigolets swing bridges. He led the design of the remote operating systems and mechanical/electrical upgrades for the two swing bridges. He coordinated communication with the US Coast Guard to secure approval of remote operation.
07/15-07/18	**New Jersey Transit - Rehabilitation of the Morgan Draw | Morgan, NJ** - *Project Manager.* Robert managed the design rehabilitation and resiliency improvements for the two-track rolling bascule bridge. The project involved site assessment, USCG coordination, electrical and mechanical system rehabilitation design, bid analysis and construction support services.
11/13-12/14	**Public Works and Government Services Canada – Hastings Swing Bridge Replacement | Hastings, ON** – *Project Director.* Robert led the technical development and Quality Assurance for the superstructure replacement of the bobtail swing bridge over the Trent-Severn Waterway. He was responsible for technical delivery of the new mechanical and electrical systems.
01/03-04/05	**City of New Haven - Ferry Street Bascule Bridge | New Haven, CT** – *Project Electrical Engineer*. Robert oversaw the electrical work items in the bridge rehabilitation, which featured the design of a deck replacement for the double-leaf bascule bridge. The work included the replacement of the bascule span floor system including floor beams, stringers, purlins and deck.
12/01-7/02	**New Hampshire Department of Transportation – Hampton Harbor Bridge | Hampton Beach, NH** - *Project Manager.* Robert led the detailed design for the mechanical and electrical rehabilitation of the single-leaf trunnion girder bascule span.
07/00-11/00	**Washington State Dept. of Transportation (WSDOT) – SR 520 Floating Pontoon Bridge Rehabilitation | Seattle, WA** – *Project Manager.* Robert led the rehabilitation design of the mechanical and electrical systems for the floating pontoon retractile draw span. He designed the control system consisting of a programmable logic control system and skew control system.

Firm employed by **HDR Engineering, Inc.**			
Name	**Erin O'Malley, PE (SPRAT 3)**	Years of relevant experience with this employer	11
Title	Senior Bridge Engineer	Years of relevant experience with other employer(s)	2
Degree(s) / Years / Specialization		MS / 2010 / Structural Engineering | BS / 2008 / Architectural Engineering	
Active registration number / state / expiration date		PE.0043899 Louisiana, Exp. 03/31/2024	
Year registered	2019	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		Structural Inspection	
Training: FHWA-NHI Course No. 130055, Safety Inspection of In-Service Bridges; FHWA-NHI Course No. 130053, Bridge Inspection Refresher Training; FHWA-NHI Course No. 130078, Fracture Critical Inspection Techniques for Steel Bridges; SPRAT Level 3 Rope Access Technician, No. 131089 Expires: 12/10/2024			

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).
02/20-01/21	**Louisiana Dept. of Transportation and Development (LADOTD) – LADOTD Statewide In-Depth Complex Bridge Inspection | Statewide LA** - *Bridge Inspection/Rope Access Site Supervisor.* Erin performed rope access inspections of lifting towers and lift span floor systems where other methods of access were not practical for the Red River and Teche Bayou lift bridges. As the rope access site supervisor, Erin created the work plan and safety plan for the SPRAT-certified inspectors and rigged the rope access system. The structural inspections were coordinated with the mechanical and electrical inspection and accommodated lifts as needed for boat traffic. Erin wrote and reviewed structural sections of the report.
10/20–11/20	**Texas Dept. of Transportation (TxDOT) - TxDOT Movable Bridges Asset Maintenance | Rio Hondo, TX** - *Bridge Inspection/Rope Access Site Supervisor.* Erin supervised rope access inspection of the Rio Hondo lift bridge towers above deck that were beyond the reach of the bucket truck including the side faces over water and majority of the lift-span and approach-span faces. Scope included a general inspection to access the condition of the bridge since its rehabilitation in 2017 and a detailed inspection of elements needing potential repairs and maintenance. Erin created the work plan and safety plan for two SPRAT Level 1 inspectors and rigged the rope access system. The structural inspection was performed separately from the mechanical and electrical inspection, but still required coordination with operations for boat traffic. She wrote the tower sections of the report.
05/12-09/21	**TxDOT - Fracture Critical Bridge Inspection | Statewide TX** - *Bridge Inspection.* Erin has worked on five cycles of this contract since 2012, working her way up from Assistant to Team Leader to Rope Access Leader for the state. Structure types include plate girders, plate caps, tub girders, box caps, floorbeams, trusses, rail car bridges, and signature tower and cable structures. Erin coordinates each aspect of inspection from planning to mobilization to reporting. Additionally, this contract includes load ratings. Erin has performed load ratings for small rural structures, steel I-beams and plate girders, through trusses, deck trusses, floorbeams and gusset plates. Erin has led two inspections of the Corpus Christi Harbor Bridge (2017 and 2019), performing inspections from a snooper and on rope.
10/17-11/21	**Golden Gate Highway and Transportation District – Fracture Critical Bridge Inspection of the Golden Gate Bridge | San Francisco, CA** – *Bridge Inspection*. Erin has been a reoccurring member of this national team providing inspection services on portions of the bridge that are not accessible from catwalks and inspection travelers. Erin participated in the special inspection of the towers in 2018. Due to ongoing construction that impacts the inspection travelers, the 2021 scope was greatly increased from the usual work. HDR mobilized eight times from April 2021 to November 2021 with teams of 10 to 12 rope access inspectors and 10

	to 12 rigging specialists. Erin participated in seven of the eight mobilizations. She is also a lead report writer for this contract, and she performs QC reviews of reports written by other team members.
08/21	**Virginia Dept. of Transportation – Fracture Critical Bridge Inspection of the Berkley Bridge | Norfolk, VA** – *Bridge Inspection/ Rope Access Site Supervisor*. Erin supervised the inspection of girders and floorbeams at the ends of the spans that were inaccessible to the snooper. She created the work plan and safety plan for two SPRAT Level 1 inspectors and rigged the rope access system in the anchorage house and around the lifting machinery. The work required coordination with boat traffic as the twin double bascule spans open approximately twice a day.
07/16	**Alabama Dept. of Transportation – In-depth Inspection of Cochrane-Africatown USA Bridge | Mobile, AL** – *Bridge Inspection*. Erin was one of twelve rope access technicians inspecting stay-cables and portions of the concrete towers using rope access techniques. Her inspection covered stay-cables and upper concrete surfaces that were beyond the reach of the manlift, exterior concrete surfaces on the towers and cross beams below deck and the interiors of the tower legs below deck.

Firm employed by	**HDR Engineering, Inc.**		
Name	**Herbert Protin, PE**	Years of relevant experience with this employer	19
Title	Movable Bridge Structural Discipline Lead	Years of relevant experience with other employer(s)	21
Degree(s) / Years / Specialization		BE / 1980 / Civil Engineering	
Active registration number / state / expiration date		PE 24GE03973900 New Jersey, Exp. 4/30/2022	
Year registered	1996	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		QA/QC Structural	

Herbert has 40 years of expience with Complex and Movable Bridges and is a recognized leader in the field. He is a published author and a member of Heavy Movable Structures, Inc. (HMS) for 27 years, including a three time member of the Board of Directors of HMS.

Experience dates (mm/yy–11/17)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
08/04-11/17	**Michigan Dept. of Transportation – Rehabilitation of the Houghton Lift Bridge | Houghton, MI** – *Structural QC Reviewer.* QC review included lift span finger joint replacement for this double deck lift span, deck repairs, cleaning and repairs of the lift span expansion rockers, floor beam strengthening, gusset plate plug weld analysis and repairs, guide casting retrofit design and later lift span adjustments.
03/21-04/21	**New Hampshire Dept. of Transportation – Replacement of the Memorial Bridge over the Piscataqua River | Portsmouth, NH and Kittery, ME** – *Lead Movable Bridge Engineer.* Herbert's responsibilities included the preliminary design of the replacement of a 300 ft through truss span drive lift span and two 300-ft through truss approach spans. Post-tensioned anchors and a new concrete cap were deigned to strengthen the granite pier systems for seismic loading. Herbert served as the lead movable bridge engineer during the preparation of Design Build procurement documents and during the review of the Design Build team's design and construction inspection of the mechanical and electrical for the project.
08/04-11/17	**CSX Transportation – Movable Bridge On-call Engineering Services (Swing Bridges - Alabama) | Mobile, AL** – *Lead Movable Bridge Engineer and Quality Control Engineer.* Developed design concepts and construction staging for the replacement of the existing swing span Bayou Sara Bridge. Herbert served as Quality Control Engineer for the final design. During construction support services, Herbert was the lead Structural Designer for revised staging to accelerate the project construction. He also performed Structural QC for Chickasaw and 3 Mile Bridges. This project was an ACEC Award Recipient for Accelerated Bridge Construction.
06/17-12/17	**CSX Transportation – Movable Bridge On-call Engineering Services (Swing Bridges – Louisiana) | Statewide LA** – *Structural QC Reviewer.* Herb was responsible for the QC review of structural design of access platforms on Chef Menteur and Riglots.
03/08-08/20	**Sacramento County – Tower Bridge | Sacramento, CA** – *QC Reviewer.* Herbert reviewed the span lock replacement on the tower drive lift span to accommodate new street cars traffic.
06/07-04/10	**New Jersey Dept. of Transportation – Re-decking of Route 1 & 9 Lift Bridge over the Passaic River | Newark and So. Kearney, NJ** - *Project Manager.* Herbert managed the deck replacement for this 333-ft long tower drive vertical lift span, removal of the existing half-filled steel grid deck and replacement with new galvanized heavy-duty riveted steel grid deck. The deck design used six-inch cut channel sections as main bearing bars riveted to secondary and sinusoidal bars. The new deck was proposed to remove excessive

	dead load from the mechanical and electrical systems. The project also included the removal of concrete filled riveted steel grid deck sidewalks and replacement with slip resistant aluminum plank decking. Design conformed to the 2007 AASHTO LRFD Specifications as modified by NJDOT.
05/09-12/10	**New Jersey Dept. of Transportation - Construction Inspection Services for the N.J. Route 7 (1953) Hackensack River (Wittpenn) Bridge Interim Priority | Jersey City and Kearny, NJ** – *Project Manager.* Herbert led the mechanical and electrical construction inspection of the interim repairs to this 200-ft long skewed span drive vertical lift bridge. Interim repairs intended to keep the bridge in operation until a new span is constructed included replacements of the sheaves, trunnion bearing bushings, and counterweight ropes and repairs to the live load shoes and miscellaneous steel and concrete repairs.
03/07-10/08	**New Jersey Dept. of Transportation - Rehabilitation of I-290 (Stickle Bridge) | Newark and Harrison, NJ** - *Senior Movable Bridge Inspector*. Herbert inspected the jacking operations to weight the bridge, temporarily support the counterweights for this tower drive vertical lift span during counterweight rope replacement.
01/09–07/10	**New Jersey Dept. of Transportation - Construction Inspection Services for the PEOSHA Improvements to the Stickle Bridge | Newark, NJ** – *Project Manager*. Herbert performed construction inspection of PEOSHA improvements to the 222-ft long tower drives vertical lift bridge. Improvements included installation of close circuit television to monitor traffic flow and installation of fall arrest systems for ladders
08/02-12/06	**City of Cleveland - Reconstruction of the West 3rd Street Vertical Lift Bridge | Cleveland, OH** – *QC Reviewer*. Herbert reviewed the final design of the reconstruction of a 217-ft span drive vertical lift bridge over the Cuyahoga River. This included structural and mechanical interfaces. Herbert also served as the Project Manager for the Construction Support Services for this project.
04/03-06/06	**New York State Dept. of Transportation - Rehabilitation of Washington Street and Ingersoll Road Lift Bridges over the Erie Canal | Rochester, NY**- *Senior Structural Engineer.* Herbert was responsible for the QC on the rehabilitation of two historic towerless vertical lift bridges over the Erie Canal. The bridges were constructed circa 1912 and are eligible to be listed on the National Register of Historic Places. This project involved the rehabilitation or replacement of mechanical, electrical and structural components of the bridges, architectural renovation of the control towers and highway improvements. The architectural rehabilitation of bridge and control tower was performed to return or retain the original appearance of the structures, extend the life of the bridge and accommodate the modern mechanical and electrical equipment.
09/01-06/02	**City of Milwaukee - McKinley Knapp Street Vertical Lift Bridge | Milwaukee, WI** – *Senior Project Engineer.* Herbert was responsible for the structural design of a 78-ft long towerless vertical lift span replacement for the new McKinley/Knapp Street crossing over the Milwaukee River. He led the design of hydraulically driven rigid frame with under deck counterweights. Longitudinal and transverse equalizing rope systems were used to prevent span misalignment. The project was on a fast track and completed in nine months from the notice to proceed. The project included through trusses rigidly connected to lifting posts, below deck counterweights and a gear driven pinions in the pit at the near side of the bridge drive linear racks mounted to the near side lifting posts. The far side was lifted using equalizing ropes.
6/04-10/09	**Rockland County - Bridge Street Bridge Rehabilitation | Rockland County, NY** – *Project Manager.* The project consisted of rehabilitation of an 1880 historic hand-cranked drawbridge built by the King Iron Bridge Company. The bridge was restored to maintain the historic integrity of the structure. The existing approach span and lift span through trusses and lifting towers were removed rehabilitated and reinstalled. New Alaskan Cedar Decking was installed, along with planters and benches so that the rehabilitated structure can be enjoyed by residents as a linear park area.

Firm employed by	**HDR Engineering, Inc.**				
Name	**Keith Salais, PE (SPRAT 1)**		Years of relevant experience with this employer	2.5	
Title	Project Engineer		Years of relevant experience with other employer(s)	1	
Degree(s) / Years / Specialization		MS / 2018 / Civil Engineering | BS / 2017 / Civil Engineering			
Active registration number / state / expiration date		PE.0046204 Louisiana, Exp. 03-31-2022			
Year registered	2021	Discipline	Civil Engineering		
Contract role(s) / brief description of responsibilities		Bridge Inspection/Design			

Keith has an academic background in structures and geotechnics and a professional background in bridge inspection.
Training Certs: Bridge Inspector Certified, FHWA 130053 (2021), FHWA 130078 (2021); SPRAT Level 1 Rope Access Technician (2019); ANSI/CSA MEWP Operator Certified: 1A, 2B, 3A, and 3B (2020); OSHA Certified in Construction Safety and Health – 30 hours (2016)

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).
02/20-01/21	**Louisiana Department of Transportation and Development (LADOTD) – LADOTD Statewide Bridge Inspections | Statewide, LA** – *Structural EIT*. Keith performed an in-depth (fracture critical and routine) inspection of complex bridges, Alexandria Lift Bridge and Teche Bayou Lift Bridge. As a SPRAT technician, Keith assisted in anchor rigging and rope management and performed ascend/descend and rope-to-rope techniques to access the structure. Keith documented defection location/severity through in-field note-taking and photography. He assisted in the development of the in-depth inspection report.
04/21-07/21	**North Dakota Department of Transportation - Off System Bridge Inspections | Statewide, ND** - *Bridge Inspector.* Keith performed routine inspections of various types of bridges, from reinforced or prestressed concrete to steel, to timber, to a combination of the types. Keith performed routine inspections visually as well as other bridge inspection techniques when needed, e.g. sounding concrete or timber. Keith documented field measurements and defect location/severity through in-field note-taking and photography. Notes were documented per National Bridge Inventory (NBI) and via condition state/element method per National Bridge Inspection Standards (NBIS). Keith used a state-sponsored application called InspectX to take in-field notes and photos and also to develop or quality-control bridge inspection reports in coordination with other inspectors.
04/21-04/21	**Wilson T Ballard Company and Maryland Department of Transportation - Inspection of Bridge No. 1513700 | Silver Spring, MD** - *Bridge Inspector, SPRAT Technician.* Keith performed rope access inspections of bridge bearings, fracture critical floorbeams and concrete piers of bridge no. 1513700, the Capital Beltway Outer and Inner Loop carrying I-495 over the Northwest Branch Anacostia River. Keith documented defect location/severity through in-field note-taking and photography. Fracture critical members were inspected and documented as required by the Federal Highway Administration (FHWA). After the inspection, Keith organized his notes and photo-log for the inspection report and coordinated with the inspection report-writers.
02/20-02/20	**Texas Department of Transportation - Houston Ship Channel Bridge Inspection | Houston, TX** - *Bridge Inspector.* Keith assisted in fracture critical inspection of five-span steel plate girder and pin and hanger bridge (1,230 ft) carrying IH 610 over the Houston Ship Channel. Inspection was completed via snooper and available catwalk.
08/19-08/19	**Texas Department of Transportation - Fracture Critical Bridge Inspection | Waco, TX** - *Structural EIT*. Keith performed fracture critical inspection of two steel truss bridges (SH 147 over Brazos River and FM 817 over Leon River). He utilized "snooper" and bucket trucks to perform hands on/detailed inspection of steel members of the superstructure.

Firm employed by	**HDR Engineering, Inc.**				
Name	**Ronald Sanchez, PE**		Years of relevant experience with this employer	1	
Title	SE Movable Bridge Program Lead		Years of relevant experience with other employer(s)	24	
Degree(s) / Years / Specialization		BS / 1995 / Civil Engineering			
Active registration number / state / expiration date		PE.0036556 Louisiana, Exp. 03/31/2022			
Year registered	2011	Discipline	Civil Engineer		
Contract role(s) / brief description of responsibilities		Bridge Inspection/Design (**Meets MPR 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).
03/20-05/21	**Palm Beach County – Donald Ross Bascule Bridge over ICWW | Palm Beach County, FL** – *Project Manager.* Ronald oversaw complete movable bridge rehabilitation and developed technical special provisions.
03/20-05/21	**Martin County – Hobe Sound Bascule Bridge over the ICWW | Martin County, FL** – *Project Manager.* Ronald was the technical lead for the movable bridge design. This emergency project developed the contract plans, performed utility coordination and prepared permits within 140 days. The scope of work included complete electrical system and submarine cable replacement and replacement of the live load shoes and bumper blocks.
03/20-05/21	**Florida Dept. of Transportation (FDOT) – NE 79th Street Causeway Bascule Bridges Rehabilitation | Miami, FL** – *Project Manager.* Ronald was the technical lead for movable bridge design which included mechanical and electrical rehabilitation of two bridges along the NE 79th Street Causeway.
03/16-02/19	**FDOT – North Causeway Bridge over ICWW | Fort Pierce, FL** – *Project Manager.* This project included the alignment, segmental bridge super and substructure design, drainage, MOT, ITS, geotechnical, hydrogeology, lighting, signalization, signage, paving marking, ROW/utility/railroad/marine coordination, permitting, public involvement, maintenance, control and protection of vehicular and marine traffic, as well as additional roadway design services which addresses adjacent state, frontage and access roads, and railway crossings affected by the project. Ronald was responsible for overseeing the engineering design services for the replacement of SR A1A North Causeway Bridge. The superstructure is prestressed concrete beams (FIB-78), and the substructure is reinforced concrete supported on prestressed concrete pile.
06/17-02/19	**City of Fort Lauderdale – Coconut Isles Bridge Replacement | Fort Lauderdale, FL** – *Project Manager.* The scope of work included permitting, geotechnical investigation, load rating, drainage, utility coordination, bridge bulkhead wall design, temporary bridge, maintenance of traffic, public involvement support as well as bid-phase and post-design services. Ronald provided a Bridge Alternative Study and engineering design services for the replacement of a single-span fixed bridge.
06/18-02/19	**FDOT – I-95 Express Lanes Phase 3C | Broward County, FL** – *Project Manager/Structural Engineer.* Ronald managed and contributed to the independent peer review of twelve Category-2 complex bridge structures, which includes steel plate girders and boxes, steel straddle integral pier caps, non-redundant drilled shafts and unique C-shaped replacement piers. During the contract execution phase, Ronald managed the technical review team for the final plans, as part of the Corridor Design Consultant Team.
03/14-04/18	**FDOT – Wave Streetcar | Fort Lauderdale, FL**– *Structures Lead.* Ronald led and provided design services for the system and infrastructure installation of a proposed Streetcar.
02/13-02/15	**FDOT – Sunny Isles Blvd Bascule Bridge over ICWW | Miami, FL** – *Project Engineer.* Ronald oversaw the complete movable bridge rehabilitation which included Bridge Development Report (BDR) and comprehensive design services required for the rehabilitation of the twin four-lane Sunny Isles Bridges. Ronald designed deck grating, steel cantilever deck support brackets, and span lock installation procedure.

02/13-02/15	**Mississippi Dept. of Transportation (MSDOT) – SR 609 Bascule Replacement	Jackson County, MS** – *Project Lead.* This project includes engineering assessment, structural and geotechnical design for bridges and retaining walls; hydraulic design for bridges; design for roadway, traffic signals plans, ITS, and roadway lighting; as well as design and constructability review services. Designs were completed in accordance with AASHTO, FHWA and MSDOT guidelines and specifications. Ronald led the structural, mechanical and electrical design teams for full rehabilitation of SR 609 bascule bridge as a task-order to the IDIQ Master Bridge Contract.
02/12-03/13	**Miami Dade County – Port Miami/FEC Railroad Rolling Lift Bridge over Biscayne Bay	Miami, FL** – *Project Engineer.* The scope for this fast-track $6 million design-build contract rehabilitated structural and mechanical systems and replaced the entire electrical system. This railroad bridge consists of a through girder Hopkins trunnion single-leaf/single-track 152-ft bascule span. Ronald was responsible for design, calculations, plan preparation and post design of the bridge's structural systems.
08/10-12/12	**FDOT – CSX Railroad Rolling Lift Bridge over the New River	Broward, FL** – *Project Engineer.* Ronald oversaw complete movable bridge rehabilitation which included preliminary PD&E study and final design for the off-line replacement of a single-leaf heavy rail bridge owned and operated by SFRTA and used by CSX Freight and Tri-Rail as an alternate route. Ronald designed the bascule and approach piers. Design challenges included vessel impact, deep mudlines and narrow construction site.
10/10 -12/12	**FDOT – Flagler Memorial Bascule Bridge over the ICWW	Palm Beach, FL** – *Senior Project Engineer.* Ronald oversaw complete movable bridge rehabilitation which included the replacement of the entire bridge off-line and parallel to the existing bridge to maintain traffic for this busy causeway connecting West Palm Beach to Palm Beach. Ronald was responsible for design of the substructure, load rating, quality assurance reviews and post-design services.
06/04-04/10	**FDOT – SR 7 NW 5th Street Bascule Bridge Replacement over the Miami River	Miami, FL**– *Project Engineer.* Ronald was technical lead for the entire design of a new $50 million double-leaf bascule bridge used the appearance of a deck truss Chicago-style trunnion bascule span to fit in with the historic and aesthetic character of Miami's Little Havana community. Ronald designed the bascule pier and footing consisting of 30-ft deep cofferdam, 30" Sq. prestressed piles for AASHTO LRFD loads including vessel collision, steel trunnion towers and access platforms, stairs, door and hatches.
01/08-05/09	**Gasparilla Island Bridge Authority – Boca Grande Swing Bridge over the Gulf ICWW	Placida, FL** – *Project Engineer.* The project consisted of a design study for the replacement of a 248-ft swing span bridge. The project included inspection of the structural, mechanical and electrical systems and rehabilitation and replacement options (swing, and bascule span) with conceptual drawings, alignments and cost estimates. Ronald was responsible for the development of structural alternative, their feasibility and cost estimates.
09/08-12/09	**SCDOT – Ben Sawyer Swing Bridge (SR 703) over the ICWW	Charleston, SC** – *Project Manager.* Ronald was the technical lead for the movable bridge design. The bridge consists of 12 steel plate girder non-redundant approach spans and a 245-ft through truss swing span. Ron designed the approach span steel girder system.
06/01-01/07	**FDOT – SR 786/ PGA Boulevard Bascule Bridge over ICWW| Palm Beach Gardens, FL** – *Structural Engineer.* Ronald was the technical lead for this $15-million multi-phase construction project which included in-depth inspection, condition report with load ratings and recommendations, preparation of structural, mechanical and electrical rehabilitation, and bascule span replacement plans. Ronald was responsible for project coordination, plan development and design of the rehabilitation/replacement of bascule pier, trunnion tower, deck over counterweight and flanking spans for a twin double-leaf Hopkins Trunnion-type bascule bridge with prestressed concrete AASHTO girder approach spans.
01/03-09/03	**City of Fort Lauderdale – SW 11th Avenue over North Fork of New River	Fort Lauderdale, FL**– *Project Engineer.* Ronald was responsible for the preliminary planning for the rehabilitation of a Pony truss swing span. The project included truss repairs, control house replacement and improvements.

Firm employed by	**HDR Engineering, Inc.**				
Name	**Megan Tatara, PE**		Years of relevant experience with this employer	12	
Title	Electrical Engineer		Years of relevant experience with other employer(s)	0	
Degree(s) / Years / Specialization		BE / 2010 / Electrical Engineering			
Active registration number / state / expiration date		PE 24GE05216700 New Jersey, Exp. 4/30/2022			
Year registered	2015	Discipline	Electrical		
Contract role(s) / brief description of responsibilities		Electrical engineering support.			

Megan has 12 years of experience in the design, inspection, and construction of electrical systems. This experience includes highway and railway systems in the forms of movable bridges and transfer bridges. Megan's experience also includes work for hydropower and water management systems in the form of locks and spillway gates, airport lighting design for runways and taxiways, and highway tunnels.

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).
07/21-09-21	**BNSF Railway Company – Movable Bridge Network Assessment | Various Locations, WA and OR |** *Electrical Engineer*. Megan was the electrical inspector for the field inspections of seven movable bridges, documenting the electrical and control system existing conditions and equipment configurations.
02/19-04/19	**Canadian National Railway – Mechanical and Electrical Inspection of Bridge 552 | Morris, IL** – *Electrical Engineer.* Megan performed the inspection, including power analysis of motors at the bridge, visual inspection and functional operation of the bridge electrical systems for the vertical lift bridge. She wrote the inspection report documenting findings, deficiencies and recommendations.
10/17-01/19	**Sacramento Regional Transit District – Downtown Riverfront Streetcar | Sacramento, CA** – *Electrical Engineer.* Megan performed a field visit to assess and document the existing conditions. She designed the power and control modifications to the existing electrical systems on the bridge to integrate operation of the span locks with the streetcar signal system for the vertical lift bridge.
06/15-12/17	**Union Pacific Railroad – Steel Bridge Electrical Rehabilitation Construction Management | Portland, OR** – *Electrical Engineer.* Megan performed daily inspections at the construction site to document contractor progress and attended meetings with the construction team to discuss progress and resolve issues identified during construction for the vertical lift bridge.
06/15-12/17	**Union Pacific Railroad – Steel Bridge Electrical Rehabilitation | Portland, OR** – *Electrical Engineer.* Megan performed review of submittals and RFIs provided by the contractor during construction for the vertical lift bridge.
11/11-03/12	**Canadian Pacific Railroad – Mechanical and Electrical Inspection of Bridge 489.83 | Kansas City, MO** – *Electrical Engineer Coordinator.* Megan performed the inspection, including power analysis of motors at the bridge, insulation resistance testing, visual inspection and functional operation of the bridge electrical systems. She wrote the inspection report documenting findings, deficiencies and recommendations for vertical lift bridge.
05/11-08/14	**Connecticut Dept. of Transportation – Roadway Bridge Inspection | Various Locations, CT** – *Electrical EIT.* Megan performed the inspection, including load current measurements of motors at the bridge, insulation resistance testing, visual inspection and functional operation of the bridge electrical systems for bascule, swing, and vertical lift bridges. She wrote the inspection report documenting findings, deficiencies, and recommendations.
04/15-06/18	**Oregon Dept. of Transportation – Burnside Street Willamette River Bridge Paint and Rehab Project | Portland, OR** – *Electrical Engineer.* Megan designed a new backup power supply infrastructure, span motor drive equipment, and PLC control system. She performed inspection during design and construction for the bascule bridge.

Firm employed by **HDR Engineering, Inc.**			
Name	**John Christopher "Chris" Taylor, PE**	Years of relevant experience with this employer	1
Title	Senior Bridge Engineer	Years of relevant experience with other employer(s)	13
Degree(s) / Years / Specialization		BS / 2006 / Construction Engineering	
Active registration number / state / expiration date		PE. 54282 Arizona, Exp. 12/31/2024	
Year registered	2012	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		Structural Inspection	

Chris has over 14 years of professional experience inspecting, repairing, rehabilitating, and constructing bridges, retaining walls, culverts, tunnels and other structures.

Training: National Highway Institute FHWA-NHI-130053 Bridge Inspection Refresher Training; National Highway Institute FHWA-NHI 13055 Safety Inspection of In Service Bridges; National Highway Institute FHWA-NHI 130078 Fracture Critical Inspection Techniques; National Highway Institute FHWA-NHI135047 Steam Stability and Scour at Highway Bridges for Bridge Inspectors

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).
03/20–02/22	**Arizona Department of Transportation (ADOT) – Bridge Inspection On-Call	AZ** – *Bridge Inspection Team Leader.* Chris inspected structures and performed QC reviews of inspection reports in support of Task Orders 3-16. Inspection types included Routine, In-Depth, Fracture Critical, and Special Inspections of steel and concrete bridges, culverts and the I-10 Deck Park Tunnel. Inspection access methods included ground, ladder, manlift, bucket truck, UBIV, wader, boat and confined space access.
03/20–02/22	**City of Phoenix (COP) - Bridge Inspection On-Call	Phoenix, AZ** – *Bridge Inspection Team Leader.* Chris inspected structures and performed QC reviews of inspection reports in support of the 2019/20, 2020/21, and 2021/22 Aviation, Valley Metro, and Non-NBI inspection task orders. Inspection types included Routine, In-Depth, Fracture Critical, and Special Inspections of bridges. Inspection Access methods included ground, ladder, manlift, boat and confined space access.
07/21–02/22	**Nevada Department of Transportation (NDOT) – Bridge Inspection On-Call	Nevada Districts 1-3** – *Bridge Inspection Team Leader.* Chris's responsibilities included the routine inspection of steel bridges, concrete bridges, concrete culverts, steel culverts and the QC Review of inspection reports in support of the 2021 and 2022 bridge inspection contracts.
01/22–02/22	**Harris County Toll Road Authority (HCTRA) – Washburn Tunnel Inspection	Pasadena, TX** – *Civil/Structural Inspection Team Leader.* Chris's responsibilities included the inspection of the tunnel liner, plenum, retaining walls, and portals during the 2022 tunnel inspection.
01/21–12/21	**North Dakota Department of Transportation (NDDOT) – Bridge Inspection On-Call	North Dakota** – *Bridge Inspection Team Leader.* Chris's responsibilities included the routine inspection of concrete, steel, and timber bridges in support of the 2021 Bridge Inspection contract.
08/21–08/21	**Michigan Department of Transportation (MDOT) – 2021 Mackinac Bridge Fracture Critical Inspection	Mackinaw City, MI** – *Bridge Inspection Team Leader.* Chris's responsibilities included inspecting steel girders, floor beams, stringers, deck, and hangers in support of the 2021 Mackinac Bridge Fracture Critical Inspection. Access methods included the utilization of ladders, bucket trucks, and rail-mounted travelers.

02/19-03/20	**City of Phoenix (COP) – Horizontal Project Management | Phoenix, AZ** – *Project Manager*. Chris managed capital improvement projects through the design and construction phases. Projects included the replacement of the 24th Street Bridge over the Grand Canal, and Grand Canal Pedestrian Bridges as part of Grand Canal Phase I and Phase II Multi-Use Path projects.
05/17–02/19	**Arizona Department of Transportation (ADOT) – Bridge Inspection Program | Statewide, AZ** – *Bridge Inspection Team Leader*. Chris's responsibilities included supporting the Arizona Statewide Bridge Inspection Program by performing routine and fracture critical inspections of state and local agency owned bridges and culverts. Structure types included concrete slab, concrete girder, steel girder, timber girder, concrete culverts, and steel culverts.
03/15-05/17	**City of Omaha – Bridge Inspection Program | Omaha, NE** – *Structures Group Manager*. Chris's responsibilities included the management of the City of Omaha bridge inspection, maintenance, rehabilitation, and replacement programs. Inspection types included Routine, In-Depth, Fracture Critical, and Special Inspections of bridges and culverts. Inspection access methods included ground, ladder, bucket truck, UBIV, wader, and confined space access.
01/13-03/15	**City of Phoenix (COP) – Bridge and Dam Safety Program | Phoenix, AZ** –*Deputy Program Manager*. Chris's responsibilities included supporting the City's Bridge and Dam Safety Program consisting of 540+ bridges, 16 dams, and 4 levees. Other responsibilities included inspecting bridges, culverts, dams, and levees, managing the repair and rehabilitation job order contract, and maintaining compliance with FHWA's 23 Performance Metrics.
09/08–01/13	**Arizona Department of Transportation (ADOT) – Bridge Inspection Program | Statewide, AZ** – *Bridge Inspection Specialist*. Chris's responsibilities included supporting the Arizona Statewide Bridge Inspection Program by inspecting state and local agency owned bridges and culverts, scheduling inspections for 6 in-house inspection teams, and maintaining compliance with the FHWA's 23 Performance Metrics.
11/07-09/08	**Arizona Department of Transportation (ADOT) – Interstate 10 Widening | Tucson, AZ** – *Kiewit Structures Field Engineer*. Chris's responsibilities included the management of operational budgets and schedules, procurement of materials and equipment, and performing pre-pour inspections for 16 AASHTO girder bridges, cast-in-place retaining walls, and storm drainage junction structures.
01/07-11/07	**Maricopa County Department of Transportation (MCDOT) – Cotton Lane Bridge over the Gila River | Goodyear, AZ** - *Kiewit Structures Field Engineer*. Chris's responsibilities included the management of operational budgets and schedules, procurement of materials and equipment, and performing pre-pour inspections for bridges built over the RID Canal and the Gila River.

Firm employed by **HDR Engineering, Inc.**				
Name	**Brian Zeiger, PE (SPRAT 1)**		Years of relevant experience with this employer	20
Title	Bridge Program Manager		Years of relevant experience with other employer(s)	18
Degree(s) / Years / Specialization			MS / 1988 / Civil Engineering | BS / 1983 / Civil Engineering	
Active registration number / state / expiration date			PE 11141 Kansas, Exp. 04/30/2023	
Year registered	1988	Discipline	Civil Engineering	
Contract role(s) / brief description of responsibilities			Bridge Inspector/Design	

Brian's experience includes management of multiple projects including coordination of design and plan development, design of steel and concrete structures, design of bridge rehabilitations, routine and in-depth bridge inspections, fracture critical bridge inspections, load rating of bridges and quality control process. **Training Certs:** SPRAT Level 1 Rope Access Technician; NHI-130055 Safety Inspection of In-Services Bridges; FHWA-NHI-135087 Scour at Highways Bridges; FHWA-NHI-130053 Bridge Inspection Refresher Training; FHWA-NHI-130078 Fracture Critical Inspection Techniques for Steel Bridges; FHWA-NHI-135047 Stream Stability and Scour at Highway Bridges for Bridge Inspectors; FHWA-NHI-135086 Stream Stability Factors and Concepts (Prerequisite)

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).
2008-2011	**Texas Department of Transportation (TxDOT) - Corpus Christi Harbor Bridge Inspection | Corpus Christi, TX** – *Rope Access Inspector*. Brian performed an in-depth inspection, load rating and rehabilitation plans, specifications and estimates for this 1,782 ft deck truss and through truss structure constructed in 1959. The detailed "arms-length" inspection of the bridge required access by man-lifts, under bridge inspection vehicles and industrial rope access techniques.
2009-2012	**New Hampshire DOT - Portsmouth-Kittery Bridge Inspection and Cost Analysis (BICA) including Procurement Services for the Memorial Bridge Replacement | NH** – *Bridge Inspector.* Brian performed in-depth bridge inspection and load capacity ratings for the three bridges - two vertical lift movable truss bridges and one through-truss arch bridge. He prepared estimates of current and future costs for serviceability, continued use, operation and maintenance for the three bridges. The determination of the cost for a complete superstructure replacement with a modern through-truss vertical lift structure for the Memorial Bridge.
2013	**City of Memphis - Harahan Bridge | Memphis, TN** – *Lead Bridge Inspector and Rope Access Inspector.* The project consisted of the inspection of the northern portionof the Harahan Bridge over the Mississippi River in preparation for the design of a new walkway on the north side of the existing UPRR bridge. This roadway was in use prior to the construction of a new highway bridge several years ago and has been idle since this project to convert it to a walkway. Brian led two inspection teams, one rope access and one working via man-lift.
2014	**Kansas DOT - Statewide Fracture Critical | Statewide KS** – *Senior Bridge Inspector*. This project involved the assessment of approximately 1,500 off-system bridges owned by the cities and counties of a 25-county region in southwest Kansas. Brian performed in-depth fracture critical inspections for the fracture critical bridges.
2007	**Alaska DOT & Public Facilities - Fracture Critical and Special Bridge Inspections | Various Locations, AK** – *Bridge Inspector/Rope Access Inspector.* Brian was responsible for fracture critical inspection of two fracture critical bridges. The bridges consisted of steel single and multi-span bridges of various types including trusses and rolled shapes. His responsibilities included inspection of fracture critical members and fatigue prone details.

