ROYAL
engineeringpossibilites.

CONTRACT NO. 4400024593
STATE PROJECT NO. H.015009.5
F.A.P. NO. H015009
JEFFERSON PARISH

CONTRACT FOR OFF SYSTEM HIGHWAY BRIDGE PROGRAM: WEST METAIRIE AVENUE OVER SOUTH SUBURBAN CANAL

Submitted to
Louisiana Department of Transportation and Development

Submitted by
Royal Engineers & Consultants, LLC

Date
August 4, 2022

Photo: Metairie Bridge

COVER LETTER

August 4, 2022

Department of Transportation and Development
Attn.: Barbara Ostuno, Program Manager
1201 Capitol Access Road
Baton Rouge, LA 70802-4438

RE: CONTRACT NO. 4400024593
CONTRACT FOR OFF SYSTEM HIGHWAY BRIDGE PROGRAM
WEST METAIRIE AVENUE OVER SOUTH SUBURBAN CANAL
STATE PROJECT NO. H.015009.5
F.A.P. NO. H015009
JEFFERSON PARISH

Dear Consultant Selection Committee,

Royal Engineers and Consultants, L.L.C. (Royal) respectfully requests your review and consideration of the enclosed proposal prepared in response to the Department's advertisement for Engineering and Related Services for OSHB Program - West Metairie Avenue Over South Suburban Canal. Since 2005, Royal has delivered multi-discipline professional design, engineering, construction and program management for industry, government, and the private sector across the Gulf Coast and is fully licensed, bonded, and insured to do so. Additionally, Royal has provided construction engineering for complex roadway programs across Louisiana, totaling more than $500 million.

Royal has offices in New Orleans, Lafayette, and Baton Rouge, LA. We have strategically partnered with Batture and Huval for this proposal. Several members in each firm included in this proposal have a successful history of working together to deliver projects. Through our carefully selected team of professionals, we are committed to providing the Department and Jefferson Parish the full suite of design and construction support services required and are confident we will surpass expectations.

Royal's proposed team meets or exceeds the specified minimum requirements and is organized to meet the needed services described in Attachment A of the advertisement. The Royal Team's statement of qualifications contained herein is submitted in direct response to the referenced advertisement. It highlights our relevant experience and expertise and articulates our unique capabilities to perform needed services in a timely and professional manner within budget.

We appreciate the opportunity to respond and look forward to working with the Department and Jefferson Parish. Please direct communication related to the advertisement to our Primary Point of Contact, Michael Pugh, by phone at (504) 283-9400 or via email at mpugh@royalengineering.net.

Sincerely,

Michael Pugh, P.E.
President
ROYAL ENGINEERS AND CONSULTANTS, LLC

STANDARD FORM: 24-102

DOTD FORM: 24-102

(Revised March 1, 2022)

PROPOSAL TO PROVIDE CONSULTANT SERVICES

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

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

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

1. Contract title as shown in the advertisement	CONTRACT FOR OFF SYSTEM HIGHWAY BRIDGE PROGRAM WEST METAIRIE AVENUE OVER SOUTH SUBURBAN CANAL
2. Contract number(s) as shown in the advertisement	4400024593
3. State Project Number(s), if shown in the advertisement	H.015009.5
4. Prime consultant name (as registered with the Louisiana Secretary of State where such registration is required by law)	Royal Engineers and Consultants, LLC
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.0003328
6. Prime consultant mailing address	1501 Religious St, Ste C New Orleans, LA 70130
7. Prime consultant physical address (existing or to be established, if location is used as an evaluation criteria)	1501 Religious St, Ste C New Orleans, LA 70130
8. Name, title, phone number, and email address of prime consultant's contract point of contact	Michael Pugh, P.E., President 504-283-9400 mpugh@royalengineering.net
9. Name, title, phone number, and email address of the official with signing authority for this proposal	Michael Pugh, P.E., President 504-283-9400 mpugh@royalengineering.net

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. LADOTD 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:  Date: August 4, 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): N/A Firm(s)' %: N/A

12. Past Performance Evaluation Discipline Table:

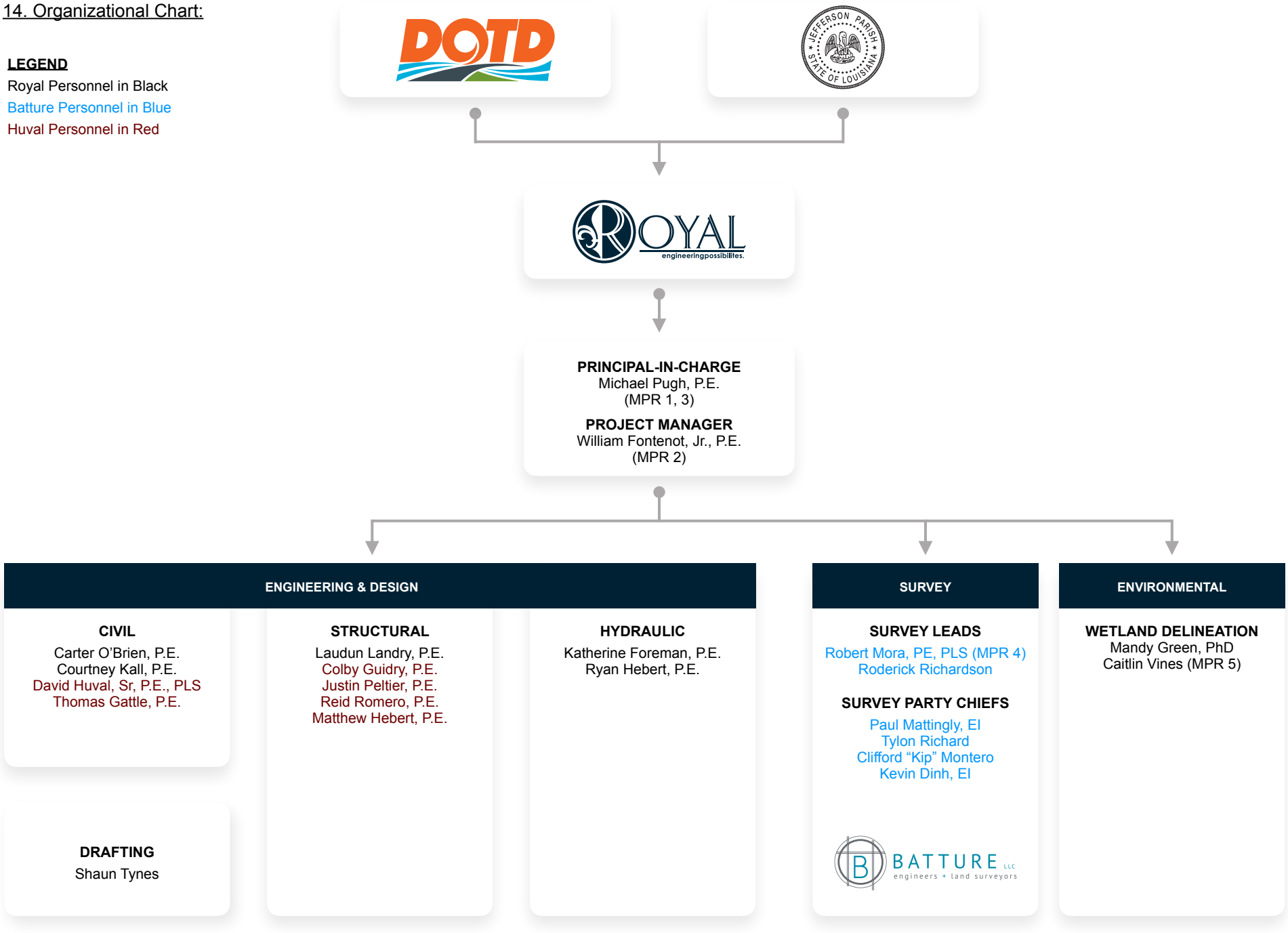
Evaluation Discipline(s)	**% of Overall Contract**	**(Prime)**	**Batture**	**Huval**	**Each Discipline Must Total to 100%**
Bridge	70%	85%		15%	100%
Survey	25%		100%		100%
Environmental	5%	100%			100%
Identify the percentage of work for the **overall contract** to be performed by the prime consultant and each sub-consultant.					
Percent of Contract	100%	64.5%	25%	10.5%	100%

13. Firm Size:

Firm Name	LADOTD Job Classification	Number of personnel committed to this contract	Total number of personnel available in this LADOTD Job Classification (if needed)
ROYAL engineeringpossibilities.	Principal	1	4
	Engineer	6	10
	Biologist / Wetlands	2	4
	CADD Drafter	1	3
BATTURE LLC engineers + land surveyors	Surveyor	1	1
	Party Chief	2	2
	Engineer Intern	2	5
	CADD Operator	1	2
HUVAL & ASSOCIATES, INC. Consulting Engineers	Principal	1	1
	Supervisor Engineer	2	5
	Engineer	4	6
	Engineer Intern	3	5
	Technician	1	2
	CADD Technician	1	3
	CADD Drafter	2	4
	Inspector - Certified	1	5

14. Organizational Chart:

LEGEND
Royal Personnel in Black
Batture Personnel in Blue
Huval Personnel in Red



Prime Consultant Name: Royal Engineers & Consultants, LLC

ROYAL

15. Minimum Personnel Requirements:

MPR No. Do not insert wording from ad	**Personnel being used to meet the MPR** (Individual(s) may not satisfy more than one MPR unless specifically allowed by Attachment B of the advertisement)	**Firm employed by**	**Type of license/certification & number**	**State of license**	**License/certification expiration date**
1	Michael Pugh, P.E.	ROYAL	Professional Engineer / 30911	LA	3 / 31 / 2024
2	William Fontenot, Jr., P.E.	ROYAL	Professional Engineer / 41036	LA	3 / 31 / 2023
3	Michael Pugh, P.E.	ROYAL	Professional Engineer / 30911	LA	3 / 31 / 2024
4	Robert Mora, PE, PLS	BATTURE	Professional Land Surveyor / 5042	LA	9 / 30 / 2022
5	Caitlin Vines	ROYAL		LA	

16. Staff Experience:

Firm employed by	Royal Engineers and Consultants, L.L.C.		
Name	Michael Pugh, P.E.	Years of relevant experience with this employer	16
Title	President	Years of relevant experience with other employer(s)	11
Degree(s) / Years / Specialization			BS / 1997 / Civil Engineering
Active registration number / state / expiration date			30911 / LA / 3-31-2024
Year registered	2003	Discipline	Professional Engineer, Civil
Contract role(s)/brief description of responsibilities			Principal-in-Charge, MPR 1 and 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).
25+ years of experience	Mr. Pugh has over 20 years of experience in design and construction management of roadway and drainage systems. He started up and managed the St. Bernard Parish Roadway Restoration Program which has included the design, bidding, and construction management of 178 roadways with a construction value of nearly $60M. He is a Registered Professional Engineer in 8 states, including Louisiana.
02/15 - Ongoing	**BARTOLO DRIVE AT 20 ARPENT CANAL: St. Bernard Parish, LA** Principal-in-charge and stamping design engineer for the Royal team contracted by St. Bernard Parish Government (SBPG) to provide Engineering Services for repairs, restorations and/or replacement of Parish owned roadway and canal crossings to their Pre-Katrina condition while preserving the historical value and intent of each facility and Engineering Services for replacement of 6 existing culverts with precast Con-Span structures. PW 19329, Bartolo Canal Crossing consisted of a Hazard Mitigation project to replace the pre-existing two – 72” reinforced concrete pipe culverts with a 26’-0” wide clear span, precast concrete structure.
02/15 - Ongoing	**MAGISTRATE STREET AT CORINNE CANAL: St. Bernard Parish, LA** Principal-in-charge and stamping design engineer for the Royal team contracted by St. Bernard Parish Government (SBPG) to provide Engineering Services for repairs, restorations and/or replacement of Parish owned roadway and canal crossings to their Pre-Katrina condition while preserving the historical value and intent of each facility and Engineering Services for replacement of 6 existing culverts with precast Con-Span structures. PW 19925, Magistrate @ Corrine Canal Crossing consisted of a Hazard Mitigation project to replace the pre-existing two – 96” corrugated metal pipe culverts with a 26’-0” wide clear span, precast
02/15 - Ongoing	**MISSOURI STREET AT CORINNE CANAL: St. Bernard Parish, LA** Principal-in-charge and stamping design engineer for the Royal team contracted by St. Bernard Parish Government (SBPG) to provide Engineering Services for repairs, restorations and/or replacement of Parish owned roadway and canal crossings to their Pre-Katrina condition while preserving the historical value and intent of each facility and Engineering Services for replacement of 6 existing culverts with precast Con-Span structures. PW 19332, Missouri @ Corrine Canal Crossing consisted of a Hazard Mitigation project to replace the pre-existing two – 60” corrugated metal pipe culverts with a 26’-0” wide 72’-0” long clear span, precast concrete structure.
02/15 - Ongoing	**MUMPHREY ROAD AT 20 ARPENT CANAL: St. Bernard Parish, LA** Principal-in-charge and stamping design engineer for the Royal team contracted by St. Bernard Parish Government (SBPG) to provide Engineering Services for repairs, restorations and/or replacement of Parish owned roadway and canal crossings to their Pre-Katrina condition while preserving the historical value and intent of each facility and Engineering Services for replacement of 6 existing culverts with precast Con-Span structures. PW 20172, Mumprhrey Rd @ 20 Arpent Canal Crossing consisted of a Hazard Mitigation project to replace the pre-existing two – 60” Concrete Pipe Culverts with a 26’-0” wide 72 clear span, precast concrete structure.

16. Staff Experience:

02/15 - Ongoing	**PAUL DRIVE AT 20 ARPENT CANAL: St. Bernard Parish, LA** Principal-in-charge and stamping design engineer for the Royal team contracted by St. Bernard Parish Government (SBPG) to provide Engineering Services for repairs, restorations and/or replacement of Parish owned roadway and canal crossings to their Pre-Katrina condition while preserving the historical value and intent of each facility and Engineering Services for replacement of 6 existing culverts with precast Con-Span structures. PW 19331, Paul Drive @ 20 Arpent Canal Crossing consisted of a Hazard Mitigation project to replace the pre-existing three – 72" Concrete Pipe Culverts with a 28'-0" wide 64'- 0" long clear span, precast concrete structure.
02/15 - Ongoing	**GALLO DRIVE AT 20 ARPENT CANAL: St. Bernard Parish, LA** Principal-in-charge and stamping design engineer for the Royal team contracted by St. Bernard Parish Government (SBPG) to provide Engineering Services for repairs, restorations and/or replacement of Parish owned roadway and canal crossings to their Pre-Katrina condition while preserving the historical value and intent of each facility and Engineering Services for replacement of 6 existing culverts with precast Con-Span structures. Gallo Drive @ 20 Arpent Canal Crossing included concrete road reconstruction, utility relocations, and installation of sidewalks, drainage, infrastructure, and other incidentals.
04/19 - Ongoing	**EAST HARDY BRIDGE DESIGN AND REPLACEMENT: New Orleans, LA** Principal Engineer on the Royal team contracted to provide Engineering services for bridge design, layout, specifications and probable cost. The existing East Hardy Street Bridge is a two-lane bridge located on the Leaf River in Petal, MS that was identified for replacement through the Emergency Road and Bridge Repair Fund. Mr. Pugh participated in Design Reviews and served as Civil Engineering Subject Matter Expert.
12/15 - 11/18	**SITE DESIGN FOR AN ALGIERS POINT SUBDIVISION: Orleans Parish, LA** Principal-in-charge and design engineer providing oversight and design management of site/civil services for the design-build project developing a home complex in the West Bank of New Orleans in Algiers Point. The project will construct 51 single family residential buildings on approximately 4.5 acres of vacant land. Mr. Pugh is overseeing civil engineering services related to the overall site development such as geotechnical, civil and structural engineering for all roadways, utility design, pavement, sidewalks, site grading, public right of way access, erosion and sediment control measures, stormwater management features, lighting, and providing services related to required permitting.
11/19 - ongoing	**FEMA ROADWAY RESTORATION PROGRAM: New Orleans, LA** Principal Engineer on the Royal team contracted by the Department of Public Works (DPW) to provide construction management and resident inspection services for the FEMA Roadway Restoration Program. This project includes restoration of parish concrete and asphalt roadways and associated infrastructure (i.e., sidewalks, driveways, drainage, sewer, and water) that suffered damage during Hurricane Katrina. Construction services are being performed by multiple contractors under contract by DPW and overseen by Royal. Royal is providing all construction management, data management, reporting, platform deployment, quality assurance, administration, pay applications, and closeout services.
09/19 - 03/20	**MAXPAVE ROADWAY PROGRAM: New Orleans, LA** Principal Engineer responsible for interagency coordination, project management, contract administration, construction management, assessment, and resident inspection services for the CNO DPW and SWBNO combined utility rehabilitation initiative, which involves 50 to 75 service cuts weekly to conduct the needed point repairs to the sewer and water infrastructure. Ontime, on-budget contract delivery; client service management; and civil engineering and utility impacts SME ert were Mr. Pugh's primary duties.
03/07 - 10/09	**ROADWAY RESTORATION PROJECT: St. Bernard Parish, LA** Lead Design Engineer and Project Principal responsible for engineering, design, and construction management services provided to the Parish for the restoration of all concrete and asphalt roadways, including associated infrastructure, including sidewalks, driveways, drainage, sewer, and water systems, that suffered damage during Hurricane Katrina and the recovery process. Mr. Pugh was the engineer in responsible charge for all design and served as the primary technical resource for contractor questions and challenges encountered during construction.
11/10 - 08/11	**BLOSKI AVENUE EXTENSION: Belle Chasse, LA** Principal in Charge for this road construction project. Royal worked directly for the Naval Facilities Engineering Command Southeast as the prime contractor. This project consisted of the construction of an asphalt roadway for 1300 feet and included the construction of stormwater drainage, sidewalks, concrete driveways, and solar street lighting. Royal was also responsible for the development and maintenance of the Stormwater Pollution Prevention Plan (SWPPP), Environmental Protection Plan (EPP), Health & Safety Plan (HASP), and Accident Prevention Plan (APP).
01/98 - 08/00	**LA DOTD - Off System Bridge Program, Iberia Parish, LA** Mr. Pugh was responsible for maintaining and supervising all Iberia Parish's Off-System Bridge Program. This project included intermediate inspection of bridges, recommendations for repairs, supervised repair work, coordination with DOTD and Parish officials, and maintenance of detailed bridge files.

16. Staff Experience:

Firm employed by	Royal Engineers and Consultants, L.L.C.		
Name	William Fontenot, Jr, P.E.	Years of relevant experience with this employer	<1
Title	Project Manager	Years of relevant experience with other employer(s)	8
Degree(s) / Years / Specialization			BS / 2012 / Civil Engineering
Active registration number / state / expiration date			41036 / LA / 3-31-2023
Year registered	2016	Discipline	Professional Engineer, Civil
Contract role(s)/brief description of responsibilities			Civil Engineer, MPR 2

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).
8+ years of experience	Mr. Fontenot has more than eight years of experience in civil and structural engineering, construction consulting, and structural inspection and repair. He has performed on-site inspection of structural deficiencies of statewide projects and engineered safe, economic approaches to specific construction problems related to various heavy construction projects. He has significant experience and familiarity with MUTCD, AASHTO, AISC, ACI, and LADOTD design manuals and codes. **Certifications:** Traffic Control Supervisor, Traffic Control Technician, Certified Flagger
12/14 - 10/17	**St. Martin Parish Off-System Bridge Maintenance, St. Martin Parish, LA** Mr. Fontenot performed in-depth inspections of the deck, superstructure and substructure of the approach spans of all of the off-system bridges maintained by St. Martin Parish. In this role, Mr. Fontenot also coordinated meetings between the inspectors and contractors; assisted in bridge load ratings; and provided assessment report of bridges including potential repair plans. Codes used included: PONTIS Inspection Manual, all relevant BDTMs.
12/16 – 11/17	**Seabrook Bridge Repairs, Orleans Parish, LA** As a Licensed Engineer, Mr. Fontenot provided engineering support and construction consulting for the replacement of steel bottom-chord members of a Stauss-Truss Rolling-Lift bascule railroad bridge. Tasks performed: designed temporary support chords, gusset plates, and access platforms for replacement of permanent truss members, coordinated with railroad traffic personnel to optimize construction phasing and productivity, assisted contractor and laborers with review and compliance with design plans, produced RFIs for changes to design plans Codes Used: AISC Steel Construction Manual, AASHTO LRFD Bridge Design Specifications, ASCE/SEI 7 Minimum Design Loads for Buildings and Other Structures, ASD/LRFD - Manual for Engineered Wood Construction, ACI 318-11 Building Code Requirements for Structural Concrete
10/16 – 08/17	**Yscloskey Vertical Lift Bridge Painting, St Bernard Parish, LA** As a Licensed Engineer, Mr. Fontenot assisted with design and details for a paint containment system, survey and geometric site layout of new operator house foundation, and phasing plans for different construction activites. Tasks Performed included: Site survey and layout using total station and automatic level, designed and detailed support system for paint containment, coordination of roadway and water-fairing traffic to optimize productivity during construction activities. Codes used included: AISC Steel Construction Manual, ACI 318-11 Building Code Requirements for Structural Concrete, LADOTD Bridge Design Manual.
12/15 – 07/16	**Luling Bridge Deck Overlay and Repairs, St. Charles Parish, LA** As an Engineer Intern, Mr. Fontenot revised original traffic control plans and diversion crossovers to expedite construction sequencing and feasibility. Updated drainage plan to match revised traffic control. Tasks Performed: geometric Design of Diversion Crossovers, hydraulic analysis of watershed area for new and existing drainage design, traffic control layout and phasing plans throughout the project, assisted construction efforts in the field using survey data and design plans, design of debris screen for sandblasting operations near adjacent traffic, quality control of final plans, quantification of cut/fill and roadway elements for cost estimates. Codes Used: AASHTO Roadside Design Guide, AISC Steel Construction Manual, ACI 318-11 Building Code Requirements for Structural Concrete, MUTCD, LADOTD Traffic Control Standard Plans, AASHTO Guide Design Specifications for Bridge Temporary Works, LADOTD Hydraulics Manual

16. Staff Experience:

05/14 – 07/16	**Bayou Bienvenue Swing Bridge, Orleans Parish, LA** As an Engineer Intern, Mr. Fontenot provided engineering support and construction consulting throughout the construction of the bridge from the initial site survey layout to the final completion and opening of the structure. Tasks performed: Site survey and layout using total station and automatic level, designed and detailed pile driving template for concrete piles, designed formwork for cast in place concrete bridge elements such as pier caps and slab span decks, designed and detailed pile driving template for timber fender wall, performed barge stability calculations for marine pile driving operations, performed geotechnical analysis of subsurface conditions based on soil borings from the plans, maintained survey control for bridge elements throughout construction using total station, designed friction collar and friction collar testing apparatus for concrete formwork support, assisted in various construction efforts throughout the duration of the project, prepared as-built final plans as part of the final construction efforts. Codes Used: AISC Steel Construction Manual, AASHTO LRFD Bridge Design Specifications, NHI Design and Construction of Driven Pile Foundations, ASCE/SEI 7 Minimum Design Loads for Buildings and Other Structures, ASD/LRFD - Manual for Engineered Wood Construction, ACI 318-11 Building Code Requirements for Structural Concrete
06/12 - 07/16	**H.002550 MACARTHUR DRIVE INTERCHANGE COMPLETION: Jefferson Parish, LA** As an Engineer Intern, Mr. Fontenot assisted with plan and elevation revision, performed quality checks of plans from other firms, designed curtain wall details, and designed overhead sign support addition. Tasks Performed included: modification of existing geometric design of baseline for on/off ramps; detailed sections of roadway for graphical grade plans; used current design standards to detail and design curtain wall details for final plans; detailed and designed overhead sign support addition and layout for various locations throughout final design; proposed options for frontage road modifications and layout of roadway beneath bridge structure. Codes used included: AASHTO Roadside Design Guide, AISC Steel Construction Manual, ACI 318-11 Building Code Requirements for Structural Concrete, LADTOD Bridge Design Manual.
06/12 - 07/16	**IN-DEPTH BRIDGE INSPECTION OF COMPLEX STRUCTURES: St. Landry Parish, LA** As an Engineering Intern, Mr. Fontenot performed in-depth inspection of the deck, superstructure and substructure of the approach spans on the Krotz Springs Bridge over the Atchafalaya River. In this role, Mr. Fontenot also coordinated meetings between the inspectors; coordinated equipment rentals and staffed personnel; performed bridge inspections; and provided assessment report of bridges including potential repair plans. Codes used included: PONTIS Inspection Manual.
06/12 - 07/16	**H.003182 INNER HARBOR CANAL BRIDGE REHABILITATION: Algiers, LA** As an Engineering Intern, Mr. Fontenot designed traffic control and signage including detour plans and assisted in quantity checks and details for Final Plans Tasks performed included: used as-built plans and CAD software to layout and design traffic control options and detour paths for temporary lane closure during construction efforts; applied LADOTD Standards for Traffic Management and Signage; and refined and checked rehabilitation details and plans for final submittal. Codes used included: MUTCD, LADOTD Traffic Control Standard Plans, AISC Steel Construction Manual, and ACI 318-11 Building Code Requirements for Structural Concrete.
06/12 - 07/16	**I-10 LAKE PONTCHARTRAIN BRIDGE DECK PATCHING & GIRDER PAINTING: New Orleans, LA** As an Engineering Intern, Mr. Fontenot performed field inspection of all bridges. Created Assessment Report. Designed traffic control and detour plans. Wrote TMP for final submittal. Prepared plans and details for repairs. Tasks performed included: planned for inspection and quantification of bridge deficiencies by preparing traffic control plans and reviewing previous inspection reports; used CAD software to develop detour plans and a TMP for the state's review; performed field inspection; compiled data from the field inspection to create an assessment report; and used as-built plans and current state standards to prepare and detail suggested repairs. Codes used included: MUTCD, LADOTD Traffic Control Standard Plans, AISC Steel Construction Manual, ACI 318-11 Building Code Requirements for Structural Concrete, AASHTO LRFD Bridge Design Specifications, and LADOTD Bridge Design Manual.