2014	**Port Authority of New York and New Jersey - Bayonne Bridge | Bayonne, NJ** – *Bridge Inspector.* Brian performed fracture critical inspection of a 1,675 ft steel arch bridge using rope-access prior to the modification necessary to raise the roadway deck of this structure. He participated in final inspection and repair reports.
2010-Ongoing	**TxDOT Bridge Division - Bridge-Fracture Critical Bridge Inspection | Statewide TX** – *Bridge Inspector.* Brian performed field inspection and report preparation for the Statewide Fracture Critical Bridge Inspection Contracts for TxDOT, totaling 682 bridges to date. Work Authorization #3 included the inspection of TxDOT's inventory of cable-stayed bridges: the Fred Hartman Bridge (twin 78-ft roadways, northbound and southbound) over the Houston Ship Channel and the Veterans Memorial Bridge (54-ft roadway, eastbound) over the Neches River.
2016-Ongoing	**Golden Gate Bridge, Highway and Transportation District - Golden Gate Bridge Fracture Critical Bridge Inspection | San Francisco, CA** – *Bridge inspector.* Inspections of fracture critical members that are difficult to access were performed within "arm's length" using industrial rope access. The inspection of 179 truss members, 168 floorbeams, 3 girder spans and portions of the main cables were completed within three weeks using a team of up to seven inspectors and seven rigging technicians.
2014-2017	**Missouri Department of Transportation - Statewide On-Call Fracture Critical Inspections | Statewide Missouri** – *Project Manager.* Brian managed the on-call contract to provide 12 fracture critical bridge inspections in six counties across the State. The bridge types and elements consisted of box girders, thru trusses, floorbeams, steel capbeams and two-girder systems. In addition to bridges over waterways, HDR inspected bridges over both the UPRR and the BNSF as well as City streets. The bridges over the railroads were accessed with under bridge inspection vehicles (UBIV's). Other access methods for the project consisted of ladders, on-foot and various sizes of man-lifts.
2017-2021	**Colorado Department of Transportation - Statewide Bridge Inspection | Statewide CO** - *QA Reviewer.* Brian reviewed for inspection reports of over 3,500 on-system and off-stem bridges of various types. Additional activities included on-site audits of bridge inspection teams.
2020-2021	**North Dakota Department of Transportation – Statewide Bridge Inspection | Statewide ND** – *QA Lead.* Brian led the inspection, including add-ons or additional investigation service needs, load rating and reporting, including report development, critical findings and quality control on over 1,000 bridges in the Southwest region.
2018-2021	**Mississippi Department of Transportation – Statewide Bridge Inspection | Statewide MS** – *QA Inspector.* Brian reviewed bridge inspections on-site for accuracy and completeness of inspection procedures and reporting. This activity consisted of follow-up inspections of numerous bridge types.

Firm employed by	**Collins Engineers, Inc.**		
Name	**Drew Garceau, PE, CWI**	Years of relevant experience with this employer	16
Title	Structural Inspection Program Manager	Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization	BS / 2007 / Civil Engineering MBA / 2017 / Master of Business Administration		
Active registration number / state / expiration date	PE 46494 Louisiana, Exp. 9/30/2022		
Year registered: 2022	Discipline: Civil Engineering		
Contract role(s) / brief description of responsibilities	Inspection Team Leader; Rope Access Supervisor; Non-Destructive Testing (NDT)		

Mr. Garceau has 16 years of extensive experience performing complex, fracture critical, and in-depth above water bridge inspections; rope access climbing inspections of bridges; and ultrasonic pin and hanger inspections. His inspection capabilities are supplemented by being a Certified Welding Inspector as well as NDT Level II Ultrasonic Testing certified. Climbing inspections are supplemented by being certified to the highest level, Level III, by the Society of Professional Rope Access Technicians (SPRAT). He has performed the inspection of more than 2,000 bridges and is a NHI Certified Instructor.

Training: Society of Professional Rope Access Technician – SPRAT Level III; FHWA-NHI Course 130055 - Safety Inspection of In-Service Bridges; FHWA-NHI Course 130053 - Bridge Inspection Refresher Training; FHWA-NHI Course 130078 - Fracture Critical Inspection Techniques for Steel Bridges; FHWA-NHI Course 130087 - Inspection and Maintenance of Ancillary Highway Structures; FHWA-NHI Course 130099A - Bridge Inspection Non-Destructive Evaluation Showcase (BINS); FHWA-NHI Course 130091 - Underwater Bridge Inspection; FHWA-NHI Course 133117 – Maintenance of Traffic for Supervisors; NDT Certified - Level II Magnetic Particle and Ultrasonic Testing; Confined Space Entry; Fall Protection Training; Advanced Structural Climbing Safety and Rescue.

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).
06/08-09/21	**Montana DOT, Climbing Bridge Inspections Term Contracts (2008-2021), Statewide, MT – Project Manager/QC Officer/Team Leader** Drew was responsible for being the project manager, leading rope access inspection teams, report generation, and quality control reviews of deliverables. Project included term contracts that encompassed 132 rope access climbing inspections for 54 of Montana's largest bridges (many lard river crossings) and most difficult to access bridges for the 2008 through 2021 inspection seasons, which included in-depth, hands-on, fracture critical inspections of all bridge elements. Inspectors followed the SPRAT safe practices guidelines to perform the rope access techniques necessary to inspect the bridges for this project. Inspectors provided NBI and element level inspections for each bridge inspected. Detailed inspection reports were prepared for each bridge in addition to element level inspection data which was uploaded directly into Montana's Structure Management System (SMS). Project included the 2017 emergency inspection and mobilization of the Dearborn River Bridge which was temporarily closed due to the crossing of an overweight vehicle.
05/21-11/21	**Wisconsin DOT, St. Croix Crossing Bridge Inspection, Stillwater, MN – Project Manager/Rope Access Team Leader** Drew was responsible for being the project manager, leading rope access inspection teams, report generation, and quality control reviews of deliverables. Project included the two-week long inspection of the St. Croix Crossing Bridge, a new main river crossing that spans Minnesota Trunk Highway (TH) 95, the Union Pacific Railroad (UPRR), wetlands, and the St. Croix River between the communities of Oak Park Heights, MN and St. Joseph, WI. The St. Croix Crossing Bridge totals 5,579 ft in length with four main spans of 600 ft. It consists of eight concrete box girder approach spans and six extradosed main spans. Multiple access methods were employed including rope access, under bridge inspection vehicles, boats, man lifts, and drones. A significant amount of the inspection effort was geared toward the interior of the concrete boxes where confined space entry methods were utilized.

08/15-11/15 07/18-11/18 07/19-11/19 07/20-11/20	**Iowa DOT, Major River Crossing Bridge Inspections (2015 & 2018-2020), IA — Project Manager/ Team Leader** Drew was responsible for providing project management, coordination, planning, and performed field inspection. Project included the fracture critical inspection of large Mississippi River bridge crossings including a 400-ft tall, 2,267-ft long cable-stayed Bridge on USH-34 over the Mississippi River in Burlington, IA and a 1,653-ft long through truss bridge on Iowa Highway 9 over the Mississippi River in Lansing, IA, and IH-74 twin 5,018-ft long suspension bridges in Bettendorf, IA.
11/20-12/20	**Virginia DOT, High Rise Bridge Moveable Bridge Inspection – Rope Access Team Leader** Drew was responsible for leading rope access climbing inspections on this project. Collins performed the inspection of VDOT Bridge 131-2527, Interstate 64 over the Southern Branch of Elizabeth River (High Rise Bridge) for the Hampton Roads District of VDOT. This four-lane bridge consists of one, 280 ft long steel double leaf bascule span with thirty-nine steel multi-girder approach spans and is 4,825 ft long total. The inspections performed include the Routine Inspection in November 2020, the Fracture Critical Inspection in November 2021, and an In-depth Design Level Inspection in January 2022. An Aspen A-62 (UBIV) with traffic control (nighttime right lane closures) was utilized for the hands-on inspection of each of the approach spans. SPRAT compliant rope access was utilized to access the interior portion of Bascule Piers 21 and 22 and each movable leaf of Span 22.
06/11-08/18	**South Carolina DOT Ravenel Bridge System & Coastal Bridge Asset Management – Inspection Team Member** Drew was responsible for leading rope access climbing inspections on this project. Collins provided in-service bridge inspection, evaluation, and design services for the Arthur Ravenel Bridge System and coastal bridges in Beaufort, Berkeley, and Charleston counties. Inspections include biennial routine, emergency, fracture critical, construction, and warranty item specific frequency inspections. The Ravenel Bridge System is comprised of 18 bridges and encompasses over six miles of structures. The four coastal bridges in Berkeley and Charleston Counties encompass nearly 10.5 miles of structures and the two Beaufort County bridges encompass over 10 miles of structures. The bridges are considered complex, ranging from multi-level interchanges, cable-stayed systems, prestressed concrete beam and tub girders, post-tensioned girders and deck, steel plate girders, and flat slabs.
05/19-11/19	**Wisconsin DOT – Complex Inspection of Blatnik Bridge, Superior, WI – Project Manager/Rope Access Team Leader** Drew was responsible for being the project manager, leading rope access inspection teams, report generation, and quality control reviews of deliverables. Project included the complex, fracture critical, and ultrasonic testing (UT) of 202 bridge pins on the Blatnik Bridge (B-16-0005) in accordance with the NBIS and WisDOT Structure Inspection Manual. Four (4) snooper trucks were required to perform inspection of approach spans as well as underdeck of main spans. Manlifts (1) was used to inspect the truss tied arch span above the deck and access inspection locations from the ground underneath the bridge. SPRAT rope access climbing was available and used as necessary to perform the truss inspection. A drone/UAV was used to supplement the inspection teams. Drew performed additional NDT as necessary to verify cracks and/or section loss.
02/16-12/16 & 02/18-12/18	**East End Crossing Cable-Stayed Bridge Inspection – Lewis & Clarke Bridge, Louisville, KY – Rope Access Team Leader** Drew was responsible for leading rope access inspection teams. Collins provided the initial in-depth inspection and annual routine inspections of the Lewis and Clark Cable-Stayed Bridge in Louisville, KY, totaling six inspection cycles. The Lewis and Clark Bridge opened to the public in 2016 and consists of a 2,500-ft.-long cable-stayed bridge crossing the Ohio River with a main span of 1,200 ft. The inspection included a hands-on inspection of all fracture critical members, including the floor beams, edge girders, and cable anchor boxes. SPRAT rope access climbing inspection techniques were used to perform a hands-on inspection of the concrete towers and all of the cable-stays. Rope lengths of up to 660 ft. were used to slide the entire length of the longest cables. A detailed inspection report was prepared, including photographs, figures, and element level quantities and ratings.

Firm employed by	**Collins Engineers, Inc.**			
Name	**Beau Kamrath, PE**		Years of relevant experience with this employer	5
Title	Civil/Structural Engineer		Years of relevant experience with other employer(s)	3
Degree(s) / Years / Specialization		BS / 2013 / Structural Engineering		
Active registration number / state / expiration date		PE 46453 Louisiana, Exp. 9/30/2022		
Year registered	2022	Discipline	Civil Engineering	
Contract role(s) / brief description of responsibilities		Bridge Inspection		

Mr. Kamrath has eight years of experience performing the safety inspection of bridges above and below water. His inspection experience includes above and underwater bridge inspections and is supplemented by being certified to the highest level, Level III, by the Society of Professional Rope Access Technicians (SPRAT and being commercially trained and certified as an ADCI Surface-Supplied Air Diver. He routinely performs bridge inspections on complex bridges and performs underwater diving inspections on statewide bridge inspection projects.

Training: Society of Professional Rope Access Technician – SPRAT Level III; FHWA-NHI Course 130055 - Safety Inspection of In-Service Bridges; FHWA-NHI Course 130053 - Bridge Inspection Refresher Training; FHWA-NHI Course 130078 - Fracture Critical Inspection Techniques for Steel Bridges; FHWA-NHI Course 130091 - Underwater Bridge Inspection; FHWA-NHI Course 130087 - Inspection and Maintenance of Ancillary Highway Structures; FHWA-NHI Course 135046 - Stream Stability & Scour; Nondestructive Testing Certified - Level II Ultrasonic Testing; ADCI Surface-Supplied Air Diver; UAS Part 107 Pilot

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).
06/16-10/21	**Montana DOT, Climbing Bridge Inspections Term Contracts, Statewide, MT – Inspection Team Member** Beau was responsible for performing rope access climbing inspections as a team member. Project included term contracts that encompassed 70 rope access climbing inspections for 26 of Montana's largest bridges and most difficult to access bridges for the 2008 through 2021 inspection seasons, which included in-depth, hands-on, fracture critical inspections of bridge elements. Inspectors followed the SPRAT safe practices guidelines to perform the rope access techniques necessary to inspect the bridges for this project. Inspectors provided NBI and element level inspections for each bridge inspected. Detailed inspection reports were prepared for each bridge in addition to element level inspection data which was uploaded directly into Montana's Structure Management System (SMS).
11/20-12/20	**Virginia DOT, High Rise Bridge Moveable Bridge Inspection – Rope Access Team Leader** Beau was responsible for performing bridge inspections including rope access climbing inspections on this project. Collins performed the inspection of VDOT Bridge 131-2527, Interstate 64 over the Southern Branch of Elizabeth River (High Rise Bridge) for the Hampton Roads District of VDOT. This four-lane bridge consists of one, 280 ft long steel double leaf bascule span with thirty-nine steel multi-girder approach spans and is 4,825 ft long total. The inspections performed include the Routine Inspection in November 2020, the Fracture Critical Inspection in November 2021, and an In-depth Design Level Inspection in January 2022. An Aspen A-62 (UBIV) with traffic control (nighttime right lane closures) was utilized for the hands-on inspection of each of the approach spans. SPRAT compliant rope access was utilized to access the interior portion of Bascule Piers 21 and 22 and each movable leaf of Span 22.
01/20-12/21	**Virginia DOT, Safety Inspections of Highway Structures, Bridges, and Traffic Control Devices (2016-2020), Hampton Roads District, VA – Inspection Team Leader** Beau was responsible for leading and performing inspections on 18 bridges and performing QC on 18 reports. Project included above water and underwater routine, fracture critical, and initial NBIS inspections. Work also included ultrasonic testing (including

	fracture critical bridge bins), magnetic particle testing, dye penetrant testing, rope access climbing techniques, night inspections, MOT plans, mobile lane closures, and detailed inspection reports submitted on time.
11/20-12/21	**VDOT Hampton Roads I-64 High Rise Bridge Inspections – Team Leader/QC** Beau was responsible for above water inspections and QC review of inspection reports. Collins has performed three inspections of VDOT Bridge 131-2527, Interstate 64 over the Southern Branch of Elizabeth River (High Rise Bridge) for the Hampton Roads District of VDOT. This four-lane bridge consists of one, 280' long steel double leaf bascule span with thirty-nine steel multi-girder approach spans and is 4,825 ft long total. The inspections performed include the Routine Inspection in November 2020, the Fracture Critical Inspection in November 2021, and an In-depth Design Level Inspection in January 2022.
06/20-07/21	**VDOT Hampton Roads Berkley Bridge Inspections – Team Leader/Diver/QC** Beau was responsible for the above water and underwater inspection of the JRB and Berkley Fender Systems and QC for VDOT. Collins performed the inspection of each VDOT Bridge 122-1804, Interstate 264 WB over the Eastern Branch of Elizabeth River (Berkley Bridge) and VDOT Bridge 122-2722, Interstate 264 EB over the Eastern Branch of Elizabeth River (Berkley Bridge) for the Hampton Roads District of VDOT. Bridge 122-1804 is a four-lane bridge consisting of one, 260' long steel double leaf bascule span with nineteen steel multi-girder approach spans and is 2,128' long total and Bridge 122-2722 is a four-lane bridge consisting of one, 260' long steel double leaf bascule span with three steel multi-girder approach spans and six prestressed concrete multi-beam approach spans and is 1200' long total. The inspections performed include the routine inspection of each bridge in June 2020. Collins is currently under contract to perform the routine inspection of each structure in June of 2022.
02/18-12/18	**East End Crossing Cable-Stayed Bridge Inspection – Lewis & Clarke Bridge, Louisville, KY – Rope Access Team Leader** Beau was responsible for being a rope access inspection team member and aiding in the bridge inspection of the stay cables. Collins provided the initial in-depth inspection and annual routine inspections of the Lewis and Clark Cable-Stayed Bridge in Louisville, KY, totaling six inspection cycles. The Lewis and Clark Bridge opened to the public in 2016 and consists of a 2,500-ft.-long cable-stayed bridge crossing the Ohio River with a main span of 1,200 ft. The inspection included a hands-on inspection of fracture critical members, including the floor beams, edge girders, and cable anchor boxes. SPRAT rope access climbing inspection techniques were used to perform a hands-on inspection of the concrete towers and the cable-stays. Rope lengths of up to 660 ft. were used to slide the entire length of the longest cables. A detailed inspection report was prepared, including photographs, figures, and element level quantities and ratings.
01/17-12/17	**Mississippi DOT OSARC Complex Bridge Insp 2017, Statewide, MS - Team Member** Beau was responsible for being a rope access inspection team member and aiding in bridge inspections. The project included performing four bridge inspections in accordance with the National Bridge Inspection Standards on bridges located throughout the state. The inspections included NBI and Element Level inspections. Bridge types included steel girder, movable span, and trusses that were fracture critical. Beau prepared formal reports of the inspection findings for each bridge site. The formal reports included damage assessments and recommendations for repair of bridge deficiencies.

Firm employed by	**Collins Engineers, Inc.**		
Name	**Barritt Lovelace, PE**	Years of relevant experience with this employer	7
Title	Director of UAS, Reality Modeling and Artificial Intelligence	Years of relevant experience with other employer(s)	18
Degree(s) / Years / Specialization		BS / 1996 / Civil Engineering	
Active registration number / state / expiration date		PE 40456 Minnesota, Exp. 6/30/2022	
Year registered	2000	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		Bridge Inspection and Design services	

Mr. Lovelace has more than 24 years of structural engineering experience in bridge design, load rating, safety inspection, and bridge rehabilitation. He has been the Lead Design Engineer for over 50 bridge projects including prestressed concrete, steel, cast-in-place concrete, curved steel and timber bridges. Mr. Lovelace has performed above and underwater inspections of numerous bridges and marine facilities. He has performed the safety inspection of over 3,000 bridges, including major river crossing bridges. Mr. Lovelace is a certified rope access technician and is experienced in non-destructive testing and fracture critical inspection procedures. He was the project manager for the development of the Minnesota Department of Transportation's Bridge Inspection Program Manual. Barritt has performed UAS work on over 500 bridge and other asset inspections and has led or been a team member on 6 UAS related research project. He has given over 100 presentations worldwide on using UAS for engineering applications. Mr. Lovelace is an instructor of adult learning and has completed the NHI Instructor Training Course. He currently teaches NHI classes for the Federal Highway Administration.
Training: Society of Professional Rope Access Technician – SPRAT Level I; FHWA-NHI Course 130055 - Safety Inspection of In-Service Bridges; FHWA-NHI Course 130053 - Bridge Inspection Refresher Training; FHWA-NHI Course 130078 - Fracture Critical Inspection Techniques for Steel Bridges; FHWA-NHI Course 130091 - Underwater Bridge Inspection; UAS Part 107 Pilot

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).
05/21-11/21	**Wisconsin DOT (WisDOT), St. Croix Crossing Bridge Inspection, Stillwater, MN – Inspection Team Member/UAS Pilot** In 2021, Barritt was responsible for leading UAS inspections on the bridge and creating a 3D digital twin model of the structure. Project included the two-week long inspection of the St. Croix Crossing Bridge, a new main river crossing that spans Minnesota Trunk Highway (TH) 95, the Union Pacific Railroad (UPRR), wetlands, and the St. Croix River between the communities of Oak Park Heights, MN and St. Joseph, WI. The St. Croix Crossing Bridge totals 5,579 ft in length with four main spans of 600 ft. It consists of eight concrete box girder approach spans and six extradosed main spans. Multiple access methods were employed including rope access, under bridge inspection vehicles, boats, man lifts, and drones. A significant amount of the inspection effort was geared toward the interior of the concrete boxes where confined space entry methods were utilized.
05/19-09/19	**Minnesota DOT (MnDOT), St. Croix Crossing Bridge Inspection, Stillwater, MN – Project Manager/UAS Pilot** In 2019, Barritt was responsible for being the project manager and leading inspection teams throughout the inspection. He also led UAS inspections on the bridge and creating a 3D digital twin model of the structure. Project included the two-week long inspection of the St. Croix Crossing Bridge, a new main river crossing that spans Minnesota Trunk Highway (TH) 95, the Union Pacific Railroad (UPRR), wetlands, and the St. Croix River between the communities of Oak Park Heights, MN and St. Joseph, WI. The St. Croix Crossing Bridge totals 5,579 ft in length with four main spans of 600 ft. It consists of eight concrete box girder approach spans and six extradosed main spans. Multiple access methods were employed including rope access, under bridge inspection vehicles, boats, man lifts, and drones. A significant amount of the inspection effort was geared toward the interior of the concrete boxes where confined space entry methods were utilized.

05/19-11/19	**Wisconsin DOT – Complex Inspection of Blatnik Bridge, Superior, WI – Inspection Team Member/UAS Pilot** Barritt was responsible for being an inspection team member and he also led UAS inspections on the bridge and creating a 3D digital twin model of the structure. Project included the complex, fracture critical, and ultrasonic testing (UT) of 202 bridge pins on the Blatnik Bridge (B-16-0005) in accordance with the NBIS and WisDOT Structure Inspection Manual. Four (4) snooper trucks were required to perform inspection of approach spans as well as underdeck of main spans. Manlifts (1) was used to inspect the truss tied arch span above the deck and access inspection locations from the ground underneath the bridge. SPRAT rope access climbing was available and used as necessary to perform the truss inspection. A drone/UAV was used to supplement the inspection teams. Additional NDT was performed as necessary to verify cracks and/or section loss.
10/21-12/21	**Complex Inspection of Rio Grande Gorge Bridge, Taos, New Mexico – Inspection Team Member/UAS Pilot** Barritt was responsible for being an inspection team member throughout the inspection. He also led UAS inspections on the bridge and creating a 3D digital twin model of the structure. Collins performed the fracture critical inspection of the Rio Grande Gorge Bridge. The Bridge is a 1,200-foot-long steel deck truss bridge spanning over the Rio Grande River, approximately 600 feet below the bridge deck. The project involved the fracture critical inspection of the lower chord of the deck truss. A team of four rope access inspectors utilized rope-to-rope transfers to achieve arms-length inspection of the lower chord and gusset connections.
02/18-12/18	**Minnesota DOT, Fracture Critical System Analysis for Steel Bridges, Twin Cities Metro Area, MN – Project Manager** Barritt was responsible for project manager duties and leading inspection teams throughout the inspection. Project included the structural analysis of steel bridges on the Minnesota Bridge System statewide. The overall goal was to utilize refined analysis techniques under the American Association of State and Highway Transportation Officials Load Resistance Factor Design Manual, Section 6.6.2, on specific structure types, particularly steel pier caps, to determine structural redundancy. This refined analysis demonstrated if a structure has adequate strength and stability sufficient to avoid partial or total collapse and therefore does not need to be considered fracture critical any longer. Structures of this type included designated fracture critical bridges that likely exhibited structural redundancy, such as steel pier caps, steel arches, and/or two-girder steel systems.
05/20-11/21	**Minnesota DOT (MnDOT) Statewide Underwater Bridge Inspections, Statewide, MN – Inspection Team Leader** Barritt performed underwater diving bridge inspections as a team leader. Project included bridges spanning various waterways throughout Minnesota. The bridges ranged from 20 to 300 feet in length, with depths up to 60 feet, currents up to 3 feet per second, and, at times, very limited visibility. Collins performed 570 underwater inspections. Collins also prepared a Scour Monitoring Training Program for the Minnesota DOT that included 2 weeks of classroom lecture and activities in conjunction with 2 weeks of on-site field activities. As part of the project, Collins prepared training documents, assisted with equipment selection, directed mounting hardware fabrication, and implemented software setup in an effort to fully train the DOT's Hydraulics Department in state-of-the-art scour monitoring and hydrographic surveying technologies. The project utilized technologies such as mechanical scanning and mobile multi-beam sonar operations. Underwater survey data was collected during field activities and was subsequently processed into 3D models by the MnDOT participants during classroom learning exercises.

Firm employed by	**Collins Engineers, Inc.**		
Name	**Michael A. Seal, PE**	Years of relevant experience with this employer	1
Title	Senior Project Manager	Years of relevant experience with other employer(s)	20
Degree(s) / Years / Specialization	BS/2000/Civil & Structural Engineer		
Active registration number / state / expiration date	PE 46395 Louisiana, Exp. 9/30/2022		
Year registered: 2022	Discipline: Civil Engineering		
Contract role(s) / brief description of responsibilities	Inspection Team Leader		

Mr. Seal has 21 years of extensive experience performing complex, fracture critical, and in-depth above water bridge inspections; and rope access climbing inspections of bridges. Project scopes included bridge inspections, bridge rehabilitations, bridge structural health monitoring, and both nondestructive and destructive testing on bridges. He has participated in more than 2,400 bridge inspections in a total of 23 states and has climbed on more than 400 bridges. Mr. Seal is an NBI Team Leader, SPRAT Level III Technician, and has experience in the use of both destructive and non-destructive testing methods to evaluate structural conditions. He has load rated multiple bridges, including trusses, timber, and concrete. He has also been involved with field instrumentation and structural health monitoring on multiple significant bridges, including the Brooklyn Bridge in New York City; Brent Spence Bridge in Cincinnati, Mathews Bridge in Jacksonville, and the Virgin River Gorge I-15 bridges in Arizona.

Training: Society of Professional Rope Access Technician – SPRAT Level III; FHWA-NHI Course 130055 - Safety Inspection of In-Service Bridges; FHWA-NHI Course 130053 - Bridge Inspection Refresher Training; FHWA-NHI Course 130078 - Fracture Critical Inspection Techniques for Steel Bridges; FHWA-NHI Course 130087 - Inspection and Maintenance of Ancillary Highway Structures; Confined Space Entry; Fall Protection Training

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
06/18-09/20	**Iowa DOT, Major River Crossing Bridge Inspections (2015 & 2018-2020), IA — Project Manager/ Team Leader** Mike was responsible for providing project management, coordination, planning, and leading inspection teams including all rope access climbing. Project included the fracture critical inspection of large Mississippi River bridge crossings including a 400-ft tall, 2,267-ft long cable-stayed Bridge on USH-34 over the Mississippi River in Burlington, IA and a 1,653-ft long through truss bridge on Iowa Highway 9 over the Mississippi River in Lansing, IA, and IH-74 twin 5,018-ft long suspension bridges in Bettendorf, IA.
05/20-08/20 05/12-08/12 05/05-08/05	**Astoria Truss Bridge (2020/2012/2005), Astoria, OR – Lead Access Supervisor** Mike was responsible for providing coordination, planning, and leading inspection teams including all rope access climbing. Project included the fracture critical inspection of approach truss, anchor truss, and main truss spans for this continuous cantilevered through truss crossing the Columbia River. With a main span length of 1,232 feet and a total length of 21,474 feet, it is the longest continuous truss in the US. Used rope access and adapted climbing techniques to inspect all necessary elements of the bridge. Digital photographs and field notes were taken, and a short form report was prepared.
04/08-12/21	**Oklahoma DOT, On- and Off-System Fracture Critical Inspections (2008-2021), Statewide, OK – Team Leader** Mike was responsible for providing coordination, planning, and leading inspection teams including all rope access climbing. Project included the inspection of fracture critical bridges, including truss and two-beam structures and included bridges on both state roads and local agency structures. Additionally, took field measurements of truss bridges for load rating purposes, including measurements of the gusset plates. Performed load ratings and analysis on multiple truss bridges and assisted with gusset plate analysis.
06/18-10/18	**Complex Inspection of John A. Roebling Bridge (2018), Cincinnati, OH - Lead Access Supervisor** Mike was responsible for providing coordination, planning, and leading inspection teams including all rope access climbing. Project included multiple fracture critical inspections of this historic 139-year-old suspension bridge connecting Covington,

	Kentucky and Cincinnati, Ohio. This bridge over the Ohio River has a main span of 1,057 feet. Weight limit restrictions did not allow for the use of heavy machinery; therefore, an arm's length inspection of the floor system, truss, and cable connections was used using rope access and adapted climbing techniques. Field notes were recorded and submitted electronically to the DOT, eliminating the need for paper notes.
11/16-04/17	**Dames Point Cable-Stayed Bridge Inspection (2016/2007), Jacksonville, FL - Team Leader/Lead Access Supervisor** Mike was responsible for providing planning, and leading inspection teams including all rope access climbing. Project included multiple inspections of this 2 mile-long, 175-foot-high bridge. The main span measures 1,600 feet long with 300-foot towers. Cable lengths ranged from 65 to 720 feet long. All cables were accessed at arm's length utilizing internally adapted rolling techniques. All towers, cable and deck anchorages, and other bridge portions were inspected. A confined space underwater inspection was required to access the towers below at the river bottom. A long form and BrM report was generated.
6/17-8/21	**Mississippi DOT, Complex and Timber Bridge Inspections and Load Ratings, Statewide, MS – Project Manager** Mike was responsible for providing project management, coordination, planning, and leading inspection teams. Project included an in-depth inspections and load ratings of multiple local agency bridges in multiple counties in Mississippi. All bridges received a hands-on inspection of all timber and fracture critical components. Bridge deterioration was noted, and timber components were field measured and verified for load ratings. All visible components for all bridges were load rated when required. Concrete superstructure beams were rated with BrR, with member sections requiring manipulation as section properties did not match available standard sections in the software. A custom designed spreadsheet was used in conjunction with MIDAS software to build a model that could be used for different span lengths and substructure pile spacing. Field measurements did not match standard MDOT drawings, so values had to be hand entered to build the model for each substructure. MDOT standard InspectTech reports were generated for each structure, complete with condition comments, repair recommendations, and load rating summary results. Bridges were rated for HS-20, H-20, HL-93, and multiple Mississippi specific truck loadings.
04/20-09/20	**Complex Climbing Inspection of Brent Spence Bridge (I-71/I-75) (2020), Cincinnati, OH - Lead Access Supervisor** Mike was responsible for leading rope access bridge inspection teams and maintain safety oversight. Project included multiple fracture critical inspection of components of the approach and truss on this bi-level cantilevered through truss with a main span of 831 feet. This bridge carries I-71 and I-75 over the Ohio River into downtown Cincinnati. Total length of the structure is 1,737 feet of truss spans and 1,187 feet of approach spans. Geometric conditions and significant traffic make lane closures not an option. All components were accessed at an arm's-length distance used rope access and modified fall protection techniques, eliminating the need for traffic control. Field notes were recorded and submitted electronically to the DOT, eliminating the need for paper notes. In the late summer of 2004, Michael participated in a fatigue study on the structure. The team used climbing techniques to instrument strain gauges on the bridge to collect traffic and fatigue data over a 2-week period.

Firm employed by	**Collins Engineers, Inc.**		
Name	**Michael Spencer, PE**	Years of relevant experience with this employer	9
Title	Structural Engineer/Inspector Engineer-Diver	Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization	BS / 2012 / Civil Engineering		
Active registration number / state / expiration date	PE. 062-070248 Illinois, Exp. 11/30/2023		
Year registered	2018	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities	Bridge Inspection		

Mr. Spencer has nine years of experience in the inspection and analysis of bridges and various waterfront structures. He has in-depth technical experience with complex, fracture critical, and element level inspections, underwater inspections, various rope access (climbing) inspections, hydrographic surveying, and underwater acoustic imaging. Mr. Spencer has been involved with the inspection and reporting of over 600 bridges and various structures. Climbing inspections are supplemented by being certified to the highest level, Level III, by the Society of Professional Rope Access Technicians (SPRAT). He is commercially trained and certified as an ADCI Surface-Supplied Air Diver. He routinely performs bridge inspections on complex bridges and performs underwater diving inspections on statewide bridge inspection projects.

Training: Society of Professional Rope Access Technician – SPRAT Level III; FHWA-NHI Course 130055 - Safety Inspection of In-Service Bridges; FHWA-NHI Course 130053 - Bridge Inspection Refresher Training; FHWA-NHI Course 130078 - Fracture Critical Inspection Techniques for Steel Bridges; FHWA-NHI Course 130087 - Inspection and Maintenance of Ancillary Highway Structures; FHWA-NHI Course 130091 - Underwater Bridge Inspection; Confined Space Entry; Fall Protection Training; ADCI Surface-Supplied Air Diving 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).
06/16-10/21	**Montana DOT, Climbing Bridge Inspections Term Contracts, Statewide, MT – Inspection Team Member** Mike was responsible for performing rope access climbing inspections as a team member. Project included term contracts that encompassed 70 rope access climbing inspections for 26 of Montana's largest bridges and most difficult to access bridges for the 2008 through 2021 inspection seasons, which included in-depth, hands-on, fracture critical inspections of all bridge elements. Inspectors followed the SPRAT safe practices guidelines to perform the rope access techniques necessary to inspect the bridges for this project. Inspectors provided NBI and element level inspections for each bridge inspected. Detailed inspection reports were prepared for each bridge in addition to element level inspection data which was uploaded directly into Montana's Structure Management System (SMS).
04/19-12/21	**Illinois DOT (IDOT) Large River Crossing Bridge Inspections, Statewide, IL – Project Manager/Inspection Team Leader** Mike was responsible for being the project manager and leading inspection teams. Mike preformed all inspection planning, budgeting, and inspection of these large complex bridges. Collins performed the inspection and reporting of 16 major river bridges throughout the state of Illinois on a task-order basis over three years. The bridges included many of Illinois DOT's (IDOT) largest and most complex structures including arch, suspension, through truss, deck truss, and deck girder bridges ranging in length from 1,000 ft to 5,000 ft long. The inspections utilized multiple inspection teams coordinating snooper trucks, aerial manlifts, bucket trucks, rope access climbing, confined space entry, and drones to perform the in-depth, fracture critical, and element level inspection of each bridge. Collins coordinated inspection windows with snooper truck rental companies, railroad flagman, and traffic control companies to ensure all aspects needed to perform the work were in place. Ultrasonic Testing (UT) of structural pins was performed on several structures. Final reports were issued to the IDOT Bridge Office complete with bridge rating forms, sketches, photographs, and deficiency tables.

05/19-09/19	**Minnesota DOT (MnDOT), St. Croix Crossing Bridge Inspection, Stillwater, MN – Inspection Team Member** Mike was responsible for being an inspection team member using rope access climbing techniques. He also led UAS inspections on the bridge and creating a 3D digital twin model of the structure. Project included the two-week long inspection of the St. Croix Crossing Bridge, a new main river crossing that spans Minnesota Trunk Highway (TH) 95, the Union Pacific Railroad (UPRR), wetlands, and the St. Croix River between the communities of Oak Park Heights, MN and St. Joseph, WI. The St. Croix Crossing Bridge totals 5,579 ft in length with four main spans of 600 ft. It consists of eight concrete box girder approach spans and six extradosed main spans. Multiple access methods were employed including rope access, under bridge inspection vehicles, boats, man lifts, and drones. A significant amount of the inspection effort was geared toward the interior of the concrete boxes where confined space entry methods were utilized.
02/16-12/16 & 02/18-12/18	**East End Crossing Cable-Stayed Bridge Inspection – Lewis & Clarke Bridge, Louisville, KY – Rope Access Team Leader** Mike was responsible for leading rope access inspection teams. Collins provided the initial in-depth inspection and annual routine inspections of the Lewis and Clark Cable-Stayed Bridge in Louisville, KY, totaling six inspection cycles. The Lewis and Clark Bridge opened to the public in 2016 and consists of a 2,500-ft.-long cable-stayed bridge crossing the Ohio River with a main span of 1,200 ft. The inspection included a hands-on inspection of all fracture critical members, including the floor beams, edge girders, and cable anchor boxes. SPRAT rope access climbing inspection techniques were used to perform a hands-on inspection of the concrete towers and all of the cable-stays. Rope lengths of up to 660 ft. were used to slide the entire length of the longest cables. A detailed inspection report was prepared, including photographs, figures, and element level quantities and ratings.
05/19-08/19	**South Carolina DOT Ravenel Bridge System & Coastal Bridge Asset Management – Inspection Team Member** Mike was responsible for performing rope access climbing inspections on this project. Collins provided in-service bridge inspection, evaluation, and design services for the Arthur Ravenel Bridge System and coastal bridges in Beaufort, Berkeley, and Charleston counties. Inspections include biennial routine, emergency, fracture critical, construction, and warranty item specific frequency inspections. The Ravenel Bridge System is comprised of 18 bridges and encompasses over six miles of structures. The four coastal bridges in Berkeley and Charleston Counties encompass nearly 10.5 miles of structures and the two Beaufort County bridges encompass over 10 miles of structures. The bridges are considered complex, ranging from multi-level interchanges, cable-stayed systems, prestressed concrete beam and tub girders, post-tensioned girders and deck, steel plate girders, and flat slabs.
01/17-12/19	**Chicago DOT, Bridge Inspection Program (2017-2019), Chicago, IL – Inspection Team Leader** Mike was responsible for performing rope access climbing inspections on this project. Project included inspection of all 376 bridges in the City's inventory, including movable bridges, fixed spans over water, viaducts, pedestrian walkways, and expressway overpasses utilizing bucket boats, bucket trucks, manlifts, and SPRAT inspection techniques. The full scope of inspection services include routine, fracture critical, element level, underwater, and special inspections including numerous structures over the Chicago River, Cal-Sag Channel, and Calumet River with main spans over 200 feet. Responsible for leading inspection teams in the field and oversight of the report and form preparation.
06/16-08/16	**Idaho Transportation Department, Above Water Bridge Inspection (2016), Statewide, ID – Inspection Team Member** Mike was responsible for performing rope access climbing inspections on this project. Project included performing 8 fracture critical climbing and ultrasonic pin testing bridge inspections. As part of the inspection of bridges over water, a stream profile was taken and recorded in the inspection report on the upstream side of the bridge. Access was gained through the use of SPRAT rope access climbing techniques. The bridge inspection services included thorough field inspections, preparation of reports in computerized format, digital pictures on with at least two photographs for each structure.