16. Staff Experience:

Firm employed by	Royal Engineers and Consultants, L.L.C.		
Name	Carter O'Brien, P.E.	Years of relevant experience with this employer	3
Title	Senior Project Manager	Years of relevant experience with other employer(s)	8
Degree(s) / Years / Specialization			BS / 2013 / Civil Engineering
Active registration number / state / expiration date			43647 / LA / 3-31-2024
Year registered	2019	Discipline	Professional Engineer, Civil
Contract role(s)/brief description of responsibilities			Civil Engineer

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
11 years of experience	Mr. O'Brien is an Engineer with over 10 years of heavy civil, roadway, drainage, and bridge construction experience. Mr. O'Brien has managed field operations, inspectors, project documentation and closeout on numerous projects. He has completed road restoration and reconstruction projects for LADOTD, FEMA, and various other local agencies. He has extensively worked in asphalt paving, PCCP, catch basins, drainage, and sidewalk projects. Mr. O'Brien has significant experience preparing plans and specifications to in accordance with DOTD standards. **Certifications:** Traffic Control Supervisor, Traffic Control Technician, Certified Flagger
02/15 - Ongoing	**BARTOLO DRIVE AT 20 ARPENT CANAL: St. Bernard Parish, LA** Engineer on the Royal team contracted by St. Bernard Parish Government (SBPG) to provide Engineering Services for repairs, restorations and/or replacement of Parish owned roadway and canal crossings to their Pre-Katrina condition while preserving the historical value and intent of each facility and Engineering Services for replacement of 6 existing culverts with precast Con- Span structures. PW 19329, Bartolo Canal Crossing consisted of a Hazard Mitigation project to replace the pre-existing two – 72" reinforced concrete pipe culverts with a 26'-0" wide clear span, precast concrete structure.
02/15 - Ongoing	**MAGISTRATE STREET AT CORINNE CANAL: St. Bernard Parish, LA** Engineer on the team providing engineering services to the LCG for the design of a dedicated right-turn lane and second left-turn lane at the intersection of Camellia Boulevard and Settlers Trace Boulevard. Roads services include preparing plans and specifications for project construction, performing engineering design and analyses for the widening of the concrete roadway, evaluation of the existing drainage infrastructure, and identifying required modifications to the existing drainage system. Mr. O'Brien assisted with joint layout and geometric design of roadway and provided technical support during construction.
02/15 - Ongoing	**MISSOURI STREET AT CORINNE CANAL: St. Bernard Parish, LA** Engineer on the Royal team contracted by St. Bernard Parish Government (SBPG) to provide Engineering Services for repairs, restorations and/or replacement of Parish owned roadway and canal crossings to their Pre-Katrina condition while preserving the historical value and intent of each facility and Engineering Services for replacement of 6 existing culverts with precast Con- Span structures. PW 19332, Missouri @ Corrine Canal Crossing consisted of a Hazard Mitigation project to replace the preexisting two – 60" corrugated metal pipe culverts with a 26'-0" wide 72'-0" long clear span, precast concrete structure.
02/15 - Ongoing	**MUMPHREY ROAD AT 20 ARPENT CANAL: St. Bernard Parish, LA** Engineer on the Royal team contracted by St. Bernard Parish Government (SBPG) to provide Engineering Services for repairs, restorations and/or replacement of Parish owned roadway and canal crossings to their Pre-Katrina condition while preserving the historical value and intent of each facility and Engineering Services for replacement of 6 existing culverts with precast Con- Span structures. PW 20172, Mumprhrey Rd @ 20 Arpent Canal Crossing consisted of a Hazard Mitigation project to replace the pre-existing two – 60" Concrete Pipe Culverts with a 26'-0" wide 72 clear span, precast concrete structure.

16. Staff Experience:

02/15 - Ongoing	**PAUL DRIVE AT 20 ARPENT CANAL: St. Bernard Parish, LA** Engineer on the Royal team contracted by St. Bernard Parish Government (SBPG) to provide Engineering Services for repairs, restorations and/or replacement of Parish owned roadway and canal crossings to their Pre-Katrina condition while preserving the historical value and intent of each facility and Engineering Services for replacement of 6 existing culverts with precast Con-Span structures. PW 19331, Paul Drive @ 20 Arpent Canal Crossing consisted of a Hazard Mitigation project to replace the pre-existing three – 72" Concrete Pipe Culverts with a 28'-0" wide 64'-0" long clear span, precast concrete structure.
02/15 - Ongoing	**GALLO DRIVE AT 20 ARPENT CANAL: St. Bernard Parish, LA** Engineer on the Royal team contracted by St. Bernard Parish Government (SBPG) to provide Engineering Services for repairs, restorations and/or replacement of Parish owned roadway and canal crossings to their Pre-Katrina condition while preserving the historical value and intent of each facility and Engineering Services for replacement of 6 existing culverts with precast Con-Span structures. PW 19331, Paul Drive @ 20 Arpent Canal Crossing consisted of a Hazard Mitigation project to replace the pre-existing three – 72" Concrete Pipe Culverts with a 28'-0" wide 64'-0" long clear span, precast concrete structure.
04/19 - Ongoing	**EAST HARDY BRIDGE DESIGN AND REPLACEMENT: New Orleans, LA** Engineer on the Royal team contracted to provide Engineering services for bridge design, layout, specifications and probable cost. The existing East Hardy Street Bridge is a two-lane bridge located on the Leaf River in Petal, MS that was identified for replacement through the Emergency Road and Bridge Repair Fund. Mr. Pugh participated in Design Reviews and served as Civil Engineering Subject Matter Expert.
05/15 - 08/19	**WEST LAROSE VERTICAL LIFT BRIDGE: Lafourche Parish, LA** Mr. O'Brien served as a Construction Engineer on LADOTD Contract No. 4400005410 - Retainer Contract for Construction Engineering and Inspection and Painting and Inspection and Environmental Monitoring Statewide. This $26,000,000 project consisted of rehabilitation of the entire moveable bridge including construction of a new fender system, concrete structural repairs, steel girder repairs, bearing replacement, cleaning, head removal, painting, sealing cracks, bolt replacement, and updating electrical and mechanical equipment. Mr. O'Brien generated and composed several change orders for the project and was responsible for compiling surveyed elevations on newly constructed bridge footing to show possible issues with subsidence.
06/15 - 10/20	**CAMELLIA - SETTLERS TRACE TURN LANE: Lafayette, LA** Engineer on the team providing engineering services to the LCG for the design of a dedicated right-turn lane and second left-turn lane at the intersection of Camellia Boulevard and Settlers Trace Boulevard. Roads services include preparing plans and specifications for project construction, performing engineering design and analyses for the widening of the concrete roadway, evaluation of the existing drainage infrastructure, and identifying required modifications to the existing drainage system. Mr. O'Brien assisted with joint layout and geometric design of roadway and provided technical support during construction.
04/18 - 02/19	**H.010352 LA 442: TANGIPAHOA RIVER BRIDGE REPLACEMENT: Tickfaw, LA** As Construction Engineer responsible for reviewing the contractor's Critical Path Method schedule. This includes approval of the CPM baseline schedule ensuring that it meets the project time requirements, project specifications, the contract value matches that in the schedule, that all resources and items in the contract are adequately reflected in the contractor's CPM schedule. Also included with this project is review and approval of each monthly update of the schedule and providing the owner (DOTO) with adequate and informed information in case of litigation, disputes or requested change orders.
04/18 - 08/18	**H.009597 1-10: W PEARL RIVER: Baton Rouge, LA** As Construction Engineer assisted the project manager with review of the projects critical path method (CPM) schedule. Mr. O'Brien was responsible for reviewing the submitted baseline and updates to ensure the contractor's means and methods were reasonable, the contract specifications for allowed time per line item were reflected in the schedule, and the contract amount was reflected in the schedule.
07/16 - 07/18	**H.011503: I-10 TWIN SPANS ITS: Orleans and St. Tammany Parish, LA** As Construction Engineer responsibilities included responding to RFI's throughout construction, providing LADOTD with suggested solutions to RFI's, generating LADOTD SiteManager monthly estimates, reviewing SiteManager diaries, and reviewing project change orders and submitting them to LADOTD for approval. Upon completion of construction, Mr. O'Brien compiled all project documentation including all submittals, as-builds, survey site layout, correspondence, 2059, and all LADOTD required project documentation and submitted to the state.
12/15 - 06/16	**H.001491.6; LA 20 (North Canal Blvd.) Widening in Lafourche Parish** As Senior Field Engineer duties included QA/QC testing management, submitted change orders, project submittal management, RFI submittals, schedule management, survey site layout, project coordination, and maintained project as-builts.

16. Staff Experience:

Firm employed by	Royal Engineers and Consultants, L.L.C.		
Name	Courtney Kall, P.E.	Years of relevant experience with this employer	1
Title	Lead Project Manager	Years of relevant experience with other employer(s)	13
Degree(s) / Years / Specialization			BS / 2007 / Civil Engineering
Active registration number / state / expiration date			37306 / LA / 3-31-23
Year registered	2012	Discipline	Professional Engineer, Civil
Contract role(s)/brief description of responsibilities			Civil 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).
13+ years of experience	Ms. Kall is a knowledgeable and motivated licensed civil engineer skilled in the execution and management of all phases of project operations from design through construction. Consistent with completing projects on schedule and within budget. Exceptional organizational skills. Strong communication skills and ability to problem solve as conflicts arise. Career has focused primarily on serving municipal clients. **Certifications:** Traffic Control Supervisor, Traffic Control Technician, Certified Flagger
04/21 - Ongoing	**RR004 BAYOU ST. JOHN, FAIRGROUNDS, SEVENTH WARD GROUP B: New Orleans, LA** Project Manager on the Royal team contracted by the City of New Orleans to provide construction management services during the nearly $27 Million FEMA Recovery Roads Project. Royal's main responsibility, aside from field management of the contractor and all construction activities, includes but is not limited to conducting progress meetings, resolving resident complaints, reviewing for approval monthly quantities and pay estimates, assisting in field adjustments, and utilizing knowledge and experience in civil construction to ensure project remains within budget and on schedule.
04/21 - 04/22	**ST. CLAUDE GROUP E: New Orleans, LA** Project Manager on the Royal team responsible for providing the City of New Orleans with Resident inspection, ensuring that the project was completed to the specifications established by the client. Royal also provided construction management for this project, which assisted the City of New Orleans to correct any issues that were found while in the field, as well as ensuring the project was completed on time and within allocated budget.
10/11 - 04/21	**HURRICANE KATRINA RECOVERY PROGRAM: St. Bernard Parish, LA** As Project Manager, Ms. Kall’s role involved managing all aspects of various projects from inception through construction and closeout as Owner’s representative. Her duties included developing project scopes via damage assessments; acquiring funding approval; developing and implementing hazard mitigation proposals; facilitating proper procurement for design and construction services; managing construction operations and inspection services; providing technical assistance to design teams; reviewing and analyzing project costs for reasonableness and compliance with State reimbursement guidelines; and maintaining overall project schedules and State work deadlines. Projects included water and wastewater treatment plants and systems; infrastructure rehabilitation projects; and other various public works facilities totaling over $200M. St. Bernard Project Manager responsible for oversight of the Royal team providing engineering services to St. Bernard Parish Government for repairs, restorations, and replacement of Parish-owned roadway and canal crossings to Pre-Katrina conditions. During construction, Ms. Kall’s duties included facilitating the resolution of daily field issues and conflicts and coordinating with design engineer, contractor, and inspector; ensuring construction budgets and schedules were maintained and followed; field-verifying monthly quantities for invoice reviews and approvals; and implementing change orders, including securing the funding, for additional eligible work identified in the field.

16. Staff Experience:

01/08 - 10/11	**HURRICANE KATRINA RECOVERY PROGRAM: Plaquemines Parish, LA** Ms. Kall served as Project Manager providing administrative and program management services for FEMA-funded projects in Plaquemines Parish. Projects included the restoration and/or replacement of fire stations, public auditoriums, recreational facilities, marinas, sewer lift stations, Parish-wide sewer lines, and water and wastewater treatment plants totaling approximately $50 million.
01/08 - 10/11	**STAFF ENGINEER FOR VARIOUS PROJECTS: New Orleans, LA** Ms. Kall served as Staff Engineer, Project Design Team for several local project, including the South Claiborne Avenue Streetscape Project, City of New Orleans Street enhancement program on Claiborne Avenue between Martin Luther King, Jr. Blvd. and Napoleon Ave., a vital commercial corridor.
06/21 - Ongoing	**MAGISTRATE STREET AT CORINNE CANAL: St. Bernard Parish, LA** Engineer on the Royal team contracted by St. Bernard Parish Government (SBPG) to provide Engineering Services for repairs, restorations and/or replacement of Parish owned roadway and canal crossings to their Pre-Katrina condition while preserving the historical value and intent of each facility and Engineering Services for replacement of 6 existing culverts with precast Con-Span structures. PW 19925, Magistrate @ Corrine Canal Crossing consisted of a Hazard Mitigation project to replace the pre-existing two – 96” corrugated metal pipe culverts with a 26’-0” wide clear span, precast concrete structure.
06/21 - Ongoing	**MISSOURI STREET AT CORINNE CANAL: St. Bernard Parish, LA** Engineer on the Royal team contracted by St. Bernard Parish Government (SBPG) to provide Engineering Services for repairs, restorations and/or replacement of Parish owned roadway and canal crossings to their Pre-Katrina condition while preserving the historical value and intent of each facility and Engineering Services for replacement of 6 existing culverts with precast Con-Span structures. PW 19332, Missouri @ Corrine Canal Crossing consisted of a Hazard Mitigation project to replace the pre-existing two – 60” corrugated metal pipe culverts with a 26’-0” wide 72’-0” long clear span, precast concrete structure.

16. Staff Experience:

Firm employed by	Royal Engineers and Consultants, L.L.C.		
Name	Laudun Landry, P.E.	Years of relevant experience with this employer	<1
Title	Professional Engineer	Years of relevant experience with other employer(s)	6
Degree(s) / Years / Specialization			BS / 2017 / Civil Engineering
Active registration number / state / expiration date			45878 / LA / 3-31-24
Year registered	2021	Discipline	Professional Engineer, Civil
Contract role(s)/brief description of responsibilities			Structural 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).
Mr. Landry joined Royal Engineers and Consultants, LLC with 4 years’ experience in civil engineering. Previously employed with LADOTD, he was involved in engineering design of bridge structures and reviewing engineering plans and specifications on consultant projects. His experience includes acting as Engineer of Record (H.001666), Bridge Task Manager (H.012031, H.012535, H.014672, H.014323, H.012071, H.014591, H.002337, H.011993), and Design Engineer on various LADOTD projects. Mr. Landry’s training includes…	
09/20 - 03/22	**Dorcheat Bayou Bridge Replacements** Mr. Landry served as Civil/Bridge Engineer of Record. This project included engineering to design four replacement bridges on LA 160. The bridges were simple slab span bridges. The project scope included coordination with road to bring the route up to current code, including guard rail design, and alignment adjustments.
09/20 - 03/23	**Bayou Barataria Bridge Replacements** Mr. Landry served as the Civil/Structural Design Engineer. This project included the engineering design of a mechanical bridge to replace the existing swing span bridge. Responsible for the structural design and detailing of the replacement bridge’s operator house.
09/20 - 03/24	**Sunshine Bridge Pier 4 Fender Repair** Mr. Landry served as the Civil/Bridge Engineer. Project goal was to repair the pier protection fender system on pier 4 of the Sunshine bridge. The existing fender system had been damaged from multiple barge impacts. Responsibilities included reviewing submitted plans and specifications to ensure the designed repair met the requirements set forth by the initial pier protection design as well as current design standards and practice.
10/18 - 09/20	**POND 1 VAULT STRUCTURAL DESIGN PACKAGE: Mont Belvieu, TX** Mr. Landry served as a Civil/Structural Engineer on this project, which included engineering to design a new 2000 square foot pump vault as a cast-in-place concrete vault. The project scope included verification of steel design provided by others. Responsibilities included structural design of the concrete vault, reinforcement design, construction sequencing, and sheet pile design. Work included the use of risa-3d structural modeling software.
10/18 - 09/20	**RAIL RACK MODIFICATIONS: Adamana, AZ** Mr. Landry served as a Civil/Structural Engineer on this project, which included structural design of rail rack modifications allowing for the installation of new loading arms and gangways. Responsibilities included structural modeling of new steel and design of foundations for the new construction.

16. Staff Experience:

10/18 - 09/20	**ST-16 FOUNDATION: Geismar, LA** Mr. Landry served as a Civil/Structural Engineer on this project, which included engineering to design and install a modified ring wall foundation for a new 103-foot diameter tank inside a secondary containment area. Responsibilities included the verification of secondary containment volume capacity, design of the ring wall foundation, and specification development for the modification of HDPE liner.
10/18 - 09/20	**2019 CAUSTIC STRUCTURE INSPECTION: Geismar, LA** Mr. Landry served as a Civil/Structural Engineer on this project, which included structural inspection and assessment of the caustic unit structure and the centrifuge support structure. Responsibilities included identifying structural deficiencies due to corrosion, prioritizing the identified repairs, and providing engineering estimates to repair the areas identified as critical condition.
10/18 - 09/20	**HIGHWAY 23 TURN LANE PROJECT: Belle Chasse, LA** Mr. Landry served as a Civil/Structural Engineer on this project, included engineering to design and install a new turn lane on highway 23, allowing truck access to a future project site. The project scope included drainage and geometric design of the turn lane. The engineering also included the development of a traffic control plan.
10/18 - 09/20	**CAUSTIC STRUCTURE REPAIR: Geismar, LA** Mr. Landry served as a Civil/Structural Engineer on this project, which included structural analysis and design of temporary supports to allow the replacement of multiple damaged and corroded members within an existing structure.
10/18 - 09/20	**RAILCAR UNLOADING STATION: Geismar, LA** Mr. Landry served as a Civil/Structural Engineer on this project, which included conducting preliminary design calculations as well as gathering equipment quotes to aid in the development and delivery of a FEED package and TIC estimate. He also provided a civil construction package for the installation of a new railcar unloading station. The work included structural analysis and design of multiple shallow foundations, area paving, and miscellaneous supports.
10/18 - 09/21	**HEAVY-OIL FLEXIBILITY DESIGN PROJECT: Port Allen, LA** Mr. Landry served as a Civil/Structural Engineer on this project, which included providing a civil construction package for the installation of a new pipe rack, the addition of a tier to an existing pipe rack, and miscellaneous supports. The work also included structural analysis and design of existing structures and new structures, including their foundations.

16. Staff Experience:

Firm employed by	Royal Engineers and Consultants, L.L.C.		
Name	Katherine Foreman, P.E.	Years of relevant experience with this employer	6
Title	Professional Engineer	Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization			BS / 2017 / Civil Engineering
Active registration number / state / expiration date			46031 / LA / 3-31-2024
Year registered	2021	Discipline	Professional Engineer, Civil
Contract role(s)/brief description of responsibilities			Hydraulics

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).
6 years of experience	Ms. Foreman has 6 years of experience in civil engineering design and construction management on project types including storm drainage systems, asphalt and concrete road design, sidewalks, potable water distribution systems, gravity sewer systems, flood control structures, commercial and residential site design, foundation design, and retaining walls. Her expertise includes familiarity with LADOTD design manuals and specifications, ADA requirements, and AASHTO standards and the use of various software packages for H&H design and analysis such as HEC-HMS, HEC-RAS, LADOTD HYDR programs, HY8, and Autodesk Storm and Sanitary Analysis. Ms. Foreman has significant experience preparing plans and specifications to in accordance with DOTD standards. **Certifications**: Traffic Control Supervisor and Traffic Control Technician
02/15 – Ongoing	**BARTOLO DRIVE AT 20 ARPENT CANAL: St. Bernard Parish, LA** Engineer Intern on the Royal team contracted by St. Bernard Parish Government (SBPG) to provide Engineering Services for repairs, restorations and/or replacement of Parish owned roadway and canal crossings to their Pre-Katrina condition while preserving the historical value and intent of each facility and Engineering Services for replacement of 6 existing culverts with precast Con-Span structures. PW 19329, Bartolo Canal Crossing consisted of a Hazard Mitigation project to replace the pre-existing two – 72” reinforced concrete pipe culverts with a 26’-0” wide clear span, precast concrete structure.
02/15 – Ongoing	**MAGISTRATE STREET AT CORINNE CANAL: St. Bernard Parish, LA** Engineer Intern on the Royal team contracted by St. Bernard Parish Government (SBPG) to provide Engineering Services for repairs, restorations and/or replacement of Parish owned roadway and canal crossings to their Pre-Katrina condition while preserving the historical value and intent of each facility and Engineering Services for replacement of 6 existing culverts with precast Con-Span structures. PW 19925, Magistrate @ Corrine Canal Crossing consisted of a Hazard Mitigation project to replace the pre-existing two – 96” corrugated metal pipe culverts with a 26’-0” wide clear span, precast concrete structure.
02/15 – Ongoing	**MISSOURI STREET AT CORINNE CANAL: St. Bernard Parish, LA** Engineer Intern on the Royal team contracted by St. Bernard Parish Government (SBPG) to provide Engineering Services for repairs, restorations and/or replacement of Parish owned roadway and canal crossings to their Pre-Katrina condition while preserving the historical value and intent of each facility and Engineering Services for replacement of 6 existing culverts with precast Con-Span structures. PW 19332, Missouri @ Corrine Canal Crossing consisted of a Hazard Mitigation project to replace the pre-existing two – 60” corrugated metal pipe culverts with a 26’-0” wide 72’-0” long clear span, precast concrete structure.
02/15 – Ongoing	**MUMPHREY ROAD AT 20 ARPENT CANAL: St. Bernard Parish, LA** Engineer Intern on the Royal team contracted by St. Bernard Parish Government (SBPG) to provide Engineering Services for repairs, restorations and/or replacement of Parish owned roadway and canal crossings to their Pre-Katrina condition while preserving the historical value and intent of each facility and Engineering Services for replacement of 6 existing culverts with precast Con-Span structures. PW 20172, Mumprhrey Rd @ 20 Arpent Canal Crossing consisted of a Hazard Mitigation project to replace the pre-existing two – 60” Concrete Pipe Culverts with a 26’-0” wide 72 clear span, precast concrete structure.

16. Staff Experience:

02/15 – Ongoing	**PAUL DRIVE AT 20 ARPENT CANAL: St. Bernard Parish, LA** Engineer Intern on the Royal team contracted by St. Bernard Parish Government (SBPG) to provide Engineering Services for repairs, restorations and/or replacement of Parish owned roadway and canal crossings to their Pre-Katrina condition while preserving the historical value and intent of each facility and Engineering Services for replacement of 6 existing culverts with precast Con-Span structures. PW 19331, Paul Drive @ 20 Arpent Canal Crossing consisted of a Hazard Mitigation project to replace the pre-existing three – 72" Concrete Pipe Culverts with a 28'-0" wide 64'-0" long clear span, precast concrete structure.
02/15 – Ongoing	**GALLO DRIVE AT 20 ARPENT CANAL: St. Bernard Parish, LA** Engineer Intern on the Royal team contracted by St. Bernard Parish Government (SBPG) to provide Engineering Services for repairs, restorations and/or replacement of Parish owned roadway and canal crossings to their Pre-Katrina condition while preserving the historical value and intent of each facility and Engineering Services for replacement of 6 existing culverts with precast Con-Span structures. Gallo Drive @ 20 Arpent Canal Crossing included concrete road reconstruction, utility relocations, and installation of sidewalks, drainage, infrastructure, and other incidentals.
08/15 - 01/22	**IBERIA STREET SIDEWALK: Youngsville, LA** Engineer Intern on team providing engineering design and construction management for the DOTD TAP-funded H.013443 Iberia Street Sidewalk, Ph 1 project in Youngsville, LA. The project consisted of installation of RCP drainage piping within the existing roadside ditches and a six-foot wide concrete sidewalk including two pedestrian bridges crossing waterways on the south side of Iberia St. from School St. to Sugar Mill Pond Subdivision, allowing for greater interconnectivity of pedestrian travel. Ms. Foreman provided design support for proper sizing of the proposed subsurface drainage system and is responsible for layout and foundation design of the pedestrian bridges and supporting preparation of the preliminary and final design documents.
12/17 - 02/22	**CAMELLIA - SETTLERS TRACE TURN LANE: Lafayette, LA** Engineer Intern and Project Manager on the team providing engineering services to the LCG for the design of a dedicated right-turn lane and second left-turn lane at the intersection of Camellia Boulevard and Settlers Trace Boulevard. Services include preparing plans and specifications for project construction, performing engineering design and analyses for the widening of the concrete roadway, evaluation of the existing drainage infrastructure, and identifying required modifications to the existing drainage system. Responsibilities included site layout, engineering calculations for evaluation of the storm drainage system, utility coordination, coordinating preparation of construction documents, as well as invoicing, deliverables, scheduling, resourcing, and client coordination.
11/16 - 02/18	**CITY OF YOUNGSVILLE NEW ROAD: Youngsville, LA** Engineer Intern – Engineer Intern on team that provided engineering design and construction management for Mayor Lucas Denais Drive in Youngsville, LA. The project involved design of a new approximately 1000 linear ft. asphalt roadway with turning lanes and stop-controlled intersections and open-ditch drainage. Ms. Foreman was responsible for the design of the roadway striping plan, performing a drainage analysis for use in design of the open ditch drainage system, and engineering support and inspection during construction.
08/15 - 11/21	**POLLY LANE EXTENSION: Lafayette, LA** Engineer Intern and Project Manager – Engineer Intern and Project Manager responsible for performing engineering design services and construction management for the extension and connection of both existing dead-end streets of Polly Lane, inclusive of roadway reconstruction and widening to its existing section at Verot School Road. The approximate length of the new roadway is 1,080 linear feet and the length of improvements to existing roadway is 930 linear feet. The roadway extension/connection consists of a 2-lane asphaltic concrete roadway with curb and gutter and subsurface drainage, a concrete box culvert over Issac Verot Coulee Lateral 7, sidewalks, and lighting. As Engineer Intern, Ms. Foreman was responsible for performing engineering analyses for design of the storm drainage system, preparation of and revisions to construction documents, and providing engineering support during construction. As Project Manager, Ms. Foreman was responsible for invoicing, deliverables, scheduling, resourcing, and client coordination.
11/16 - 02/18	**CITY OF YOUNGSVILLE NEW ROAD: Youngsville, LA** Engineer Intern – Engineer Intern on team that provided engineering design and construction management for Mayor Lucas Denais Drive in Youngsville, LA. The project involved design of a new approximately 1000 linear ft. asphalt roadway with turning lanes and stop-controlled intersections and open-ditch drainage. Ms. Foreman was responsible for the design of the roadway striping plan, performing a drainage analysis for use in design of the open ditch drainage system, and engineering support and inspection during construction.
08/20 - ongoing	**INDIAN CREEK LOW WATER CROSSING: Fort Polk, LA** Project Manager – Project Manager for the Royal team providing engineering services to design a new roadway low water crossing structure and to design repairs to the existing Sagebrush Road. Responsibilities include serving as the primary point of contact between Royal and DCMS, Inc., coordinating closely with the construction Contractor for the project throughout design of the project, designing the horizontal geometry of proposed new road, and supporting the design team with various design tasks such as Hydraulic Modeling, culvert sizing, and development of plans and specifications.

16. Staff Experience:

Firm employed by	Royal Engineers and Consultants, L.L.C.		
Name	Ryan Hebert, P.E.	Years of relevant experience with this employer	5
Title	Professional Engineer	Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization			BS / 2017 / Environmental Engineering
Active registration number / state / expiration date			33737 / LA / 9-30-2022
Year registered	2018	Discipline	Professional Engineer, Civil
Contract role(s)/brief description of responsibilities			Civil 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).
4 years of experience	Mr. Hebert is an engineer intern degreed in Environmental Engineering with experience in construction operations for street, sewer, and water systems repair. Specific project experience includes catch basin cleaning, asphalt and pavement patching, ADA project elements, and water and sewer line repairs. For Royal Projects Mr. Hebert provides inspection services as well as project and construction management support. This includes assisting with project scheduling and coordination, quality control, and ensuring retention of administrative records.
07/22 - ongoing	**AIRBASE FIRE STATION TEMPORARY SITE IMPROVEMENTS: Houma, LA** Engineer on Royal team contracted by Terrebonne Parish Consolidated Government (TPCG) to provide engineering design of site improvements for the construction of a temporary fire station facility at the site of an existing fire station building which was badly damaged during Hurricane Ida. Tasks performed include Rational Method analysis and design of site grading and ditches in accordance with the DOTD Hydraulics Manual and TPCG’s stormwater design guidelines.
11/19-ongoing	**FEMA ROADWAY RESTORATION PROGRAM: New Orleans, LA** Assistant Project Manager responsible for construction administration and management services for pavement restoration efforts undertaken by the City of New Orleans Department of Public Works (DPW) as part of the CNO Capital Improvement Program. DPW currently has (2) construction contractors (GC's) under contract to perform routine maintenance under a requirements-based contract. These contractors are dispatched on a work order-based system to repair and restore pavement and associated infrastructure. These projects include pavement restoration, utility repair, and replacement (drainage only), sidewalks, ADA-Compliant Ramps, as well as replacement and repair to associated infrastructure.
02/18-ongoing	**CITY-WIDE CONSTRUCTION ADMINISTRATION AND RESIDENT INSPECTION SERVICES: New Orleans, LA** Associated Inspector for the Royal team contracted by the City of New Orleans Department of Public Works to provide construction management and resident inspection services for roadways restorations of water and sewer service cuts throughout the City. The program consisted of assessing over 30,000, cleaning over 15,000 and repairing over 3,000 catch basins. Also, under the City’s contract, Mr. Hebert served as associate inspector for eight full roadway rehabilitations including base excavation and installation, asphaltic concrete mill and overlay, and concrete pavement installation. He regularly assists in project scheduling and coordination and is responsible for maintaining quality control and completion of administrative records.
10/18-11/19	**INTERIM PAVING PROGRAM: New Orleans, LA** Assistant Project Manager and Lead Inspector for team providing part time inspection for temporary roadway restorations of water and sewer cuts throughout the city. The program consisted of identifying over 1,000 service cuts and nearly 800 completed repairs in a matter of 6 months. Mr. Hebert is serving as lead inspector and assistant Project Manager and is responsible for maintaining quality assurance and control of all field information captured by inspectors and oversees work order development.