Firm employed by	**Collins Engineers, Inc.**		
Name	**Daniel Stromberg, PE, SE (ADCI)**	Years of relevant experience with this employer	33
Title	Civil/Structural Engineer	Years of relevant experience with other employer(s)	5
Degree(s) / Years / Specialization		BS / 1983 / Structural Engineering	
Active registration number / state / expiration date		PE 36176 Louisiana, Exp. 9/30/2023	
Year registered	2011	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		Underwater Inspection	

Mr. Stromberg has over 38 years of experience in the inspection and design for a wide range of highway and railroad bridges. To date, he has managed and/or conducted well over 5,000 above and below water inspections on a diverse collection of private and public sector structures throughout the United States. For many of the bridges inspected, he has incorporated underwater imaging and/or above water drone-based surveying techniques to complement his hands-on physical inspections. Based on his inspection work, Mr. Stromberg has prepared or overseen the preparation of thousands of assessment reports that detail and evaluate the inspection findings. Mr. Stromberg's reports have also included detailed repair or replacement measure recommendations along with associated construction cost estimates. Mr. Stromberg has also prepared numerous feasibility/concept study reports that presented cost/benefit analyses and evaluations for identified repair or replacement alternatives. Also related to his inspections, Mr. Stromberg has performed well over 500 load capacity ratings based on original construction details and his assessment of existing conditions.

Training: FHWA-NHI Course 130055 - Safety Inspection of In-Service Bridges; FHWA-NHI Course 130053 - Bridge Inspection Refresher Training; FHWA-NHI Course 130078 - Fracture Critical Inspection Techniques for Steel Bridges; FHWA-NHI Course 130091 - Underwater Bridge Inspection; ADCI Surface-Supplied Air Diver; CPR; First-Aid

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).
05/20-11/21	**Minnesota DOT (MnDOT) Statewide Underwater Bridge Inspections, Statewide, MN – Inspection Team Leader** Dan performed underwater diving bridge inspections as a Team Leader. Project included bridges spanning various waterways throughout Minnesota. The bridges ranged from 20 to 300 feet in length, with depths up to 60 feet, currents up to 3 feet per second, and at times, very limited visibility. Collins performed 570 underwater inspections. Collins also prepared a Scour Monitoring Training Program for the Minnesota DOT that included 2 weeks of classroom lecture and activities in conjunction with 2 weeks of on-site field activities. As part of the project, Collins prepared training documents, assisted with equipment selection, directed mounting hardware fabrication, and implemented software setup to fully train the DOT's Hydraulics Department in state-of-the-art scour monitoring and hydrographic surveying technologies. The project utilized technologies such as mechanical scanning and mobile multi-beam sonar operations. Underwater survey data was collected during field activities and was subsequently processed into 3D models by the MnDOT participants during classroom learning exercises.
01/15-12/15	**Golden Gate Bridge Highway and Transportation District, Golden Gate Bridge Diving Inspection, San Francisco, CA – Project Manager/Team Leader/Engineer Diver** Dan performed underwater diving bridge inspections as a Team Leader and was the Project Manager. Project included the underwater inspection of the Golden Gate Bridge South and North Tower Piers, the south tower fender construction, and the channel bottom around and adjacent to each pier, as well as throughout the bridge waterway. The work included in-depth diving inspection, extensive marine growth removal, and below water 'hands-on' data collection. In addition, underwater imaging of the substructure and surveying of the seabed using sector-scanning and multi-beam sonars was part of the inspection effort. Detailed reports for both the diving inspection results and the underwater imaging and surveying were developed that presented the evaluation of current conditions, along with recommendations for needed repairs or maintenance measures.

01/14-12/14	**Caltrans, Underwater Inspection of all Major Bridges in the San Francisco Bay, CA – Project Manager/Team Leader/Engineer-Diver** Dan performed underwater diving bridge inspections as a Team Leader and was the Project Manager. Project included, as part of various task orders under Collins two Caltrans underwater inspection contracts, the routine underwater inspection of every major bridge in the San Francisco Bay, including the San Francisco/Oakland Bay Bridge, Richmond/San Rafael Bridge, San Mateo/Hayward Bridge, Carquinez Bridge, Antioch Bridge and the Dunbarton Bridge. The underwater inspections were conducted in water depths of up to 100 feet, with low-visibility and tidal currents of up to 4 feet per second. Underwater acoustic imaging of the typically large substructure units, along with hydrographic surveying of surrounding channel bottom was also performed to supplement the diving operations. For all inspections, standard Caltrans reports were prepared and downloaded into Caltrans' database system.
01/14-11/14	**Washington State DOT, Underwater Bridge Inspections Statewide, WA – Project Manager/Team Leader/Engineer-Diver** Dan performed underwater diving bridge inspections as a Team Leader and was the Project Manager. Project included, as part of various task orders under eight successive IDIQ contracts, the inspection of over 250 highway bridges throughout the state, as well as the state's various ferry terminals within the Puget Sound. The inspections were for steel, concrete and timber structures located in waterways that included: the deep reservoirs in Mossyrock, WA; various Puget Sound passages; and the Columbia, Lewis, Skagit, Snoqualmie, and Snohomish River; and multiple inspections at the Tacoma Narrows Bridge, with water depths in excess of 100 feet and strong tidal currents. For bridges with deeper water and/or strong currents, underwater imaging of substructure components was employed to supplement the diving operations. Based on the inspection/imaging results, reports were prepared that included condition assessment and remedial measure recommendations along with state-specific inspection and dive operations forms.
01/15-12/15	**Nevada DOT, Statewide Underwater Inspection of On-System and Off-System Bridges, NV – Project Manager/Team Leader/Engineer-Diver** Dan performed underwater diving bridge inspections as a Team Leader and was the Project Manager. Project included, under four successive contract selections, the underwater inspection of over 200 highway bridges throughout the state of Nevada. Work included preparation of inspection procedure documentation for each bridge, and post- inspection development of an assessment report for each bridge in the State's InspectTech asset management system. In addition to hands-on diving inspection, underwater imaging and/or drone-based surveying was used when needed to further detail bridge/waterway configuration and conditions. Along with 48-month-cycle routine inspections, yearly special inspections were also conducted for 10 bridges identified to have conditions warranting annual monitoring. Also, during the first quarter of 2016, emergency, post-event, underwater inspections were conducted for some 50 bridges during the aftermath of significant flooding on the Truckee and Carson Rivers.
01/15-12/15	**Missouri DOT, Underwater Inspection of Off-System Bridges under Various Task Orders, MO – Project Manager/Team Leader/Engineer-Diver** Dan performed underwater diving bridge inspections as a Team Leader and was the Project Manager. Project included, as part of yearly task orders under two successive contract selections between 2009 and 2015, the underwater inspection and assessment of 25 large, off-system bridges throughout Missouri over waterways that included the Mississippi River, Missouri River, Table Rock Lake, and Lake of the Ozarks. In instances where significant water depths and/or waterway currents were present, underwater imaging of the bridge substructure was used to supplement the diving operations. Based on the inspections, detailed technical reports were prepared for each bridge with condition assessment and ratings and repair or maintenance recommendations.

Firm employed by	**Collins Engineers, Inc.**		
Name	**Chris Thrift, NICET IV**	Years of relevant experience with this employer	6
Title	Project Manager/Team Leader	Years of relevant experience with other employer(s)	17
Degree(s) / Years / Specialization		Certificate / 1997 / Construction Management	
Active registration number / state / expiration date		NICET IV 113463, Exp. 1/5/2023	
Year registered	2017	Discipline	Engineering Technologies
Contract role(s) / brief description of responsibilities		Inspection Team	

Mr. Thrift is a NICET IV certified project manager and bridge inspector with 23 years of continuous experience in the field of NBIS bridge safety inspections. He is a NBIS-qualified team leader and has inspected over 3,000 simple to complex bridges nationwide for numerous agencies. He has performed routine and complex inspections, as well as fracture critical inspections requiring NDE, specialized access equipment, traffic control, and extensive planning and coordination. His inspection experience includes bridge structures of all types and materials including major bridge structures with fracture critical members and fatigue prone details. He is also an experienced rope access technician certified by the Society of Professional Rope Access Technicians.

Training: Society of Professional Rope Access Technician – SPRAT Level III; FHWA-NHI Course 130055 - Safety Inspection of In-Service Bridges; FHWA-NHI Course 130053 - Bridge Inspection Refresher Training; FHWA-NHI Course 130078 - Fracture Critical Inspection Techniques for Steel Bridges; FHWA-NHI Course 130087 - Inspection and Maintenance of Ancillary Highway Structures; FHWA-NHI Course 130091 - Underwater Bridge Inspection; FHWA-NHI Course 133117 - Maintenance of Traffic for Supervisors; FHWA-NHI Course 133119 - Safe and Effective Use of Law Enforcement Personnel in Work Zones; Confined Space Entry; Fall Protection Training

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
06/16-10/21	**Montana DOT, Climbing Bridge Inspections Term Contracts, Statewide, MT – Inspection Team Member** Chris was responsible for performing rope access climbing inspections as a team member. Project included term contracts that encompassed 70132 rope access climbing inspections for 2654 of Montana's largest bridges and most difficult to access bridges for the 2008 through 2021 inspection seasons, which included in-depth, hands-on, fracture critical inspections of all bridge elements. Inspectors followed the SPRAT safe practices guidelines to perform the rope access techniques necessary to inspect the bridges for this project. Inspectors provided NBI and element level inspections for each bridge inspected. Detailed inspection reports were prepared for each bridge in addition to element level inspection data which was uploaded directly into Montana's Structure Management System (SMS). Project included the 2017 emergency inspection and mobilization of the Dearborn River Bridge which was temporarily closed due to the crossing of an overweight vehicle.
01/20-12/21	**Virginia DOT, High Rise Bridge Moveable Bridge Inspection – Project Manager/Team Leader** Chris was responsible for preparing fee estimates, scheduling work, managing the budget, and submitting final deliverables. Collins performed the inspection of VDOT Bridge 131-2527, Interstate 64 over the Southern Branch of Elizabeth River (High Rise Bridge) for the Hampton Roads District of VDOT. This four-lane bridge consists of one, 280 ft long steel double leaf bascule span with thirty-nine steel multi-girder approach spans and is 4,825 ft long total. The inspections performed include the Routine Inspection in November 2020, the Fracture Critical Inspection in November 2021, and an In-depth Design Level Inspection in January 2022. An Aspen A-62 (UBIV) with traffic control (nighttime right lane closures) was utilized for the hands-on inspection of each of the approach spans. SPRAT compliant rope access was utilized to access the interior portion of Bascule Piers 21 and 22 and each movable leaf of Span 22.

05/19-08/19	**South Carolina DOT Ravenel Bridge System & Coastal Bridge Asset Management – Inspection Team Member** Chris was responsible for performing rope access inspection work. Collins provided in-service bridge inspection, evaluation, and design services for the Arthur Ravenel Bridge System and coastal bridges in Beaufort, Berkeley, and Charleston counties. Inspections include biennial routine, emergency, fracture critical, construction, and warranty item specific frequency inspections. The Ravenel Bridge System is comprised of 18 bridges and encompasses over six miles of structures. The four coastal bridges in Berkeley and Charleston Counties encompass nearly 10.5 miles of structures and the two Beaufort County bridges encompass over 10 miles of structures. The bridges are considered complex, ranging from multi-level interchanges, cable-stayed systems, prestressed concrete beam and tub girders, post-tensioned girders and deck, steel plate girders, and flat slabs.
02/18-12/18	**East End Crossing Cable-Stayed Bridge Inspection – Lewis & Clarke Bridge, Louisville, KY – Rope Access Team Member** Chris was responsible for performing rope access inspections. Collins provided the initial in-depth inspection and annual routine inspections of the Lewis and Clark Cable-Stayed Bridge in Louisville, KY, totaling six inspection cycles. The Lewis and Clark Bridge opened to the public in 2016 and consists of a 2,500-ft.-long cable-stayed bridge crossing the Ohio River with a main span of 1,200 ft. The inspection included a hands-on inspection of all fracture critical members, including the floor beams, edge girders, and cable anchor boxes. SPRAT rope access climbing inspection techniques were used to perform a hands-on inspection of the concrete towers and all of the cable-stays. Rope lengths of up to 660 ft. were used to slide the entire length of the longest cables. A detailed inspection report was prepared, including photographs, figures, and element level quantities and ratings.
05/19-12/20	**Federal Highway Administration Bridge Inspections, EFL 2020 CUYA and NSRR Bridge Insp, Statewide, OH - Project Manager/Team Leader** Chris was responsible for scheduling work and as team leader performed inspections, QC or reports and final submittal. Project included performing the routine inspection of 18 bridges owned and maintained by the National Park Service, throughout the Cuyahoga Valley National Park in Ohio and the Upper Delaware National Scenic and Recreational River in New York and Pennsylvania. The bridge types included suspension, single, multi-span, and continuous, concrete, prestressed concrete, and steel multi-beams, girders, box beams, and slabs, and masonry arches. Collins planned and scheduled the field work to minimize disruption to traffic and provide efficient mobilization and demobilization. Element quantities were verified against quantities obtained from the design or as-built plans. Each report included a cover sheet, structure summary, recommended work and estimated costs, NBI Coding/Condition Evaluations and Ratings, load rating information, bridge profile drawing indicating scour, erosion, and vertical clearances, SI&A sheet, and photos of defects and deficiencies encountered during the inspections. Element level inspection sheets for each structure were prepared, in accordance with AASHTO, and populated the quantities and conditions state quantities.
05/20-12/20	**Federal Highway Administration, EFL 2020 GSMNP Bridge Inspection, Statewide, TN - Project Manager/Team Leader** Chris was responsible for scheduling work and as team leader performed inspections, QC or reports and final submittal. Project included performing the routine inspection of 50 bridges and 2 tunnels, owned and maintained by the National Park Services, throughout the Greater Smokey Mountain National Park. The bridge types included single, multi-span, and continuous, concrete, prestressed concrete, and steel multi-girder/beams, concrete arches, concrete box beams, and concrete girders. Responsibilities include scheduled work and as team leader performed inspections, QC or reports and final submittal.

Firm employed by	**Collins Engineers, Inc.**		
Name	**Jon M. Wittrock, PE, CWI**	Years of relevant experience with this employer	11
Title	Civil/Structural Engineer, Engineer-DIver	Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization		BS / 2010 / Civil Engineering	
Active registration number / state / expiration date		PE 43360-6 Wisconsin, Exp. 7/31/2022	
Year registered	2015	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		Inspection and Nondestructive Testing	

Mr. Wittrock has 10 years of experience performing complex, fracture critical, and in-depth above water bridge inspections; rope access climbing inspections of bridges; and ultrasonic pin and hanger inspections. His inspection capabilities are supplemented by being a Certified Welding Inspector as well as NDT Level II Ultrasonic Testing certified. Climbing inspections are supplemented by being certified by the Society of Professional Rope Access Technicians (SPRAT). He has performed the inspection of more than 500 bridges and is a NHI Certified Instructor. Mr. Wittrock routinely performs NDT on bridges including ultrasonic testing and magnetic particle testing.

Training: Society of Professional Rope Access Technician – SPRAT Level I; FHWA-NHI Course 130055 - Safety Inspection of In-Service Bridges; FHWA-NHI Course 130053 - Bridge Inspection Refresher Training; FHWA-NHI Course 130078 - Fracture Critical Inspection Techniques for Steel Bridges; FHWA-NHI Course 130087 - Inspection and Maintenance of Ancillary Highway Structures; FHWA-NHI Course 130099A - Bridge Inspection Non-Destructive Evaluation Showcase (BINS); FHWA-NHI Course 130091 - Underwater Bridge Inspection; FHWA-NHI Course 133117 – Maintenance of Traffic for Supervisors; NDT Certified - Level II Magnetic Particle and Ultrasonic Testing; Confined Space Entry; Fall Protection Training.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
05/21-11/21	**Wisconsin DOT, St. Croix Crossing Bridge Inspection, Stillwater, MN – Assistant Project Manager/ Team Leader** Jon was responsible for being the assistant project manager, leading inspection teams, report generation, and quality reviews of deliverables. Project included the two-week long inspection of the St. Croix Crossing Bridge, a new main river crossing that spans Minnesota Trunk Highway (TH) 95, the Union Pacific Railroad (UPRR), wetlands, and the St. Croix River between the communities of Oak Park Heights, MN and St. Joseph, WI. The St. Croix Crossing Bridge totals 5,579 ft in length with four main spans of 600 ft. It consists of eight concrete box girder approach spans and six extradosed main spans. Multiple access methods were employed including rope access, under bridge inspection vehicles, boats, man lifts, and drones. A significant amount of the inspection effort was geared toward the interior of the concrete boxes where confined space entry methods were utilized.
08/15-11/15 07/18-11/18 07/19-11/19 07/20-11/20	**Iowa DOT, Major River Crossing Bridge Inspections (2015 & 2018-2020), IA — Team Member** Jon was responsible for providing field inspections as a team member. Project included the fracture critical inspection of large Mississippi River bridge crossings including a 400-ft tall, 2,267-ft long cable-stayed Bridge on USH-34 over the Mississippi River in Burlington, IA and a 1,653-ft long through truss bridge on Iowa Highway 9 over the Mississippi River in Lansing, IA, and IH-74 twin 5,018-ft long suspension bridges in Bettendorf, IA.
05/19-11/19	**Wisconsin DOT – Complex Inspection of Blatnik Bridge, Superior, WI – Assistant Project Manager/ Team Leader** Jon was responsible for being the assistant project manager, leading inspection teams, report generation, and quality reviews of deliverables. Project included the complex, fracture critical, and ultrasonic testing (UT) of 202 bridge pins on the Blatnik Bridge (B-16-0005) in accordance with the NBIS and WisDOT Structure Inspection Manual. Four (4) snooper trucks were required to perform inspection of approach spans as well as underdeck of main spans. Manlifts (1) was used to inspect the truss tied arch

	span above the deck and access inspection locations from the ground underneath the bridge. SPRAT rope access climbing was available and used as necessary to perform the truss inspection. A drone/UAV was used to supplement the inspection teams. Jon performed additional NDT to verify cracks and/or section loss.
06/16-10/21	**Montana DOT, Climbing Bridge Inspections Term Contracts, Statewide, MT – Inspection Team Member** Jon was responsible for performing rope access climbing inspections as a team member. Project included term contracts that encompassed 70 rope access climbing inspections for 26 of Montana's largest bridges and most difficult to access bridges for the 2008 through 2021 inspection seasons, which included in-depth, hands-on, fracture critical inspections of all bridge elements. Inspectors followed the SPRAT safe practices guidelines to perform the rope access techniques necessary to inspect the bridges for this project. Inspectors provided NBI and element level inspections for each bridge inspected. Detailed inspection reports were prepared for each bridge in addition to element level inspection data which was uploaded directly into Montana's Structure Management System (SMS).
04/17-10/17	**Wisconsin DOT, Routine & Fracture Critical Inspections of 2 Bridges, Green Bay, WI – Engineer Inspector** Jon was responsible for performing bridge inspections as a team member. Project included the routine and fracture critical inspections of 2 bridges (B-5-658 STH 29EB to USH 41NB and B-5-660 USH 41NB to STH 29WB). The bridges have 10 and 15 spans respectively and each consist of 2 steel tub girders. The interior of the tub girders were inspected utilizing confined space entry methods and the exterior of the tub girders were inspected utilizing an under bridge inspection truck (UBIT) for access. The inspections required detailed traffic control to close all lanes of traffic below the fly over ramps as well as coordination with the CN Railroad for working over live railroad tracks.
01/16-12/17	**Montana DOT, Pin and Hanger Inspection (2016-2017), Statewide, MT – NDT Level II Inspector** Jon was responsible for performing NDT bridge inspections of bridge pins. Project included inspection of pins on 53 bridges. Work entailed the ultrasonic testing of steel pins and hangers, as well as steel pins on transverse girder elements. Testing included ultrasonic testing, phased array testing, magnetic particle testing, and dye penetrant testing.
04/16-06/16	**Richmond Metropolitan Authority, Boulevard Bridge Pin Ultrasonic Testing, Richmond, VA – NDT Level II Inspector** Jon was responsible for performing NDT bridge inspections of bridge pins. Project included ultrasonic testing of 32 deck truss bridge pins. Due to maintenance of traffic and load restrictions on the structure, rope access techniques were used to access the pins from the bridge deck. A letter report including evaluations and recommendations was prepared.
02/14-09/14	**Caltrans, Fracture Critical Inspections, Northern California, CA – NDT Level II Inspector** Jon was responsible for performing NDT bridge inspections of bridge pins using rope access climbing techniques. Project included ultrasonic testing and fracture critical inspection on four truss bridges. Work was performed using rope access techniques. A total of 78 bridge pins were inspected with ultrasonic testing on this work order. Inspection findings were documented, photographed, and compiled into a detailed inspection report for each bridge summarizing findings and recommendations.

Firm employed by **C. H. Fenstermaker & Associates, L.L.C.**					
Name	**Travis Bodin, PLS, PMP**		Years of relevant experience with this employer		16
Title	Vice President, Survey and Mapping		Years of relevant experience with other employer(s)		1
Degree(s) / Years / Specialization			B.S. / 2004 / Industrial Technology		
Active registration number / state / expiration date			PLS.0005067 / LA / 3.31.2022		
Year registered	2011	Discipline	Professional Land Surveyor		
Contract role(s) / brief description of responsibilities			Professional Land Surveyor **(Meets MPR 5)**		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
	Mr. Bodin currently serves as Vice President of Survey at Fenstermaker and has over 17 years of surveying, management, and coordination experience. He is currently responsible for directing and overseeing the daily activities within the Survey Division for all offices and 33 survey crews working across multiple states. He has served as the Lead Surveyor for projects across Louisiana and Texas. His responsibilities have included the management of surveying/ROW services, utility relocation coordination, coordinating with parish, state, and federal agencies and sub-consultants, cost estimating, scoping, scheduling and planning, resource management, and construction management services. With his background in surveying and project management, Mr. Bodin has performed and participated in multi-million-dollar projects consisting of large scale topographic and boundary surveys, right-of-way maps, development of high accuracy GPS networks, setting DOTD monumentation, process and procedural development. With his wide range of managerial and technical experiences, Mr. Bodin was able to obtain his Project Management Professional (PMP) Certification which is acknowledged by agencies around the world as the leading certification for project managers. Mr. Bodin is experienced in the use of the newest versions of MicroStation, AutoCAD, and Trimble Business Center, Office 365, and Primavera 6. Additionally, Mr. Bodin has obtained the following certifications: • ATSSA Traffic Control Technician/Supervisor • ATSSA Registered Flagger • Project Management Professional PMP #2269869 • Transportation Worker Identification Credential (TWIC)
11/18-05/19	**Farm Road Multi-Bridge Replacement (Calcasieu Parish, LA):** Fenstermaker was contracted by Calcasieu Parish Police Jury to provide professional engineering services related to the replacement of two (2) bridges located on Farm Road. Mr. Bodin assisted with survey crew coordination, the review of data collection and boundary surveys.
04/10-09/18	**Lebesque Road Bridge Replacement and Road Reconstruction (Lafayette, LA):** Fenstermaker was contracted by Lafayette Consolidated Government to provide the design of the replacement of Lebesque Bridge and Lebesque Road Reconstruction. Mr. Bodin served as survey principal and provided oversight of survey crew coordination, right-way and boundary surveys, title research, utility coordination, topographic and bathymetric surveys, and the processing of survey data.

12/08-07/18	**LADOTD Permit No. 03030387: Kaliste Saloom Rd Widening, Intersection Improvements, Bridge, and CE&I (LA 3073 to LA 733) Lafayette, LA** - Mr. Bodin served as the Surveyor PM. Fenstermaker performed the topographic survey of all cross street and road tie-ins, cross sections for the purpose of an existing elevation DTM and parcel boundaries effected by the ROW. Mr. Bodin was responsible for field crew coordination, topo/boundary surveys, ROW plats, monuments, data processing, plats, and legal descriptions.
04/12- 09/13	**Baker Canal Bridge (US 61), East Baton Rouge Parish, Louisiana, Survey Tech:** As a subconsultant, Fenstermaker's responsibilities were to survey the existing project extents for the creation of an accurate DTM of the project area, create construction plans, demolition of the existing bridge, and construction of a detour bridge. Mr. Bodin served as survey technician.
03/19-ongoing	**Calcasieu Parish Regional (HUC 8) Watershed Modeling and Planning, Calcasieu Parish, LA:** Fenstermaker provided surveying services within the project area in support of the modeling efforts for the project. The survey task consisted of the collection of roadside ditch inverts, cross drains, high and low cords on existing bridge decks, along with documentation of the existing conditions of the crossings. Mr. Bodin served as the survey director on this project, overseeing all survey tasks and ensuring all data is collected is in conformance with FEMA survey standards.
12/17-08/18	**City of Carencro 2018 Asphalt Overlay (Lafayette Parish, LA):** Fenstermaker was contracted to provide surveying, design, utility coordination, temporary traffic control and construction administration and inspection. The project was located along several different roadways within the City. The planned construction includes milling, overlay and patching along approximately 2,350-ft. of Hector Connoly Road, 1,250-ft. along W. Butcher Switch Road, and 290-ft along Guilbeau Road. The project is following LADOTD Road Design Manual and MUTCD standards and procedures. Mr. Bodin served as Survey Principal and assisted with the processing of survey data and survey crew coordination,
08/14-Ongoing	**Ham Reid Road Roundabout & Extension (Calcasieu Parish):** This project involves professional engineering design and planning services related to the improvement of intersection on Nelson Road at Ham Reid Road. Mr. Bodin, Project Surveyor is responsible for the Topographic Surveying and ROW Plats.

Firm employed by C. H. Fenstermaker & Associates, L.L.C.					
Name	Justin Bordelon, PLS			Years of relevant experience with this employer	15
Title	Manager, Survey 360 Specialist			Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization			B.S. / 2009 / Business Administration		
Active registration number / state / expiration date			PLS 5271 / LA / 03.31.24 ATSSA Traffic Control Supervisor / LA / 3.28.2022 ATSSA Traffic Control Technician / LA / 9.28.2022		
Year registered	2021	Discipline	Land Surveyor **(Meets MPR 4)**		
Contract role(s) / brief description of responsibilities			Surveying Support - Field Coordinator, Survey 360 Specialist		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
Justin Bordelon, PLS is the Advanced Technology Manager in Fenstermaker's Advanced Technology Group. He began performing underwater acoustic investigations and hydrographic surveys at Fenstermaker in 2006. While working at Fenstermaker, Mr. Bordelon attended the University of Louisiana at Lafayette and earned a degree in Business Administration in 2009. As the Advanced Technology Group grew, Mr. Bordelon became a Unit Manager and worked on many projects including an inspection of over 72 bridges for the Louisiana Department of Transportation and Development. In 2015, he became a Party Chief Manager and managed crews in Lafayette, Shreveport, and Midland, Texas. He is responsible for the management of all field resources, including coordinating and supervising the activities of crew personnel, Surv360 Assistants and Surv360 Technicians, as well as field logistics of equipment deployment. In 2018, he became the Advanced Technologies Manager, Survey Specialist and is responsible for Project Management, pre-project planning, quality and accuracy of all field data collection activities and analysis, and client interaction and coordination.	
03/15-05/15	**LADOTD–Harrisonburg Bridge Laser Scanning Survey:** Fenstermaker provided 3D laser scanning and high precision measurement of the in-water and land-based bridge pier supports and superstructure for LADOTD for providing critical measurements used to determine if any misalignment issues exist with the center swing span structure and the land-based approach spans. Fenstermaker also used a high accuracy 1" total station to collect positional data on monitoring targets strategically placed during a previous survey performed five years prior for comparing this data to the positional data collected on these targets during the previous survey. The dataset was critical in illustrating any movement the bridge may have encountered or misalignment issues that have occurred over the 5-year timeframe because of vessel impacts. Mr. Bordelon served as the field technician for data collection and assisted in creating deliverables for this project.
11/11-11/13	**DOTD P.O. No. 005365.5: Underwater Acoustic Imaging for Bridge Inspection Statewide:** Fenstermaker was contracted to provide Underwater Acoustic Imaging (UAI) services for the underwater bridge inspection of pier systems for 72 state-maintained bridges. The project scope consists of an underwater acoustic inspection and evaluation of the submerged components of the piers utilizing a multi-axis, steered beam imaging and profiling remote sensing system with all acoustic data correlated to a Real Time Kinematic (RTK) GPS positioning system. The purpose of the inspection and evaluation is to identify and locate any major damage or deterioration of the pier structures along with

	a detailed localized inspection of any observed anomalies using both the acoustic imaging system and dive inspection; and to identify any localized scour impact or erosion of the surrounding water bottom. The data is then processed and mosaics of the acoustic imagery are generated and included in a report that also documents the findings and recommendations resulting from the UAI and dive inspections. Mr. Bordelon served as the Manager Field Team responsible for the management of all field resources (personnel and equipment) and the quality and accuracy of all field data collection activities. Mr. Bordelon also processed the acoustic, hydrographic and topographic data and generated deliverables for this project.
06/13-07/13	**DOTD SP No. 700-29-0112: Leeville Pier #1, Acoustic Imaging, Lafourche Parish, LA:** Fenstermaker performed a topographic and high definition (laser scan) survey of the West Larose Vertical Lift Bridge on LA 1 in Larose, Louisiana as a subconsultant to support the bridge renovation for LADOTD. As a result of the survey, Fenstermaker established low steel vertical clearances in the bridge up and down positions, bridge pier elevations, and roadway clearances at the approaches, temporary bench marks as a baseline for future surveys, and shoreline topographic surveys on both sides of the channel within the limits of the existing fenders and 50 feet in each direction. Mr. Bordelon served as Project Manager and provided field coordination and review of data collection.
03/20-01/21	**Calcasieu Parish (HUC 8) Watershed Modeling & Planning, Calcasieu Parish, LA:** Fenstermaker provided surveying services within the project area in support of the modeling efforts for the project. The survey task consisted of the collection of roadside ditch inverts, cross drains, high and low cords on existing bridge decks, and documentation of the existing conditions of the crossings. Mr. Bordelon oversaw field coordination, project management, and data processing for all the bathymetric surveys required for the Calcasieu Parish (HUC) 8 Watershed Modeling & Planning Project.
12/12-07/13	**Horace Wilkenson Bridge Mississippi River Bridge Inspection, West Baton Rouge Parish, LA:** Fenstermaker provided an Underwater Acoustic Imaging inspection of a damaged bridge pier fender system, for LADOTD after a ship collided with the bridge, to assist in damage assessment and debris disposition mapping. Mr. Bordelon served as the Field Team Crew Leader and lead acoustic technician on this project, managing the field crew, conducting site visits, processed data, provided QA/QC of data, and prepared the report on findings
10/08-06/10	**Acoustic Survey, Underwater and Structural Inspection of State Maintained Dams Statewide (LA**): Fenstermaker was contracted to perform dam system evaluations of fourteen (14) state-maintained dam systems issued through separate Task Orders including Bundicks Creek Dam, Lower Anacoco Dam, Vernon Lake Dam, Grand Reservoir Dam, Ivan Lake Dam, Iatt Lake Dam, Bayou Cocodrie Dam, Chicot Lake Dam, Lake Claiborne Dam, Black Bayou Dam, Nantachie Lake Dam, Smithport Lake Dam, Kepler Creek Dam, and Turkey Creek Dam. Mr. Bordelon served as the Field Team Crew Leader and lead acoustic technician on this project.
03/10-04/10	**Almonaster Street Bridge Damage Inspection, New Orleans, LA:** Fenstermaker was contracted to perform and Underwater Acoustic Imaging investigation of the Almonaster Avenue Bridge and the fendering system for the bridge. This entailed scanning the bridge abutments as well as the fendering system and Dolphin Cells as well as documenting the disposition of debris on the water bottom. Mr. Bordelon served as survey technician, collecting images of the fender system with MS 1000 in the field and creating the Autocad mosaics.

Firm employed by **C. H. Fenstermaker & Associates, L.L.C.**					
Name	**Dax Douet, P.E.**		Years of relevant experience with this employer	24	
Title	Director, Engineer		Years of relevant experience with other employer(s)	1	
Degree(s) / Years / Specialization			B.S. / 1997 / Civil Engineering		
Active registration number / state / expiration date			PE.0030170 / LA / 9.30.2022		
Year registered	2002	Discipline	Civil Engineering		
Contract role(s) / brief description of responsibilities			Roadway/Traffic Control		

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).
Dax Douet is an Engineering Director with over 24 years of professional civil engineering experience in design, planning, construction oversight, and project management. His core experience is in roadway design, transportation corridor studies, line and grade studies, design of roundabouts, environmental assessments, both open channel and subsurface drainage systems, large one and two-dimensional hydrologic numerical modeling, municipal engineering, and project managing large complex, multi-disciplinary projects. He has served as the lead design engineer and project manager on many transportation projects ranging from both urban and rural local, collector, and arterial roadways, to large interchange projects on the interstate system. He is proficient in Bentley Software project such as Microstation, Storm and Sanitary, and InRoads; HEC-RAS, LADOTD's HYDRWIN, and DHI MIKE 11/MIKE 21/MIKE FLOOD. He has attended ATSSA Traffic Control Technician, Traffic Control Supervisor, and Certified Flagger training courses, participated in NHI Course 142005 NEPA and Transportation Decision Making Process, LADOTD Highway Safety Manual Course, and LADOTD Traffic Engineering Process and Report Training Class.	
02/17-Present	**H.011235.5 I-49 South @ Verot School Road (LA339) (Lafayette, LA):** Fenstermaker, as a sub-consultant, was selected to perform engineering design services for improvements to the existing intersection of U.S. Highway 90 (US 90) (Future I-49 South) and Verot School Road. Mr. Douet is one of the senior design engineers responsible for the widening of existing Verot School Road and improving existing U.S. Hwy. 90 to interstate standards. Mr. Douet aided in the development of a project line and grade study to help facility decision making on the future design for moving the project to preliminary plan development. Mr. Douet led the design of a multi-lane roundabout at the new Verot School Road intersection with South College Road. Mr. Douet also led the public outreach scope of the project by coordinating and hosting a public meeting which followed the procedures set forth by the Louisiana Department of Transportation and Development.
11/08-Present	**LADOTD Permit No. 03030387: Kaliste Saloom Rd Widening, Intersection Improvements, Bridge and CE&I (LA3073 to LA733) (Lafayette Parish, LA):** Mr. Douet is managing this $34 million project, which includes fast-tracking all real estate appraisals, plats, and construction plans. Mr. Douet is also the Lead Design Engineer for the widening of approximately 1.7 miles. The roadway is an over-capacity major arterial roadway located in the center of Lafayette. Mr. Douet was directly responsible for the development of a line and grade study that allowed the LCG to choose between alternatives and determine the optimal locations for widening based upon impacts to businesses, cost of ROW, and minimizing impacts to utilities. Mr. Douet was the lead presenter at several public meetings, performed constructability reviews of all components of the plans, assessed sequencing of construction, critical path management, and making recommendations to the staff to adjust design elements to make construction efforts more efficient with live traffic loading. Mr. Douet continues to manage the construction effort on this project.

05/13-02/20	**SP No. H.010620: US 90 (I-49 South) Albertson Parkway to Ambassador Caffery Design-Build (Design Build) (Broussard, LA):** Under the Design-Build Contractor, James Construction Group, Mr. Douet was the Design Manager for the preparation of all engineering design components of the proposed upgrading of a portion of US 90 in Lafayette Parish to a six-lane controlled access facility to also include improvements to the existing east and westbound frontage road system, construction of a new six-lane US 90 overpass structure over both Albertson Parkway and the existing BNSF railroad facility, and construction of all associated US 90 mainline ramps needed to connect these overpass structures and frontage roads. In this role, Mr. Douet was required by contract to be involved directly in every aspect of the design to include roadway, drainage, traffic, and bridge design as well as the design of Mechanically Stabilized Earth Walls (MSEW) needed to construct the US 90 mainline improvements within existing right of way. In this capacity, he was required to also review all construction related Request for Information (RFI's) to ensure that all responses meet the expectations of LADOTD. Mr. Douet reviewed all design packages to quality control check the constructability of the designs being proposed. Mr. Douet was also directly responsible for the management of four engineering sub-consultants on the design-build team to ensure that all design components meet the overall goals and expectations of the project.
11/13-06/15	**LADOTD Permit No. 153198, 153357, 153587: Sasol LCCP-Heavy Haul Road Engineering and Construction (LA378 & LA379) (Westlake, LA):** This is a $12.9 Million contract with Fluor for engineering and consulting services which include the design of a 1.5-mile heavy haul route to be utilized to transport oversized modules from the Calcasieu River to the proposed plant site. Mr. Douet aided in analyzing the ability of these transport modules to navigate within an existing 2-lane roadway and determined areas that needed to be widened to provide the turning radii for these transport modules. Mr. Douet aided in the roadway design components, including quality control of the roadway geometry and drainage design.
04/17-04/20	**Cane River Bridge Church Street Route LA 1-X (Natchitoches Parish, LA):** LADOTD in conjunction with the FHWA prepared a NEPA environmental assessment for the proposed replacement of Cane River Bridge on Church Street Route LA 1-X. Mr. Douet served as the project manager and lead engineer for preparation of the environmental document. He was responsible for all public outreach, agency coordination, preparation of the project line and grade study, coordination of the project's traffic study, development of project alternatives, development of cost estimates, coordination of the noise and air analysis, coordination of historical and archeological investigations, and coordination of various other environmental analysis
05/17-Present	**S.P. No. H.009932 US 80 Widening: Vancil Rd to Well Rd EA (Ouachita Parish, LA):** Mr. Douet is serving as the Deputy Project Manager for this Environmental Assessment to improve the corridor by widening the existing roadway and implementing intersection improvement principles along a 1.4-mile portion of US 80. He has assisted in analyzing project impacts by coordinating and assisting in developing various engineering and technical studies, including line and grade study, GIS mapping, phase 1 environmental assessment, and air and noise impact studies. He is assisting in the coordination of all public and agency outreach activities, including solicitation of views, public participation plans, public hearings, public meetings, and all public and agency comments.

Firm employed by **C. H. Fenstermaker & Associates, L.L.C.**					
Name	Brett Dufour		Years of relevant experience with this employer		14
Title	Survey 360 Technician II		Years of relevant experience with other employer(s)		2
Degree(s) / Years / Specialization			A.S. / 2004 / Civil, Surveying & Mapping Technology		
Active registration number / state / expiration date			Survey Technician Certification Level 1 #804-2015 ATSSA Traffic Control Superviser ATSSA Traffic Control Technician		
Year registered	NA	Discipline	NA		
Contract role(s) / brief description of responsibilities			Survey Support - Survey 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).
Brett Dufour has been employed by C. H. Fenstermaker & Associates, L.L.C. for over fourteen years and currently serves as a Senior Surv360 Technician II. He is responsible for processing RTK field data, preparing plat information, and assembling pre-survey data for all services provided by the Advanced Technologies Division. Mr. Dufour is proficient in all data processing aspects of high-definition laser scan survey, dimensional control surveys, topographic surveys, hydrographic surveys, route surveys, subsidence surveys, geodetic control surveys, hazard surveys, and boundary surveys. He is familiar with traditional survey methods as well as the latest, most current technologies, including Underwater Acoustic Imaging (UAI) and High-Definition Surveying (HDS) and Dimensional Control (DC).	
03/15-05/15	**LADOTD–Harrisonburg Bridge Laser Scanning Survey:** Fenstermaker provided 3D laser scanning and high precision measurement of the in-water and land-based bridge pier supports and superstructure for LADOTD for providing critical measurements used to determine if any misalignment issues exist with the center swing span structure and the land-based approach spans. Fenstermaker also used a high accuracy total station to collect positional data on monitoring targets strategically placed during a previous survey performed five years prior for comparing this data to the positional data collected on these targets during the previous survey. The dataset was critical in illustrating any movement the bridge may have encountered or misalignment issues that have occurred over the 5-year timeframe because of vessel impacts. Mr. Dufour served as survey technician, prepared for mobilization, performed laser scanning and targeting, processed data, prepared final drawings and datasheets, and provided QA/QC of final revisions.
11/11-11/13	**LADOTD SPN. 005365.5: Underwater Acoustic Imaging for Bridge Inspection Statewide:** Fenstermaker was contracted to provide Underwater Acoustic Imaging (UAI) services for the underwater bridge inspection of pier systems for 72 state-maintained bridges. The project scope consists of an underwater acoustic inspection and evaluation of the submerged components of the piers utilizing a multi-axis, steered beam imaging and profiling remote sensing system with all acoustic data correlated to a Real Time Kinematic (RTK) GPS positioning system. The purpose of the inspection and evaluation is to identify and locate any major damage or deterioration of the pier structures along with a detailed localized inspection of any observed anomalies using both the acoustic imaging

	system and dive inspection; and to identify any localized scour impact or erosion of the surrounding water bottom. The data is then processed, and mosaics of the acoustic imagery are generated and included in a report that also documents the findings and recommendations resulting from the UAI and dive inspections. Mr. Dufour served as Survey Technician, providing field support profiling and imaging multiple bridges and water bottoms, processing collected data, and assisting with the preparation of findings reports.
06/13-07/13	**DOTD SP No. 700-29-0112: Leeville Pier #1, Acoustic Imaging, Lafourche Parish, LA:** Fenstermaker performed a topographic and high definition (laser scan) survey of the West Larose Vertical Lift Bridge on LA 1 in Larose, LA as a subconsultant in support of the bridge renovation for LADOTD. As a result of the survey, Fenstermaker established low steel vertical clearances in the bridge up and down positions, bridge pier elevations, and roadway clearances at the approaches, temporary benchmarks as a baseline for future surveys, and shoreline topographic surveys on both sides of the channel within the limits of the existing fenders and 50 feet in each direction. Mr. Dufour served as the Lead Field Survey Technician on this project and lead the data processing.
08/17-09/17	**Port of Lake Charles: Bathymetric Survey Bulk Terminal 1, Calcasieu Parish:** Fenstermaker performed a bathymetric survey of Bulk Terminal 1. Mr. Dufour served as a survey technician creating the profile of the beneficial use of dredged material area 1 (BUDM 1) and added additional survey data to the surfaces, updated surfaces, and recomputed the cross-sections.
03/13-05-13	**Hero Canal Levee, East of Harvey Canal at the Mississippi River for New Orleans District Army Corps of Engineers, Orleans/Jefferson Rouge Parish, LA:** This project provides improved hurricane protection for the communities of Belle Chase and Gretna. The scope of the project includes repairs and upgrades to the Hero Canal 1st lift by increasing the grade elevation approximately 1.5 feet. Mr. Dufour was part of the survey team to set four permanent benchmarks were placed along the land side of the levee right-of-way. The hydrographic survey performed at Hero Canal was performed at standards that meet or exceed the USACE minimum accuracy standards, quality control, and quality assurance requirements for Navigation and Dredging support surveys for a soft bottom material classification.
05/07-11/07	**Port of New Orleans: Poland Street Under Wharf Acoustic Survey (New Orleans, LA):** Fenstermaker performed an under wharf acoustic survey to provide bathymetric contours and image visualization of the under wharf conditions at the Poland Street wharf. The underwater imaging utilized both vessel mounted and tripod deployments with a multiple number of setups and rotating sensor deployments. This method is necessary to achieve more effective coverage and varying perspectives of the area. One additional scan was included at an area of possible scour. Profiling was performed at 20’ intervals down the wharf face. Mr. Dufour assisted the Underwater Imaging team by importing images into AutoCAD, creating plats, and exporting 3D polylines from Cyclone.

Firm employed by **C. H. Fenstermaker & Associates, L.L.C.**					
Name	Lance Fontenot		Years of relevant experience with this employer		15
Title	Survey 360 Technician II		Years of relevant experience with other employer(s)		0
Degree(s) / Years / Specialization			A.S. / 2006 / Survey & Drafting		
Active registration number / state / expiration date			ATSSA Traffic Control Supervisor / LA / 02.24.2022		
Year registered	NA	Discipline	NA		
Contract role(s) / brief description of responsibilities			Survey 360 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).
Lance Fontenot is a Senior Survey 360 Technician in the Advanced Technologies Division. Mr. Fontenot serves as the lead Unmanned Aerial Vehicle (UAV) and High-Definition Scanning (HDS) / Dimensional Control survey technician and oversees all field HDS/DC operations for the project to ensure corporate QA/QC guidelines and procedures are being utilized on projects. He also provides the day-to-day technical guidance and has final say in submission of all data to project managers. Mr. Fontenot has performed UAV Surveys, HDS Scanning, Dimensional Control support, Boundary/Right-of-Way, Pipeline, Topographic, Roadway, Construction, Oil & Gas, Geodetic, Hazard, and Accident Surveys primarily across the Gulf Coast Area.	
2015	**LADOTD–Harrisonburg Bridge Laser Scanning Survey:** Fenstermaker provided 3D laser scanning and high precision measurement of the in-water and land-based bridge pier supports and superstructure for LADOTD for providing critical measurements used to determine if any misalignment issues exist with the center swing span structure and the land-based approach spans. Fenstermaker also used a high accuracy 1" total station to collect positional data on monitoring targets strategically placed during a previous survey performed five years prior for comparing this data to the positional data collected on these targets during the previous survey. The dataset was critical in illustrating any movement the bridge may have encountered or misalignment issues that have occurred over the 5-year timeframe because of vessel impacts. Mr. Fontenot served as lead technician in processing the laser scan data and generating the deliverables for this project.
2013	**DOTD P.O. No. 005365.5: Underwater Acoustic Imaging for Bridge Inspection, Louisiana Statewide:** Fenstermaker was contracted to provide Underwater Acoustic Imaging (UAI) services for the underwater bridge inspection of pier systems for 72 state-maintained bridges. The project scope consists of an Underwater Acoustic Inspection and evaluation of the submerged components of the piers utilizing a multi-axis, steered beam imaging and profiling remote sensing system with all acoustic data correlated to a Real Time Kinematic (RTK) GPS positioning system. Mr. Fontenot served as Lead Survey Technician.
06/13-07/13	**DOTD SP No. 700-29-0112: Leeville Pier #1, Acoustic Imaging, Lafourche Parish, LA:** Fenstermaker performed a topographic and high definition (laser scan) survey of the West Larose Vertical Lift Bridge on LA 1 in Larose, Louisiana as a subconsultant in support of the bridge renovation for LADOTD. As a result of the survey, Fenstermaker established low steel vertical clearances in the bridge up and down positions, bridge pier elevations,

	and roadway clearances at the approaches, temporary benchmarks as a baseline for future surveys, and shoreline topographic surveys on both sides of the channel within the limits of the existing fenders and 50 feet in each direction. Mr. Fontenot served as the Lead Field Survey Technician on this project and led the data processing.
05/18-01/19	**Driftwood LNG Master ALTA Survey, Calcasieu Parish, LA:** Fenstermaker was contracted by Driftwood LNG to generate an overall ALTA survey for the proposed site. Mr. Fontenot was responsible for flying the UAV for the project, data processing, quality control and assisting with producing deliverables.
04/17-02/20	**Lafayette Consolidated Government–Kaliste Saloom Widening, Lafayette, LA:** Fenstermaker's Engineering Division was contracted to provide engineering services in design of the Kaliste Saloom widening between LA 733 and Ambassador Caffery. In support of this effort, Fenstermaker provided aerial mapping services of the alignment using UAV technology. Mr. Fontenot served as the lead UAV field technician responsible for operation of the drone system, and production of the topographic plats generated from the photogrammetric data.
2013	**West Larose Bridge Survey, Larose, LA:** Fenstermaker provided 3D laser scanning of the West Larose Bridge carrying LA1 over Bayou Lafourche. Using laser scanning technology, Fenstermaker was tasked to provide critical measurements of specific structural elements for the purposes of engineering design in the renovation of the bridge. Mr. Fontenot served as lead laser scanning technician responsible for all aspects of data collection in the field and was instrumental in processing the laser scan data in the office.
06/10-10/12	**Inner Harbor Navigation Canal, GIWW Barge, and Bayou Bienvenue Lift Gate Projects, Orleans Parish, LA:** Fenstermaker was contracted to provide a rapid response on call survey service for performing high order surveys along with high speed laser scanners to report deviation in alignment and location of the interfaces between constructed features, design documents and components being fabricated offsite in support of the construction of the Inner Harbor Navigation Canal Sector Gates, the GIWW Barge Gate, and the Bayou Bienvenue Lift Gate Monolith. Fenstermaker linked the survey data and laser scanner data to allow the generation of a visual representation of the areas being surveyed. Mr. Fontenot served as our lead field survey technician on this project.

Firm employed by	**C. H. Fenstermaker & Associates, L.L.C.**				
Name	**Diane Hammonds, P.E., PTOE**		Years of relevant experience with this employer	2	
Title	Senior Engineer		Years of relevant experience with other employer(s)	17	
Degree(s) / Years / Specialization			B.S. / 2002 / Civil Engineering		
Active registration number / state / expiration date			PE.0040749 / LA / 9.30.2022; PTOE No. 7113/ 12.19.2022		
Year registered	2016	Discipline	Civil Engineering		
Contract role(s) / brief description of responsibilities			Roadway/Traffic Control - Traffic Engineering		

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).

Diane Hammonds is a Professional Engineer and Professional Traffic Operations Engineer (PTOE) with 19 years of experience specializing in Traffic/Transportation Engineering and Transportation Planning projects including traffic impact assessments, traffic signal design systems, traffic simulation modeling, access management reviews, safety studies, roundabout analysis and design as well as permit reviews and coordination. Ms. Hammonds has successfully completed hundreds of successful traffic & transportation projects. Her unique skills to bring both the client and reviewing agency to agreement on the final product is an asset to the projects she is involved in. She has completed training in HCS, Synchro, Roundabouts and the HSM and is proficient in Synchro, SimTraffic, HCS, VISTRO, SIDRA, CRASH 1, CRASH 3 and Microstation. Additionally, Ms. Hammonds has obtained the following certifications:

- LADOTD Traffic Engineering Process and Reports, Modules I, II, and III
- LADOTD Highway Safety Manual Workshop
- Collecting and Using Automated Pedestrian and Bicycle Counts for Planning and Feasibility Analysis-RPC Course No. A122A-0105
- ATSSA Traffic Control Technician
- ATSSA Traffic Control Supervisor

02/19-08/22	**Farm Road Multi-Bridge Replacement Project (Calcasieu Parish, LA):** Fenstermaker was contracted by Calcasieu Parish Police Jury to provide professional engineering services related to the replacement of two (2) bridges located on Farm Road. Ms. Hammonds is providing traffic engineering services, including the preparation of temporary traffic control plans.
11/19-04/20	**2019 Asphalt Overlay Project (Carencro, LA):** Fenstermaker was contracted to provide surveying, design, utility coordination and construction administration and inspection. The project was located along several different roadways within the City. Ms. Hammonds provided coordination with LADOTD and reviewed plans and documentation for approximately 12.9 miles of **roadway** in the City of Carencro.
08/19-Present	**S.P. No. H.002297 LA 37 (Sullivan Road to Liberty Road) (East Baton Rouge Parish):** Ms. Hammonds is currently serving as the Lead Traffic Engineer and is responsible for managing and reviewing all submittals by the traffic sub-consultant. Fenstermaker is serving as the prime consultant for this Stage 0 feasibility study and environmental inventory. Ms. Hammonds ensures quality control and is assisting in the development of the Stage 0 Feasibility Study, Environmental Inventory, and conceptual plans.
08/19-Present	**S.P. No. H.009932 US 80 Widening: Vancil Rd to Well Rd EA (Ouachita Parish):** Ms. Hammonds is serving as a traffic engineer for this Environmental Assessment to improve the corridor by widening the existing roadway and implementing intersection improvement principles along a 1.4-mile portion of US 80. She has assisted in the existing/no-build, safety, and

	alternatives capacity analysis reports, which have been approved by LADOTD. She analyzed project impacts by coordinating and assisting in developing the line and grade study, cost estimates, and conceptual plans.
08/19-Present	**Stage 0 Feasibility Study of Modern Roundabouts (Lafayette, LA):** Fenstermaker is responsible for the Stage 0 Feasibility Studies being performed on many conceptual roundabout locations throughout Lafayette Parish for the Acadiana Metropolitan Planning Organization. Ms. Hammonds is serving as the Transportation Engineer, and she is responsible for developing the roundabout reports and analyses.
08/19-Present	**Apollo Rd (LA 93) Extension to Dulles Drive (Scott, LA):** Fenstermaker was selected to provide engineering services to the City of Scott to extend Apollo Road. This $14 million construction project included two miles of 4-lane boulevard and 8-ft. sidewalks to accommodate both bicyclists and pedestrians. The new roadway intersected LA 90 & LA 93, which were designed for a bow-tie intersection and a roundabout, respectively. Ms. Hammonds served as the Transportation Engineer and assisted with the design of the roundabout, median opening review, signage, and striping.
05/18-8/19	**Lakeshore Drive Mixed Use Development Traffic Impact Study (Slidell, LA):** Ms. Hammonds served as the Project Manager, Engineer of Record, and Analyst for a ± 1,083-acre mixed use development which at full buildout will contain residential houses, a school, and small commercial retail. The study included 2 interstate interchanges with state highways as well as a 1.7-mile segment of Parish owned roadway including 4 roundabout evaluations and a J-turn corridor. She performed approval coordination with both the LADOTD and St. Tammany Parish.
01/18-08/19	**Hayden Roundabout Interchange Modification Report (Hayden, AL):** As a result of the statewide Wrong Way Ramp Study, the Interchange of I-65 and Al-160 was further evaluated for improvements. Ms. Hammonds served as the Technical Director and Lead Analyst in the analysis and report documentation to modify the interchange ramps to roundabouts as well as 2 adjacent intersections. In addition, Ms. Hammonds provided Design Assistance for the plans to modify the interchange and adjacent intersections.
08/19-03/20	**LA-93 (Westgate Road) at Eraste Landry Road (Scott, LA):** Ms. Hammonds served as the Technical Lead, Analyst and Design Engineer for the modification of the intersection to add a traffic signal. The temporary traffic signal at the intersection was needed to accommodate traffic during construction which resulted in an adjacent roadway closure. Ms. Hammonds prepared the volume forecasting and capacity analysis as well as report documentation, and signal design. The approval coordination included the LADOTD District 03 staff as well as Headquarters and the Lafayette Consolidated Government.
05/20-Present	**Perrin Ferry Road Improvements (Livingston Parish):** Ms. Hammonds is serving as the Project Manager and Technical Lead for the design of approximately 850-ft. of roadway. The project will raise the elevation to provide ingress and egress for the residents along the roadway during large rain events. Ms. Hammonds is coordinating the survey, environmental study and permitting, as well as the Hydraulics & Hydrology Study for this project and associated roadway design.
05/05-06/19	**River Chase/Nor Du Lac (Covington, LA):** Ms. Hammonds served as the Project Manager, Technical Director and Analyst for the traffic impact study of the 2 million square feet of retail/residential/office space located in Covington, Louisiana. Her detailed analysis included conversion of an existing rest area into an interstate interchange with I-12 as well as the LA-21 at I-12 interchange, the LA-21 corridor and other surrounding roadways. Ms. Hammonds created a regional Synchro analysis for the Tchefuncte River Region which included over 30 intersections, both proposed and existing. In addition to the study she designed 9 traffic signals for both the upgrading of existing locations and new installations

Firm employed by	**C. H. Fenstermaker & Associates, L.L.C.**		
Name	**Kimberly McDaniel, P.E., PTOE**	Years of relevant experience with this employer	2
Title	Operations Leader, Engineer	Years of relevant experience with other employer(s)	16
Degree(s) / Years / Specialization		B.S. / 2003 / Civil Engineering M.S. / 2005 / Civil Engineering	
Active registration number / state / expiration date		PE.0032973 / LA / 9.30.2023; PTOE No. 2072/ 8.31.2022	
Year registered	2007	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		Roadway/Traffic Control - Traffic 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).
	Kimberly McDaniel currently manages Fenstermaker's engineering operations in Baton Rouge and Mandeville. She has over 18 years of experience in transportation design and traffic engineering. She spent 6 years in state service at LADOTD in Traffic Engineering Management, where she developed policies and programs related to Complete Streets, Access Management, and Traffic Impacts and served as the subject-matter expert on access management and traffic impacts. The remainder of her career has been spent as a consultant performing a wide variety of traffic engineering and transportation design projects throughout the states of Louisiana, Texas, and Michigan. Ms. McDaniel is very knowledgeable in the areas of roadway design, sub-surface and open drainage systems, geometric design, innovative intersection design and operation, geometric design, feasibility study requirements, access connection safety and design, corridor studies, interchange modification and justification studies, traffic impact studies, crash analyses, safety studies, low-cost safety improvements, and traffic impact analyses. Ms. McDaniel has successfully completed **LADOTD Traffic Engineering Process and Report Training Modules 1, 2, and 3**, ATSSA Certified Flagger, Traffic Control Technician and Supervisor courses, **NHI Course NEPA & the Transportation Decision-Making Process,** and **LADOTD Highway Safety Manual Course**.
10/19-Present	**2019 Asphalt Overlay Project (Carencro, LA):** Ms. McDaniel is serving as the Project Principal and Engineer of Record for approximately 12.9 miles of roadway in the City of Carencro. This project includes the mill and overlay or reconstruction of 36 roadways. Plans and specifications preparations, the development of traffic control plans, and the development of intergovernmental agreements between the City of Carencro and Lafayette Consolidated Government are overseen by Ms. McDaniel.
10/08-08/14	**LADOTD Access Management Program (Statewide):** Kimberly developed and managed the LADOTD Access Management Program. In this role, she performed extensive research of access management policies and best practices throughout the US. Using this information, Kimberly led multiple focus groups and policy development teams consisting of LADOTD employees and consulting engineers from around the state to develop a policy for LADOTD which would regulate the granting of access to state highways. The policy was adopted as a Louisiana Administrative Code Title 70, Part I, Chapter 15. Kimberly wrote the *Access Connections Policy*, a document further expanding the criteria of the code. She developed

Ms. McDaniel developed and managed the **LADOTD Access Management Program**. The policy was adopted as a Louisiana Administrative Code Title 70, Part I, Chapter 15. Kimberly wrote the *Access Connections Policy*, expanding the criteria of the code. She developed training courses for LADOTD employees, consultants, contractors, real estate professionals, and elected officials and conducted these trainings throughout the State of Louisiana.

	training courses for DOTD employees, consultants, contractors, real estate professionals, and elected officials and conducted these trainings throughout the state of Louisiana.
02/19-Present	**Farm Road Multi-Bridge Replacement Project (Calcasieu Parish, LA):** Fenstermaker was contracted by Calcasieu Parish Police Jury to provide professional engineering services related to the replacement of two (2) bridges located on Farm Road. Ms. McDaniel serves as Lead Traffic Engineer and is providing traffic engineering services, including the preparation of temporary traffic control plans.
01/19-Present	**S.P. No. H.002297 LA 37 (Sullivan Rd. to Liberty Rd.) (East Baton Rouge Parish):** Ms. McDaniel is currently serving as the Project Principal and is responsible for directing all necessary engineering, environmental, and planning services required to determine necessary improvements along the LA 37 corridor from Sullivan Road to Liberty Road. Upon completion of all analyses, a final Stage 0 Feasibility Report including the Stage 0 Checklist, Environmental Checklist, roadway engineering plans, and the opinion of probable cost will be developed.
01/19-04/20	**S.P. No. H.001271 Cane River Bridge Church Street EA (Natchitoches Parish):** Ms. McDaniel served as the Lead Traffic Engineer for this Environmental Assessment for the replacement of the Cane River Bridge. She was responsible for the analysis of multiple future traffic scenario alternatives as well as three different complex detour scenarios for the replacement of the Cane River Bridge. She assisted with the development of the final EA document which received approval on the first known LADOTD and FHWA "net benefit determination" for Section 4(f) properties in Louisiana. She assisted in the development a Finding of No Significant Impact (FONSI) document, which was approved by FHWA and LADOTD. Ms. McDaniel also assisted in coordinating public and agency outreach activities.
01/19-0/20	**S.P. No. H.009932: US 80 Widening: Vancil Rd to Well Rd EA (Ouachita Parish):** Ms. McDaniel serves as the traffic and safety project engineer for the Environmental Assessment study for capacity and safety improvement of a 1.4-mile portion of US 80. She developed traffic models for a variety of alternatives, identified safety improvements, and determined geometric configurations to increase traffic capacity. Alternatives included roundabouts.
08/19-03/20	**LA-93 at Westgate Signal (Scott, Louisiana):** Ms. McDaniel prepared the Intersection Control Evaluation, Signal Warrant Analysis, traffic memorandum, and the design plans for the approval of a temporary traffic signal at the intersection to relieve traffic congestion due to an adjacent road closure.
01/12-06/13	**US 61 Access Management Study (Baton Rouge, Louisiana):** Ms. McDaniel was the project manager for the access management study of an over 9-mile corridor including 13 signalized intersections and 36 unsignalized median openings. The study included bicycle and pedestrian considerations, safety, access management, and traffic operations.
04/15-12-18	**LADOTD Traffic Engineering Retainer Contract (Statewide – LA):** Ms. McDaniel served as the project manager and lead traffic engineer for a three-year IDIQ-type contract. Ms. McDaniel managed this $3 million contract with various associated task orders for a variety of traffic engineering studies and evaluations throughout Louisiana. Services included traffic engineering studies, corridor studies, safety and crash analyses, traffic signal design, traffic data collection, signing and pavement marking designs, traffic signal timing studies, and intersection design.

Firm employed by **C. H. Fenstermaker & Associates, L.L.C.**					
Name	Bradford Millett, PLS, EI		Years of relevant experience with this employer		8
Title	Surveyor I		Years of relevant experience with other employer(s)		0
Degree(s) / Years / Specialization			B.S. / 2014 / Civil Engineering		
Active registration number / state / expiration date			PLS.5245 / LA / 3.31.2023 | EI.32848 / LA / 9.30.22		
Year registered	2020	Discipline	Professional Land Surveyor		
Contract role(s) / brief description of responsibilities			Professional Land Surveyor **(Meets MPR 5)**		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
Ms. Millett is an Engineer Intern and Professional Land Surveyor in Fenstermaker's Advanced Technology Group, and has 8 years of surveying, management, and coordination experience. While working at Fenstermaker, Ms. Millett attended the University of Louisiana at Lafayette and earned a degree in Civil Engineering in 2014. Her current responsibilities consist of field crew coordination, data collection and processing, layout and design of boundary and right of way maps, ALTA surveys and Development and Planning subdivision platting process, client relations, utility coordination, cost estimating, scoping, scheduling, planning and other components associated with surveying services.	
09/12-ongoing	**S.P. No. H.012792 LA 675 at Airport Road Roundabout, Iberia Parish, LA** - This project includes the design of a new roundabout at the intersection of LA 675, US 90 Frontage Road, and the Acadiana Regional Airport Access Road (currently under construction). Ms. Millett is responsible for the topographic and boundary surveys, as well as the development and review of right of way maps.
11/08-ongoing	**LADOTD Permit No. 03030387: Kaliste Saloom Road Widening, Intersection Improvements, Bridge, and CE&I (LA 3073 to LA 733) (Amb. Caffery to E. Broussard Rd) Lafayette, LA** - Fenstermaker was responsible for the widening of approximately two miles of Kaliste Saloom Road, a highly congested major arterial roadway located in the center of the City of Lafayette. The project was then split into three phases to include drainage outfall construction, utility relocations, and roadway construction. Fenstermaker is the direct responsible charge of all design components and construction management for improvements. Ms. Millett assisted with topographic and boundary surveying, utility relocation, right of way plats, drainage design, as-built surveys, drainage design, sign and striping layout, and coordination of survey crews in the field for Phases 3A and 3B.
10/18-05/19	**Farm Road Multi-Bridge Replacement (Calcasieu Parish, LA):** Fenstermaker was contracted by Calcasieu Parish Police Jury to provide professional engineering services related to the replacement of two (2) bridges located on Farm Road. Ms. Millett was the lead surveyor, providing survey crew coordination, boundary and right-of-way surveys, parcel revisions, construction surveys, utility coordination, reviewing survey data, and coordinating with the abstractor.

04/16-09/18	**Lebesque Road Bridge Replacement and Road Reconstruction (Lafayette, LA):** Ms. Millett served as the lead surveyor, providing survey crew coordination, utility coordination, boundary surveys and right-of-way plats. The project entailed the design of the replacement of Lebesque Bridge and Lebesque Road Reconstruction.
06/20-ongoing	**IDIQ Contract for Louisiana Watershed Initiative (LWI) Modeling Contract – Region No. 6:** Fenstermaker is contracted as a subconsultant for this unprecedented project that will manage the future flood risk in the State of Louisiana through watershed-based solutions. Fenstermaker is responsible for assisting with various tasks including data collection, data gap analysis, surveying, drone imaging, and GIS services to successfully complete interactive, usable, and manageable hydraulic and hydrologic models for Region 6 of Louisiana. Through Task Order 1, Fenstermaker is identifying, collecting, and analyzing available data, and stakeholder and agency coordination. Fenstermaker has acquired channel surveys and hydraulic structure data from existing models, studies, engineering drawings, as-built drawings, and through coordination with local, regional, state, and federal agencies. Fenstermaker is responsible for converting all acquired data to the project datum and confirming the validity of information compared to current field conditions in order to successfully complete a data gap analysis. Ms. Millett serves as Survey Project Manager on this project.
05/19-03/21	S**.P. H.005967 Port of Lake Charles Rail at W. Sallier St., Calcasieu Parish, LA** - Ms. Millett served as the Project Manager for the topographic and boundary field surveys, established control, post-processed data, reviewed title reports, established property boundaries and mapped encumbrances for the approximately 0.75-mile Railroad Relocation for the Port of Lake Charles. LADOTD survey feature codes were utilized for this project, and LADOTD Right of Way maps along with COGOWIN legal descriptions were created. this project.
05/14-11/17	**LADOTD Permit No. 153351,153352,153353: Lake Charles LNG Traffic Impact Analysis and Road Improvements, Calcasieu Parish, LA** - Fenstermaker was responsible for designing road improvements at various locations to support anticipated construction traffic associated with the expansion of the Lake Charles LNG, G2X, and Magnolia Facilities**.** Topographic and boundary surveys associated with the planned improvements, right of way maps, as well as coordinating and managing utility relocations were performed by Fenstermaker. Ms. Millett prepared survey request, coordinated survey crews, reviewed and processed survey data, prepared right of way maps, and coordinated with utilitiy companies.
06/12-ongoing	**S.P. No. H.006459 Roundabout at Churchpoint/Roddy Road, Ascension Parish, LA** - Fenstermaker completed a roundabout study at Churchpoint Road and Roddy Rd. The study was completed in compliance with "EDSM VI.1.1.5, Roundabout Study and Approval." Following LADOTD's approval, Fenstermaker began final design of the roundabout. Safety data was collected for a three-year period and analyzed for correctible crashes at the intersection. Ms. Millett coordinated with survey crews, processed data, completed preliminary boundary layouts, and developed right of way maps for this intersection.

Firm employed by Thompson Engineering, Inc., of Louisiana					
Name	**Jay Davison, P.E.**		Years of experience with this employer		16
Title	Bridge Inspection Team Leader		Years of experience with other employer(s)		0
Degree(s) / Years / Specialization			BS/2005/Civil Engineering		
Active registration number / state / expiration date			PE 0043010 Louisiana, Exp. 03/31/2023 Other: Certified Bridge Inspector: AL No. 827		
Year registered	2018 (LA)	Discipline	Civil Engineering		
Contract role(s) / brief description of responsibilities			Bridge Inspection		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc.
02/15-08/16	**General W. K. Wilson I-65 Bridge over Mobile River –** Thompson Engineering is providing Project Management and CE&I services for the various bridge repairs. The repairs include deck joint replacement, upper and lower cable connection repairs, girder, floorbeam, tied arch stiffener repair, new drainage system and coating.
04/09-Ongoing	**City of Mobile, In-Service Bridge Inspections, Mobile, AL –** Project Manager coordinating all Thompson inspection teams for the structural condition assessment inspections following ALDOT and FHWA guidelines and procedures for 124 bridges, and culverts throughout the City of Mobile. Also supervised underwater inspections performed by a subcontractor. Inspections include substructure, superstructure, and deck and channel condition ratings. Inspections are performed by a three person team consisting of a Certified Bridge Inspector and two Engineering Technicians. Detailed reports are prepared consisting of completed ALDOT BrM forms, scour assessment and stream profile measurements, maintenance/repair estimates, and detailed field notes and pictures describing any deficiencies.
11/07-08/08	**Alabama Department of Transportation, Truss Bridge Inspection, Tallassee, AL, Rainbow City, Al and Lincoln, AL –** Thompson Engineering was contracted to inspect three truss bridges in the locations listed above. Mr. Davison was part of the crew on the bridges in Rainbow City and Lincoln. His role in the inspection was to inspect the superstructure of the bridge from the snooper truck. Once the inspection was complete, he helped complete the paper work that was needed for the inspection.
08/10-09/10	**City of Mobile, Cottage Hill Road at Montlimar Creek Bridge Approach Slab Repairs –** Thompson Engineering provided the civil and structural plans for this repair project. The project consisted of the design and construction of removing and replacing the two approach slabs on the bridge.
04/15–06/17	**Alabama Department of Transportation. West Central Region Bridge Inspection Program, Tuscaloosa, AL** Project Manager providing bridge inspection services in ALDOT's region serving the Tuscaloosa-area. A program of 100+ bridges. This project requires a thorough knowledge of the National Bridge Inspection

	Standards (NBIS) and the Alabama Department of Transportation's Bridge Element Inspection Manual and Procedures. Duties include utilizing ALDOT's new BrM computer software in the management of these bridge structures.
07/16-Ongoing	**Alabama Department of Transportation. South West Region Bridge Inspection Program, Mobile, AL** Project Manager and Team Leader providing bridge inspection services in ALDOT's region serving the Mobile-area. A program of 50+ bridges. This project requires a thorough knowledge of the National Bridge Inspection Standards (NBIS) and the Alabama Department of Transportation's Bridge Element Inspection Manual and Procedures. Duties include utilizing ALDOT's new BrM computer software in the management of these bridge structures.

Firm employed by Thompson Engineering, Inc., of Louisiana					
Name	Nick Hartman, P.E.			Years of experience with this employer	21
Title	Project Manager			Years of experience with other employer(s)	1
Degree(s) / Years / Specialization			BS / 1999 / Civil Engineering		
Active registration number / state / expiration date			PE 0043049 Louisiana, Exp. 03/31/2023 Other: Certified Bridge Inspector AL #563		
Year registered	2018 (LA)	Discipline	Civil Engineering		
Contract role(s) / brief description of responsibilities			Bridge Inspection		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc.
02/15-08/16	**General W. K. Wilson I-65 Bridge over Mobile River –** Nick was Team Leader and assistant Project Manager for the various bridge repairs. The repairs included deck joint replacement, upper and lower cable connection repairs, girder, floorbeam, tied arch stiffener repair, new drainage system and coating.
9/17-Ongoing	**State of Mississippi Office of State Aid Road Construction, Complex Bridge Inspection/BR-NBIS(088)B –** Inspection Team Leader and Program Manager for various structure types/bridges located throughout various Counties in SE Mississippi. Nick coordinated field team inspection schedules, performed QC/QA inspections to ensure all inspections were being completed to established standards, and ensured field and load rating data entered into Miss. OSARC database in a timely manner
01/02-Ongoing	**City of Mobile, In-Service Bridge Inspections, Mobile, AL –** Nick serves as Team Leader providing inspections and coordinating all Thompson inspection teams for the structural condition assessment inspections following ALDOT and FHWA guidelines and procedures for 124 bridges, and culverts throughout the City of Mobile. He supervised underwater inspections performed by a subcontractor. Inspections include substructure, superstructure, and deck and channel condition ratings. Inspections are performed by a three person team consisting of a Certified Bridge Inspector and two Engineering Technicians. Detailed reports are prepared consisting of completed ALDOT BrM forms, scour assessment and stream profile measurements, maintenance/repair estimates, and detailed field notes and pictures describing any deficiencies.
11/07-08/08	**ALDOT Bridge Inspection and Gusset Plate Analysis** – Nick served as Team Leader responsible for NBIS and structural condition assessment Inspection on the US Hwy 78 Bridge over the Coosa River in Riverside, AL. He oversaw the Gusset Plate inspection and dimensioning on the Hwy 77 Bridge over the Coosa River in Southside, AL, and the US Hwy 78 Bridge over the Coosa River in Riverside, AL.

01/13-Ongoing	**Escambia County, In-Service Bridge Inspections, Escambia County, FL** – Nick serves as Team Leader providing inspections and coordinating all Thompson inspection teams for the structural condition assessment inspections following FDOT and FHWA guidelines and procedures for 5 bridges throughout Escambia County.
11/10-11/10	**Claiborne County, In-Service Bridge Inspections, Claiborne County, MS –** Nick served as Team leader providing inspections and coordinating all Thompson inspection teams for the structural condition assessment inspections following MDOT and FHWA guidelines and procedures for 44 bridges, and culverts throughout Claiborne County.
12/08-12/08	**City of Meridian, 22nd Avenue Bridge Renovation, Meridian, MS –** Nick served as Team Leader for structural assessment inspection to determine the renovations necessary for the 22nd Avenue Bridge. Thompson Engineering inspected, evaluated, and made design recommendations for the renovations including geotechnical investigation of bridge approaches, bid documents, contractor selection, and construction inspection services. The renovations included repair of spalling and cracked concrete, soil stabilization at bridge approaches, new guardrail and lighting, and new approach pavement.
04/15 – 06/17	**Alabama Department of Transportation. West Central Region Bridge Inspection Program, Tuscaloosa, AL -** Nick served as Inspection Team Leader providing bridge inspection services in ALDOT's region serving the Tuscaloosa-area. A program of 100+ bridges. Nick supervised the work of a crew of three. This project requires a thorough knowledge of the National Bridge Inspection Standards (NBIS) and the Alabama Department of Transportation's Bridge Element Inspection Manual and Procedures. Duties include utilizing ALDOT's new BrM computer software in the management of these bridge structures.
07/16—06/18	**Alabama Department of Transportation. South West Region Bridge Inspection Program, Mobile, AL** Inspection Team Leader providing bridge inspection services in ALDOT's region serving the Mobile-area. A program of 50+ bridges. Nick supervised the work of a crew of three. This project requires a thorough knowledge of the National Bridge Inspection Standards (NBIS) and the Alabama Department of Transportation's Bridge Element Inspection Manual and Procedures. Duties include utilizing ALDOT's new BrM computer software in the management of these bridge structures.

Firm employed by Thompson Engineering, Inc., of Louisiana					
Name	Keith Smith, P.E.		Years of experience with this employer		22
Title	Bridge Inspection Team Engineer		Years of experience with other employer(s)		2
Degree(s) / Years / Specialization			BS / 1999 / Civil Engineering | BS / 1999 / Mathematics		
Active registration number / state / expiration date			PE 26763 / Alabama, Exp. 12-31-2023 Other: Certified Bridge Inspector AL #696		
Year registered	2004	Discipline	Civil Engineering		
Contract role(s) / brief description of responsibilities			Bridge Inspection		

Training: FHWA-NHI-130055 Safety Inspection of In-Service Bridges, October 2007; NHI Fracture Critical Inspection Techniques for Steel Bridges, May 2009; NHI 3 Day Bridge Inspection Refresher Course, August 2016; Received Basic Rope Rescue training by Alabama Fire College and Personnel Standards Commission, October 2016

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc.
9/17-Ongoing	**State of Mississippi Office of State Aid Road Construction, Complex Bridge Inspection/BR-NBIS(088)B –** Keith serves as Bridge Inspection Team Leader for various structure types/bridges located throughout various Counties in Mississippi. Keith coordinated field information gathering and inspection for complex bridges, including fracture critical, with no existing plans and included deterioration/section loss for substructure, superstructure and deck in the load ratings and load posting recommendations.
03/08-Ongoing	**City of Mobile, Bridge Inspections, Mobile, AL –** Keith serves as Team Leader for the structural condition assessment inspections following ALDOT and FHWA guidelines and procedures for 124 bridges and culverts throughout the City of Mobile. Inspections include fracture critical, substructure, superstructure, and deck and channel condition ratings. Thompson supervises underwater surveys where necessary. Inspections are performed by a three person team consisting of a Certified Bridge Inspector and two Engineering Technicians. Detailed reports are prepared consisting of completed ALDOT ABIMS forms, scour assessment and stream profile measurements, maintenance/repair estimates, and detailed field notes and pictures describing any deficiencies.
03/17-Ongoing	**City of Merrill, Holon Engineering, Salem Road Bridge over Pascagoula River, George County, MS –** Keith was Team Leader and performed fracture critical inspection. This project consists of select bridge member element level inspection for only the floorbeams (including connections), stringers (including connections), and open grid deck of a 2-span (175.5-175.5 ft) variable depth steel truss bridge spanning the Pascagoula River. As a subconsultant, Thompson Engineering, performed Initial Element Level Bridge Inspection, Future Element Level, and Future Bridge Load Rating.