16. Staff Experience:

03/17-08/18	**PAVEMENT RESTORATION: New Orleans, LA** Mr. Hebert is an associate Inspector and assistant project manager of the pavement restoration project for the City of New Orleans. The design consists of roadway repairs including removal of asphalt surface, pavement patching, and the installation of pedestrian ramps compliant with the Americans with Disabilities Act at all intersections. Mr. Hebert is responsible for quality assurance and control of all information captured in the field and work order development.

16. Staff Experience:

Firm employed by	Royal Engineers and Consultants, L.L.C.		
Name	Mandy Green, PhD	Years of relevant experience with this employer	2
Title	Senior Coastal Scientist	Years of relevant experience with other employer(s)	16
Degree(s) / Years / Specialization			PhD / 2012 / Geography MS / 2004 / Environmental Studies BS / 2002 / Sustainable Agriculture
Active registration number / state / expiration date			N/A
Year registered	N/A	Discipline	Planning
Contract role(s)/brief description of responsibilities			Wetland Delineation

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).
Other Professional Qualifications: Civil Works Orientation, USACE. Baton Rouge, LA; Coastal Marine Spatial Planning Advancement Training, Battelle. Spanish Fort, AL; Habitat Priority Planner Workshop, National Oceanic and Atmospheric Administration, Coastal Services Center; Incident Command Certification IS100-800, FEMA;	
08/20 - Ongoing	**JDEC Disaster Recovery Project Management Consultant Services: Jefferson Davis Parish, LA** Environmental & Historic Preservation (EHP) subject matter expert responsible for working collaboratively with the Federal Emergency Management Agency (FEMA) to prepare environmental documents that are compliant with the National Environmental Policy Act and FEMA’s EHP review process for Jefferson Davis Electric Cooperative’s (JDEC) Hurricane Laura Response efforts. This involves coordination with other federal and state regulatory agencies including the US Army Corps of Engineers, the US Fish and Wildlife Service, the Louisiana Department of Natural Resources Office of Coastal Management, and others.
2010 - 2019	**Environmental Science Consulting Services Contracts: Coastal, LA** Coastal Resources Senior Scientist at CPRA responsible for management of up to six environmental science consulting services IDIQ contracts, totaling approximately $25 million, for successive three-year contracting periods. This included providing assistance to task managers in the development of statements of need, reviewing notice to proceed packages and invoices for each task order, and corresponding with consulting firm points of contact to ensure delivery of high quality work products in accordance with the schedule and budget.
2020 - Ongoing	**DWH LA TIG Restoration Plan and Environmental Assessment (RP/EA) #7: Restore Wetlands, Coastal, Nearshore Habitats and Birds: Coastal LA** Senior Coastal Scientist responsible for working collaboratively with CPRA and the LA TIG to develop and complete Restoration Plan and Environmental Assessment #7: Restore Wetlands, Coastal, Nearshore Habitats and Birds, which included project screening; development of the draft and final RP/EA; development and refinement of Biological Evaluations; revision of all documents based on LA TIG and public feedback; development of the Finding of No Significant Impact; schedule development and maintenance; regular coordination with CPRA staff from the Executive, Planning, and Project Management Divisions; and project coordination, management, and delivery.
2019 - Ongoing	**Terrebonne Basin Ridge and Marsh Creation Project: Bayou Terrebonne Increment Environmental Information Document (EID) and Biological Evaluation (BE): Terrebonne Parish, LA** Senior Coastal Scientist responsible for development and finalization of the LA TIG EID and BE for the Terrebonne Basin Ridge and Marsh Creation Project: Bayou Terrebonne Increment. Responsibilities included development of draft and final versions of the Environmental Information Document and Biological Evaluation; incorporation of comments from the LA TIG; regular coordination with CPRA staff from the Executive, Planning, and Project Management Divisions; and project coordination, management, and delivery.

16. Staff Experience:

2019 - Ongoing	**Finalization of Barataria Basin Ridge and Marsh Creation Project: Spanish Pass Increment and Lake Borgne Marsh Creation Project: Increment One Restoration Plan/Environmental Assessment (RP/EA): Plaquemines Parish, LA** Senior Coastal Scientist responsible for development and finalization of the LA TIG Spanish Pass Increment and Lake Borgne Marsh Creation Project: Increment One RP/EA #1.2. Responsibilities included development of draft and final versions of the RP/EA; incorporation of comments from the public and the LA TIG into the documents; development of the Finding of No Significant Impact; regular coordination with CPRA staff from the Executive, Planning, and Project Management Divisions; and project coordination, management, and delivery.

16. Staff Experience:

Firm employed by	Royal Engineers and Consultants, L.L.C.		
Name	Caitlin Vines	Years of relevant experience with this employer	<1
Title	Project Scientist	Years of relevant experience with other employer(s)	5
Degree(s) / Years / Specialization			MS / 2017 / Forestry BS / 2014 / Natural Resource Ecology and Management
Active registration number / state / expiration date			N/A
Year registered	N/A	Discipline	N/A
Contract role(s)/brief description of responsibilities			Wetland Delineation

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).
11/21 - 06/22	Ms. Vines served as a Coastal Resources Scientist Supervisor for the Louisiana Coastal Protection and Restoration Authority. Her responsibilities included supervising, training, and organizing workload (planning, scheduling, setting priorities, establishing operating procedures to ensure accurate and consistent results, etc.) of Coastal Resources Scientist; supervising and coordinating the promulgation of complex regulations, operating procedures, standards, and test methods with other state and federal agencies and evaluating and making recommendations to CPRA officials regarding federal, state, commercial, and private projects with potentially large environmental and/or legal consequences.
09/18 - 11/22	As a Coastal Resources Scientist for the Louisiana Coastal Protection and Restoration Authority, Ms. Vines was responsible for coordinating compliance with environmental regulations, policies and processes including Endangered Species Act, Magnuson-Stevens Fishery Conservation and Management Act, Migratory Bird Treaty Act, Marine Mammal Protection Act, Section 106 of the National Historic Preservation Act, Clean Water Act, National Environmental Policy Act and Oil Pollution Act for CPRA’s Deepwater Horizon Natural Resource Damage Assessment restoration projects; providing professional knowledge and experience with scientific and ecological principles and practices for protecting, restoring, and enhancing coastal fish and wildlife habitat and evaluating and developing appropriate impact minimization and mitigating strategies; and serving as a key member in restoration plan and monitoring and adaptive management plan development and review teams.
07/17 - 09/18	Ms. Vines acted as Applied Ecologist and Project Manager where she oversaw the development, management, and compliance of current wetland mitigation banks; coordinated extensively with federal, state, and local regulatory agencies throughout the mitigation bank permitting and implementation stages; organized project site visits, scheduled inter-agency meetings, and freely shared information with sister companies; wrote technical reports for each stage of the mitigation banking process and responded to comments from the Interagency Review Team; managed extensive spatial geo-databases for data analysis and map creation using ESRI ArcGIS; collected, imported, edited and analyzed vector data, tabular data, and geo-referenced imagery, and performed routine habitat assessments, wetland delineations, vegetation inventory, and analysis for each mitigation bank.

16. Staff Experience:

Firm employed by	Royal Engineers and Consultants, L.L.C.		
Name	Shaun Tynes	Years of relevant experience with this employer	6
Title	CADD Specialist	Years of relevant experience with other employer(s)	16
Degree(s) / Years / Specialization			AAS | 2000 | Drafting and Design
Active registration number / state / expiration date			N/A
Year registered	N/A	Discipline	Drafting & Design
Contract role(s)/brief description of responsibilities			Drafter

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).
08/15 - 01/22	**IBERIA STREET SIDEWALK AND PEDESTRIAN BRIDGE DESIGN: Youngsville, LA** CAD Technician on the Royal Team. Job duties include, using AutoCAD Civil 3D to create proposed drainage pipe network, and drawings for proposed sidewalk installation. Responsible for providing plan and profile sheets detailing the removal and/or replacement of existing utilities and drainage, and providing details for installment of new sidewalks and subsurface drainage. Prepared plans in accordance with DOTD CAD Standards.
12/17 - 02/22	**CAMELLIA/ SETTLERS TRACE TURN LANE: Lafayette, LA** Draftsmen responsible for creating drawings for a dedicated right turn lane and second left turn lane at the intersection of Camellia Boulevard and Settlers Trace Boulevard. Drawings consist of typical roadway sections, plan and profiles of proposed turn lanes, existing and design drainage maps, geometric details, joint layouts, sequence of construction, and cross sections.
08/15 - 11/21	**POLLY LANE EXTENSION: Lafayette, LA** CAD Technician on the Royal Team. Job duties include, creating typical roadway sections, plan and profile sheets, existing and design drainage maps as well as special details, and geometric details of added roundabout to the existing roadway.
04/18 - Ongoing	**ST. BERNARD HMP CANAL CROSSINGS: St. Bernard Parish, LA** CAD Technician on the Royal Team providing creating a grading site plan and associated cross-sections of the site plan to St. Bernard Parish Government for repairs, restorations, and replacement of Parish-owned roadway and canal crossings to Pre-Katrina conditions. Responsibilities included site layout, engineering, and coordinating preparation of construction documents for the replacement of the culvert canal crossing structures on 20 Arpent Canal at Mumphrey Rd. and Gallo Rd. in Chalmette, LA, and all associated infrastructure necessary to replace to current codes and standards, including HMGP measures.
02/18 - Ongoing	**NOLA CAPITAL IMPROVEMENT PROGRAM, RR1 31 MILNEBURG GROUP B: New Orleans, LA** Royal Engineers and Consultants (Royal) was contracted by Design Engineering, Inc (DEI) to provide engineering services for the following four New Orleans City blocks: 5600 Block of Arts Street; 6200 Block of Spain Street; 6300 Block of Marigny Street; and 2200 Block of New York Street. Royal was tasked with providing Preliminary and Final Design Plans for road reconstruction, sidewalks and ADA ramps, drainage infrastructure improvements, and sewer utilities. Mr. Tynes was responsible for preparing design drawings including plan profile sheets and drainage maps.
01/16 - 09/19	**THE COVE OF MOSS BLUFFS HOUSING DEVELOPMENT: Calcasieu Parish, LA** CCAD Technician on the Royal Team. Job duties include, creating typical roadway sections, plan and profile sheets, existing and design drainage maps as well as geometric and special details.

16. Staff Experience:

Firm employed by	Batture, LLC		
Name	Robert Mora, PE, PLS	Years of relevant experience with this employer	8
Title	Project Manager, Survey	Years of relevant experience with other employer(s)	12
Degree(s) / Years / Specialization			BS / 2003 / Civil Engineering
Active registration number / state / expiration date			Professional Civil Engineering – 35109 / LA / 9-30-2022 Professional Land Surveyor – 5042 / LA / 9-30-2022
Year registered	2009 2010	Discipline	Civil Engineering Professional Land Surveyor
Contract role(s)/brief description of responsibilities			Professional Land Surveyor, MPR 4

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., “designed drainage”, “designed girders”, “designed intersection”, etc. Experience dates should cover the time specified in the applicable MPR(s).
06/18 - Present	**St. Anthony Green Streets (New Orleans, Louisiana)** St. Anthony Green Streets is part of the HUD National Resilience Disaster Competition funded Gentilly Resilience District. The St. Anthony Green Streets project area lies between the London Avenue Canal and St. Anthony Avenue and Robert E Lee Boulevard and Mirabeau Avenue. Batture performed all survey tasks in the project. Mr. Mora is providing civil engineering design support and is the Surveyor of Record for this $13.4 Million project.
05/17 - Present	**Claiborne Corridor (New Orleans, Louisiana)** This project aims to revitalize the corridor beneath the Claiborne overpass from Cleveland Avenue to Annette Street (approximately 8,000 linear feet). Mr. Mora was the land surveyor of record for providing a lease survey which was used to create a land lease between the City of New Orleans and the LADOTD. After finalizing the lease agreement, Mr. Mora supervised the preparation of right of way and topographic surveys for use during the design of this transformative project. The project will take place in 4 phases. To date, the first two phases of survey are complete.
08/17 - 08/17	**SWB Emergency Generator (New Orleans, Louisiana)** Following the Aug 5, 2017, floods in New Orleans, Batture was contracted to provide land surveying for the emergency design and installation of five generators and electric service lines to provide backup power to five existing drainage pump stations. Mr. Mora was the land surveyor of record for this project providing topographic and utility location surveys. The work, which normally would be delivered in 30-45 days, was delivered in 6 days per the client’s request to expedite the work.

16. Staff Experience:

Firm employed by	Batture, LLC		
Name	Roderick Richardson	Years of relevant experience with this employer	2
Title	Survey Operations Manager	Years of relevant experience with other employer(s)	18
Degree(s) / Years / Specialization			BS / 2002 / Architectural Engineering
Active registration number / state / expiration date			N/A
Year registered	N/A	Discipline	N/A
Contract role(s)/brief description of responsibilities			Survey Operations Manager

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., “designed drainage”, “designed girders”, “designed intersection”, etc. Experience dates should cover the time specified in the applicable MPR(s).
11/21 - Present	**Nashville Wharf “A” Substructure Survey and Repair (New Orleans, Louisiana)** The Nashville Wharf “A” was constructed in 1960 & 1961. The wharf has been modified and repaired multiple times since its original construction. In 2017, a section of the wharf experienced a deck failure due to severely deteriorated substructure piling. The resulting project repaired the failed deck section and surrounding piling, surveyed the remainder of the wharf substructure, and began piling repairs along the length of the wharf. The prior substructure repair project was not fully completed, with some areas and individual piles being only partially repaired. The project was met with challenges from varying existing conditions and difficulty performing repairs in fluctuating river levels. Batture has been hired to perform a substructure inspection of the wharf and develop a repair project to restore piling capacity and provide corrosion protection to the wharf substructure as a whole. Rod led the survey portion of this project.
10/21 - 12/21	**Milneburg Neighborhood Stormwater Resilience (New Orleans, Louisiana)** The City of New Orleans is undertaking an unprecedented network of integrated initiatives across Gentilly that will reduce flood risk, slow land subsidence, spur economic opportunity, improve health, encourage neighborhood revitalization, and adapt our city to a changing natural environment. Dana Brown & Associates, Inc. (DBA) is providing design services on the Milneburg Project as part of this larger initiative in Gentilly. DBA contracted Batture to provide land surveying services in support of their design. Scope of work included topographic land survey, elevations, utilities, and survey drawings. Rod served as project manager.
08/12 - 05/19	**Magazine St Phase I (Nashville-Calhoun) Phase II (Calhoun-Leake) (New Orleans, Louisiana)** This City of New Orleans DPW Project consisted of surveying and engineering design services for the reconstruction of several blocks in the Audubon Area. Work included reconstruction of existing roadway and replacement of affected utilities. Rod Richardson acted as Survey Party Chief on this project. Construction Cost $16 million.

16. Staff Experience:

Firm employed by	Batture, LLC		
Name	Paul Mattingly, EI	Years of relevant experience with this employer	2
Title	Survey / Civil Designer	Years of relevant experience with other employer(s)	4
Degree(s) / Years / Specialization			BS / 2016 / Civil Engineering
Active registration number / state / expiration date			EI / 33363 / LA / 9-30-2023
Year registered	N/A	Discipline	N/A
Contract role(s)/brief description of responsibilities			Survey Party Chief

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).
11/21 - Present	**Nashville Wharf “A” Substructure Survey and Repair (New Orleans, Louisiana)** The Nashville Wharf “A” was constructed in 1960 & 1961. The wharf has been modified and repaired multiple times since its original construction. In 2017, a section of the wharf experienced a deck failure due to severely deteriorated substructure piling. The resulting project repaired the failed deck section and surrounding piling, surveyed the remainder of the wharf substructure, and began piling repairs along the length of the wharf. The prior substructure repair project was not fully completed, with some areas and individual piles being only partially repaired. The project was met with challenges from varying existing conditions and difficulty performing repairs in fluctuating river levels. Batture has been hired to perform a substructure inspection of the wharf and develop a repair project to restore piling capacity and provide corrosion protection to the wharf substructure as a whole. Mr. Mattingly was the survey party chief for this project.
06/20 - Present	**St. Bernard Campus Water Resilience Project (New Orleans, Louisiana)** Batture, LLC is performing the surveying and assisting in the engineering design of the water management project along Bayou St John and within the Gentilly Resilience District. Batture, LLC is providing surveying support services to assist with design and construction related to the St Bernard Stormwater Resilience Project, including right of way investigation, boundary, topography, utility, and control surveying. Mr. Mattingly is the survey party chief for this project.
11/19 - 01/22	**Pontilly Stormwater HMGP Project (New Orleans, LA)** The Pontilly Neighborhood Stormwater Network project will reduce flood risk and beautify green spaces in the Pontchartrain Park and Gentilly Woods neighborhoods through the construction of green infrastructure strategies. The project will combine improvements to the Dwyer Canal with a network of interventions along streets, in alleyways, and within vacant lots designed to slow and store stormwater. Batture is providing surveying services as a subconsultant to Fleming Construction. Batture’s scope includes layout of construction features, as-built surveys and drawings, quantity surveys and drawings. Mr. Mattingly is the survey party chief for this project.

16. Staff Experience:

Firm employed by	Batture, LLC		
Name	Tylon Richard	Years of relevant experience with this employer	2
Title	Survey / Civil Designer	Years of relevant experience with other employer(s)	1
Degree(s) / Years / Specialization			BS / 2021 / Civil Engineering
Active registration number / state / expiration date			N/A
Year registered	N/A	Discipline	N/A
Contract role(s)/brief description of responsibilities			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).
10/20 - Present	**St. Anthony Green Streets Resilience Project (New Orleans, Louisiana)** Batture, LLC is leading the design team for this project within the Gentilly Resilience District. St. Anthony Green Streets is part of the HUD National Resilience Disaster Competition funded Gentilly Resilience District. The St. Anthony Green Streets project area lies between the London Avenue Canal and St. Anthony Avenue and Robert E Lee Boulevard and Mirabeau Avenue. The priority streets consist of Wildair Drive and Wingate Drive and two parks. The project goal is to improve the resilience of the neighborhood. For the St. Anthony project, there is heavy emphasis on the reduction of subsidence and to better connect the parks to the neighborhood. Batture performed all survey tasks in the project, including topographic survey and providing FFE’s for the BCA. Interventions will take place within the street Right of Ways and the two parks. Mr. Richard is a drafter and designer for this project.
11/20 - 08/21	**Leonidas Group C & D (New Orleans, Louisiana)** The City of New Orleans Department of Public Works is managing numerous Road Enhancement and Reconstruction projects throughout New Orleans. Batture is performing the professional surveying and engineering services for the Leonidas Group C & D neighborhood. Tasks for this project included topographic survey, preliminary design, environmental study, final design, bid and award, construction administration, and inspection/ reporting/ verification. Mr. Richard was a surveyor and drafter for the project.
06/18 - Present	**St. Bernard Campus Water Resilience Project (New Orleans, Louisiana)** Batture, LLC is performing the surveying and assisting in the engineering design of the water management project along Bayou St John and within the Gentilly Resilience District. Batture, LLC is providing surveying support services to assist with design and construction related to the St Bernard Stormwater Resilience Project, including right of way investigation, boundary, topography, utility, and control surveying. Mr. Richard is a drafter and surveyor for this project.

16. Staff Experience:

Firm employed by	Batture, LLC		
Name	Clifford “Kip” Montero	Years of relevant experience with this employer	2
Title	Surveyor / Inspector	Years of relevant experience with other employer(s)	3
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			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).
08/19 - 08/20	**LA SAFE Gretna Resilience District Kickstart Phase I (New Orleans, Louisiana)** The Gretna Resilience District Kickstart is an ambitious parish-owned Resilient Infrastructure and Community Nonstructural Mitigation/Flood Risk Reduction project. Improvements to the park include greater stormwater retention, enhanced entryways, pathways and signage, additional seating and pavilions, and the installation of a tiered dock that will connect visitors to the water. The improvements include green infrastructure features to increase storage capacity and improve conveyance of stormwater in an area with a high concentration of repetitively flooded homes and businesses in an area that is primarily LMI. In addition, the canal enhancements include the creation of recreational amenities for biking, walking and interactive community spaces. Batture is performing all H&H modeling (and surveying associated with the modeling), structural engineering, civil site design, stormwater management design, habitat assessments, and some cost estimation for the project. Clifford is performing surveying tasks for this project.
05/21 - 02/22	**RR 101 Little Woods, Group B (FRC) Resilience (New Orleans, Louisiana)** Mr. Montero provided resident inspection services for the Little Woods Full Reconstruction project in New Orleans, Louisiana which includes repairs/improvements to sewer, water, and pavement. This project involves roadway pavement (asphalt, concrete, and composite), concrete sidewalks, driveways, curbs, and ADA Ramps based on storm related damages & constructability concerns. As resident inspector, Mr. Montero reviewed specifications and plans to ensure the project was constructed according to specifications, inspected and monitored all work in progress, verified that materials on site conform to specifications and drawings, photographed pertinent activities on job sites showing construction details, witnessed tests performed by testing agency, completed daily logs and attended any required project meetings.
12/20 - Present	**Sewerage & Water Board Transmission Line TM005 (New Orleans, Louisiana)** Batture is providing topographic and right-of-way land surveying for this project to support design for water repairs and related infrastructure improvements in New Orleans. Mr. Montero is a surveyor for this project.

16. Staff Experience:

Firm employed by	Batture, LLC		
Name	Kevin Dinh, EI	Years of relevant experience with this employer	2
Title	Survey / Civil Designer	Years of relevant experience with other employer(s)	1
Degree(s) / Years / Specialization			BS / 2019 / Civil Engineering
Active registration number / state / expiration date			EI / 34377 / LA / 9-30-2022
Year registered	2020	Discipline	Civil Engineering
Contract role(s)/brief description of responsibilities			Surveyor / Drafting 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).
10/20 - Present	**St. Anthony Green Streets Resilience Project (New Orleans, Louisiana)** Batture, LLC is leading the design team for this project within the Gentilly Resilience District. St. Anthony Green Streets is part of the HUD National Resilience Disaster Competition funded Gentilly Resilience District. The St. Anthony Green Streets project area lies between the London Avenue Canal and St. Anthony Avenue and Robert E Lee Boulevard and Mirabeau Avenue. The priority streets consist of Wildair Drive and Wingate Drive and two parks. The project goal is to improve the resilience of the neighborhood. For the St. Anthony project, there is heavy emphasis on the reduction of subsidence and to better connect the parks to the neighborhood. Batture performed all survey tasks in the project, including providing FFE’s for the BCA. Interventions will take place within the street Right of Ways and the two parks. Mr. Dinh is a drafter for this project.
11/20 - 08/21	**Leonidas Group C & D (New Orleans, Louisiana)** The City of New Orleans Department of Public Works (DPW) is managing numerous Road Enhancement and Reconstruction projects throughout New Orleans. Batture is performing the professional engineering services for the Leonidas Group C & D neighborhood. Tasks for this project include survey, preliminary design, environmental study (if requested), final design, bid and award, construction administration, and inspection/ reporting/ verification. Mr. Dinh is a surveyor and drafter for the project.
12/20 - Present	**Sewerage & Water Board Transmission Line TM005 (New Orleans, Louisiana)** Batture is providing topographic and right-of-way land surveying for this project to support design for water repairs and related infrastructure improvements in New Orleans. Mr. Dinh is a drafter for this project, preparing deliverables in accordance with DPW & SWB standards.

16. Staff Experience:

Firm employed by	Huval & Associates, Inc.		
Name	David S. Huval, Sr., P.E., P.L.S.	Years of relevant experience with this employer	32
Title	President	Years of relevant experience with other employer(s)	29
Degree(s) / Years / Specialization			Post Graduate Work / 1966 - 1969 / Structural Engineering BS / 1961 / Civil Engineering (Structural)
Active registration number / state / expiration date			9931 / LA / 03-31-2023 2015 / LA / 03-31-2023
Year registered	1965	Discipline	Civil Engineering and Land Surveying
Contract role(s)/brief description of responsibilities			Senior Principal

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

David Huval, Sr. has designed, Inspected, Rated and Constructed Bridges across Louisiana and the Southeastern United States for the past 61 years. His experience includes Highway and Railroad Bridges, Roadways, Cofferdams and Caissons, and he is familiar with Federal and State Government Procedures and the geographic area. Mr. Huval leads construction bid estimates for his sister company C.E.C., Inc. He has designed and managed a number of large projects as a Consultant, General Manager for a Steel Erection Contractor, Bridge Design Engineer for Louisiana Department of Transportation and Development (LADOTD), and Highway Engineer for the Federal Highway Administration (FHWA). Since 1989, Mr. Huval has served as President of Huval & Associates, Inc., where he has worked as a Project Engineer, Project Manager, Quality Assurance Officer, and participates directly as a Design Engineer. Mr. Huval is also a Professional Land Surveyor. David Huval, Sr., was the Lead Engineer for seven (7) separate Bridge Rehabilitation Retainer Contracts that HUVAL has had with the LADOTD over the past eighteen (18) years. Inspection, Repair, Rehabilitation or Replacement Services were performed for several hundred fixed and movable bridge structures under these Retainer Contracts, including the I-10 Calcasieu River Bridge, the LA 70 Sunshine Bridge, I-310 Mississippi River Bridge, US 80 Louisville Street Bascule Bridge in Monroe, Jackson Street Bridge over the Red River in Alexandria, LA 511 Red River Bridge (Jimmie Davis Bridge), and dozens of bridge structures on the future I-49 North corridor.

(2018 - 2020)	**GNOEC Safety Bay Improvement CMAR (Independent Cost Estimator)** Assisted the Independent Cost Estimator (ICE) for the for the $55 million Safety Bay Improvement CMAR Project, the first highway CMAR project in Louisiana. Under this contract, Mr. Huval assisted in the efforts of producing a detailed independent cost estimate for the contract items and review the CMAR Contractor’s schedule and cost model throughout each phase of design under the CMAR pre-construction phase. Additionally, constructability reviews and design comments were performed collaboratively with the CMAR design engineer, contractor, and Program Manager.
(2011 - 2015)	**Retainer Contract for Bridge Preventive Maintenance Program (BRPM) – Statewide, Contract No. 440001543** Principal and Lead Bridge Design Engineer for Retainer Contract. Responsible for Task Order conceptual design, oversight, construction support services and QA/QC. Retainer Contract currently consists of 7 Task Orders.