03/15-Ongoing	**Alabama Department of Transportation. West Central and Southwest Region Bridge Inspection Program** Keith serves as Inspection Team Leader providing bridge inspection services in ALDOT's region serving the Tuscaloosa-area. A program of 100+ bridges. Mr. Smith is an Inspection Team Leader supervising the work of a crew of three. This project requires a thorough knowledge of the National Bridge Inspection Standards (NBIS) and the Alabama Department of Transportation's Bridge Element Inspection Manual and Procedures. His team is utilizing ALDOT's BrM computer software in the assessment of these bridge structures.
11/07-12/08	**ALDOT Bridge Inspection and Gusset Plate Analysis –** In response to the tragic collapse of the I-35 Mississippi River bridge across Saint Anthony Falls of the Mississippi River in Minneapolis, Minnesota, ALDOT engaged Thompson Engineering to inspect fracture critical bridge structures of similar construction. Thompson Engineering performed Bridge Inspection, Load Rating, and Gusset Plate Analysis for three structures. The three truss spans were load rated using VIRTIS, an AASHTOWARE load rating program. The results are broken down into three sections for the trusses, 1) Main truss members, 2) Floorbeams, and 3) Stringers. The gusset plates for the three trusses were analyzed using a Mathcad worksheet developed by New York DOT. The worksheet has been reviewed and was determined a good tool for analysis. Keith served as an inspection team member.
01/15-Ongoing	**Alabama State Port Authority – On Call Bridge Inspections, Mobile, AL** – The project entails bridge inspection services for vehicular and railroad bridges including precast concrete, pre-stressed concrete, steel beam and culverts. Keith is an Inspection Team Leader and Project Manager supervising the work of a crew of three to five members.

Firm employed by Thompson Engineering, Inc., of Louisiana					
Name	**Charlie Weston**		Years of experience with this employer		24
Title	Bridge Inspection Team		Years of experience with other employer(s)		13
Degree(s) / Years / Specialization			Professional Training		
Active registration number / state / expiration date			Certified Bridge Inspector: AL No. 695		
Year registered	N/A	Discipline	N/A		
Contract role(s) / brief description of responsibilities			Bridge Inspection		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc.
03/08 - Ongoing	**City of Mobile Annual Bridge Inspections –** Inspection Team Leader: Charlie providing inspections for the structural condition assessment following ALDOT and FHWA guidelines and procedures for 124 bridges, and culverts throughout the City of Mobile. He also supervised underwater inspections performed by a subconsultant. The inspections include substructure, superstructure, and deck and channel condition ratings. Detailed reports were prepared consisting of completed ALDOT ABIMS forms, scour assessment and stream profile measurements, maintenance/repair estimates, and detailed field notes and pictures describing any deficiencies.
02/15-08/16	**General W. K. Wilson I-65 Bridge over Mobile River –** Charlie provided Project Manager and CE&I services for the various bridge repairs. The repairs included deck joint replacement, upper and lower cable connection repairs, girder, floorbeam, tied arch stiffener repair, new drainage system and coating.
04/08-02/10	**City of Meridian 22nd Avenue Bridge Renovation, Meridian, MS – Renovation of the 22nd Avenue Bridge.** Bridge Inspector: Charlie performed inspection, evaluated, and made design recommendations for the renovations including geotechnical investigation of bridge approaches, bid documents, contractor selection, and construction inspection services. The renovations included repair of spalling and cracked concrete, soil stabilization at bridge approaches, new guardrail and lighting, and new approach pavement.

17. **Firm Experience:** Project 1

Firm name	**HDR Engineering, Inc.**		Past Performance Evaluation Discipline(s)*	Bridge	
Project name	LADOTD Statewide In-Depth Complex Bridge Inspections (Task Orders 1 & 3)		Firm responsibility (prime or sub?)	Sub	
Project number	4400013322	Owner's name	Louisiana Department of Transportation and Development		
Project location	Statewide – Alexandria and Teche Bayou, LA		Owner's Project Manager	Hayle Brown, PE	
Owner's address, phone, email	1201 Capitol Access Rd, Baton Rouge, LA 70802, 225-379-1500, hayle.brown@la.gov				
Services commenced by this firm	11/19	Total consultant contract cost ($1,000's)		$275	
Services completed by this firm	Ongoing	Cost of consultant services provided by this firm ($1,000's)		$275	

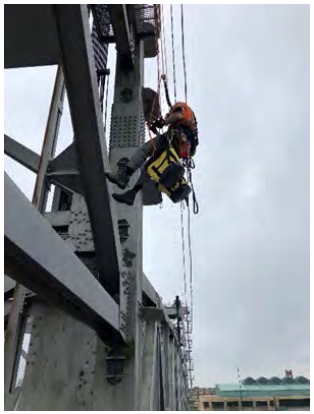
HDR performed in-depth inspections of the main span features of the Jackson Street Vertical Lift Bridge over the Red River in Alexandria, LA in February 2020 and the main span of Teche Bayou Vertical Lift Bridge in December 2020. The Red River main span is a 300 ft vertical lift span supported by two steel truss towers over 100 feet in height. The main truss span accommodates two lanes of traffic with shoulders. The two-lane Teche Bayou Vertical Lift is a 65 ft long deck girder span with two – 60-ft-plus – steel braced column towers framed together

HDR performed the mechanical and electrical systems in depth inspections including machinery, open gearing, speed reducers, shafts/bearings, brakes, emergency drives, live load shoes, strike plates, counterweights, lift cables, sheaves, span locks, transformers, thyristors, conduit, junction boxes, programmable logic controllers (PLC), control console, warning lights/gates, traffic signals, and navigation lights. The bridge control system is comprised of drum controlled switch motor controls, relays and motor starters. The lift span is operated by one 40hp wound rotor main span motor per tower, and the lift span skew control system relies on a synchro-tie motor system with motors similar to the main span motors. HDR prepared reports outlining the inspection findings and remediation/improvement recommendations.

The typically two-lane roadways were reduced to single-lane operation when required, using traffic control devices and flagmen to allow for use of hydraulic lifts and snooper trucks for inspection of the underside and substructure of the bridge. Rope access techniques were employed for inspection of towers, and portions of the (Jackson Street Bridge) main span truss.

This project is an example of successful bridge work HDR is currently executing with LADOTD.

HDR MEMBERS INVOLVED: Wesley Jacobs, Jason Abendroth, Keith Salais, Ronald Sanchez, Erin O'Malley, Brian Leshko, Matthew McGuire, Mike Carlton, Raphael Costa



17. **Firm Experience:** Project 2

Firm name	**HDR Engineering, Inc.**		Past Performance Evaluation Discipline(s)*	Bridge	
Project name	Corpus Christi Harbor Bridge Inspection		Firm responsibility (prime or sub?)	Prime	
Project number	97191	Owner's name	Texas Department of Transportation (TxDOT) - Bridge Division		
Project location	Corpus Christi, TX		Owner's Project Manager	Lu Trujillo, PE	
Owner's address, phone, email	118 E. Riverside Drive, Austin, TX 78704 | (512) 416-2075 | Lu.Trujillo@TxDOT.gov				
Services commenced by this firm (mm/yy)	09/08	Total consultant contract cost ($1,000's)	$2,978		
Services completed by this firm (mm/yy)	05/11	Cost of consultant services provided by this firm ($1,000's)	$1,533		

HDR performed an in-depth inspection, load rating and prepared rehabilitation plans, specifications and estimates for this 1,782-foot deck truss and through truss structure that was constructed in 1959. Detailed "arms-length" inspection of the bridge required access by man-lifts, under bridge inspection vehicles and industrial rope access techniques. Based on the inspection, HDR prepared a condition evaluation report that documented the aspects of the bridge condition including structure deterioration, phased-array ultrasonic pin test results, specific locations of defects, and preliminary recommendations for repairs.

Each member and gusset plate was load rated with and without structure deterioration utilizing the latest FHWA criteria. Working closely with TxDOT, HDR developed rehabilitation plans to repair members and gussets with an Operating Rating less than 1.3. HDR developed specific details and repair sequences that could be executed while maintaining traffic on the bridge.

Corpus Christi Harbor Bridge, a Through Truss and Deck Truss Structure, is 1782 feet in Length

KEY PROJECT ELEMENTS:

- In-Depth Rehabilitation Inspection– Through-Truss
- SPRAT Rope Access Inspection
- Pins Phased-Array Ultrasonic Testing
- Total Bridge Length of 1782 feet
- Clearance Above Waterway of 138 feet
- Performed Load Rating of Truss and Evaluated Truss Gusset Plates
- Prepared Plans for Repair and Strengthening Components
- Trusses with Fracture Critical Elements and Fatigue Sensitive Details

HDR MEMBERS INVOLVED: Brian Zeiger, Brian Leshko

Finite Element Modeling was used to Efficiently Determine the Operating Rating of the Bridge Members and Gussett Plates

Rope Access Allowed Traffic to be Maintained While Performing Inspections

17. **Firm Experience:** Project 3

Firm name	**HDR Engineering, Inc.**		Past Performance Evaluation Discipline(s)*	Bridge	
Project name	Fracture Critical In-Depth Inspection IDIQ (TxDOT) Bridge Division		Firm responsibility (prime or sub?)	Prime	
Project number	88-048P5005, 88-2IDP5036, 88-4IDP5067 & 88-8IDP5005	Owner's name	Texas Department of Transportation (TxDOT) - Bridge Division		
Project location	Texas - Statewide		Owner's Project Manager	Lu Trujillo, PE	
Owner's address, phone, email	118 E. Riverside Drive, Austin, TX 78704 | (512) 416-2075 | Lu.Trujillo@TxDOT.gov				
Services commenced by this firm (mm/yy)	2010	Total consultant contract cost ($1,000's)		$10,000	
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)		$9,139	

HDR performed field inspection and report preparation in accordance with the National Bridge Inspection Standards (NBIS) for three consecutive two-year TxDOT Statewide Fracture Critical Bridge Inspection contracts. HDR is currently executing on the fourth two-year contract. We staffed the projects with experienced FHWA-certified bridge inspection team leaders, graduate engineers, from numerous offices across the country. Inspection team leaders are NBIS-certified bridge safety inspectors who have completed the following FHWA-NHI Training Courses: 130055 - Safety Inspection of In-Service Bridges and 130078 - Fracture Critical Inspection Techniques for Steel Bridges. Numerous bridges over railroad facilities necessitates that HDR bridge inspection personnel have current background checks and e-Railsafe security access credentials. HDR bridge inspectors perform dye penetrant and magnetic particle testing in the field, to determine the presence of a crack or to measure the extent of an existing crack, to determine whether the crack is propagating.

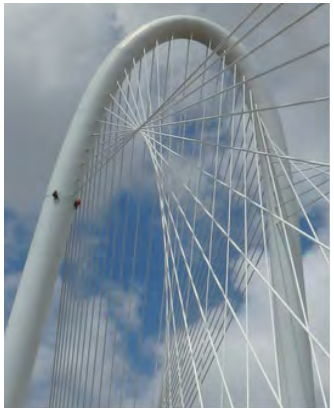
Inspection access is gained using rented Aspen Aerials UB-60/A-62 under bridge inspection vehicles, rented bucket trucks, manlifts, confined space entry techniques and industrial rope access.

The contracts to date include 46 Work Authorizations to inspect 1560 bridges comprised of 6,248 fracture critical components (plate caps, box caps, tub girder spans, plate girder spans, steel truss spans, flat car spans and the State's inventory of cable-stayed bridges).

KEY PROJECT ELEMENTS:

- In-Depth Fracture Critical Bridge Inspection
- Multiple bridges and bridge types – movable bridges, plate girders, cable stayed, truss spans, tub girders.
- Tunnel Inspection
- Load Rating
- Non-Destructive Testing

HDR MEMBERS INVOLVED: Brian Leshko, Erin O'Malley, Peter Harrison, Keith Salais, Riley Boone, Matthew Bruno, Brian Zieger



Spur 366 over Trinity River.

Santiago Calatrava's Signature Bridge.

1,202 ft long two-span cable-stay unit bookended by five west approach spans (combined 440 ft) and three east approach spans (a combined 290 ft) total length of 1,957 ft.

17. **Firm Experience:** Project 4

Firm name	**HDR Engineering, Inc.**		Past Performance Evaluation Discipline(s)*	Bridge, Other	
Project name	Oregon DOT Statewide Major and Complex Bridge Inspections		Firm responsibility (prime or sub?)	Prime	
Project number	29376, Work Order #4	Owner's name	Oregon Department of Transportation		
Project location	Portland, OR		Owner's Project Manager	Joel Boothe, PE	
Owner's address, phone, email	4040 Fairview Industrial Drive, SE, Salem, OR 97302 | (503) 302-7998 | joel.e.boothe@odot.oregon.gov				
Services commenced by this firm (mm/yy)	08/10	Total consultant contract cost ($1,000's)		$402	
Services completed by this firm (mm/yy)	04/12	Cost of consultant services provided by this firm ($1,000's)		$281	

HDR performed an in-depth and fracture critical bridge inspection, including electrical and mechanical systems inspections, and prepared a condition report for the following:

Approach interchanges and main span of the Fremont Bridge, carrying Interstate 405 and U.S. Route 30 over the Willamette River in Portland, Oregon. The main river bridge, 385 feet at the arch's peak, has vertical clearance of 175 feet over the water and consists of a three-span continuous steel tied arch, totaling 2,154 feet.

George Abernethy Bridge complex in West Linn, Oregon, carrying six lanes of I-205 over the Willamette River. The complex, comprised of four ramps totaling almost two miles of elevated structure, is predominately composed of welded I-girders with a three-span welded steel box girder main river unit. Access techniques included use of underbridge inspection cranes, bucket trucks and confined space entry.

Steel Bridge complex carrying Oregon Highway 1W, Trimet light rail trains, and the Union Pacific Railroad over the Willamette River in Portland, OR. This twin-deck, independently-liftable, vertical lift bridge is the only one of its type in the world and consists of Pratt deck and through truss spans flanked by a total of 19 riveted steel approach spans and 12 concrete approach spans conveying vehicular, light rail, and freight rail traffic. The total length of the main river spans is over 800 feet.

Special attention was devoted to examining fracture-critical members and fatigue-prone details, structural connections and gusset plates, as well as areas with previously identified deficiencies. Routine inspection of the trackways, safety facilities, and movable bridge components was also performed on an opportunity basis. HDR performed a detailed inspection of incoming power as well as the bridge control system. Based on these inspections, a scope of work for rehabilitation was prepared. HDR also performed a lift span balance adjustment plan.

KEY PROJECT ELEMENTS:

- First Close-up, Hands-on Inspection of 100% of the Superstructure and Substructure since its Construction in 1910
- Fracture-Critical Member Inspection
- SPRAT Rope Access Inspection
- Bridge Length Greater than 1000 feet
- Clearance above Waterway of 163 feet (max.)
- Vehicles, Light Rail and Freight Rail on Bridge
- Minimal Impact to Traffic Operations due to Extensive use of Rope Access Techniques
- One-of-a-Kind Vertical Lift Bridge in the World
- Trusses with Fracture Critical Elements and Fatigue Sensitive Details
- Inspection of Movable Bridge (Mechanical & Electrical) Components
- Trackway Inspection

HDR MEMBERS INVOLVED:
Matthew McGuire, Brian Leshko, Matthew Bruno

HDR Inspectors used Rope Access Techniques to Access Areas on the Bridge that would not be Accessible using Traditional Methods

17. **Firm Experience:** Project 5

Firm name	**HDR Engineering, Inc.**	Past Performance Evaluation Discipline(s)*	Bridge
Project name	Golden Gate Bridge Fracture Critical Bridge Inspection	Firm responsibility (prime or sub?)	Prime
Project number	2015-B-8; 2017-B-19; 2020-B-053	Owner's name	Golden Gate Bridge Highway &Transportation District
Project location	San Francisco, CA	Owner's Project Manager	Steve Song
Owner's address, phone, email	Box 9000, Presidio Station, San Francisco, CA 94129-0601 | (415) 923-2336 | ssong@goldengate.org		
Services commenced by this firm	06/15	Total consultant contract cost ($1,000's)	$13,600
Services completed by this firm	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$9,285

The Golden Gate Bridge, Highway and Transportation District (District) selected HDR to provide Fracture Critical Bridge Inspection Services on select floor beams and truss members on the Golden Gate Bridge for the 2015, 2017, 2019, and 2021 inspection cycles.

For each inspection cycle, industrial rope access was used to complete the inspection of 244 truss members, 177 floorbeams, nine girders, 250 deck pedestals and 450 feet of the main cables within two weeks using a team of 12 inspectors and 12 rigging technicians. The project included inspections within the following structure units: South Approach Viaduct (SAV) Girder Spans 1-3, SAV Deck Struss Spans 4-6, Fort Point Arch Span, Suspension Spans, and North Approach Viaduct Desk Truss Spans 1-5.

In 2018, HDR performed the first ever close-up visual inspection of the main suspension span towers in less than nine days. The inspection also encompassed the transverse tower struts, including exposed surfaces of the trusses located within the steel facade at Struts 1-4, interior faces of the steel facades at Struts 1-4, exposed surfaces of Struts 5-7 and exposed surfaces of diagonal cross-bracing between Struts 5, 6 and 7.

In response to diaphragm cracking discovered by the District in the SAV Girder Spans, HDR also performed close-up visual inspection of the Type 'B' Orthotropic Deck Support Diaphragms during the 2019 cycle (located at South Approach Tower Spans, Pylon S1, Suspension Span Tower Spans, Pylon N1 and North Approach Beam Span).

In 2021, HDR inspected the entire underside of the suspension spans using rope access since the District's traveler system was being replaced. The inspection work included: all 261 bridge floorbeams, requiring nearly 9 miles of traversing on rope; the entire underside of the steel deck, 400,000 square feet; nearly 13,000 feet of stiffening trusses, requiring 514 vertical descents; and over 4,000 deck support pedestals.

KEY PROJECT ELEMENTS:

- In-Depth Fracture Critical Inspections
- SPRAT Rope Access Inspections
- Suspension Bridge 8,891 ft. in length
- Load Rating
- Structural Analysis/Repairs for Condition State 4 defects
- Exceptional PPQ ratings by client

HDR MEMBERS INVOLVED: Brian Leshko, Matthew Bruno, Peter Harrison, Erin O'Malley, Brian Zeiger

17. **Firm Experience:** Project 6

Firm name	**HDR Engineering, Inc.**		Past Performance Evaluation Discipline(s)*	Bridge	
Project name	Alaska DOT & PF Fracture Critical and Special Bridge Inspections		Firm responsibility (prime or sub?)	Prime	
Project number	CON0074675	Owner's name	Alaska Department of Transportation		
Project location	Statewide AK		Owner's Project Manager	Larry Owen, PE, Bridge Management Engineer	
Owner's address, phone, email	PO Box 112500, MS-2500, Juneau, AK 99811-2500 | 907.465.8897 | larry.owen@alaska.gov				
Services commenced by this firm (mm/yy)	2006	Total consultant contract cost ($1,000's)		$1,700 (est)	
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)		$1,400 (est)	

HDR was retained by the Alaska Department of Transportation and Public Facilities (AKDOT&PF) from 2006 to the present to provide bridge inspection services. This contract typically is for a duration of three years and assignments and Task Orders are issued under the contract for specific assignments. Contract services typically involve inspection of the state's fracture critical structures and special inspections that may require rope access and assisted climbing techniques. Under this contract, HDR performed hands-on inspection of each fracture critical member, fatigue prone detail and other identified items on bridges, throughout the State of Alaska. HDR developed access plans that enabled inspection of the bridges at 'an arm's length distance' commensurate with the requirements for fracture critical inspections. Access and inspection plans were developed with a priority placed on the safety of inspection crews while minimizing impacts to the traveling public.

HDR's talented bridge inspectors used rope access to evaluate the structural components within arm's reach on each of the assigned bridges. Rope access is the application of specialized rope techniques to place inspectors in hard-to-reach locations in the vertical environment. Rope-access inspectors descend, ascend and traverse ropes to access the structure to perform the hands-on inspection. HDR's rope-access bridge inspectors are certified to Levels I, II and III, by the Society of Professional Rope Access Technicians (SPRAT).

The structure types typically included under this contract include through trusses and docks and marine ferry terminal structures. Many of the bridges are in remote locations that are not connected to the contiguous road system, requiring transportation by small aircraft or boats. HDR's inspection team developed detailed logistics plans to get personnel and gear to these locations to perform the work. Our work in Alaska has also helped our teams realize the importance of having backup contingency plans for our proposed workplan due to the highly variable weather conditions and travel challenges.

Over the years, HDR also performed load ratings for AKDOT&PF and underwater inspections (via subconsultant).

The examples below depict some of the Task Order assignments HDR performed under this contract:

12 bridges were inspected: **1) Kuzitrin River**, BN 398 – Steel through truss, 306'; **2) Kougarok River**, BN 893 – Steel through truss, 183'; **3) Tanana River at Nenana**, BN 202 – Two (2) steel through trusses, 500'-500'; **4) Tanana River**, BN 505 – Steel cantilever through truss, 258'-430'-258'; **5) Tatalina River**, BN 462 – Steel pony truss, 61'; **6) Takotna River**, BN 463 – Steel through truss, 255'; **7) California Creek**, BN 466 – Dual steel I-beam girders, 44'; **8) Gaines Creek**, BN 467 – Steel pony or "half-through" truss, 120'; **9) Klehini River**, BN 1216 – Two (2) Steel through trusses, 121'-121'; **10) Taiya River**, BN 309 – Steel through truss, 205'; **11) Tanana River at Big Delta**, BN 524 – Steel through truss, 399'; and **12) Nenana River at Rex**, BN 216 – Steel through truss, 406'.

36 transfer bridges at marine ferry terminals and seaplane float facilities were inspected at 22 locations throughout the South Central, Southeastern and Inside Passage regions of Alaska.

Through our partnership with AKDOT&PF over multiple years we have inspected each of their fracture critical bridges and ferry terminal structures multiple times.

HDR MEMBERS INVOLVED: Brian Leshko, Brian Zeiger, Matthew Bruno

17. **Firm Experience:** Project 7

Firm name	**HDR Engineering, Inc.**	Past Performance Evaluation Discipline(s)*	Bridge
Project name	New Hampshire DOT Portsmouth-Kittery Bridge Inspection & Cost Analysis	Firm Responsibility (prime or sub?)	Prime
Project number	13678E	Owner's name	New Hampshire Department of Transportation
Project location	Portsmouth, NH - Kittery, ME	Owner's Project Manager	Loretta Girard Doughty, P.E.
Owner's address, phone, email	Room 230, JOM Building, PO Box 483, 7 Hazen Drive Concord, NH 03302-0483 | (603) 271-2230 | Loretta.G.Doughty@dot.nh.gov		
Services commenced by this firm (mm/yy)	05/09	Total consultant contract cost ($1,000's)	$4,145
Services completed by this firm (mm/yy)	06/12	Cost of consultant services provided by this firm ($1,000's)	$2,911

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

The New Hampshire Department of Transportation (NHDOT) and the Maine Department of Transportation (MaineDOT) collaborated on assessing the crossings of the Piscataqua River from Portsmouth, NH to Kittery, ME. Bids for the rehabilitation of the Memorial Bridge, in conjunction with the continual annual operating costs of the Sarah Mildred Long and Memorial Bridges, prompted both State DOTs to conduct a study to determine the future of this corridor. The Bridge Analysis and Cost Analysis (BICA) contract provided comparative life cycle costs for these two movable, vertical lift bridges regarding their continued use, operation and maintenance, and options to rehabilitate or replace the existing structures.

In 2010, NHDOT tasked HDR to inspect the main spans, lift towers and approach spans of the Sarah Mildred Long and Memorial Bridges - both movable bridges of the vertical lift type. The Sarah Mildred Long Bridge consists of four fixed truss spans carrying both rail and highway traffic, a vertical lift truss span and several deck girder approach spans on both the north and south ends of the trusses. The Memorial Bridge consists of two fixed through-truss spans carrying highway traffic, a vertical lift through-truss span and several multi-stringer approaches on both ends of the bridge. In addition, an in-depth inspection and load rating were conducted on the Interstate 95 (I-95) High-Level Highway Bridge, which is a three-span through-truss arch bridge.

HDR's Services Included: In-depth bridge inspection and load capacity ratings for the three bridges; two vertical lift movable truss bridges and one through-truss arch bridge; Preparation of estimates of current and future costs for serviceability, continued use, operation and maintenance for the three bridges; Determination of the cost for a complete superstructure replacement with a modern through-truss vertical lift structure for the Memorial Bridge; Preparation of a conceptual level estimate for the cost of a new fixed high-level bridge to replace the current Sarah Mildred Long Bridge.

KEY PROJECT ELEMENTS:

- In-depth Moveable Bridge Inspection – Vertical Lift
- Rope Access Inspections: Decreased inspection time and cost by reducing use of access vehicles and efficient entry into hard-to-reach areas
- Load Capacity Ratings
- Fracture Critical Bridge Inspection with fatigue sensitive details
- Structural, Mechanical and Electrical Inspection of two vertical lift bridges
- Bridge Repair/Replacement and Evaluation Recommendations
- I-95 Bridge is 135 feet over the river
- Three Steel Truss Bridges, each of the three bridges is over 1000 feet in length: Bridges included: a Through Truss, a Deck Truss and a Through-Truss Arch
- Procurement Services
- Preliminary Design of Vertical Lift Replacement Bridge; including Structural, Mechanical, Electrical, and Architectural plans

HDR MEMBERS INVOLVED: Brian Leshko, Brian Zeiger, Matt McGuire

17. **Firm Experience:** **Project 8**

Firm name	**HDR Engineering, Inc.**		Past Performance Evaluation Discipline(s)*		Bridge
Project name	Cochrane-Africatown USA Bridge – In-Depth Structural Inspection		Firm responsibility (prime or sub?)		Prime
Project number	10037886	Owner's name	Alabama Department of Transportation (ALDOT)		
Project location	Mobile, AL		Owner's Project Manager	Don Powell – Operations Engineer	
Owner's address, phone, email	1701 I-65 West Service Road N Mobile, Alabama 36618 | (251) 470-8230 | powelld@dot.state.al.us				
Services commenced by this firm (mm/yy)	06/16	Total consultant contract cost ($1,000's)		$265	
Services completed by this firm (mm/yy)	07/16	Cost of consultant services provided by this firm ($1,000's)		$215 (estimated)	

Opened in 1991, the high-level, fixed structure replaced the vertical-lift Cochrane Bridge. The bridge's two lanes had served for nearly 60 years but were subject to 14,000 traffic delays annually as the bridge accommodated busy river traffic. The new bridge is 7,291 ft long, with approaching roadways more than one-half mile long on either side. The main river crossing is accomplished by a 1,500 ft cable-stayed main span unit with a 780 ft. main center span.

The cast-in-place concrete segmental main span was constructed in balanced cantilever and is supported by 96 cables in a semi-fan arrangement within two "H" shaped towers. This bridge was built to provide a bridge alternative to the two highway tunnels underneath the Mobile River, and to also provide above- ground passage for hazardous materials that are prohibited from using the tunnels. It is the first cable-stayed bridge ever built in Alabama. It's stunning profile, 140 feet above the Mobile River, frequently graces promotional media for the area, and the bridge has become a landmark and symbol of progress to residents and visitors alike.

HDR was selected by ALDOT in 2016 under a special task order to perform the inspection of the cable-stayed main span including towers, stays, anchors, superstructure and substructure followed by the development of an inspection report and recommendations for maintenance. HDR's experienced 12-person inspection team used a man-lift operating from traffic closures on the deck to efficiently access the adjacent portions of the towers up to and including the top strut, as well as various industrial rope access techniques to access all other components of the main span unit.

KEY PROJECT ELEMENTS:

- In-Depth Structural Inspections of a 1,500 ft cable stayed bridge
- Rope Access and lift inspection methods
- Completed inspection work in one week
- Mechanical and Electrical Inspections

HDR MEMBERS INVOLVED: Ryan Hedlund, Erin O'Malley, Brian Leshko

17. **Firm Experience:** Project 9

Firm name	**HDR Engineering, Inc.**			Past Performance Evaluation Discipline(s)*	Bridge
Project name	TxDOT Movable Bridges Asset Maintenance			Firm responsibility (prime or sub?)	Prime
Project number	10256030	Owner's name	Texas Department of Transportation (TxDOT)		
Project location	Orange, TX		Owner's Project Manager	Courtney Holle	
Owner's address, phone, email	125 East 11th Street, Austin, TX 78701 | Office: (512) 416-2717, Mobile: (512) 720-1875 | Courtney.Holle@txdot.gov				
Services commenced by this firm (mm/yy)	06/20	Total consultant contract cost ($1,000's)		$3,317	
Services completed by this firm (mm/yy)	ongoing	Cost of consultant services provided by this firm ($1,000's)		$2,941	

HDR was selected to provide Asset Maintenance Development and Oversight Services for the 14-span deck girder bridge featuring a 154-foot swing span over Cow Bayou. The primary goal of the project is to preserve the integrity and serviceability of the recently rehabilitated movable bridge and provide reliable operation for years to come. TxDOT is also interested in outsourcing this work such that its in-house maintenance team could focus on other priorities. As the prime consultant representing TxDOT, HDR performed an in-depth multi-discipline inspection, and developed the routine and periodic bridge maintenance program for the structural, mechanical, and electrical systems, and an operation and maintenance plan for the bridge. TxDOT intends to task HDR with developing a maintenance contract to be let for open bidding such that a contractor will maintain the asset. Upon award of a routine maintenance contract, HDR will perform oversight of the maintenance contractor and conduct routine inspections to assess the effectiveness of the maintenance program and make adjustments where required.

The swing span's superstructure features a new cast-in-place concrete deck made composite with the steel stringer-floorbeam-girder floor system. The bridge operating machinery includes a spherical bronze disc pivot bearing and enclosed gear system, end lifts operated by linear actuators, and traffic gates. The bridge electrical system consists of a relay-based control system and a switched secondary resistance wound rotor motor for operating the swing span. HDR is monitoring system performance through measurements, data logging and trend analysis of key electrical parameters as part of the asset maintenance program.

KEY PROJECT ELEMENTS:

- Movable Bridge Inspection
- Developed Routine and Bridge Maintenance Program

HDR MEMBERS INVOLVED: Robert Moses, David Knickerbocker, Mike Carlton, Matt McGuire, Jonathan Kohler, Carlos Larco, Mathew Cassera, Raphael Costa

17. **Firm Experience:** **Project 10**

Firm name	**HDR Engineering, Inc.**		Past Performance Evaluation Discipline(s)*		Bridge
Project name	Movable Bridge On-Call Engineering Services		Firm responsibility (prime or sub?)		Prime
Project number	Multiple	Owner's name	CSX Transportation		
Project location	Nationwide		Owner's Project Manager	Matthew Crawford	
Owner's address, phone, email	500 Water Street – J350, Jacksonville, FL 32202 | (904) 359-1519 | matthew_crawford@csx.com				
Services commenced by this firm (mm/yy)	04/15	Total consultant contract cost ($1,000's)			$9,120
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)			$8,300

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

As part of the CSX Transportation On-Call Engineering Services contract, HDR is tasked with improving the reliability and serviceability of over 40 movable bridges nationwide and converting several of these bridges for remote control operation. The program included detailed and assessment inspections, rehabilitation design and construction support for swing, bascule and lift bridges in various locations around the nation.

HDR performed initial scoping inspections to evaluate overall bridge condition and to identify repairs necessary to achieve 'State of Good Repair' and also to facilitate remote operation. HDR produced scoping inspection reports including findings, recommendations, life-cycle costs, cost/benefit analyses and construction scheduling. Once each bridge's repair and rehabilitation scope was confirmed, in-depth inspections were performed on each bridge to acquire additional field information and measurements, obtain missing technical data caused by lack of 'as-built' documentation, and perform NDT and verify any other information needed for the rehabilitation designs.

KEY PROJECT ELEMENTS:

- Preliminary Scoping Inspections.
- In-depth Inspections.
- Rehabilitation detailed design.
- Permitting and agency coordination.
- Construction inspection, management, support.

HDR MEMBERS INVOLVED: Robert Moses, Raphael Costa, Peter Davis, Herbert Protin, David Knickerbocker, Mike Carlton, Matt McGuire, Carlos Larco, Diana Jandreski, Matthew Cassera

The following is a partial list of bridges HDR has performed the key project elements during the past 7 years:

- Joliet Vertical Lift Bridge – Chicago, IL
- Marley Neck Swing Bridge – Baltimore, MD
- Schuylkill River Swing Bridge – Philadelphia, PA
- Hopewell/Appomattox River Swing Bridge – Hopewell, VA
- Tailrace Canal Vertical Lift Bridge – Moncks Corner, SC
- New Johnsonville Vertical Lift Bridge – New Johnsonville, TN
- CR Draw Swing Bridge – Nashville, TN
- Trout River Swing Bridge – Jacksonville, FL
- Buffalo Bluff Bascule Bridge – Palatka, FL
- Apalachicola River Swing Bridge – Apalachicola, FL
- Saint Lucie Canal Swing Bridge – Indiantown, FL
- Little Manatee River Swing Bridge – Ruskin, FL
- Mobile River Vertical Lift Bridge – Saraland, AL
- Three Mile Creek Swing Bridge – Mobile, AL
- Bayou Sara Swing Bridge – Saraland, AL
- Chickasaw Swing Bridge – Mobile, AL
- Bay Saint Louis Swing Bridge – Bay St. Louis, MS
- Pascagoula Bascule Bridge – Pascagoula, MS
- Biloxi Bay Swing Bridge – Ocean Springs, MS
- Pearl River Swing Bridge – Pearl River, LA
- Chef Menteur Swing Bridge – Chef Menteur, LA
- Rigolets Swing Bridge – Rigolets, LA
- Industrial Canal Bascule Bridge – New Orleans, LA

17. **Firm Experience:** **Project 11**

Firm name	**Collins Engineers, Inc.**		Past Performance Evaluation Discipline(s)*	Bridge	
Project name	Montana DOT (MDT) Bridge Climbing Inspections Term Contracts		Firm responsibility (prime or sub?)	Prime	
Project number	9885.00	Owner's name	Montana Department of Transportation		
Project location	Statewide, MT		Owner's Project Manager	Henry Henning	
Owner's address, phone, email	200 Smelter Avenue NE, Great Falls, MT 59403; 406-781-6929, hhenning@mt.gov				
Services commenced by this firm	2008	Total consultant contract cost ($1,000's)		$1,400	
Services completed by this firm	2021	Cost of consultant services provided by this firm ($1,000's)		$1,400	

Collins performed 132 rope access climbing inspections for many of Montana's largest bridges from 2008 through the 2021 inspection seasons, including in-depth, hands-on, fracture-critical inspections of all bridge elements. Collins completed various bridge types, including through trusses, deck trusses, a Pratt half-deck through truss, and one suspension bridge. Inspectors followed the Society of Professional Rope Access Technicians (SPRAT) safe practices guidelines to perform the rope access techniques necessary to inspect the bridges for this project. Engineer inspectors performed NBI and element level inspections for each bridge inspected. Collins delivered comprehensive inspection reports for each structure, including an evaluation of the overall condition of the bridge, photographs, sketches, bearing and gusset measurements, and diagrams to substantiate the findings, as well as recommendations for short and long-term repairs and maintenance. Submittals included updated fracture critical inspection procedures, attribute data, bridge ratings, and element level inspection ratings, all entered directly into SMS.

COLLINS MEMBERS INVOLVED: Drew Garceau, Michael Spencer, Jon Wittrock, Chris Thrift, Beau Kamarath

17. **Firm Experience:** **Project 12**

Firm name	**Collins Engineers, Inc.**	Past Performance Evaluation Discipline(s)*	Bridge
Project name	VDOT Hampton Roads Berkley Bridge Inspections	Firm responsibility (prime or sub?)	Sub
Project number	48738	Owner's name	Virginia Department of Transportation (VDOT)
Project location	Chesapeake, VA	Owner's Project Manager	Christopher A. Roberts, PE
Owner's address, phone, email	7511 Burbage Drive, Suffolk, VA 23435; 757-925-2243; Christopher.Roberts@VDOT.Virginia.gov		
Services commenced by this firm	2020	Total consultant contract cost ($1,000's)	N/A
Services completed by this firm	2022	Cost of consultant services provided by this firm ($1,000's)	$750

Under this contract, Collins performed the inspection of each VDOT Bridge 122-1804, Interstate 264 WB over the Eastern Branch of Elizabeth River (Berkley Bridge) and VDOT Bridge 122-2722, Interstate 264 EB over the Eastern Branch of Elizabeth River (Berkley Bridge) for the Hampton Roads District of VDOT. Bridge 122-1804 is a four-lane bridge consisting of one, 260' long steel double leaf bascule span with nineteen steel multi-girder approach spans and is 2,128' long total and Bridge 122-2722 is a four-lane bridge consisting of one, 260' long steel double leaf bascule span with three steel multi-girder approach spans and six prestressed concrete multi-beam approach spans and is 1200' long total. The inspections performed include the routine inspection of each bridge in June 2020. Collins is currently under contract to perform the routine inspection of each structure in June of 2022.