16. Staff Experience:

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

16. Staff Experience:

Firm employed by	Huval & Associates, Inc.		
Name	Colby J. Guidry, P.E.	Years of relevant experience with this employer	15
Title	Vice President and Lead Engineer	Years of relevant experience with other employer(s)	7
Degree(s) / Years / Specialization			BS / 2000 / Civil Engineering
Active registration number / state / expiration date			31338 / LA / 09-30-2022
Year registered	2004	Discipline	Civil Engineering
Contract role(s)/brief description of responsibilities			Huval Project Manager / Lead Bridge Designer

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., “designed drainage”, “designed girders”, “designed intersection”, etc. Experience dates should cover the time specified in the applicable MPR(s).
Mr. Guidry came to Huval & Associates with 7 years’ experience with the Federal Highway Administration (FHWA). His FHWA experience included all aspects of transportation related projects, where he was actively involved with environmental review, design, construction, and maintenance of bridges and roadways throughout Louisiana. Since joining HUVAL, he has been involved in bridge and structural design, plan preparation, bridge inspections, and construction support services. Completed the two-week FHWA approved comprehensive bridge training course for bridge inspectors, certified as a Bridge Inspection Team Leader, completed the NHI LRFR for Superstructures Course, the Work Zone Traffic Control Technician and Supervisor Courses, ATSSA Flagger Training, the NHI Design & Operation of Work Zone Traffic Control, Roadside Design Course, NHI Highway Hydraulics Course, NHI Urban Drainage Design Course, as well as many construction and environmental related courses. Very familiar with the LADOTD Bridge Design Manuals, 2002 AASHTO Bridge Specs, and the current AASHTO LRFD Bridge Specs	
(01/19 - Present)	**Herman Dupuis Swing Span Bridge (Movable) - St. Martin Parish** Project Manager for the design and plan development of a new swing span bridge over alligator bayou which will replace the Butte LaRose Pontoon bridge. Design elements include all aspects of the bridge including environmental clearance, surveying, structural design, mechanical design, electrical design, hydraulic design, roadway design, and all other design elements.
(10/10 - 01/22)	**Butte LaRose Pontoon Repairs (Movable) - St. Martin Parish** Lead Engineer for the design of numerous repairs to the movable pontoon bridge over alligator bayou. Repairs included deck repairs, stringer repairs, cap repairs, pontoon barge repairs, machinery repairs, pile repairs, abutment repairs.
(01/11 - 08/14)	**St. Ann Bridge Over Bayou Terrebonne (Movable) Swing Span - S.P. 700-55-0107** Lead structural designer for a new Swing span bridge over bayou Terrebonne. Also assisted with Mechanical reviews throughout the design process. Colby was involved with every aspect of this movable bridge project from environmental clearance through construction. This swing span had unique issues to overcome due to the limited vertical space due to waterway and adjacent road obstructions.
(04/18 - Present)	**Retainer for Engineering Services for Bridge Preservation - Statewide, Contract No. 4400011225** Supervisor Engineer of Retainer Contract. Responsible for project management, coordination, project setup, QA/QC, and bridge rehab design for the $4M retainer.
(09/12 - 12/17)	**Retainer Contract for Bridge Repair and Rehabilitation Services - Statewide, Contract No. 4400002537** Supervising Engineer of Retainer Contract. Responsible for coordination, inspections, project setup, QA/QC, bridge rehab design for the $6M retainer contract.
(05/11 - 08/15)	**Retainer for Engineering Services for Bridge Preventive Maintenance (BRPM) - Statewide, Contract No. 440001543** Lead Engineer of Retainer Contract. Led the Inspection and Design for 8 different Task Orders covering Preventive Maintenance Repairs for over 100 Bridges statewide in short timeframes.
(08/09 - 06/15)	**Retainer Contract for Bridge Repair and Rehabilitation Services - Statewide, S.P. 700-99-0488** Lead Engineer of Retainer Contract. Responsible for coordination, inspection team leader, project setup, bridge design, and QA/QC of Task Orders totaling approximately $8.75M over a 5-year period. Contract utilized multiple Subconsultants on all aspects of bridge design and inspection.

16. Staff Experience:

(03/09 - 11/12)	**I-49 Bridges (Various Segments), Under Retainer No. 4400000670** Lead Engineer for LRFR load ratings for 18 bridges, design and final plans of over 10 bridge structures and 1 box culvert structure. Bridge types included steel girder, prestressed concrete, and slab spans. Managed several sub-consultants producing numerous bridge plans.
(01/13 - 11/15)	**Tappan Zee Bridge, NY Thruway Authority** Project Manager/design engineer for design of precast tower and anchor pier slabs, pile templates, work platforms, and other systems. Also assisted in the design of temporary fender systems designed to protect the construction area from ice, wave, and ship impacts.
(10/14 - 12/14)	**Bayou Mercier Bridge Rehabilitation, St. Martin Parish** Project Engineer for the construction project which consisted of repairing piles, cap replacements, wingwall construction, and other miscellaneous works.
(10/14 - 03/15)	**St. Martin Parish Phase II Bridge Repairs, St. Martin Parish** Project Engineer for the complete reconstruction of three concrete bridges. Construction consisted of new piles, concrete panel removal, new caps, new bulkheads, new wingwalls, new roadway approach work, new guardrail.
(10/14 - 05/15)	**St. Martin Parish Phase III Bridge Repairs, St. Martin Parish** Project Engineer for the complete reconstruction of three concrete bridges. Construction consisted of new piles, concrete panel removal, new caps, new bulkheads, new wingwalls, new roadway approach work, new guardrail.
(12/15 - 03/16)	**Rusty Rd. Bridge Replacement, St. Martin Parish** Assistant Project Engineer for the bridge replacement project on Rusty Rd. in St. Martin Parish. New bridge consisting of new concrete girders, new concrete caps, new concrete piles, new wingwalls, new backwalls, new approach slabs, new approach roadway, new asphalt, etc.
(12/17 - Ongoing)	**Desselles Crossing Bridge Rehabilitation, Avoyelles Parish** Project Engineer for the bridge rehabilitation project, which consists of 30 pile splices, new stringers, cap repairs, new backwalls, approach work.
(11/17 - 07/18)	**Surrey St. Bridge Repairs, Lafayette Parish** Assistant Project Engineer for the repair of the Surrey St. Bridge in Lafayette. Project consisted of bearing repair and replacement, concrete riser construction, deck overlay, joint repairs, painting of steel girders with full enclosure, and miscellaneous work.
(10/10 - 07/11)	**Beau Bassin Bridge, Lafayette Parish** Assistant Project Engineer for the replacement of a bridge with a new concrete slab span bridge. New concrete piles, concrete caps, concrete barrier, wingwalls, approach slab, approach roadway, guardrdail, and other miscellaneous items.

16. Staff Experience:

Firm employed by	Huval & Associates, Inc.		
Name	Thomas M Gattle III, P.E.	Years of relevant experience with this employer	20
Title	Director of Engineering	Years of relevant experience with other employer(s)	4
Degree(s) / Years / Specialization			BS / 1997 / Civil Engineering (Structural)
Active registration number / state / expiration date			30779 / LA / 09-30-2023
Year registered	2003	Discipline	Civil Engineering
Contract role(s)/brief description of responsibilities			Roadway Design Lead

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

Mr. Gattle has over 20 years’ experience in the design and management of roadway and bridge projects. Mr. Gattle has been instrumental in the design, production and overall management of projects for the LADOTD. These projects include performing Lead Design and Project Management of numerous Bridge Rehabilitation Retainer Contracts, LADOTD Bridge Inspection projects, and LADOTD Roadway Design Project. In addition, Mr. Gattle was the Lead Designer for numerous road and bridge design projects for the Lafayette Consolidated Government Projects. Prior to joining HUVAL, Mr. Gattle was in responsible charge of the I-49 Connector EIS and I-10 Calcasieu River Bridge Environmental Assessment. He has experience and in roadway design, drainage design, feasibility studies, bridge design, and bridge inspection.

(10/19 - 06/21)	**Comite River Diversion Bridges at LA 67, LA 19 and LA 19 Railroad Bridge CMAR Project, East Baton Rouge Parish - 4400017421** Project Manager and Design Lead for providing geometric layout, construction sequencing and cost estimation for the first CMAR project conducted by the DOTD. The project consisted of constructing 360’ roadway bridges for LA 67, LA 19 and the adjacent railroad track to LA 19 over the proposed layout of the Comite Diversion Canal. This $39 million project required continued coordination with the DOTD, CMAR Contractor, ICE, USACE, Geaux-Geaux Railroad and EBR Parish and was completed on-time and in advance of the on-going diversion canal construction in the area.
(11/18 - 05/19)	**I-10 Loyola Design-Build Project RFP Phase 30% Design - S.P. H.011670** Assisted the Design Manager in the coordination and organization of all project data with the various members of the design team from numerous consulting firms. Assisted in development of alternative technical concepts, suggested sequence of construction, and miscellaneous bridge and other details.
(03/19 - Present)	**I-220 / I-20 Interchange IMP & Barksdale Access Design-Build Project, Bossier Parish, S.P. No. H.003370** Currently the Design Manager and Lead Design for the Design-Build project. The Design-Build project consisted of modifying the existing I-220/I-20 Interchange to accommodate direct access to the Barksdale Airforce Base. Project includes new roadway design for new directional ramps and I-220 extension, bridges over I-20 and KCS Railroad, temporary traffic control, sequence of construction and drainage design. Mr. Gattle produced the geometric layout of the project and lead the design and coordination for the $72M Design-Build project. The design phase of the project is 98% complete with the overall project scheduled to be completed on time.
(03/18 - 12/18)	**GNOEC Safety Bay Improvement CMAR (Independent Cost Estimator)** Assisted the Independent Cost Estimator (ICE) for the for the $55 million Safety Bay Improvement CMAR Project. Under this contract, Mr. Gattle assisted in the efforts of producing a detailed independent cost estimate for the contract items and review the CMAR Contractor’s schedule and cost model throughout each phase of design under the CMAR pre-construction phase. Additionally, constructability reviews and design comments were performed collaboratively with the CMAR design engineer, contractor, and Program Manager.

16. Staff Experience:

(01/18 - Present)	**I-10 Widening LA 415 to Essen Lane on I-10 and I-12, WBR and EBR Parishes, S.P. No. H.004100** Currently the Design Lead for the anticipated $1.2 billion project to widen I-10 from the LA 415 interchange to the I-10/I-12 Interchange. This project consists of all aspects of infrastructure including complex bridge design and roadway design. Prior to the award for engineering services for the project, Mr. Gattle led the Constructability Analysis during the NEPA phase of the project. This included development of construction sequencing while maintaining traffic thru the corridor along with providing construction cost estimates and project timeframes. Mr. Gattle presently leads the bridge and roadway engineering efforts for the current phase of the project that includes the replacement of road and bridges from the I-10/I-110 interchange past the I-10/Acadian Thruway. This includes coordination with the DOTD, CMAR Contractor and ICE to develop the best construction value for the complex project thru Baton Rouge.
(09/12 - 12/17)	**Retainer Contract for Bridge Repair and Rehabilitation Services - Statewide, Contract No. 4400002537** Project Manager of Retainer Contract. Responsible for coordination, project setup, QA/QC, meetings and contracts for the $6M retainer contract.
(06/14 - 04/19)	**I-49 South-US 90 Albertson Pkwy to Ambassador Design Build - S.P. H.010620** HUVAL Project Manager. Lead Designer on roadway geometric layout and assisted with bridge design and construction services for this Design Build.
(06/16 - Present)	**I-49 South-Verot School Road Interchange, S.P. H.011235** HUVAL Project Manager and Prime Consultant Team Leader of roadway geometric design including traffic analysis while assisting with bridge design and construction services.
(04/11 - 05/16)	**West Bank Expressway MacArthur Drive Interchange, S.P. H.002550.5 & H.009933.5** As Project Manager and Lead Engineer, Mr. Gattle was responsible for Geometric/Span Layout Modifications and Structure Design. Mr. Gattle coordinated the survey efforts and the responsibilities of multiple Sub-consultants for the $34M reconstruction project to provide additional ramps from the US 90B elevated roadway to the adjacent parallel frontage roads under tight timeframes.
(08/09 - 06/15)	**Retainer Contract for Bridge Repair and Rehabilitation Services - Statewide, S.P. 700-99-0488** Project Manager of Retainer Contract. Responsible for coordination, supervising inspection team, project setup and QA/QC of Task Orders totaling approximately $8.75M over a 5-year period. Contract utilized multiple Subconsultants on all aspects of bridge design and inspection.
(06/07 - 11/11)	**Retainer Contract for Bridge Preservation (On-System) - Statewide, S.P. 700-99-0431** Project Manager of Retainer Contract. Responsible for coordination, project setup, design and QA/QC of Task Orders.

16. Staff Experience:

Firm employed by	Huval & Associates, Inc.		
Name	Justin Peltier, P.E.	Years of relevant experience with this employer	9
Title	Civil Engineer	Years of relevant experience with other employer(s)	8
Degree(s) / Years / Specialization			BS / 2005 / Civil Engineering
Active registration number / state / expiration date			34765 / LA / 09-30-2023
Year registered	2009	Discipline	Civil Engineering
Contract role(s)/brief description of responsibilities			Bridge Design & Ratings

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. Peltier joined Huval & Associates in 2013 with 8 years of experience in civil engineering. Previously employed with LADOTD, he was involved with the design, live load rating, plan development, and construction support of more than 20 bridge replacement projects. These consisted of various superstructure and substructure types including but not limited to: AASHTO p.p.c. girders, quadbeams, cast-in-place slab spans, precast slab spans, steel girders, steel swing spans, concrete box culverts, p.p.c. pile bents, steel H-pile and pipe pile bents, timber pile bents and column bents supported by drilled shafts and/or p.p.c. pile footings. Mr. Peltier assisted in developing and maintaining LADOTD’s highway safety hardware details and specifications, including but not limited to guard rail, barrier rail, and crash cushion attenuators. He served as the Engineer of Record for the LADOTD concrete barrier rail and the detour bridge special details. Mr. Peltier’s training includes the NHI LRFR for Highway Bridge Superstructure Course, the NHI AASHTO LRFD for Highway Bridge Superstructure Course, the NHI AASHTO LRFD for Highway Bridge Substructure Course, the Roadside Design Course, ATSSA Traffic Control Technician and Supervisor Course.