An Aspen A-75 (UBIV) with traffic control (nighttime right lane closures) was utilized for the hands-on inspection of each of the approach spans over the roadway in excess of 60'. SPRAT compliant rope access was utilized to access the interior portion of Bascule Piers 8 and 9 and each movable leaf of Spans 8 and 9. A bucket truck with single lane flagging operation and HRT Light Rail Coordination on City Hall Ave. was required for the inspection of Span 1, while nighttime bucket truck inspections within the courthouse parking lot below the structure was required after normal business hours for spans lower than 60' in height. Harcon's pontoon bucket boat was used to inspect the approach spans over the water to limit the lane closures in this highly traveled section of interstate which connects downtown Norfolk and Downtown Tunnels to Portsmouth, Va.

COLLINS MEMBERS INVOLVED: Chris Thrift, Beau Kamrath

17. **Firm Experience:** Project 13

Firm name	**Collins Engineers, Inc.**		Past Performance Evaluation Discipline(s)*	Bridge	
Project name	Major River Crossing Bridge Inspections		Firm responsibility (prime or sub?)	Sub	
Project number	12565	Owner's name	Iowa Department of Transportation		
Project location	Statewide, IA		Owner's Project Manager	Michael Todsen	
Owner's address, phone, email	800 Lincoln Way, Ames, IA 50010; 515-233-7726; michael.todsen@dot.iowa.gov				
Services commenced by this firm	2018		Total consultant contract cost ($1,000's)	N/A	
Services completed by this firm	2020		Cost of consultant services provided by this firm ($1,000's)	$180	

Collins provided complex bridge inspection services and quality control reviews of bridge inspection reports for Iowa DOT as a subconsultant. Inspections were completed over separate years and included various access techniques including using rope access climbing techniques, underbridge inspection vehicles, manlifts, confined space entry, boats, and temporary lane closures. Inspection reports and photographs were documented electronically on tablets. A detailed quality control review of inspection findings, recommendations, and element level ratings were completed.

- USH-34 cable-stay Bridge (Great River Bridge) over the Mississippi River (Bridge Type: cable-stayed, Length: 2,267 ft long with 400 ft tall towers)
- Iowa Highway 9 truss (Black Hawk Bridge) over the Mississippi River (Bridge Type: through truss, Length: 1,653 ft long)
- USH-77 tied arch over the Missouri River (Bridge Type: tied-arch, Length: 1,502 ft long with a 425 ft main span)
- I-74 EB and I-74 WB Suspension Bridges (Bridge Type: suspension, Length: 5,018-ft long)
- USH-61 tied arch over the Mississippi River (Bridge Type: tied-arch, Length: 2,951 ft long with a main span of 670 ft)

COLLINS MEMBERS INVOLVED: Michael Seal, Drew Garceau, Jon Wittrock

17. **Firm Experience:** **Project 14**

Firm name	**Collins Engineers, Inc.**	Past Performance Evaluation Discipline(s)*	Bridge
Project name	Illinois DOT Large River Crossing Bridge Inspections	Firm responsibility (prime or sub?)	Prime
Project number	11399	Owner's name	Illinois DOT
Project location	Statewide, Illinois	Owner's Project Manager	William A. Beisner
Owner's address, phone, email	2300 S. Dirksen Parkway, Springfield, IL 62764; 217-785-4537; william.beisner@illinois.gov		
Services commenced by this firm	2019	Total consultant contract cost ($1,000's)	$1,600
Services completed by this firm	2021	Cost of consultant services provided by this firm ($1,000's)	$618

Collins performed the inspection and reporting of 16 major river bridges throughout the state of Illinois on a task-order basis over the past three years. The bridges included many of Illinois DOT's (IDOT) largest and most complex structures including arch, suspension, through truss, deck truss, and deck girder bridges ranging in length from 1,000 ft to 5,000 ft long. The inspections utilized multiple inspection teams coordinating snooper trucks, aerial manlifts, bucket trucks, rope access climbing, confined space entry, and drones to perform the in-depth, fracture critical, and element level inspection of each bridge. Channel surveys were also performed at each bridge.

Collins, as the prime consultant, coordinated the inspection and reporting work amongst several consultants and oversaw all coordination and planning with IDOT. Collins coordinated inspection windows with snooper truck rental companies, railroad flagman, and traffic control companies to ensure all aspects needed to perform the work were in place. The work consisted of a hands-on visual inspection of all primary members of the structures. Deficiencies were measured, documented in the field on the structure, and recorded in a table of deficiencies, including photographs. Ultrasonic Testing (UT) of structural pins was performed on several structures. Final reports were issued to the IDOT Bridge Office complete with bridge rating forms, sketches, photographs, and deficiency tables.

COLLINS MEMBERS INVOLVED: Michael Spencer

17. **Firm Experience:** **Project 15**

Firm name	**Collins Engineers, Inc.**		Past Performance Evaluation Discipline(s)*	Bridge	
Project name	High Rise Bridge – Hampton Roads – Varina Enon Bridge (Cable-Stayed)		Firm responsibility (prime or sub?)	Sub	
Project number	48738	Owner's name	Virginia Department of Transportation (VDOT)		
Project location	Chesapeake, VA		Owner's Project Manager	Christopher A. Roberts, PE	
Owner's address, phone, email	7511 Burbage Drive, Suffolk, VA 23435; 757-925-2243; Christopher.Roberts@VDOT.Virginia.gov				
Services commenced by this firm	2020	Total consultant contract cost ($1,000's)	n/a		
Services completed by this firm	2022	Cost of consultant services provided by this firm ($1,000's)	$750		

Under this contract, Collins has performed three inspections of VDOT Bridge 131-2527, Interstate 64 over the Southern Branch of Elizabeth River (High Rise Bridge) for the Hampton Roads District of VDOT. This four-lane bridge consists of one, 280' long steel double leaf bascule span with thirty-nine steel multi-girder approach spans and is 4825' long total. The inspections performed include the Routine Inspection in November 2020, the Fracture Critical Inspection in November 2021, and an In-depth Design Level Inspection in January 2022.

Routine Inspection in November 2020, Collins provided a detailed inspection report in addition to BrM element level inventory services to establish and facilitate future repairs. A hands-on inspection of all structural elements was performed by an NBIS-qualified inspection team and led by an NBIS-qualified team leader certified in the inspection of fracture critical members. Non-destructive testing was performed by Collins' in-house, VDOT Materials Testing Division Qualified ASNT-Compliant NDT Level II Technicians to inspect all welds and verify the limits of all cracks and other identified deficiencies. An Aspen A-62 (UBIV) with traffic control (nighttime right lane closures) was utilized for the hands-on inspection of each of the approach spans. SPRAT compliant rope access was utilized to access the interior portion of Bascule Piers 21 and 22 and each movable leaf of Span 22. A bucket truck with single lane flagging operation on Bainbridge Blvd. was required for the inspection of Span 1. Alternating right and left daytime lane closures were utilized on a Sunday morning, between sunrise and 10am, for the in-depth inspection of the deteriorating steel grid deck in Span 22. Collins mobilized a team 11 inspectors for the in-depth inspection of the steel grid deck to meet the limited three-hour window available for the inspections. Access to each bascule pier through the tender's house was provided by VDOT.

Fracture Critical inspection in November 2021, Collins performed the hands-on inspection of fracture critical girders and floor beams in Bascule Span 22. Included in this inspection, Collins performed the hands-on inspection of the stringers and transverse riser beams within Bascule Span 22 due to know deficiencies which require annual inspection. Special attention was given to all the fatigue prone details (category C' and greater) which included: transverse stiffeners welded to girder/floor beam webs, longitudinal stiffeners welded to girder webs, intersecting welds at top of transverse stiffeners of floor beam cantilevers, bracing connection plates welded longitudinally near top of girder webs at floor beams 2–9, tapped holes in girder top flanges, butt welds in girder top flanges, transverse welds to top of girder top flanges, nicks and gouges from vessel scrapes on girders and floor beams in the west leaf, and drain pipe support straps field welded to end of stringer and girder webs. Category D, E, and E' details were hands-on inspected and Category C and C' details were inspected within arms-reach. SPRAT compliant rope access was utilized to access each movable leaf of Span 22. Access to each bascule pier through the tender's house was provided by VDOT.

COLLINS MEMBERS INVOLVED: Chris Thrift, Drew Garceau, Beau Kamrath

17. **Firm Experience:** **Project 16**

Firm name	**Collins Engineers, Inc.**	Past Performance Evaluation Discipline(s)*	Bridge
Project name	Ravenel Bridge System Inspection	Firm responsibility (prime or sub?)	Sub
Project number	02023	Owner's name	Infrastructure Corporation of America
Project location	Charleston, SC	Owner's Project Manager	John Bergman
Owner's address, phone, email	62 Brigade Street, Charleston, SC | 843-302-8640 | jbergman@ica-onramp.com		
Services commenced by this firm	2009	Total consultant contract cost ($1,000's)	$1,200
Services completed by this firm	2020	Cost of consultant services provided by this firm ($1,000's)	$700

Collins Engineers, Inc. (Collins) and Infrastructure Corporation of American (ICA) were selected by the South Carolina Department of Transportation (SCDOT) to provide in-service bridge engineering services necessary for the management, inspection, maintenance, warranty protection, and preservation of the Arthur Ravenel Bridge System located in Charleston, South Carolina. Collins is responsible for the biennial routine structure inspections and the required warranty item specific frequency inspections. Inspection techniques include following NBIS, AASHTO CoRE element, and all other applicable laws and procedures. The 18 bridges that compose the Arthur Ravenel Bridge System encompass over 6.1 miles of structures. The bridge types are considered complex ranging from multi-level interchanges, cable-stayed system, prestressed concrete girders, and fracture critical members. Collins is responsible for the inspection, scheduling, equipment rental of under bridge and above ground inspection units, work zone traffic control, special testing, surveying roadway profile and elevation monitoring points, and development of detailed reports for each structure. Collins is utilizing South Carolinas PONTIS National Bridge Management Program as an inventory tool as well as the DOTs own database that compiles inventory as well as inspection data. Some unique aspects to the project are the Ravenel Bridge System is North Americas longest cable stay span, the high-level approach and main spans were accessed using climbing techniques from the in-place tie-off bars attached to the steel girders and traveler system, and the steel box straddle bents were inspected using confined space entry techniques.

COLLINS MEMBERS INVOLVED: Drew Garceau, Chris Thrift, Michael Spencer, Beau Kamrath

17. **Firm Experience:** **Project 17**

Firm name	**Collins Engineers, Inc.**	Past Performance Evaluation Discipline(s)*	Bridge
Project name	St. Croix Crossing Complex Bridge Inspection	Firm responsibility (prime or sub?)	Prime
Project number	13152.00	Owner's name	Minnesota and Wisconsin Departments of Transportation
Project location	Stillwater, Minnesota	Owner's Project Manager	Travis McDaniel
Owner's address, phone, email	4822 Madison Yards Way, Madison, WI 53705; 608-266-5097; travis.mcdaniel@dot.wi.gov		
Services commenced by this firm	2019	Total consultant contract cost ($1,000's)	$192
Services completed by this firm	2021	Cost of consultant services provided by this firm ($1,000's)	$110

The St. Croix Crossing Bridge is the main river crossing that spans Minnesota Trunk Highway (TH) 95, the Union Pacific Railroad (UPRR), wetlands, and the St. Croix River between Oak Park Heights, MN, and St. Joseph, WI. The St. Croix Crossing Bridge totals 5,579 ft in length with four main spans of 600 ft. It consists of eight concrete box girder approach spans and six extradosed main spans. Collins completed inspection of this signature structure in 2019 and 2021.

The scale of the bridge required a large team of inspectors. Multiple access methods were employed including rope access, under bridge inspection vehicles, boats, manlifts, and drones. A significant amount of the inspection effort was geared toward the interior of the concrete boxes where confined space entry methods were used. Planning of the inspection was critical to the success of the project. The bridge was flown with a drone to create a map of the bridge and its immediate surroundings. This map was annotated with items such as span and substructure numbers, access points, safety information, and meeting areas. The map was shared via cloud server to all team members so that it was accessible by mobile device throughout the inspection. The inspection was broken down into bridge components and elements for two person teams. These teams were carefully chosen based on experience and technical expertise. Safety briefings were held every morning and the overall emphasis on safety resulted in no injuries to team members. Careful planning, experience, innovative technology, teamwork, and a focus on safety led to a successful inspection.

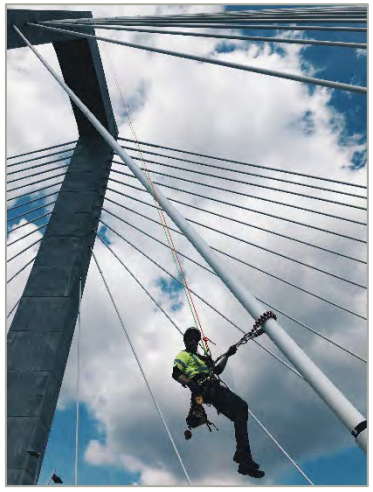
Collins Members Involved: Drew Garceau, Jon Wittrock, Michael Spencer, Barritt Lovelace

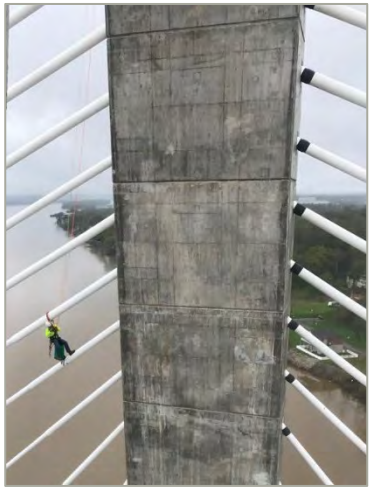
17. **Firm Experience:** **Project 18**

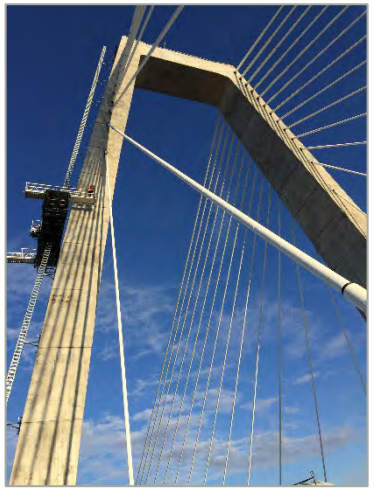
Firm name	**Collins Engineers, Inc.**	Past Performance Evaluation Discipline(s)*	Bridge
Project name	East End Crossing - Lewis & Clarke Cable-Stayed Bridge Inspection	Firm responsibility (prime or sub?)	Prime
Project number	9878.00	Owner's name	WVB – East End Crossing Partners
Project location	Louisville, Kentucky	Owner's Project Manager	Yajaira Morphonios
Owner's address, phone, email	1700 Old Salem Road, Jeffersonville, IN 47130; 812-202-4871; ymorphonios@WVB-Partners.com		
Services commenced by this firm	2016	Total consultant contract cost ($1,000's)	$490
Services completed by this firm	2021	Cost of consultant services provided by this firm ($1,000's)	$490

Collins provided the initial in-depth inspection, annual routine inspections, and periodic required warranty inspections of the Lewis and Clark Cable-Stayed Bridge in Louisville, KY, totaling six inspection cycles. The Lewis and Clark Bridge opened to the public in 2016 and consists of a 2,500-ft.-long cable-stayed bridge crossing the Ohio River with a main span of 1,200 ft. The inspection included a hands-on inspection of all fracture critical members, including the floor beams, edge girders, and cable anchor boxes. SPRAT rope access climbing inspection techniques were used to perform a hands-on inspection of the concrete towers and all of the cable-stays. Rope lengths of up to 660 ft. were used to slide the entire length of the longest cables. A detailed inspection report was prepared, including photographs, figures, and element level quantities and ratings.

Collins Members Involved: Chris Thrift, Drew Garceau, Michael Spencer, Beau Kamrath







17. **Firm Experience:** Project 19

Firm name	**Collins Engineers, Inc.**	Past Performance Evaluation Discipline(s)*	Bridge
Project name	Blatnik Bridge	Firm responsibility (prime or sub?)	Prime
Project number	11910.00	Owner's name	Wisconsin DOT (WisDOT)
Project location	Superior, Wisconsin	Owner's Project Manager	Travis McDaniel
Owner's address, phone, email	4822 Madison Yards Way, Madison, WI 53705; 608-266-5097; travis.mcdaniel@dot.wi.gov		
Services commenced by this firm	2019	Total consultant contract cost ($1,000's)	$325
Services completed by this firm	2019	Cost of consultant services provided by this firm ($1,000's)	$170

Project included the complex and fracture critical inspection biennial inspection which also included ultrasonic testing (UT) of 202 bridge pins on the Blatnik Bridge (B-16-0005) in accordance with the NBIS and WisDOT Structure Inspection Manual. The Blatnik bridge is a complex border bridge between Wisconsin and Minnesota and carries I-535 over the Saint Louis Bay of Lake Superior crossing between Superior, WI and Duluth, MN. The bridge consists of 52 spans totaling nearly 8,000 ft in length with a 600 ft main span featuring a steel through truss-arch design.

Extensive coordination was required to perform the inspection while minimizing lane closures and disruptions of traffic. A combination of access techniques was coordinated simultaneously which included the use of four under bridge inspection vehicles and an 85 ft manlift. The inspection team included five inspection teams whom were carefully staged throughout the bridge to ensure all teams could work under the same lane closures. Closures were allowed only during non-peak travel times. All 202 bridge pins were inspected using ultrasonic testing methods. Detailed field inspections, quality control review of inspection findings, recommendations, and element level ratings were completed in both WisDOT's HSIS database and MnDOT's SIMS database

COLLINS MEMBERS INVOLVED: Drew Garceau, Jon Wittrock, Barritt Lovelace

17. **Firm Experience:** **Project 20**

Firm name	**Collins Engineers, Inc.**	Past Performance Evaluation Discipline(s)*	Bridge
Project name	Minnesota DOT (MnDOT) Statewide Underwater Bridge Inspections	Firm responsibility (prime or sub?)	Prime
Project number	12477	Owner's name	Minnesota Department of Transportation
Project location	Statewide, MN	Owner's Project Manager	Joel Fishbein
Owner's address, phone, email	1500 West County Road B2, Roseville, MN 55113; 651-366-4537; Joe.Fishbein@state.mn.us		
Services commenced by this firm	2020	Total consultant contract cost ($1,000's)	$1,800
Services completed by this firm	2021	Cost of consultant services provided by this firm ($1,000's)	$1,800

Under multiple contracts, Collins performed over 2,200 visual and tactile underwater inspections on bridges spanning various waterways throughout Minnesota. The bridges ranged from 20 to 300 feet in length, with depths up to 60 feet, currents up to 3 feet per second, and, at times, very limited visibility. In 2016, Collins performed 570 underwater inspections in one season which coincided with the highest yearly runoff. Collins also prepared a Scour Monitoring Training Program for the Minnesota DOT that included 2 weeks of classroom lecture and activities in conjunction with 2 weeks of on-site field activities. As part of the project, Collins prepared training documents, assisted with equipment selection, directed mounting hardware fabrication, and implemented software setup in an effort to fully train the DOT's Hydraulics Department in state-of-the-art scour monitoring and hydrographic surveying technologies. The project utilized technologies such as mechanical scanning and mobile multi-beam sonar operations. Underwater survey data was collected during field activities and was subsequently processed into 3D models by the MnDOT participants during classroom learning exercises.

COLLINS MEMBERS INVOLVED: Michael Spencer, Barritt Lovelace, Daniel Stromberg

17. Firm Experience: Project 21

Firm name	Thompson Engineering, Inc., of Louisiana		Past Performance Evaluation Discipline (s)*		Bridge
Project name	St. Claude Bascule Bridge Repair c/o RJB, Inc.		Firm responsibility (prime or sub?)		sub
Project number	18-1101-0070	Owner's name	Port of New Orleans / client: RJB, Inc.		
Project location	New Orleans, LA		Owner's Project Manager	Beau Baggett	
Owner's address, phone, email	RJB, Inc. – 759 Holcombe Avenue, Mobile, AL 36606 | (251) 473-3290 | beau@rjbaggett.com				
Services commenced by this firm (mm/yy)	05/18	Total consultant contract cost ($1,000's)		$25	
Services completed by this firm (mm/yy)	06/18	Cost of consultant services provided by this firm ($1,000's)		$25	

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

Thompson Engineering, working for RJB, Inc., provided structural engineering services for the design of the temporary restraint system utilized to hold the St. Claude Bascule Bridge in the "raised" position for 10+ days so that canal traffic could be maintained during repair of the bridge. The bascule bridge was designed in 1918 and constructed in the early 1920's and has been in operation since. Original material properties were utilized as best determined for the age of the structure. Critical to the design was evaluation of the roughly 90-ft span in the vertical position against potential 75+ mph winds. The restraint system included a combination of steel struts, heavy-duty industrial straps and high capacity turnbuckles. Connection brackets were designed utilizing all bolted connections because welding to the riveted structure was not allowed. A severe thunderstorm caused closure of several bridges during the storm event and the St. Claude Bascule Bridge remained stable during the event and allowed the contractor to complete the repairs successfully.

Thompson Engineering is the sub-consultant to Robert J. Baggett, Inc. that performed the actual bridge repairs.

Thompson Members Involved: Keith Smith, P.E.

17. Firm Experience: Project 22

Firm name	Thompson Engineering, Inc., of Louisiana		Past Performance Evaluation Discipline (s)*		Bridge
Project name	General W.K. Wilson I-65 Bridge Over Mobile River		Firm responsibility (prime or sub?)		Prime
Project number	BR-I065(440)	Owner's name	Alabama Department of Transportation		
Project location	Mobile/Baldwin Counties, AL		Owner's Project Manager	Ken Owens, PE	
Owner's address, phone, email	1701 West I-65 Service Rd. West, Mobile, AL, 36618 | (251) 470-8200 | owensk@dot.state.al.us				
Services commenced by this firm (mm/yy)	02/15	Total consultant contract cost ($1,000's)		$965	
Services completed by this firm (mm/yy)	08/16	Cost of consultant services provided by this firm ($1,000's)		$965	

The General W. K. Wilson Bridge on I-65 is a combination fracture critical steel girder, tied arch and prestressed concrete girder system of spans. Thompson provided Project Management and CE&I services for ALDOT during a repair/rehabilitation contract with Scott Bridge Co. (Opelika, AL) with a $14 million cost and 250 day working period. Thompson was selected for this contract based on both our record providing Project Management and CE&I services to ALDOT and our availability of ALDOT certified bridge inspectors who would be familiar with bridge inspection procedures and able to identify problem areas that would require repairs that had not been identified prior to construction beginning.

The work was restricted to the steel members of the bridge, comprising of the tied arch and fracture-critical steel girder spans leading to the arch and the high points over the rivers. The connecting prestressed concrete spans were not included in the contract. The work on the tied arch included upper and lower cable connection repairs and stiffener repairs. The work on the fracture critical steel girders included deck joint replacement, girder and floorbeam stiffener repair, new drainage system installation, and new coatings applied to the steel.

The work included overseeing non-destructive tests performed on steel members to determine if cracking was present and/or spreading into adjacent members, oversight of welding procedures, and accessing high areas of the bridges. This access was made utilizing man-lifts, catwalks, and man-baskets suspended from a crane. Training was required for all Thompson personnel on site in the use of fall-protection gear, and an absolute adherence to the Thompson Safety Plan was required due to the height of the ongoing work.

Thompson Members Involved:
Nick Hartman, P.E., Jay Davison, P.E., Charlie Weston




17. Firm Experience: Project 23

Firm name	Thompson Engineering, Inc., of Louisiana		Past Performance Evaluation Discipline (s)*		Bridge
Project name	Complex Bridge Inspection/BR-NBIS(088)B			Firm responsibility (prime or sub?)	Prime
Project number	17-1106-0011	Owner's name	State of Mississippi Office of State Aid Road Construction		
Project location	Various Counties in SE Mississippi		Owner's Project Manager	David Barrett, P.E.	
Owner's address, phone, email	412 Woodrow Wilson Ave., Jackson, MS 39216-4509 | (601) 359-7150 | mail@osarc.ms.gov				
Services commenced by this firm (mm/yy)	12/2019	Total consultant contract cost ($1,000's)		$5000	
Services completed by this firm (mm/yy)	06/2018	Cost of consultant services provided by this firm ($1,000's)		$2500	

This project consists of a 2-year annual inspection, an inventory and load ratings (if necessary) on selected bridge sites located throughout varies MS Counties located in the SE portion of the State. The bridges are owned and maintained by the various counties throughout the state. The bridge types consist of, but not limited to, steel bridges with fracture critical members (floor beams, trusses, etc.), continuous plate girders, steel girders, railroad flat cars, etc. Approach spans will generally consist of timber, precast concrete or prestressed concrete beam spans.

The inspections were performed on each bridge identified by STATE AID and in accordance with the latest revision to the *National Bridge Inspection Standards (NBIS*) and the *AASHTO Manual for Bridge Evaluation (MBE)*, *Inspection of Fracture Critical Bridge Members (Report No. FHWA-IP-86-26)*, *Bridge Inspector's Reference Manual (Publication No. FHWA NHI 12-049, December 2012)*, *Movable Bridge Inspection, Evaluation, and Maintenance Manual, Current Edition, AASHTO's Manual for Bridge Element Inspection, 1st Edition, with 2015 Interim Revisions* and STATE AID's *National Bridge Inspection Program Local System Manual (LSM).*

Thompson Engineering is the Prime Consultant that performed the following responsibilities:

- Contract and Program Management
- Hands-on Bridge Inspection
- NBI Coding using InspectTech Software
- Quality Assurance/Quality Control
- Bridge Load Rating

Thompson Members Involved: Keith Smith, P.E., Nick Hartman, P.E.

17. Firm Experience: Project 24

Firm name	Thompson Engineering, Inc., of Louisiana		Past Performance Evaluation Discipline (s)*		Bridge
Project name	ALDOT Bridge Inspection and Gusset Analysis			Firm responsibility (prime or sub?)	Prime
Project number	99-706-002-550701; 28-077-01A; APL-1279(001)	Owner's name	Alabama Department of Transportation		
Project location	Elmore, Etowah and St. Clair Counties, Alabama		Owner's Project Manager	Curtis Vincent, P.E.	
Owner's address, phone, email	1525 Perimeter Parkway, Suite 400, Huntsville, AL 35806 | (256) 505-4955 vincentc@dot.state.al.us				
Services commenced by this firm (mm/yy)	02/07	Total consultant contract cost ($1,000's)		$292	
Services completed by this firm (mm/yy)	11/09	Cost of consultant services provided by this firm ($1,000's)		$292	

In response to the tragic collapse of the I-35 Mississippi River bridge across Saint Anthony Falls of the Mississippi River in Minneapolis, Minnesota, ALDOT engaged Thompson Engineering to inspect bridge structures of similar construction.

BRIDGE 1: AL 14 crosses the Tallapoosa River between at Tallassee in Elmore County. The structure was built in 1941. The bridge consists of two units, a three-span unit and a four- span unit. The structure is a deck truss with the truss spans approximately 1,385 feet long.
BRIDGE 2: AL 77 crosses the Coosa River between Southside and Rainbow City in Etowah County. The structure was built in 1930 as a swing span bridge. The main swing span is a 232' through truss, but is no longer operable. This span is flanked on the south side by a 200' through truss.
BRIDGE 3: US 78 crosses the Coosa River at Riverside in St. Clair County. The structure was built in 1930 as a swing span bridge. The main swing span is a 232' through truss, but is no longer operable. This span is flanked by 200' through trusses. Structural repairs were made to the bridge in 1970.

Thompson Engineering performed Bridge Inspection, Load Rating, and Gusset Plate Analysis for these structures. The three truss spans were load rated using VIRTIS, an AASHTOWARE load rating program. The results are broken down into three sections for the trusses, 1) Main truss members, 2) Floorbeams, and 3) Stringers. The gusset plates for the three trusses were analyzed using a Mathcad worksheet developed by New York DOT. The worksheet has been reviewed and was determined a good tool for analysis.

Thompson Members Involved: Nick Hartman, P.E., Jay Davison, P.E., Charlie Weston, Keith Smith, P.E.



17. Firm Experience: Project 25

Firm name	Thompson Engineering, Inc., of Louisiana		Past Performance Evaluation Discipline (s)*		Bridge
Project name	Salem Road Bridge over Pascagoula River			Firm responsibility (prime or sub?)	Sub
Project number	17-1101-0182	Owner's name	City of Merrill, MS		
Project location	Merrill, MS		Owner's Project Manager	Mike Shirley, P.E.	
Owner's address, phone, email	5550 Commerce Blvd E, Mobile, AL 36619 | (251) 338-6700 | mike.shirley@precision-eng.com				
Services commenced by this firm (mm/yy)	03/2017	Total consultant contract cost ($1,000's)		$93	
Services completed by this firm (mm/yy)	07/2017	Cost of consultant services provided by this firm ($1,000's)		$36	

This project consisted of select bridge member element level inspection for only the floorbeams (including connections), stringers (including connections), and open grid deck of a 2-span (175.5-175.5 ft) variable depth steel truss bridge spanning the Pascagoula River. Existing plans were not available so member dimensions (including connection dimensions) were recorded and documented. Future work included performing an element level bridge inspection for all bridge superstructure members (including connections), and load rating analysis were performed for all bridge superstructure members (excluding connections). Holon Engineering provided the bridge analysis model used for developing the bridge design for use in Thompson's load rating calculations. In addition, the bridge substructure was visually inspected.

The inspections were performed in accordance with the latest revision to the *National Bridge Inspection Standards (NBIS*) and the *AASHTO Manual for Bridge Evaluation (MBE)*, *Inspection of Fracture Critical Bridge Members (Report No. FHWA-IP-86-26)*, *Bridge Inspector's Reference Manual (Publication No. FHWA NHI 12-049, December 2012)*, and *AASHTO's Manual for Bridge Element Inspection, 1st Edition, with 2015 Interim Revisions.*

Thompson Engineering was the sub-consultant to Holon Engineering that performed the following responsibilities:

- Initial Element Level Bridge Inspection
- Future Element Level
- Future Bridge Load Rating

Thompson Members Involved: Keith Smith, P.E.

17. Firm Experience: Project 26

Firm name	Thompson Engineering, Inc., of Louisiana		Past Performance Evaluation Discipline (s)*		Bridge
Project name	ALDOT South West Region Bridge Inspections			Firm responsibility (prime or sub?)	Prime
Project number	16-1103-0011, 18-1103-0020, 20-1103-0010	Owner's name	Alabama Department of Transportation		
Project location	Mobile, Baldwin, Escambia and Conecuh Counties, AL		Owner's Project Manager	Evan Davis, PE	
Owner's address, phone, email	1701 West I-65 Service Rd. West, Mobile, AL 36618 | (251) 470-8200 | davisev@dot.state.al.us				
Services commenced by this firm (mm/yy)	05/16	Total consultant contract cost ($1,000's)		$500	
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)		$450	

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

Thompson Engineering is currently providing bridge on-call inspection services in ALDOT's Southwest region serving the Mobile-area. To date Thompson has performed hands on inspection of 175+ bridges and culverts on this project. The inspections included substructure, superstructure, deck and channel condition ratings. The inspections are performed by a two or three-person team consisting of a Certified Bridge Inspector and two Engineering Technicians. Detailed reports are prepared consisting of completed ALDOT ABIMS forms, scour assessment and stream profile measurements, maintenance/repair estimates, and detailed field notes and pictures describing any deficiencies. This project requires a thorough knowledge of the National Bridge Inspection Standards (NBIS) and the Alabama Department of Transportation's Bridge Element Inspection Manual and Procedures. Duties include utilizing ALDOT's new BrM computer software in the management of these bridge structures.

Thompson Members Involved: Nick Hartman, P.E., Jay Davison, P.E., Keith Smith, P.E., Charlie Weston

17. Firm Experience: Project 27

Firm name	Thompson Engineering, Inc., of Louisiana		Past Performance Evaluation Discipline (s)*		Bridge
Project name	ALDOT West Central Region Bridge Inspections			Firm responsibility (prime or sub?)	Prime
Project number	16-1103-0014	Owner's name	Alabama Department of Transportation		
Project location	Tuscaloosa, Hale, Perry, Greene, Sumpter, Chilton, Bibb Counties, AL		Owner's Project Manager	Shane Trippany	
Owner's address, phone, email	2715 East Skyland Blvd Tuscaloosa, AL 35405 | (205) 553-7030 | trippanys@dot.state.al.us				
Services commenced by this firm (mm/yy)		05/16	Total consultant contract cost ($1,000's)		$163
Services completed by this firm (mm/yy)		06/17	Cost of consultant services provided by this firm ($1,000's)		$141

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

Thompson Engineering provided bridge inspection services in ALDOT's West Central region serving the Tuscaloosa-area. Thompson has performed hands on inspections of 150+ bridges and culverts on this project. The inspections included substructure, superstructure, deck and channel condition ratings. The inspections were performed by a two or three-person team consisting of a Certified Bridge Inspector and one of two Engineering Technicians. The detailed reports consisted of completed ALDOT ABIMS forms, scour assessment and stream profile measurements, maintenance/repair estimates, and detailed field notes and pictures describing any deficiencies. This project required a thorough knowledge of the National Bridge Inspection Standards (NBIS) and the Alabama Department of Transportation's Bridge Element Inspection Manual and Procedures. The duties included utilizing ALDOT's new BrM computer software in the management of these bridge structures.

Thompson Members Involved: Nick Hartman, P.E., Jay Davison, P.E., Keith Smith, P.E., Charlie Weston

18. **Firm Experience:** Project 28

Firm name	**C. H. Fenstermaker & Associates, L.L.C.**		Past Performance Evaluation Discipline(s)*	Survey	
Project name	LADOTD-Harrisonburg Bridge Laser Scanning Survey		Firm responsibility (prime or sub?)	Prime	
Project number	S.P. 4400001358	Owner's name	Louisiana Department of Transportation and Development		
Project location	Catahoula Parish, LA		Owner's Project Manager	Haylye Brown, P.E.	
Owner's address, phone, email	Annex/S108, 1212 East Highway Dr., Baton Rouge, LA 70802; (225) 379-1500; Haylye.Brown@LA.GOV				
Services commenced by this firm (mm/yy)	03/15	Total consultant contract cost ($1,000's)	n/a		
Services completed by this firm (mm/yy)	06/15	Cost of consultant services provided by this firm ($1,000's)	$20.95		

Fenstermaker provided a baseline monitoring alignment survey of the structural components of the Harrisonburg Bridge passing over the Ouachita River in Harrisonburg, LA, in order to determine precise monitoring and measurement of any movement in the bridge structure that may have resulted from vessel impacts that occurred from the time the baseline survey was established in April 2011. Fenstermaker performed a high definition scanning (HDS) survey of the bridge in both the closed and open position. Fenstermaker produced a 3D point cloud of data along the bridge corridor. Fenstermaker processed and registered the scan data from the survey to existing baseline monitoring points or targets set during the April 2011 Baseline Survey. Fenstermaker generated and provided a TruView model for use in displaying the comparative measurements or deviations of the structural members within the project corridor from their positions established during the baseline survey performed in April 2011.

NORTH FACE OF HARRISONBURG BRIDGE

SOUTH FACE OF HARRISONBURG BRIDGE

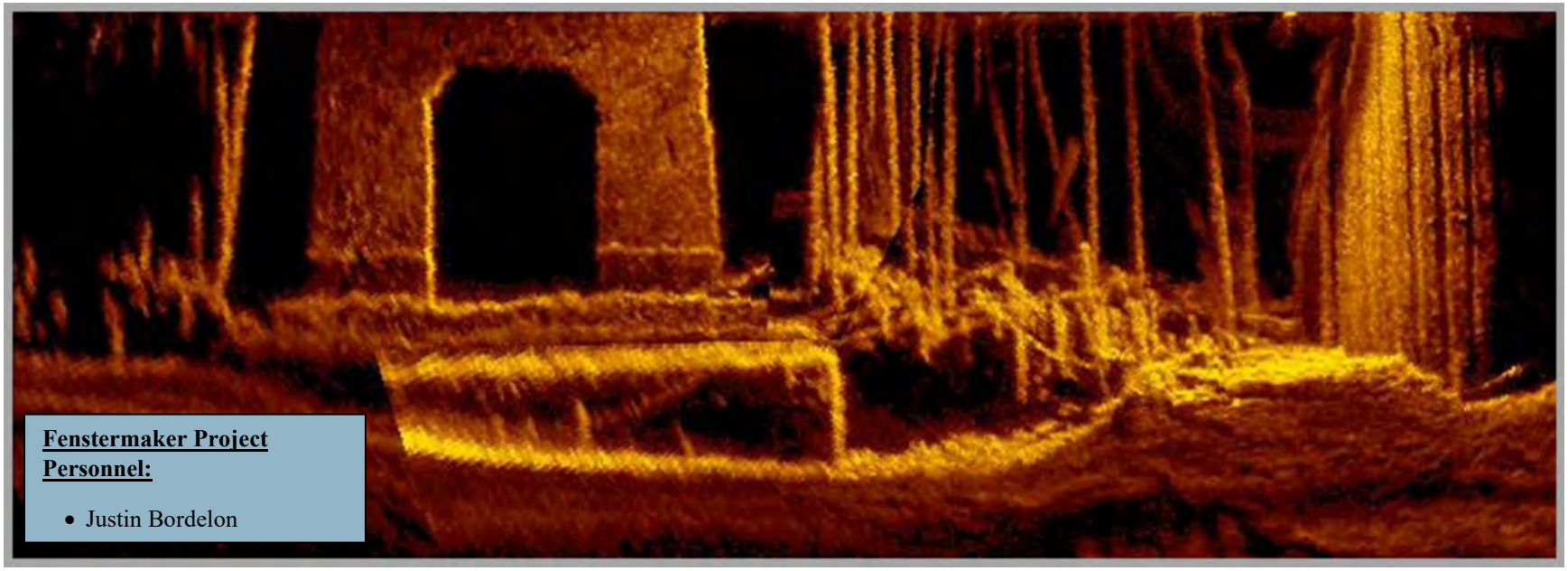
Fenstermaker Project Personnel:

- Justin Bordelon
- Brett Dufour
- Lance Fontenot

18. **Firm Experience:** **Project 29**

Firm name	C. H. Fenstermaker & Associates, L.L.C.		Past Performance Evaluation Discipline(s)*	Survey	
Project name	Almonaster Street Bridge Damage Inspection		Firm responsibility (prime or sub?)	Prime	
Project number	DOTD Work Order No. 2833 Req. 051015		Owner's name	Port of New Orleans	
Project location	Orleans Parish, LA	Owner's Project Manager	Ralph Eppehimer, P.E. (Modjeski and Masters, Inc.)		
Owner's address, phone, email	1055 St. Charles Ave., Suite 400, New Orleans, LA 70130; 504-524-4344; RJEppehimer@modjeski.com				
Services commenced by this firm (mm/yy)	03/10	Total consultant contract cost ($1,000's)	n/a		
Services completed by this firm (mm/yy)	03/10	Cost of consultant services provided by this firm ($1,000's)	$15		

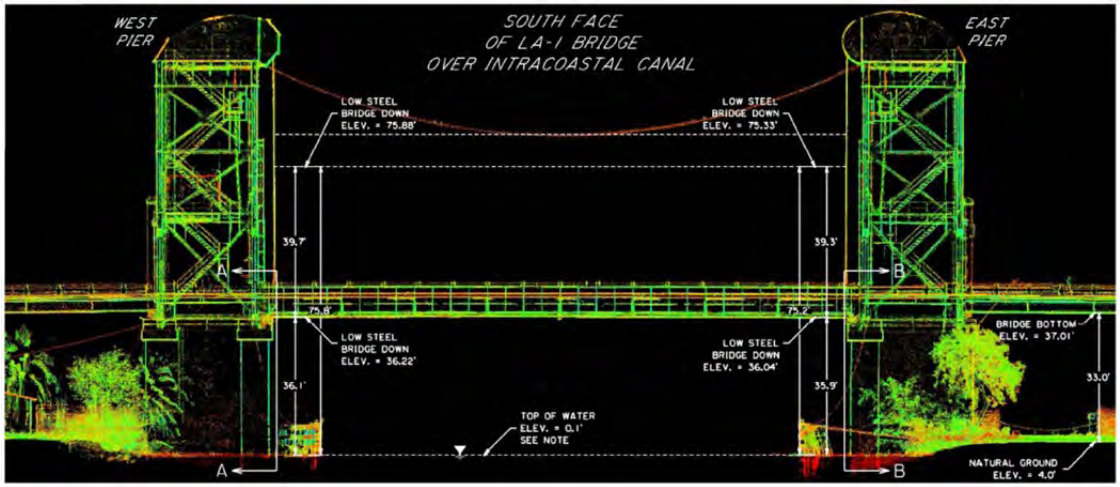
Fenstermaker was contracted to perform an Underwater Acoustic Imaging investigation of the Almonaster Avenue Bridge and the fendering system for the bridge as a sub-consultant. This entailed scanning the bridge abutments as well as the fendering system and dolphin cells and documenting the disposition of debris on the water bottom.



18. **Firm Experience:** Project 30

Firm name	C. H. Fenstermaker & Associates, L.L.C.	Past Performance Evaluation Discipline(s)*	Survey
Project name	DOTD SP No. 700-29-0112: Leeville Pier #1, Acoustic Imaging	Firm responsibility (prime or sub?)	Sub
Project number	SP. No. 700-99-0486	Owner's name	Louisiana Department of Transportation and Development
Project location	Lafourche Parish, LA	Owner's Project Manager	Bruce Peterson, P.E. (Modjeski and Masters, Inc.)
Owner's address, phone, email	1055 St. Charles Ave, Ste 400, New Orleans, LA 70130, 504-940-8055, bepeterson@modjeski.com		
Services commenced by this firm (mm/yy)	06/13	Total consultant contract cost ($1,000's)	n/a
Services completed by this firm (mm/yy)	07/13	Cost of consultant services provided by this firm ($1,000's)	$93.17

Fenstermaker performed a topographic and High Definition (Laser Scan) Survey of the West Larose Vertical Lift Bridge on LA 1 in Larose, Louisiana, for Modjeski & Masters in support of the bridge renovation effort for LADOTD. As a result of the survey, Fenstermaker established low steel vertical clearances in the bridge up and down positions, bridge pier elevations, and roadway clearances at the approaches, temporary bench marks as a baseline for future surveys, and shoreline topographic surveys on both sides of the channel within the limits of the existing fenders and 50 feet in each direction.



Fenstermaker Project Personnel

- Lance Fontenot
- Justin Bordelon
- Brett Dufour

18. **Approach and Methodology:**

The HDR Team fully understands the Scope of Services and the quality engineering services sought by LADOTD for the IDIQ for Bridge Inspection Services Statewide Contract Nos. 4400023510, 4400023511, and 4400023512. The HDR team brings a strong local team with complex bridge inspection/design experience in Louisiana and nationally. We have a deep bench of over 600 dedicated bridge engineers with direct experience in bridge inspection/design and have successfully executed hundreds of inspection contracts for clients across the nation. HDR is consistently ranked as a top design firm each year and was ranked No. 3 nationally for bridge design by ENR in 2021.

COMPLEX BRIDGE EXPERTS

For more than 60 years, our highly skilled professionals have designed and inspected bridges and structures that meet our clients' unique and individual needs and specifications. Our projects have included a wide range of bridge types, from long-span, arch, truss, suspension, movable bridges and cable-stayed to curved girder, box girder, medium and short-span girder bridges. We have experience working on historic structures, movable structures, major river crossings and directional freeway interchanges, and we offer our LADOTD a variety of options for accelerated bridge design and construction methods.

We have a key role in industry research to advance the state of the art in bridge and structure design and contribute to innovative solutions that meet our clients' specific needs. We bring progressive design and construction techniques to each project, and keep on top of issues relating to function, environment, aesthetics, timing and cost. At a time when many look to get more from their existing infrastructure — and as states look to implement bridge maintenance and rehabilitation programs — our skilled bridge and structures architects, engineers and designers are leading the industry.

HDR BRIDGE AND STRUCTURES EXPERTISE

HDR's experience on highly complex projects such as the Hoover Dam Bypass (pictured right), FDOT Interstate 4 design-build, and the Oregon Bridge Delivery Program has positioned us as a leader in the delivery of exceptional bridges and structures programs.

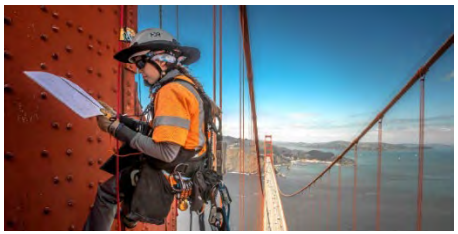
It has been our privilege to work on some of the largest and most complex bridge and structural projects in the United States, including serving as lead designer on the Hoover Dam Bypass and Bayonne Bridge - both winners of the prestigious ACEC Grand Conceptor Award. The Bayonne Bridge life was extended by raising its deck to increase navigational clearance.

HDR TEAM

Our team is built to deliver with a valuable teaming partner that has a longstanding relationship and a wealth of experience with LADOTD. C.H. Fenstermaker and Associates (CHF) will assist HDR with underwater imaging, topographic surveying, and maintenance of traffic engineering. We have close working relationship with CHF and have successfully delivered several projects across south Louisiana. Collins Engineering is an ENR Top 500 Design Firm and provides design and analysis services coupled with field experience to the transportation, marine, construction, and land development industries. They will assist with bridge inspections, NDT, and underwater divers (as needed). Thompson Engineering has a long-standing relationship with HDR and will provide bridge inspection and rehab support.

INSPECTION ACCESS METHODS

With higher traffic counts, the importance of selecting the proper inspection access method becomes critical. The HDR Team has the full range of access methods at its disposal. Whether it be under bridge inspection vehicles, bucket trucks, man lifts or industrial rope access, our team has the experience to implement these techniques at the right times and in the right places.



The HDR Team prides itself on the extensive use of rope access techniques to reduce or eliminate the need for lane closures. Over time, HDR has invested in rope access and now has five engineer team leaders with Level III Society of Professional Rope Access Technicians (SPRAT) certification allowing them to supervise rope access assignments. Currently, the HDR Team (including our subs Collins Engineers and Thompson Engineering) has a total of 70+ rope access certified inspectors.

Similar to selecting the right access method, it is also important to implement the traffic control in the safest, most efficient way to minimize road closures and provide effective protection for the inspectors and the traveling public. Traffic control plans will be developed and executed in accordance with the latest version of the Manual on Uniform Traffic Control Devices (MUTCD) and coordinated the LADOTD District Offices.

MOVABLE BRIDGE EXPERTISE

For the project, the HDR Team may be required to inspect and evaluate different movable bridge types including bascule, swing, and vertical lift bridges. Movable bridge inspection requires knowledge and skills beyond that required for routine conventional bridge inspections because of their specialized and detail intensive structural components and distinctive load paths, as well as their electrical, mechanical, and hydraulic systems. Well recognized for expertise in this area, HDR has built its movable bridge practice by bringing unmatched customer service combined with practical real world solutions. Our team includes engineers and certified technicians with vast inspection experience who have inspected hundreds of movable bridges including bascule, swing, and vertical lift spans.

LOAD RATING AND REHABILITATION

HDR routinely performs in-depth inspection and load rating and develops rehabilitation plans, specifications and estimates for complex bridges across the country. HDR inspected, load rated and designed the rehabilitation of the Corpus Christi Harbor Bridge, a 1,782-foot deck truss and through truss structure that was constructed in 1959. Detailed "arms-length" inspection of the bridge required access by man-lifts, under bridge inspection vehicles and industrial rope access techniques. Based on the inspection, HDR prepared a condition evaluation report that documented aspects of the bridge condition including structure deterioration, phased-array ultrasonic pin test results, specific locations of defects, and preliminary recommendations for repairs. Members and gusset plates were load rated with and without structure deterioration utilizing the latest FHWA criteria. HDR developed rehabilitation plans to repair all members and gussets below the Operating Rating threshold of 1.3. HDR also developed specific details and repair sequences that could be executed while maintaining traffic on the bridge.

SAFETY

HDR maintains a unique safety program that deals specifically with the safety aspects associated with inspecting bridges. HDR is in full compliance with OSHA requirements for 100 percent fall protection. Our bridge inspectors wear full-body harnesses with dual shock absorbing lanyards when operating from a bucket on an under-bridge inspection vehicle, man-lift or bucket truck, or when engaging in structure climbing techniques for bridge access. Our industrial rope access bridge inspectors wear multipurpose harnesses. The program is founded upon a proactive Bridge Inspection Safety Training course that HDR bridge inspectors must successfully complete prior to engaging in any field inspections. Inspecting the interior of box girder bridges or structures with closed box sections also requires special training for confined space entry. Our inspectors have the necessary experience and training to safely perform these inspections. Our Safety Plan includes a detailed Job Hazard Analysis (JHA) for each location identifying potential hazards such as working near high traffic volume, working near railroads, and working over water. We establish safe vehicle parking locations prior to reaching the bridge site and identify the nearest emergency services. An on-site "Tailgate" safety briefing is conducted prior to each days' work.

NON-DESTRUCTIVE TESTING AND COATINGS

HDR's bridge inspectors and team members are trained and experienced in the use of standard non-destructive testing (NDT) procedures. HDR climbing inspection teams carry a set of permanent magnet yokes with them. These light and portable yokes allow the inspectors to verify the extent of a defects immediately without any additional equipment. Our team also includes ASNT Level III Certified Technicians as well as NACE Certified Level III Coatings Specialists. In addition, Collins can supply 47 NDT Level II inspectors available to perform ultrasonic testing (UT) inspections as requested by LADOTD. Collins' inspectors routinely perform ultrasonic testing of bridge pins. Inspection Teams will have digital thickness gauges to help determine section loss of various members, especially top flanges of floor beams and stringers embedded in concrete. Collins will supply magnetic particle (MT) and liquid penetrant (PT) testing as needed to identify and measure steel cracks.

BRIDGE INSPECTION APPROACH AND METHODOLOGY

We understand that NBIS in-depth inspections are required for all bridges in this advertisement. There are variations in the NBIS element-based condition criteria between the Movable and Fixed bridge Inspection manuals. Our team will work with LADOTD staff to reconcile the inconsistencies as we have done with VDOT and other agencies in support of asset management system requirements. We will perform the inspections in accordance with NBIS and LADOTD's Bridge Inspection Manual (BIM), including but not limited to Non-Destructive Testing (NDT), Fracture Critical Bridge Members (FCM), safety practices, inspection and reporting procedures, and QC/QA.

Structural, Mechanical, and Electrical inspections will be performed in accordance with the requirements detailed in the Advertisement. Inspections will be performed by the same dedicated complex bridge engineers who will be responsible for any repair design tasks. The proposed team has inspected hundreds of fixed and movable bridges assessing the condition and performance of their systems and components, and providing recommendations to avoid incipient failures that can affect operational reliability, establishing continuity between inspection, report, and design. After the inspection is completed and before the team departs the site, we will review the findings to verify each element been inspected and sufficient detail has been collected to determine staging needs and outage impacts in support of repair cost estimates. We will report critical findings to LADOTD within 24 hours of discovery. We will provide inspection reports that document and quantify inspection findings in a clear, concise and consistent manner, and in accordance with the BIM. Task leads will review and finalize Inspection Reports per our project quality plan.

HDR's approach to condition assessment field investigations starts with a thorough understanding of the bridges before initiating the inspection. We review as-built plans and previous routine inspection reports and highlight areas that are noted with defects. HDR reviews the existing load rating and verifies the rating has not changed from revised loads such as additional asphalt being placed on the bridge. Once we have reviewed the existing information, we determine the appropriate level of detail and duration for each bridge inspection. Prior to leaving for the field, we develop a packet for each bridge with blank field note templates tailored to each structure, as-built plans, previous inspection reports and other information, so the inspection team has the information they need at their fingertips. We have experimented with technology-based approaches such as tablet computers and digital plan mark-ups, but ultimately our experience shows that nothing replaces a good photo log and well-organized hand-written field notes.

TRAFFIC CONTROL AND FIELD SAFETY

Our field assessments are scheduled with ample notice to the Districts that we will be on-site and any required traffic control is submitted for approval. Assessment on low volume roads can typically be performed safely with an advance warning sign and safety beacons on our vehicles, but for higher volume roads and interstates we will likely require a lane closure to protect our field crews.

FIELD WORK

Our innovative approach to condition assessments utilizes a custom field notes template that includes checklist items for each component. As we conduct our assessment top down on the structure and before moving onto the next component, we go through the checklist and verify we looked at and measured everything required for that component. For instance, we measure the guardrail height to make sure it is compliant with the LADOTD Standard Details and Design Manuals. We will measure the overlay thickness so that we can check the load rating and incorporate those measurements into the plans for joint repairs. In addition to taking defect photos, we will take overall photos so there is no question of whether there is a defect on a particular item. Our field template has a space to write the defect dimensions and area while in the field, instead of leaving it to be determined in the office. If feasible, we will sound defects with a hammer to determine limits. At the end of our field notes template, we will have a section for key repair items that affect safety, operation, durability, and integrity. While still in the field, we are thinking, "what will this repair look like once we are writing the report and developing PS&E?" By thinking about the repairs early in the process, we can verify that we have the information we will need prior to heading back to the office. In the rare occasion that our assessment team identifies a safety issue or critical finding, we will follow the protocol to notify LADOTD immediately.

INNOVATION AND TECHNOLOGY

We have embraced high- tech non-destructive assessment techniques such as thermography and acoustic scans. Our teaming partner Collins Engineering has an extensive background in NDT as well as dive inspectors/engineers licensed in LA that can be called upon if needed to supplement any underwater acoustic scans. As a pioneer in the use of engineers to perform underwater structural inspections, Collins continues to lead the industry today in the latest developments in diving and underwater imaging technology. Collins' underwater leadership role is best recognized by their work with the Federal Highway Administration (FHWA). They have developed and taught several FHWA/NHI structural inspection courses, including the NHI 130091 Underwater Bridge Inspection and the NHI 130091B Underwater Bridge Repair, Rehabilitation, and Countermeasures courses.

With over 300 employees Collins has completed over 15,700 underwater bridge inspections in every conceivable environment, including deep reservoir lakes, fast current rivers, and remote locations. Waterways throughout Louisiana have inherent dangers when working in or around them. However, Collins' divers are trained to analyze the dangers at each specific site and develop a plan to safely perform the required inspection. Prior to leaving for an inspection trip, a review of the structures and waterways is used to develop a Dive Safety Plan (DSP). Once on site, a Job Safety Analysis (JSA) will be conducted by all members of the inspection team, in which the team members discuss typical and site-specific hazards and precautions taken to mitigate those dangers. It is Collins' standard practice to follow OSHA regulations on Commercial Diving (29 CFR Part 1910, Subpart T) and additionally to have its engineer-divers trained at a commercial dive school through the Association of Diving Contractors International (ADCI) in compliance with the Association of Commercial Diving Educators (ACDE). In addition, all team members must maintain up to date First Aid, CPR, and Emergency Oxygen training and be familiar with Collins' Manual of Safe Diving Practices. This technology/service may not ultimately be required on the contract, but by including these valuable team members HDR has pro-actively prepared for these specialty assignments to avoid the delay of modifying our contract in the future.

Another emerging technology that we've utilized is Unmanned Aerial Vehicles (UAVs), or Drones. HDR has FAA certified operators that understand how to use this technology safely and legally on our projects. We successfully used UAV imagery to quantify column cracks on the tall columns in the water on the JFK Causeway Assessment. UAVs are not a replacement for hands-on assessments, but in this instance, it provided a more efficient assessment with less impact to the public and improved safety compared to traditional methods. Use of drones for inspections adds value for LADOTD and our inspection teams to have a living, digital, visual record of the bridge at the time of inspection, facilitating collaboration on repair/rehab solutions.

BRIDGE INSPECTION REPORT

Once we have gathered the information from the field, HDR will use the LADOTD report format to pull the information from the as-builts, inventory data and inspection into one cohesive report. Some of the information can even be populated prior to visiting the site, expediting the report writing after the assessment, while also identifying any missing as-built information. HDR's dedicated team of bridge design/inspection specialists understand the fundamental difference between routine bridge inspections and in-depth bridge inspections to NBIS standards. The goal of each report is to provide sufficient documentation that HDR, Bridge Division, or even another consultant could complete the PS&E package without additional field work.

The bridge inspection report is broken into sections describing the main span superstructure, substructure, deck, and approaches coupled with an itemization of elements and their respective quantities. The survey observation section is by component and includes tables for defect areas, annotated photologs of defects, sketches of existing conditions, and sketches of crack mapping as applicable.

REPAIR RECOMMENDATIONS AND REHABILITATION DESIGN CONSIDERATIONS

When addressing defects with our repair recommendation, we aim to determine the cause of the defect first and then address the underlying issue in addition to the repair. Without this forensic approach, the repairs would be primarily cosmetic. Examples of root causes we have encountered include leaking expansion joints, water infiltration and sediment transport behind abutments, premature coating failures, elevated chloride content, inadequate rebar cover, debonding of overlays, locked up bearing devices, and improper support of precast panel bedding strips. For movable bridges these could include poorly shimmed span locks and lack of access for proper inspection and maintenance. Based on our experience on bridge maintenance and preservation projects, HDR has developed an innovative Bridge Repair Matrix to help determine the type of repair best suited for the defect. This matrix is updated often with project feedback from the Bridge Design Section. The repair recommendations include the anticipated quantities of the repair and the procedure to complete the repair. Recommendations are not always tied to specific defects; some are more proactive with the goal of preservation. HDR considers bridge preservation

recommendations such as cleaning joints, clearing debris, waterproofing surface treatments, and maintaining drainage systems to achieve LADOTD's goal of providing additional years of service life for their bridges.

Recommended repair plans will consider LADOTD's preferences and maintenance staff capabilities to prevent the need for specialty contractors for ongoing maintenance and service. In addition, the HDR team is recognized for innovative construction approaches to minimize outage impacts as shown in our award-winning ACEC Bayou Sara Project in Mobile, AL. This focus will benefit these projects by reducing construction time, reducing/eliminating closures, and improving construction quality.

Structural Steel Repairs – Structural steel repairs will be based on LADOTD preferences, inspection conditions and measurements, and load rating results. Our structural team brings several decades of structural steel detailing experience with fixed and movable bridges, in both rehabilitation/repair, and new construction. Our repair details will consider limiting added weight and cost; constructability; proper positioning and orientation of stiffness/strength; appropriate movable bridge considerations including fatigue and fracture; avoidance of crevice and debris corrosion; and priority/applicability of protective coating(s).

Steel Painting – We will inspect the state of the bridges' paint systems and provide practical recommendations and details in the plans for preservation of steel structures. HDR's Gregory Mieczkowski and his team will test the existing paint system for adhesion, coating thickness and condition, hazardous material content (like lead), and advise on environmentally safe, effective, and economical solutions (full coating removal, overcoat, or spot painting). We will address lead abatement in the plans. We will consider replacing lighter deteriorated members with galvanized ones in lieu of painting to reduce blasting/painting time and effort while extending its life.

Concrete Repairs – HDR has provided maintenance repair design for hundreds of bridges across the US. We will bring that experience to develop plans and specifications with surface preparation and material selections that will provide lasting repairs. Typical repairs include preventive sealing, crack injection, and spall repair.

Machinery Repairs – A key issue for the LADOTD/HDR team will be the extent of repairs required. We are aware that many older bridge systems do not meet current AASHTO guidelines. During scope development, we will identify the expected life of key machinery components and the cost and construction impacts associated with upgrades. Obsolescence of brakes, limit switch mounts, anchor bolts, and – counterweight and span – guides, can be the root cause of operational reliability issues.

Motor Drives – Replacing motors and drives can have a cascading effect on other systems such as mechanical, electrical power distribution, and control systems. Our team will analyze all options including whether rehabilitating the existing motors and/or converting the drives are economical options, and whether increasing power/torque capacity is required due to any structural improvements requiring span weight changes or due to new AASHTO wind load criteria. Key issues include future component availability and obsolescence, and proper redundancies and reliability.

Span-locks – HDR's innovative wedge-based adjustment system for span locks allows for simple and precise adjustments. Our span-lock design makes it easier to ensure live load transmission and avoids the resulting impact stresses. HDR has designed systems that are easy to construct, maintain, access and highly reliable. In addition, vertical lift bridge span lock systems typically serve to ensure the span remains seated under effects of live loading, buoyancy during extreme flood event, and potential counterweight-heavy imbalance conditions. HDR has experience in relocating lift bridge span lock systems out of flood range, improving reliability while providing better maintenance access.

Electrical System – In case of deteriorated distribution systems and/or change in power requirements, our team will study repairing, rehabilitating, and/or modifying existing systems. Improvements may include system voltage upgrades to reduce conductor sizes, multipoint distribution systems, and new generator systems that meet new acoustic and thermal requirements. New generator system sizing will also consider options such as reduced speed operation to lower power demand, if needed due to space constraints.

CONSTRUCTION RELATED ENGINEERING SERVICES (CRES)

Starting with the Pre-construction meeting, HDR will continue its partnership with LADOTD to successfully deliver the completed project. HDR's combination of experience with Construction Engineering and Inspection and hands on approach to complex bridge inspection and design allow us to address any issues that would arise during construction. RFI's, shop drawing reviews, and change order documents must be addressed promptly. HDR has extensive experience preparing and reviewing Critical Path Method (CPM) schedules on multi-disciplined movable bridge projects. Site visits may be necessary but only if authorized by LADOTD. Our staff will perform shop inspections to confirm contract testing requirements and perform final functional checkouts, testing and site inspection to confirm that contract requirements have been met. Finally, HDR will review As-built plans for accuracy and provide specific Operations & Maintenance (O&M) manuals and training for LADOTD staff as necessary.

SUMMARY

The HDR team will bring the local LADOTD experience coupled with our national/regional expertise to deliver high quality deliverables that you can trust. We see our participation on this contract as a true partnership with LADOTD. We understand that there are many choices to provide services of this type, but we bring value to LADOTD with a highly skilled and experienced team with a proven track record with knowledge from executing identical scopes of work for LADOTD, and all over the country. We look forward to working with you.

19. **Workload:**

Firm(s)	Past Performance Evaluation Discipline(s) *	State project number	Project name	Remaining Unpaid Balance**
HDR Engineering, Inc. (Prime)	Other (Hydraulic Modeling)	LWI Task Order 2: S.P. Contract No. 4400017091	Task Order No. 2 - Louisiana Watershed Initiative (LWI) Statewide Modeling, Region 5	$2,685,847
HDR Engineering, Inc. (Prime)	Other (Hydraulic Modeling)	LWI Task Order 3: S.P. Contract No. 4400017091	Task Order No. 3 - Louisiana Watershed Initiative (LWI) Statewide Modeling, Region 5	$1,069,574
HDR Engineering, Inc. (Prime)	Planning	H.972419.1	Task Order No. 1 - State Highway Safety Plan (SHSP) Update and Regional SHSP Strategic Marketing and Advertising Support	$395,132
HDR Engineering, Inc. (Sub)	Bridge	H.009730.5	In-Depth Bridge Inspection of Complex Structures (Task Order 4)	$128,269
C. H. Fenstermaker & Associates, L.L.C.	Data Collection, Planning, Survey	Contract No. 4417090	IDIQ Contract for Louisiana Watershed Initiative (LWI) Region 4 (Task Order No. 2) Acadia, Allen, Beauregard, Calcasieu, Cameron, Sabine, and Vernon Parishes, LA	$3,680,898
C. H. Fenstermaker & Associates, L.L.C.	Survey	Contract No. 4400017091	IDIQ Contract for Louisiana Watershed Initiative (LWI) Region 5 (Task Order No. 2)	$92,487
C. H. Fenstermaker & Associates, L.L.C.	Survey	Contract No. 4400017092	IDIQ Contract for Louisiana Watershed Initiative (LWI) Region 6 (Task Order No. 2)	$528,282
C. H. Fenstermaker & Associates, L.L.C.	Survey	Contract No. 4400017092	IDIQ Contract for Louisiana Watershed Initiative (LWI) Region 6 (Task Order No. 3)	$1,051,210
C. H. Fenstermaker & Associates, L.L.C.	Road	H.0011235	I-49 South @ Verot School Road Lafayette Parish, LA	$62,715
C. H. Fenstermaker & Associates, L.L.C.	Road	Contract No. 4400020016 S.P. No. H.011833.5	St. Mary Street Sidewalks Lafayette Parish, LA	$129,979
C. H. Fenstermaker & Associates, L.L.C.	Data Collection, Planning	Contract Nos. 4400020960 and 4400020961	IDIQ Contracts for National Flood Insurance Program (NFIP) and The Cooperating Technical Partnership (CTP) Program Statewide (Task Order No. 1)	$20,000
Thompson Engineering, Inc., of Louisiana		4400019016	IDIQ Contract for Professional Geotechnical Services 5 year $2.5 Million	$1,563,305.00
Collins Engineers, Inc.				N/A

(Add rows as needed) DO NOT SUM

* The 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.

U.S. Department of Transportation
Federal Highway Administration

National Highway Institute

nhi national highway institute

Certificate of Training

JASON ABENDROTH

has participated in

FHWA-NHI-130056 Safety Inspection of In-Service Bridges for Professional Engineers

hosted by

LA DOTD/LTRC

Date: *October 11-15, 2021*

Hours of Instruction: 34

Location: *Baton Rouge, LA*

Instructor

Instructor

Allison H. Landry
Local Coordinator

Thomas Harman
Thomas Harman, Director
National Highway Institute

U.S. Department of Transportation
Federal Highway Administration

National Highway Institute

NATIONAL HIGHWAY INSTITUTE

Certificate of Training

Riley Boone

has participated in

FHWA-NHI-130056 Safety Inspection of In-Service Bridges for Professional Engineers

hosted by

Texas Department of Transportation

Date: June 3 – June 7, 2019

Location: Austin, TX

Hours of Instruction: 34

H C Rogers P.E.
Instructor

Philip Fish
Instructor

Local Coordinator

Michael Davies
Michael Davies, Director
National Highway Institute

U.S. Department
Of Transportation
Federal Highway Administration

National Highway Institute

Certificate of Training

NATIONAL HIGHWAY INSTITUTE
Training Solutions for Transportation Excellence

Matthew J. Bruno

has participated in

Safety Inspection of In-Service Bridges

hosted by

Oregon Department of Transportation

Hours of Instruction: 60

Date: January 25 – February 5, 2010

Location: Salem, Oregon

Guy R Lang PE
Instructor

Lorrie Schaefer
Local Coordinator

PE
Instructor

Richard Barnaby, Director
National Highway Institute

U.S. Department of Transportation
Federal Highway Administration

NATIONAL HIGHWAY INSTITUTE

National Highway Institute

Certificate of Training

Matthew Bruno

has participated in

FHWA-NHI-130053 Bridge Inspection Refresher Training

hosted by

AECOM

Date: *June 26-28, 2018*

Location: *Raleigh, NC*

Hours of Instruction: 18

Instructor

Instructor

Local Coordinator

Valerie Briggs, Director
National Highway Institute

U.S. Department of Transportation
Federal Highway Administration

NATIONAL HIGHWAY INSTITUTE

National Highway Institute

Certificate of Training

Matthew Bruno

has participated in

FHWA-NHI 130078 Fracture Critical Inspection Techniques for Steel Bridges

hosted by

Colorado DOT

Date: July 24 - 27, 2018

Location: Denver, CO

Hours of Instruction: 25

Brian D. Dietrich
Instructor

Local Coordinator

Instructor

Valerie Briggs
Valerie Briggs, Director
National Highway Institute

U.S. Department of Transportation
Federal Highway Administration

National Highway Institute

Certificate of Training

NATIONAL HIGHWAY INSTITUTE

Matthew Bruno

has participated in

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

hosted by

Fish & Associates, Inc.

Date: *April 5-6, 2016*

Location: *Middleton, WI*

Hours of Instruction: 12

Instructor

Instructor

Local Coordinator

Valerie Briggs, Director
National Highway Institute

U.S. Department of Transportation
Federal Highway Administration

NATIONAL HIGHWAY INSTITUTE

National Highway Institute

Certificate of Training

Peter Harrison

has participated in

FHWA-NHI-130053 Bridge Inspection Refresher Training

hosted by

Texas Department of Transportation

Date: *December 12 –14, 2017*

Location: *Austin, TX*

Hours of Instruction: *18*

Instructor

Instructor

Local Coordinator

Valerie Briggs, Director
National Highway Institute

U.S. Department
Of Transportation
Federal Highway
Administration

National Highway Institute

Certificate of Training

NATIONAL HIGHWAY INSTITUTE
Training Solutions for Transportation Excellence

Peter Harrison

has participated in

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

hosted by

Kansas Department of Transportation

Date: **June 2-13, 2008**

Hours of Instruction: **60 hours**

Location: **Topeka, Kansas**

Instructor

Instructor

Local Coordinator

Joseph S. Toole, Associate Administrator
Office of Professional and Corporate Development

U.S. Department of Transportation
Federal Highway Administration

NATIONAL HIGHWAY INSTITUTE
Training Solutions for Transportation Excellence

National Highway Institute
Certificate of Training

Peter J. Harrison

has satisfactorily completed training in

Fracture Critical Inspection Techniques for Steel Bridges

conducted by

Michael Baker Jr. Inc.

Location: Topeka, Kansas

Date: February 3 - 6, 2003

Hours of instruction: 28

Continuing Education Units: 2.1

J. Eric Mann
Instructor

William L. Jacobs
Coordinator

Moges Ayele
Director, National Highway Institute
Federal Highway Administration

Director, Office of Professional Development
Federal Highway Administration

U.S. Department of Transportation
Federal Highway Administration

NATIONAL HIGHWAY INSTITUTE

National Highway Institute

Certificate of Training

Peter Harrison

has participated in

FHWA-NHI-130110 Tunnel Safety Inspection

hosted by

Boston Society of Civil Engineers Section/ASCE

Date: *April 18-22, 2016*

Location: *Worcester, MA*

Hours of Instruction: *32 = 3.2 CEUs*

Thomas H. Ryan
Instructor

Richard F. Keenan
Local Coordinator

Instructor

Valerie Briggs
Valerie Briggs, Director
National Highway Institute

U.S. Department of Transportation
Federal Highway Administration

Office of Technical Services

national highway institute

CERTIFICATE OF TRAINING

Peter Harrison

has participated in

NHI Course No. FHWA-NHI-130124

Tunnel Safety Inspection Refresher WBT Prerequisite

Hosted by: **National Highway Institute**

Location: *Web-Based Course*

Date: *6/16/2021*

Hours of Instruction: *4 hours*

Thomas P. Harman
Acting Director | National Highway Instit

Mead & Hunt

In cooperation with the
Louisiana Department of Transportation & Development
presents this

Certificate of attendance and participation for:

Wesley D. Jacobs Sr. PE.

Training Course:
Maintenance and Rehabilitation of Historic Bridges

Transportation Training and Education Center
4099 Gourrier Avenue, Room 179
Baton Rouge, Louisiana 70808

Please select the date you attended the course:

- [x] Tuesday, April 12, 2016
- [ ] Wednesday, April 13, 2016
- [ ] Tuesday, May 10, 2016
- [ ] Wednesday, May 11, 2016
- [ ] Tuesday, July 12, 2016
- [ ] Wednesday, July 13, 2016

You have earned 6 PDH units that can be applied to applicable continuing education requirements for professional engineering licensure.

Mead & Hunt Instructor
Amy Squillari

Mead & Hunt Instructor
Darrell Berry, PE, SE

U.S. Department
Of Transportation
Federal Highway Administration

NATIONAL HIGHWAY INSTITUTE
Training Solutions for Transportation Excellence

National Highway Institute

Certificate of Training

DAVID KNICKERBOCKER

has participated in

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

hosted by

Boston Society of Civil Engineers with Massachusetts Department of Transportation

Date: *May 02-13, 2011*

Location: *Boston, MA*

Hours of Instruction: 60

Instructor

Instructor

Local Coordinator

Richard Barnaby, Director
National Highway Institute

U.S. Department of Transportation
Federal Highway Administration

National Highway Institute

NATIONAL HIGHWAY INSTITUTE

Certificate of Training

Brian Leshko

has participated in

Bridge Safety Inspection Refresher Training

hosted by

Oregon Department of Transportation

Date: January 23 through January 25, 2018

Hours of Instruction: 18

Location: Salem, Oregon

Instructor

Instructor

Local Coordinator

Valerie Briggs, Director
National Highway Institute

U.S. Department
Of Transportation
Federal Highway Administration

NATIONAL HIGHWAY INSTITUTE
Training Solutions for Transportation Excellence

National Highway Institute

Certificate of Training

Brian Leshko, P.E.

has participated in

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

hosted by

The American Council of Engineering Companies of WV

Date: **November 7-18, 2011** ***Hours of Instruction:*** **60**

Location: **Charleston, WV**

Ron Gardner PE
Instructor

Instructor

Local Coordinator

Richard Barnaby, Director
National Highway Institute

U.S. Department
Of Transportation

Federal Highway Administration

NATIONAL HIGHWAY INSTITUTE

Training Solutions for Transportation Excellence

National Highway Institute

Certificate of Training

Brian Leshko

has participated in

Fracture Critical Inspection Techniques for Steel Bridges

hosted by

Pennsylvania Department of Transportation

Location: Montoursville PA

Date: Feb. 15-18, 2005

Hours of instruction: 21

CEUs: 2.1

Instructor

Director, National Highway Institute
Federal Highway Administration

Coordinator

Director, Office of Professional Development
Federal Highway Administration

NACE INTERNATIONAL INSTITUTE

Certificate of Achievement

The NACE International Institute Recognizes

Greg Mieczkowski

As a Certified

NACE Certified Coating Inspector - Level 3

Executive Director
NACE International Institute

Expires
April 30, 2023

Cert No.9254

Texas Department of Transportation

CERTIFICATE OF TRAINING

Awarded to

Erin E. O'Malley

in recognition of participation in

Safety Insp In-Srvc Brgs -NHI

Presented By

National Highway Institute

On

February 08, 2013

Phil Wilson

Executive Director

Contact Hours:	80.00
Continuing Education Units	6.00

Prime consultant name: HDR Engineering, Inc.

U.S. Department of Transportation
Federal Highway Administration

NATIONAL HIGHWAY INSTITUTE

National Highway Institute

Certificate of Training

Erin O'Malley

has participated in

FHWA-NHI-130053 Bridge Inspection Refresher

hosted by

Whitman, Requardt and Associates, LLP

Date: *October 11 - 13, 2016*

Location: *Baltimore, Maryland*

Hours of Instruction: 18

Instructor

Instructor

Local Coordinator

Valerie Briggs, Director
National Highway Institute

U.S. Department of Transportation

Federal Highway Administration

NATIONAL HIGHWAY INSTITUTE

National Highway Institute

Certificate of Training

Erin O'Malley

has participated in

FHWA-NHI-130053 Bridge Inspection Refresher Training

hosted by

Texas Department of Transportation

Date: *July 14-17, 2020*

Location: *Web-Conference Course*

Hours of Instruction: *18*

Instructor

Instructor

Local Coordinator

Nathaniel Coley, Jr.
Acting Director, National Highway Institute

U.S. Department Of Transportation
Federal Highway Administration

National Highway Institute

Certificate of Training

NATIONAL HIGHWAY INSTITUTE
Training Solutions for Transportation Excellence

Erin O'Malley

has participated in

FHWA-NHI-130078 Fracture Critical Inspection Techniques For Steel Bridges

hosted by

Missouri Department of Transportation

Date: October 22-25, 2013

Hours of Instruction: 21

Location: Jefferson City, MO

Instructor

Instructor

Local Coordinator

Richard Barnaby, Director
National Highway Institute

U.S. Department of Transportation

Federal Highway Administration

National Highway Institute

Certificate of Training

Keith Salais

has participated in

FHWA-NHI-130053 Bridge Inspection Refresher Training

hosted by

GPI | Greenman-Pedersen, Inc.

Date: March 23-25, 2021

Location: Virtual Delivery, NY

Hours of Instruction: 18

Instructor

Instructor

Cailein A. MacDougall, P.E.

Local Coordinator

Thomas Harman

Thomas Harman, Director
National Highway Institute

Bridge Inspection Training School

This certifies that

Keith Salais

has completed a comprehensive bridge inspection training course approved by FHWA New Mexico Division.

May 11-22, 2015
New Mexico State University
Las Cruces, NM

Bridge Inspection Program

Kenneth R. White, Ph.D., P.E.
Bridge Inspection Engineer
Department of Civil Engineering
New Mexico State University

Peter T. Martin, Ph.D., P.E.
Department Head
Department of Civil Engineering
New Mexico State University

David Jáuregui, Ph.D., P.E.
Director, Bridge Inspection Program
Department of Civil Engineering
New Mexico State University

U.S. Department of Transportation
Federal Highway Administration

National Highway Institute

NATIONAL HIGHWAY INSTITUTE

Certificate of Training

Keith Salais

has participated in

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

hosted by

American Council of Engineering Companies – West Virginia

Date: *October 5-8, 2021*

Location: *Charleston, WV*

Hours of Instruction: *25*

Instructor

Instructor

Local Coordinator

Michael Davies, Director
National Highway Institute

U.S. Department of Transportation

Federal Highway Administration

National Highway Institute

Certificate of Training

John Christopher Taylor

has participated in

FHWA-NHI-130053 Bridge Inspection Refresher Training

hosted by

Texas Department of Transportation

Date: December 8 - 11, 2020

Location: Virtual Delivery, TX

Hours of Instruction: 18

Digitally signed by John P. Bogue, P.E.
Date: 2020.12.16 19:29:33 -05'00'

Instructor

Digitally signed by Cailein A. MacDougall, P.E.
Date: 2020.12.17 08:42:29 -05'00'

Instructor

Shandon Richardson

Local Coordinator

Thomas Harman

Thomas Harman, Director
National Highway Institute

U.S. Department Of Transportation
Federal Highway Administration

National Highway Institute

Certificate of Training

NATIONAL HIGHWAY INSTITUTE
Training Solutions for Transportation Excellence

John C. Taylor

has participated in

FHWA – NHI 130055
Safety Inspection of In Service Bridges

hosted by
Arizona Department of Transportation – ITD Technical Training

Date: June 7-18, 2010

Location: Phoenix, AZ

Hours of Instruction: 60

Guy R Lang PE
Instructor

Dennis R. Barough, P.E.
Instructor

Local Coordinator

Richard Barnaby, Director
National Highway Institute

U.S. Department of Transportation
Federal Highway Administration

NATIONAL HIGHWAY INSTITUTE

National Highway Institute

Certificate of Training

Chris Taylor

has participated in

NHI #130078 – Fracture Critical Inspection Techniques

hosted by

Nebraska LTAP

Date: *March 8th – 11th 2016*

Location: *Lincoln, Nebraska*

Hours of Instruction: 25

Instructor

Local Coordinator

Instructor

Valerie Briggs, Director
National Highway Institute

U.S. Department Of Transportation
Federal Highway Administration

National Highway Institute

Certificate of Training

NATIONAL HIGHWAY INSTITUTE
Training Solutions for Transportation Excellence

John Taylor

has participated in

FHWA NHI135047 Stream Stability and Scour at Highway Bridges for Bridge Inspectors

hosted by

Arizona Department of Transportation

Date: April 4, 2012

Hours of Instruction: 08

Location: Phoenix, AZ

Instructor

Instructor

Local Coordinator

Richard Barnaby, Director
National Highway Institute

U.S. Department of Transportation

Federal Highway Administration

National Highway Institute

Certificate of Training

Brian Zeiger, PE

has participated in

FHWA-NHI-130053 Bridge Inspection Refresher Training

hosted by

Kansas Department of Transportation

Date: January 19-21, 2021

Location: Virtual Delivery, KS

Hours of Instruction: 18

Digitally signed by Cailein A. MacDougall, P.E.
Date: 2021.01.27 12:45:30 -05'00'

Instructor

Digitally signed by Randall Leonard, P.E.
Date: 2021.01.24 14:05:37 -06'00'

Randall Leonard. P.E.

Instructor

Audrey Atkinson

Local Coordinator

Thomas Harman

Thomas Harman, Director
National Highway Institute

U.S. Department
Of Transportation

Federal Highway Administration

NATIONAL HIGHWAY INSTITUTE
Training Solutions for Transportation Excellence

National Highway Institute

Certificate of Training

BRIAN ZEIGER

has participated in

Fracture Critical Inspection Techniques for Steel Bridges

FHWA – NHI Course 130078

hosted by

Nebraska LTAP

Location: Lincoln, Nebraska

Hours of instruction: 28

Date: November 28 – Dec 1, 2006

Instructor

Director, National Highway Institute
Federal Highway Administration

Coordinator

Director, Office of Professional Development
Federal Highway Administration

U.S. Department of Transportation
Federal Highway Administration

national highway institute

CERTIFICATE OF TRAINING

Brian Zeiger

has participated in

NHI Course No. FHWA-NHI-135086

Stream Stability Factors and Concepts (Prerequisite) WEB-BASED

Hosted by: **National Highway Institute**

Location: *Web-Based Course*

Hours of Instruction: *1 hours*

Date: *1/8/2022*

Thomas P. Harman
Acting Director | National Highway Institute

U.S. Department of Transportation
Federal Highway Administration

national highway institute

CERTIFICATE OF TRAINING

Brian Zeiger

has participated in

NHI Course No. FHWA-NHI-135087

Scour at Highway Bridges: Concepts and Definitions (Prerequisite) WEB-BASED

Hosted by: **National Highway Institute**

Location: *Web-Based Course*

Hours of Instruction: *1 hours*

Date: *1/8/2022*

Thomas P. Harman

Thomas P. Harman
Acting Director | National Highway Institute

U.S. Department of Transportation
Federal Highway Administration

National Highway Institute

Certificate of Training

Brian Zieger

has participated in

FHWA-NHI-135047 Stream Stability and Scour at Highway Bridges for Bridge Inspectors

hosted by

North Dakota Department of Transportation

Date: *January 27, 2022*

Location: *Bismarck, ND*

Hours of Instruction: 6

James A. Kitchman
Instructor

Local Coordinator

Instructor

Thomas Harman
Thomas Harman, Director
National Highway Institute

Michael Seal

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

U.S. Department of Transportation
Federal Highway Administration

National Highway Institute

Certificate of Training

Michael A. Seal

has satisfactorily completed training in

SAFETY INSPECTION OF IN-SERVICE BRIDGES

conducted by

MICHAEL BAKER JR., INC.

Location: Salem, Oregon
Date: April 15-26, 2002
Hours of instruction: 80
Continuing Education Units: 6.0

Instructor
Director, National Highway Institute
Federal Highway Administration
Coordinator
Director, Office of Professional Development
Federal Highway Administration

FHWA-NHI Course 130053 - Bridge Inspection Refresher Training

U.S. Department of Transportation
Federal Highway Administration

National Highway Institute

Certificate of Training

Michael Seal

has participated in

Bridge Safety Inspection Refresher Training

hosted by

Oregon Department of Transportation

Date: January 23 through January 25, 2018
Location: Salem, Oregon
Hours of Instruction: 18

Instructor
Instructor
Local Coordinator
Valerie Briggs, Director
National Highway Institute

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

U.S. Department Of Transportation
Federal Highway Administration

National Highway Institute

Certificate of Training

Michael Seal

has participated in

NHI Course No. 130078

Fracture Critical Inspection Techniques for Steel Bridges

hosted by

National Highway Institute

Location: Allentown, PA
Date: 07/15-18/2003
Hours of Instruction: 2.1

Richard J. Barnaby, Director

SPRAT Rope Access

SOCIETY OF PROFESSIONAL ROPE ACCESS TECHNICIANS

SPRAT

Acknowledges that

MICHAEL SEAL

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

CERTIFIED

Level III Rope Access Technician

SPRAT #080312

AWARDED: February 08, 2019
Expires: February 8, 2022

ROBERT DUNSHEA, EVALUATIONS COMMITTEE CHAIR

WILLIAM McCOOK (THOLL), SPRAT PRESIDENT

©2012 - Present, Society of Professional Rope Access Technicians

Drew Garceau

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

U.S. Department of Transportation
Federal Highway Administration

National Highway Institute

Certificate of Training

NHI NATIONAL HIGHWAY INSTITUTE

Drew Garceau

has participated in

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

hosted by

Collins Engineers, Inc.

Date: August 10-21, 2015
Location: Chicago, IL

Hours of Instruction: 67 Hours

Instructor

Instructor

Local Coordinator

Valerie Briggs, Director
National Highway Institute

FHWA-NHI Course 130053 - Bridge Inspection Refresher Training

U.S. Department of Transportation
Federal Highway Administration

National Highway Institute

Certificate of Training

NHI NATIONAL HIGHWAY INSTITUTE

Drew Garceau

has participated in

FHWA-NHI-130053 Bridge Inspection Refresher Training

hosted by

Collins Engineers, Inc.

Date: February 18-20, 2020
Location: Chicago, IL

Hours of Instruction: 18

Instructor

Local Coordinator

Director, National Highway Institute

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

National Highway Institute

Certificate of Training

Drew Garceau

has participated in

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

hosted by

Collins Engineers, Inc.

Date: February 14-17, 2012 *Hours of Instruction:* 25

Location: Schaumburg, Illinois

Instructor

Instructor

Local Coordinator

Richard Barnaby, Director
National Highway Institute

FHWA-NHI Course 130091 - Underwater Bridge Inspection

National Highway Institute

Certificate of Training

Drew R. Garceau

has participated in

FHWA-NHI-130091 Underwater Bridge Inspection

hosted by

Collins Engineers, Inc.

Date: March 1-4, 2013 *Hours of Instruction:* 24

Location: Chicago, IL

Instructor

Instructor BRIAN P. DILWORTH

Local Coordinator

Richard Barnaby, Director
National Highway Institute

FHWA-NHI Course 133117 – Maintenance of Traffic for Supervisors

National Highway Institute

Certificate of Training

Garceau Drew

has participated in

NHI Course No. FHWA-NHI-133117

Maintenance of Traffic for Supervisors - WEB BASED

hosted by

National Highway Institute

Location: Web-Based Course *Hours of Instruction:* 5 hours

Date: 1/25/2017

Valerie Briggs, Director
National Highway Institute

SPRAT Rope Access

SPRAT®
Society of Professional Rope Access Technicians

To: SPRAT Certified Rope Access Technician

Congratulations on successfully completing certification testing under SPRAT standards!

Adhered to this letter you will find your secure ID card with designated level of certification, date of certification and expiration. A copy of your certificate of certification can be downloaded from your online account within the association's website interface. Instructions for accessing your account have been emailed to you. If you have trouble accessing your account or have any questions about your certification materials please contact the SPRAT Office at certification@sprat.org.

As a reminder, as a certified technician you should adhere to the current version of the Society's consensus safety standard, *Safe Practices for Rope Access Work* and ensure your certification remains up to date based on the expiration listed. Current versions of our standards and supplementary documentation can be found on SPRAT's website at www.sprat.org/publications/.

Once again, congratulations on your certification!

- The SPRAT Office

SPRAT ROPE ACCESS TECHNICIAN
LEVEL: III

Drew Garceau

Milwaukee, WI
USA

SPRAT Cert. # 080293
Certification Date: 14 MAY 2021
Renewal Date: 14 MAY 2024

Society of Professional Rope Access Technicians
994 Old Eagle School Road, Suite 1019; Wayne, PA 19087-1866
610-971-4850 (phone) info@sprat.org www.sprat.org

Certified Welding Inspector (CWI)

AWS American Welding Society®

Certifies that Welding Inspector

Drew Garceau

has complied with the requirements of AWS QC1,
Standard for AWS Certification of Welding Inspectors

10040033
CERTIFICATE NUMBER

April 01, 2022
EXPIRATION DATE

AMERICAN WELDING SOCIETY INCORPORATED 1932 NEW YORK

AWS PRESIDENT

AWS QUALIFICATION & CERTIFICATION COMMITTEE CHAIR

NDT Level II – Ultrasonic Testing

COLLINS ENGINEERS

COLLINS ENGINEERS, INC.

Certifies that

Drew R. Garceau

Has successfully completed training as a Non-Destructive Testing Limited Level II Technician in the following disciplines:

Ultrasonic Testing (UT)	**8.00 PDH**
Magnetic Particle Testing (MT)	**4.00 PDH**
Dye Penetrant Testing (PT)	**4.00 PDH**

February 23-24th, 2011

Daniel G. Cecchi, Executive Vice President

Chris Thrift

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

U.S. Department of Transportation
Federal Highway Administration

National Highway Institute

Certificate of Training

C. Chris Thrift

has satisfactorily completed training in

Safety Inspection of In-Service Bridges

NHI Course No. 130055

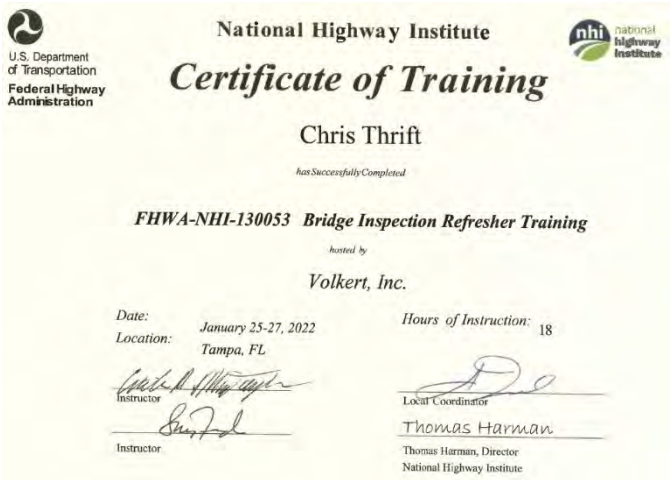
conducted by

Michael Baker Jr., Inc.

Location: Virginia Department of Transportation, Richmond, Virginia
Date: June 16-27, 2003
Hours of instruction: 80
Continuing Education Units: 6.0

Instructor
Coordinator
Director, National Highway Institute, Federal Highway Administration
Director, Office of Professional Development, Federal Highway Administration

FHWA-NHI Course 130053 - Bridge Inspection Refresher Training



U.S. Department of Transportation
Federal Highway Administration

National Highway Institute

nhi national highway institute

Certificate of Training

Chris Thrift

has Successfully Completed

FHWA-NHI-130053 Bridge Inspection Refresher Training

hosted by

Volkert, Inc.

Date: January 25-27, 2022
Location: Tampa, FL
Hours of Instruction: 18

Instructor
Instructor
Local Coordinator
Thomas Harman
Thomas Harman, Director
National Highway Institute

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

National Highway Institute

Certificate of Training

Chris Thrift

has participated in

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

hosted by

Clark ♦ Nexsen Architecture & Engineering

Date: December 1-4, 2009
Location: Norfolk, VA

Hours of Instruction: 21 hours

Instructor
Instructor
Local Coordinator
Richard Barnaby, Director
National Highway Institute

FHWA-NHI Course 130091 - Underwater Bridge Inspection

National Highway Institute

Certificate of Training

Chris Thrift

has participated in

FHWA-NHI-130091 Underwater Bridge Inspection

hosted by

Collins Engineers, Inc.

Date: May 16-19, 2016
Location: Newport News, VA

Hours of Instruction: 24

Instructor
Instructor
Local Coordinator
Valerie Briggs, Director
National Highway Institute

FHWA-NHI Course 133117 – Maintenance of Traffic for Supervisors

National Highway Institute

Certificate of Training

Chris Thrift

has participated in

NHI Course No. FHWA-NHI-133117

Maintenance of Traffic for Supervisors - WEB BASED

hosted by

National Highway Institute

Location: Web-Based Course
Date: 2/11/2017

Hours of Instruction: 5 hours

Valerie Briggs, Director
National Highway Institute

SPRAT Rope Access

SOCIETY OF PROFESSIONAL ROPE ACCESS TECHNICIANS

SPRAT

Acknowledges that

CHRIS THRIFT

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

CERTIFIED

Level 3 Rope Access Technician

SPRAT # 100162
AWARDED: February 12, 2021
Expires: February 12, 2024

TROLL , EVALUATIONS COMMITTEE CHAIR

TOM WOOD, SPRAT PRESIDENT

Barritt Lovelace

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

U.S. Department Of Transportation
Federal Highway Administration

National Highway Institute

Certificate of Training

NHI NATIONAL HIGHWAY INSTITUTE

Barritt Lovelace

has participated in

SAFETY INSPECTION OF IN-SERVICE BRIDGES

hosted by

Minnesota Department of Transportation

Date: March 09 - 20, 2009 *Hours of Instruction:* 60
Location: Mn/DOT Training & Conference Center

Instructor William Gedris, P.E.

Local Coordinator

Instructor James Gundry, P.E.

Joseph S. Toole, Associate Administrator
Office of Professional and Corporate Development

FHWA-NHI Course 130053 - Bridge Inspection Refresher Training

U.S.Department of Transportation
Federal Highway Administration

National Highway Institute

Certificate of Training

NHI NATIONAL HIGHWAY INSTITUTE

Barritt Lovelace

has participated in

FHWA-NHI-130053
Bridges Inspection Refresher Training

hosted by

Collins Engineers, Inc.

Date: June 19-21, 2018 *Hours of Instruction:* 18 Hours
Location: Chicago, IL

Instructor

Local Coordinator

Instructor

Valerie Briggs, Director
National Highway Institute

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

National Highway Institute

Certificate of Training

Barritt Lovelace

has participated in

NHI: Fracture Critical Inspection Techniques for Steel Bridges

hosted by

Minnesota Department of Transportation

Date: **December 6 - 9, 2010** *Hours of Instruction:* 28

Location: **Mn/DOT Training & Conference Center**

Instructor

Instructor

Local Coordinator

Richard Barnaby, Director
National Highway Institute

FHWA-NHI Course 130091 - Underwater Bridge Inspection

National Highway Institute

Certificate of Training

Barritt Lovelace

has participated in

FHWA-NHI-130091 Underwater Bridge Inspections

hosted by

Ayres Associates Inc

Date: *May 7-10, 2012* *Hours of Instruction:* 24

Location: *Madison, WI*

Instructor

Instructor

Local Coordinator

Richard Barnaby, Director
National Highway Institute

SPRAT Rope Access

SOCIETY OF PROFESSIONAL ROPE ACCESS TECHNICIANS

SPRAT

Acknowledges that

BARRITT LOVELACE

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

CERTIFIED

Level I Rope Access Technician

SPRAT #141489

AWARDED: March 09, 2018
Expires: March 9, 2021

ROBERT DUNSHEA, EVALUATIONS COMMITTEE CHAIR

WILLIAM McCOOK (TROLL), SPRAT PRESIDENT

2012 - Present: Society of Professional Rope Access Technicians

SPRAT

Society of Professional Rope Access Technicians

May 07, 2018

Barritt Lovelace
314 Saratoga St South
Saint Paul, MN 55105
USA

Dear Barritt:

Congratulations! You have successfully completed certification testing for Level I Rope Access Technician and are hereby awarded the enclosed certificate. Please note that you are required to adhere to the Society's consensus safety standard, ***Safe Practices for Rope Access Work*** - most recent edition.

Once again, congratulations! Be sure to contact the Society 90 days prior to the expiration of this certification to arrange for re-certification testing.

Sincerely,

Charley Ruskin , Evaluations Committee Chair

William McCook (Troll), SPRAT President

UAS Part 107 Pilot

Jon Wittrock

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

FHWA-NHI Course 130053 - Bridge Inspection Refresher Training

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

National Highway Institute

Certificate of Training

Jon Wittrock

has participated in

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

hosted by

Collins Engineers, Inc.

Date: February 14-17, 2012 *Hours of Instruction:* 25

Location: Schaumburg, Illinois

Instructor

Instructor

Local Coordinator

Richard Barnaby, Director
National Highway Institute

FHWA-NHI Course 130091 - Underwater Bridge Inspection

National Highway Institute

Certificate of Training

Jon M. Wittrock

has participated in

FHWA-NHI-130091 Underwater Bridge Inspection

hosted by

Collins Engineers, Inc.

Date: March 1-4, 2013 *Hours of Instruction:* 24

Location: Chicago, IL

Instructor

Instructor

Local Coordinator

Richard Barnaby, Director
National Highway Institute

FHWA-NHI Course 133117 – Maintenance of Traffic for Supervisors

National Highway Institute

Certificate of Training

Jon Wittrock

has participated in

NHI Course No. FHWA-NHI-133117

Maintenance of Traffic for Supervisors - WEB BASED

hosted by

National Highway Institute

Location: Web-Based Course *Hours of Instruction:* 5 hours

Date: 1/25/2017

Valerie Briggs, Director
National Highway Institute

SPRAT Rope Access

SOCIETY OF PROFESSIONAL ROPE ACCESS TECHNICIANS

SPRAT

Acknowledges that

JON MICHAEL WITTROCK

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

CERTIFIED

Level I Rope Access Technician

SPRAT #130186

AWARDED: January 25, 2019
Expires: February 19, 2022

ROBERT DUNSHEA, EVALUATIONS COMMITTEE CHAIR

WILLIAM McCOOK (TROLL), SPRAT PRESIDENT

SPRAT ROPE ACCESS TECHNICIAN

Level: I

Jon Michael Wittrock
Brookfield, WI
USA

SPRAT Cert. # 130186
Certification Date: 25 JAN 2019
Renewal Date: 19 FEB 2022

Certified Welding Inspector (CWI)

AWS American Welding Society®

Certifies that Welding Inspector

Jon Wittrock

has complied with the requirements of AWS QC1, Standard for AWS Certification of Welding Inspectors

14041471
CERTIFICATE NUMBER

Apr/01/2023
EXPIRATION DATE

AWS PRESIDENT

AWS QUALIFICATION & CERTIFICATION COMMITTEE CHAIR

NDT Level II – Ultrasonic Testing

HELLIER *A Higher Level of Reliability*

HELLIER AWARDS THIS CERTIFICATE TO:

Jon Wittrock

IN RECOGNITION OF HAVING SUCCESSFULLY COMPLETED AN EDUCATIONAL COURSE, AND DEMONSTRATED PROFICIENCY BY SATISFACTORY COMPLETION OF AN EXAMINATION ON THE SUBJECT OF

ULTRASONIC TESTING LEVEL II

(40 HOURS)

IN WITNESS THEREOF THESE SIGNATURES HAVE BEEN HERETO AFFIXED
August 3, 2012

MANAGER

INSTRUCTOR

TECHNICAL TRAINING & CONSULTING

a Rockwood Company

Beau Kamrath

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

National Highway Institute

Certificate of Training

Beau Kamrath

has participated in

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

hosted by

Kentucky Transportation Cabinet

Date: April 7-18, 2014 Hours of Instruction: 67.0

Location: Frankfort, Kentucky

Instructor

Instructor

Local Coordinator

Richard Barnaby, Director
National Highway Institute

FHWA-NHI Course 130053 - Bridge Inspection Refresher Training

INFRASTRUCTURE ENGINEERS, INC.

consulting engineers / commercial divers

Monday, March 06, 2017

Kamrath, Beau
Collins Engineers, Inc.
5257 Cleveland St.
Virginia Beach, VA 23462

Subject: **NHI 130053: Bridge Inspection Refresher Training**
Hosted by Greenman-Pedersen in Albany, NY
2/21/2017 - 2/23/2017

Dear Beau:

Congratulations! Having completed the required hours of attendance and passing the course examination (with a score of 91%), you have successfully met the requirements for periodic bridge inspection refresher training in accordance with the Code of Federal Regulations, Section 650.313g that delineates the National Bridge Inspection Standards.

In addition, you have earned 1.8 Continuing Education Units (CEUs) and 18 Professional Development Hours (PDHs).

Should you have any questions, please feel free to contact me at 864/595-8030 or jrowe@infrastructureengineers.com.

Sincerely,

INFRASTRUCTURE ENGINEERS, INC.

Jeffrey B Rowe, P.E.
Project Manager

P.S. If you have any interesting photos or videos that you believe might benefit future participants, please forward to me at jrowe@infrastructureengineers.com. Thank you in advance!

2121 Old Hickory Tree Road • Saint Cloud, FL 34772 • Phone (407) 957-1660 • Fax (407) 957-8744
1460 John B. White Sr. Blvd., Suite 1C • Spartanburg, SC 29306 • Phone (864) 595-8030 • Fax (864) 595-8034

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

U.S. Department of Transportation
Federal Highway Administration

National Highway Institute

Certificate of Training

Beau Kamrath

has participated in

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

hosted by

Clark Nexsen

Date: *November 28-December 1, 2017* ***Hours of Instruction:*** 25

Location: *Virginia Beach, VA*

Instructor

Local Coordinator

Instructor

Valerie Briggs, Director
National Highway Institute

FHWA-NHI Course 130091 - Underwater Bridge Inspection

U.S. Department of Transportation
Federal Highway Administration

National Highway Institute

Certificate of Training

Beau Kamrath

has participated in

FHWA-NHI-130091 Undewater Bridge Inspection

hosted by

Crofton Diving Corporation

Date: *March 29-31, 2018* ***Hours of Instruction:*** 24

Location: *Portsmouth, VA*

Instructor

Local Coordinator

Instructor

Valerie Briggs, Director
National Highway Institute

SPRAT Rope Access

SPRAT

ROPE ACCESS TECHNICIAN

LEVEL: III

Beau William Kamrath

Hampton, VA
USA

SPRAT Cert. # 150449
Certification Date: 12 FEB 2021
Renewal Date: 19 MAR 2024

ADCI Commercial Diver

Mike Spencer

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

FHWA-NHI Course 130053 - Bridge Inspection Refresher Training

FHWA-NHI Course 130078 - Fracture Critical Inspection Techniques for Steel Bridge

U.S. Department of Transportation
Federal Highway Administration

National Highway Institute

Certificate of Training

NHI NATIONAL HIGHWAY INSTITUTE

Mike Spencer

has participated in

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

hosted by

Collins Engineers, Inc.

Date: *April 5-8, 2017*
Location: *Chicago, IL*

Hours of Instruction: 25

Instructor

Instructor

Local Coordinator

Valerie Briggs, Director
National Highway Institute

FHWA-NHI Course 130091 - Underwater Bridge Inspection

U.S. Department Of Transportation
Federal Highway Administration

National Highway Institute

Certificate of Training

NHI NATIONAL HIGHWAY INSTITUTE

Michael J. Spencer

has participated in

FHWA-NHI-130091 Underwater Bridge Inspection

hosted by

Collins Engineers, Inc.

Date: *March 1-4, 2013*
Location: *Chicago, IL*

Hours of Instruction: 24

Instructor

Instructor

Local Coordinator

Richard Barnaby, Director
National Highway Institute

SPRAT Rope Access

SPRAT®

ROPE ACCESS TECHNICIAN

Level: III

Michael Spencer

Lemont, IL
USA

SPRAT Cert. # 150460
Certification Date: 10 JUL 2020
Renewal Date: 1 SEP 2023

Dan Stromberg

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

On-site training based on

Certificate of Training

Daniel G. Stromberg, S.E., P.E.

U.S. Department of Transportation

Federal Highway Administration's BITM 90 80 hr Course

has satisfactorily completed training in

Safety Inspection of In-Service Bridges

conducted by

Collins Engineers, Inc.

Location: Chicago, Illinois

Hours of Instruction: 80

Date: January, 1999

Continuing Education Units: 6.0

Instructor

Coordinator

FHWA-NHI Course 130053 - Bridge Inspection Refresher Training

U.S. Department of Transportation
Federal Highway Administration

National Highway Institute

Certificate of Training

NHI NATIONAL HIGHWAY INSTITUTE

Daniel Stromberg

has participated in

FHWA-NHI-130053
Bridges Inspection Refresher Training

hosted by

Collins Engineers, Inc.

Date: June 19-21, 2018
Location: Chicago, IL

Hours of Instruction: 18 Hours

Instructor

Instructor

Local Coordinator

Valerie Briggs, Director
National Highway Institute

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

U.S. Department Of Transportation
Federal Highway Administration

National Highway Institute

Certificate of Training

NHI NATIONAL HIGHWAY INSTITUTE
Training Solutions for Transportation Excellence

Dan Stromberg

has participated in

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

hosted by

Collins Engineers, Inc.

Date: February 14-17, 2012
Location: Schaumburg, Illinois

Hours of Instruction: 25

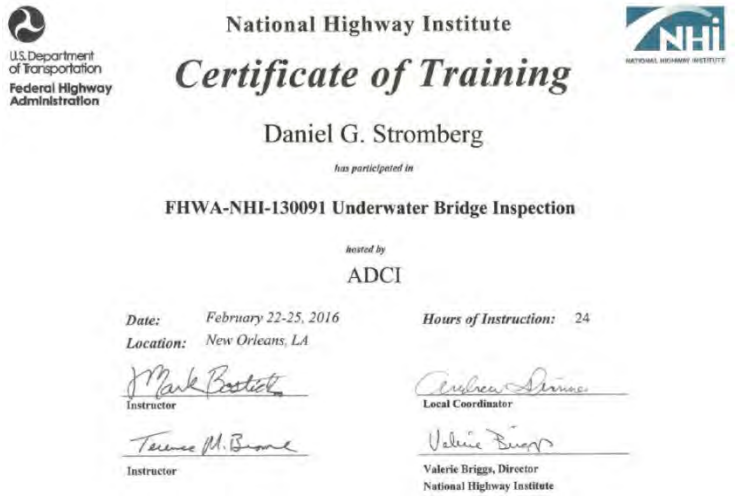
Instructor

Instructor

Local Coordinator

Richard Barnaby, Director
National Highway Institute

FHWA-NHI Course 130091 - Underwater Bridge Inspection



U.S. Department of Transportation
Federal Highway Administration

National Highway Institute

Certificate of Training

Daniel G. Stromberg

has participated in

FHWA-NHI-130091 Underwater Bridge Inspection

hosted by

ADCI

Date: February 22-25, 2016 *Hours of Instruction:* 24
Location: New Orleans, LA

Instructor

Local Coordinator

Instructor

Valerie Briggs, Director
National Highway Institute

ADCI Commercial Diver

The American Traffic Safety Services Association

Hereby recognizes that

Travis Bodin

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

Jessica Schnyder
Training & Products Dept. Director

Ryn A. Wentz
President, CEO


ATSSA
SAFER ROADS. SAVE LIVES
AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION
SLOW
This is to affirm that
TRAVIS Bodin
has satisfied the requirements
to be designated as a
CERTIFIED FLAGGER
Expiration Date 9/28/22
State Issued In CA
Instructor Signature
Verification available by calling 1-877-642-4637 or at http://www.flagger.com

The American Traffic Safety Services Association

Hereby recognizes that

Justin Bordelon

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


ATSSA
SAFER ROADS SAVE LIVES
AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION
SLOW
This is to affirm that
JUSTIN BORDELON
has satisfied the requirements
to be designated as a
CERTIFIED FLAGGER
Expiration Date 9/28/22
State Issued in LA
Instructor Signature
Verification available by calling 1-877-642-4637 or at http://www.flagger.com

ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Dax Douet

has attended

Traffic Control Supervisor Refresher-LA State Specific

Training Course

4/5/2021 to 4/5/2025
Training Valid Through

Director of Training

Baton Rouge, LA
Location

President, CEO

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

ATSSA American Traffic Safety Services Association ATSSA.com

Certificate of Completion

presented to

Dax Douet

for completing the

Traffic Engineering Analysis Process & Report
Module 1

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

Professional Development Hours (PDHs) Awarded: 2.5

Authorized Instructor

Authorized Instructor

Authorized instructor

LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Dax Douet

for completing the

Traffic Engineering Analysis Process & Report
Module 2

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

Professional Development Hours (PDHs) Awarded: 3.5

Authorized Instructor

Authorized Instructor

Authorized instructor

LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Dax Douet

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

LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Diane Hammonds

has attended

Traffic Control Supervisor-LA State Specific

Training Course

4/29/2020 to 4/30/2020
Date

,
Location

Vice President of Member Services

President, CEO

ATSSA American Traffic Safety Services Association ATSSA.com

ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Diane Hammonds

has attended

Traffic Control Technician-LA State Specific

Training Course

4/28/2020 to 4/28/2020
Date

Baton Rouge, LA
Location

Donna M. Clark
Vice President of Member Services

Steven Tichacek
President, CEO

ATSSA American Traffic Safety Services Association ATSSA.com

Certificate of Completion

presented to

Diane Hammonds

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

Diane Hammonds

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

Diane Hammonds

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

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Kimberly McDaniel

has attended

Traffic Control Supervisor Refresher-LA State Specific

Training Course

5/1/2020 to 5/1/2020
Date

Baton Rouge, LA
Location

Vice President of Member Services

President, CEO

ATSSA American Traffic Safety Services Association ATSSA.com

Certificate of Completion

presented to

Kimberly McDaniel

for completing the

Traffic Engineering Analysis Process & Report Module 1

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

Professional Development Hours (PDHs) Awarded: 4

Authorized Instructor

Authorized Instructor

Authorized instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Kimberly McDaniel

for completing the

Traffic Engineering Analysis Process & Report Module 2

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

Professional Development Hours (PDHs) Awarded: 4

Authorized Instructor

Authorized Instructor

Authorized instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Kimberly McDaniel

for completing the

Traffic Engineering Analysis Process & Report Module 3

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

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor

Authorized Instructor

Authorized instructor

LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

U.S. Department
Of Transportation

Federal Highway Administration

NATIONAL HIGHWAY INSTITUTE
Training Solutions for Transportation Excellence

National Highway Institute

Certificate of Training

Jay Davison

has participated in

Safety Inspection In-Service Bridges

hosted by

ALABAMA DEPARTMENT OF TRANSPORTATION

Location: ***Mobile, Alabama***

Date: ***May 14 – 25, 2007***

Hours of instruction: *72*

William R. Gedris
Instructor

Moges Ayele
Director, National Highway Institute
Federal Highway Administration

Coordinator

Director, Office of Professional Development
Federal Highway Administration

U.S. Department of Transportation
Federal Highway Administration

National Highway Institute

NATIONAL HIGHWAY INSTITUTE

Certificate of Training

Nick Hartman

has participated in

FHWA-NHI-130053 Bridge Inspection Refresher Training

hosted by

Office of State Aid Road Construction

Date: *July 31-August 02, 2018*

Location: *Ridgeland, MS*

Hours of Instruction: 18

Instructor

Instructor

Local Coordinator

Valerie Briggs, Director
National Highway Institute

U.S. Department
Of Transportation
Federal Highway Administration

National Highway Institute

Certificate of Training

NATIONAL HIGHWAY INSTITUTE
Training Solutions for Transportation Excellence

Keith Smith

has participated in

FHWA-NHI Course No. 130055
SAFETY INSPECTION OF IN-SERVICE BRIDGES

hosted by

BOSTON SOCIETY OF CIVIL ENGINEERS/ MASSACHUSETTS HIGHWAY DEPARTMENT

Date: October 15-26, 2007

Location: Worcester, MA

Hours of Instruction: 60

Instructor

Instructor

Local Coordinator

Joseph S. Toole, Associate Administrator
Office of Professional and Corporate Development

U.S. Department
Of Transportation
Federal Highway Administration

National Highway Institute

Certificate of Training

NATIONAL HIGHWAY INSTITUTE
Training Solutions for Transportation Excellence

Keith Smith

has participated in

FHWA-NHI-130078 Fracture Critical Inspection Techniques for Steel Bridge

hosted by

Mississippi Department of Transportation

Date: May 12-15, 2009
Location: CAV Center, Canton, MS

Hours of Instruction:
8 hours each day

Instructor

Instructor

Local Coordinator

Richard Barnaby, Director
National Highway Institute

U.S. Department of Transportation
Federal Highway Administration

NATIONAL HIGHWAY INSTITUTE

National Highway Institute

Certificate of Training

Keith Smith

has participated in

FHWA-NHI-130053
Bridge Inspection Refresher Training

hosted by

Indiana Department of Transportation

Date: August 23-25, 2016

Hours of Instruction: 18

Location: Indianapolis, Indiana

Instructor

Instructor

Local Coordinator

Valerie Briggs, Director
National Highway Institute

U.S. Department of Transportation
Federal Highway Administration

National Highway Institute

NATIONAL HIGHWAY INSTITUTE

Certificate of Training

Charlie Weston

has participated in

FHWA-NHI-130053 Bridge Inspection Refresher Training

hosted by

Office of State Aid Road Construction

Date: *July 31-August 02, 2018*

Hours of Instruction: 18

Location: *Ridgeland, MS*

Instructor

Instructor

Local Coordinator

Valerie Briggs, Director
National Highway Institute

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.

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**
Collins Engineers, Inc.	2033 W Howard Ave. Milwaukee, WI 53221	Drew Garceau, P.E., CWI dgarceau@collinsengr.com	(414) 930-4554
C. H. Fenstermaker & Associates, L.L.C.	135 Regency Square Lafayette, LA 70508	Kimberly McDaniel, P.E., PTOE kimberlym@fenstermaker.com	(337) 237-2200
Thompson Engineering, Inc., of Louisiana	14635 S. Harrell's Ferry Road, Suite 4-A Baton Rouge, LA 70816	Brant B. Richard, P.E. brichard@thompsonengineering.com	(225) 252-9182

(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.