(09/20 - Present)	**I-10: LA 415 To Essen Lane on I-10 and I-12 CMAR - S.P. H.004100** Serving as the lead bridge engineer and overall structures team lead for this $1 billion project to widen I-10 in the heavily congested section through Baton Rouge. This very complex project will replace existing bridges in the urban area within an extremely constrained right of way while maintaining the existing traffic flow on I-10 through the construction zone. Roles include bridge design, plan development, load rating, structure rehabilitation, alternative bridge concepts development, construction sequencing, contractor style cost estimates, managing the bridge and structural design and plan production process, leading bi-weekly structures task force meetings, and implementing the bridge design QC/QA process.
(09/19 - 06/20)	**Airport Connector Road and Bridge, Lafourche Parish, S.P. No. H.011915** Served as the lead bridge design and load rating engineer for a new lift span movable bridge over Bayou Lafourche in Galliano, LA. The bridge required a minimum horizontal and vertical clearance of 70ft and 73ft and a clear roadway width of 42ft with 5ft sidewalks on each side. The project presented unique challenges in that the horizontal clearance is skewed with respect to the bridge alignment and the mean high-water level is approximately 1ft below the existing ground at LA 1 and LA 308. The design included steel lifting girders, steel floor beams and stringers, concrete towers, footings, piers and machinery decks. The design was performed in accordance with the AASHTO LRFD Movable Bridge Design Specifications the LADOTD BDEM. Also responsible for the design of the concrete approach slab spans.
(06/14 - 04/19)	**US 90 (I-49South), Albertson’s Parkway to Ambassador Caffery, Design-Build Project, Lafayette Parish, S.P. No. H.010620** Served as the lead bridge and load rating engineer for the new US 90 bridge over Albertson Parkway and provided Q.C. for the US 90 BNSF RR overpass bridge within the same footprint as the existing bridge while maintaining 4-lanes of US 90 traffic during construction. This presented unique design challenges and required a complex, three-phase, traffic control and construction sequencing plan to move traffic safely through the tight work zone. The bridges consisted of multi-continuous p.p.c. girders spans supported by concrete column bents and pile footings. The developed design concept saved millions of dollars and allowed the James Team to be 15% below the bids of the nearest competitor.

16. Staff Experience:

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

16. Staff Experience:

Firm employed by	Huval & Associates, Inc.		
Name	Reid Romero, P.E.	Years of relevant experience with this employer	13
Title	Civil Engineer	Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization			BS / 2008 / Civil Engineering
Active registration number / state / expiration date			37772 / LA / 09-30-2023
Year registered	2013	Discipline	Civil Engineering
Contract role(s)/brief description of responsibilities			Bridge Design

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

Mr. Romero came to HUVAL after graduating from the University of Louisiana at Lafayette in 2008. Since joining Huval & Associates, Inc., Mr. Romero has been involved in bridge and structural design, plan preparation, bridge inspections and construction support services. Mr. Romero completed several NHI training courses including Fundamentals of LRFR and Applications of LRFR for bridge superstructures course, and a Drilled Shaft LRFD design methods and construction procedures course. Mr. Romero is familiar with the LADOTD Bridge Design Manual, LADOTD LRFD Bridge Design Manual, 2002 AASHTO Bridge Specifications, as well as the current AASHTO LRFD Bridge Specifications.

(04/18 - Present)	**Retainer for Engineering Services for Bridge Preservation - Statewide, Contract No. 4400011225** Lead Engineer of Retainer Contract. Responsible for coordination, project setup, QA/QC, and bridge rehab design for the $4M retainer.
(05/20 - Present)	**Retainer for Engineering Services for Bridge Preservation - Statewide, Contract No. 4400017262** Lead Engineer of Retainer Contract. Responsible for coordination, project setup, QA/QC, and bridge design for the $5M retainer.
(03/19 - Present)	**I-220 / I-20 Interchange Imp & BAFB Access Design Build Project - S.P. No. H.003370** Responsible for QA of the bridge plans and load rating for the LA 1267 bridges over I-20 and the LA 1267 bridges over the KCS Railroad. The LA 1267 structures over I-20 consist of twin bridges utilizing LG-54 p.p.c. girder spans supported by concrete column bents and drilled shafts. The LA 1267 structures over KCS Railroad consist of twin bridges utilizing LG-54 p.p.c. girder approach spans supported by concrete pile bents and a main span over the KCS Railroad consisting of 170’-0”, LG-78 p.p.c. girders supported by concrete column bents and drilled shafts. Some unique challenges that the project has presented is designing applicable LA 1267 bridges over I-20 column bents for vehicular collision and completely spanning the KCS own right-of-way utilizing concrete p.p.c. girders.
(01/19 - 05/19)	**I-10 Loyola Design-Build Project RFP Phase 30% Design - S.P. H.011670** Lead bridge engineer throughout the RFP design phase for this complex urban interchange. Assisted in the preparation of steel tub girder design and details, concrete box girder design and plans, as well as plans and proposal documents for the RFP phase of the project. Created dozens of computer models in order to analyze and size the steel tub girders, taking into account system redundancy. Assisted in development of alternative technical concepts, suggested sequence of construction, and miscellaneous bridge and other details. Assisted in the coordination and organization of all project data with the various members of the design team from numerous consulting firms.

16. Staff Experience:

(06/14 - 05/19)	**US 90 (I-49South), Albertson's Parkway to Ambassador Caffery, Design-Build Project, Lafayette Parish, S.P. No. H.010620** Performed QA/QC of the LRFD bridge design calculations, LRFR load rating, and plan preparation of a BT-72 girder bridge. The new US 90 bridge over Albertson Parkway and the US 90 BNSF RR overpass bridge were built within the same footprint as the existing bridge while maintaining 4-lanes of US 90 traffic during construction. This presented unique design challenges and required a complex, three-phase, traffic control and construction sequencing plan to move traffic safely through the tight work zone. The bridges consisted of multi-continuous p.p.c. girders spans supported by concrete column bents and pile footings. The developed design concept saved millions of dollars and allowed the James Team to be 15% below the construction estimate of the nearest competitor.
(07/17 - 08/20)	**I-10: Highland Road to LA 73, Design Build Project, East Baton Rouge & Ascension Parish, S.P. No. H.009250** Led the design, plan preparation, and load rating for the repair of the prestressed girder bridge on LA 928. Performed QA/QC of the LRFD design calculations and load rating for the steel girder bridge at Highland road and the slab span widening at Bayou Manchac. The existing I-10 mainline bridge at the Highland Road interchange needed to be reconstructed under the project to provide longer spans in addition to more lanes. An innovative sequence of construction scheme and bridge design enabled construction of this bridge while maintaining 74,000 ADT traffic. Huval's cost-effective designs enabled its design-build team to be the only competitor to fit within the Owner's budget of $72 million.
(10/16 - Present)	**New Swing Span- Herman Dupuis RD. Pontoon BR. Replacement, St. Martin, LA, Bridge Recall 200896** Lead structural engineer for the bridge design and plan development of a new swing span bridge over alligator bayou which will replace the Butte LaRose Pontoon bridge. Project is currently under construction. Designed, detailed, and sealed final plans, specifications, calculations, load rating and cost estimates for all structural elements.
(11/17 - 07/18)	**Surrey St. Bridge Repairs, Lafayette Parish** Lead Engineer for the repair of the Surrey St. Bridge in Lafayette. Project consisted of bearing repair and replacement, concrete riser construction, deck overlay, joint repairs, painting of steel girders with full enclosure, and miscellaneous work.
(03/11 - 06/13)	**I-49 Segment I Ratings, S.P. 701-65-9999** Performed as-designed LRFR calculations on two prestressed girder bridges. Utilized VIRTIS to model varying girder spans. Created rating reports for each span configuration. Developed bridge load rating summary sheets. Provided construction services on an as-needed basis.
(01/12 - 11/13)	**I-49 North Segment J (MLK Blvd. to LA 1), S.P. H.003496.5** Performed LRFD design calculations and led plan preparation on two prestressed girder and steel girder bridges. Performed approach slab design, girder design check using LEAP Conspan, cap and column design check using LEAP RC Pier, steel girder design check using MDX, deck and overhang reinforcing design check, strip seal joint opening calculations, quantity calculations and QA/QC, and elevation calculations Mr. Romero also provided load rating of the completed structure.
(03/09 - 11/10)	**I-49 North (LA 1 – LA 173), S.P. 701-65-1230 & S.P. 701-65-1349** Assisted in plan preparation and performed LRFD design calculations on a Type BT Prestressed Girder Bridge and a Type IV Prestressed Girder Bridge. Performed fixed and expansion bearing pad design, deck and overhang reinforcing design, quantity calculations and QA/QC, strip seal joint opening calculations, girder design check using LEAP Conspan, cap and column design check using LEAP RC Pier, and elevation checks.

16. Staff Experience:

Firm employed by	Huval & Associates, Inc.		
Name	Matthew L. Hebert, P.E.	Years of relevant experience with this employer	8
Title	Civil Engineer	Years of relevant experience with other employer(s)	5
Degree(s) / Years / Specialization			BS / 2008 / Civil Engineering
Active registration number / state / expiration date			37713 / LA / 09-30-2023
Year registered	2013	Discipline	Civil Engineering
Contract role(s)/brief description of responsibilities			Bridge Design and Ratings

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

Mr. Hebert joined Huval & Associates, Inc. in 2013 with 5 years’ experience in civil engineering. Previously employed with LADOTD, he was involved with the design, live load rating, plan development, and construction support of more than 20 bridge replacement projects. These consisted of various superstructure and substructure types including but not limited to: AASHTO precast prestressed concrete (P.P.C.) girders, quad beams, cast-in-place slab spans, precast slab spans, concrete box culverts, P.P.C. pile bents, steel H-pile bents, and pipe pile bents. Additionally, Mr. Hebert was project manager for multiple bridge replacement projects. His responsibilities included coordinating all aspects of the plan development process including but not limited to road, bridge, hydraulic, and geotechnical engineering and determining the project scope, schedule, and budget. Mr. Hebert’s training includes the NHI LRFR for Highway Bridge Superstructure Course, the NHI AASHTO LRFD for HWY Bridge Superstructure Course NHI AASHTO LRFD for Highway Bridge Substructure Course, the NHI AASHTO Roadside Design Course, and the NHI Design and Construction of Driven Pile Foundations Course.

(10/19 - Present)	**Cheniere Spillway and Bridge Replacement, S.P. H.008226** Lead engineer for the LRFD design, plan preparation, and LRFR live load rating for the Cheniere spillway bridge. The bridge consisted of 25ft. slab spans integrated with a fixed crest weir and overflow structure.
(10/20 - Present)	**I-10 CMAR: LA 415 to Essen Lane on I-10 and I-12, East & West Baton Rouge Parishes S.P. H.004100** As an Engineer on this project, Mr. Hebert developed an alternative bridge construction phasing approach through a constructability review. This alternative phasing approach leads to safer MOT and reduced construction times, throughout the corridor.
(02/17 - 11/20)	**I-10 Design Build-LA 42 to LA 73, S.P. No. H.009250** Lead Engineer for the LRFD design, plan preparation, and LRFR live load rating for the Highland Rd. overpass. Highland Rd. consisted of a full replacement of 2 existing structures utilizing a 3-span structure which included 2-60ft. prestressed girder spans and 1-190ft. steel plate girder span. The superstructure is support by column bents and pile bents and will be one structure at the end of the project. In order to maintain traffic, the bridge had to be constructed in 3 separate stages.
(04/14 - 07/18)	**I-49 South-US 90 Albertson Pkwy to Ambassador Design Build, H.010620** Lead Engineer for LRFD Bridge design and plan preparation of the mainline bridge and the two frontage road bridges over BNSF Railway. The brides consisted of BT-72 girder spans with column bents and pile footings.
(06/19 - Present)	**I-220 / I-20 Interchange IMP & BAFA Access Design-Build Project, S.P. H.003370** Mr. Hebert is serving as Bridge Design Quality Assurance on this design build project which will provide direct access to Barksdale Air Force Base. Most recently, Mr. Hebert has assisted with the QA of the I-220 Overpass bridges and KCS Overpass bridges on the project.

16. Staff Experience:

(09/18 - 06/19)	**Loyola Design Build I-10 Airport Interchange, Jefferson Parish, Louisiana, S.P. No. H.011670** Mr. Hebert was a primary bridge engineer throughout the RFP design phase for this complex urban interchange. A new interchange was designed and superimposed onto the existing Diamond interchange to provide direct connector access to the new New Orleans International Airport terminal. Assisted in the preparation of steel tub girder design and details, concrete box girder design and details, as well as plans and proposal documents for the RFP phase of the project. Assisted in development of alternative technical concepts, suggested sequence of construction, and miscellaneous bridge design items and other details. Assisted in the coordination and organization of all project data with the various members of the design team from numerous consulting firms.
(03/18 - Present)	**Belle Chasse Public-Private Partnership Project, Plaquemines Parish, Louisiana, Project No. H.004791** Mr. Hebert was the Bridge Design Lead throughout the design phase for this new high-level fixed bridge over the Intracoastal Waterway. The new bridge will replace the existing moveable bridge and tunnel system. This is the first highway public-private partnership project in Louisiana. The bridge will be constructed in 2 stages to assist in MOT.
(09/18 - 08/19)	**LA 106: Bayou Boeuf Bridge, H.009497** Lead Engineer for the LRFD design, plan preparation, and LRFR live load rating of a new bridge structure to replacement an existing bridge. The new bridge structure consisted of LG girders and pile bents.
(11/15 - 04/17)	**Kaliste Saloom Roadway Widening, LCG** Lead Engineer for the LRFD Bridge Design and plan preparation of an AAHSTO Type 4 girder bridge with pile bents on skew.

17. Firm Experience:

Firm Name	Royal Engineers and Consultants, LLC	Past Performance Evaluation Discipline(s)*	Bridge
Project name	East Hardy Bridge Design & Replacement	Firm responsibility (prime or sub?)	Subconsultant
Project number	2019-07	Owner's name	SDW Consulting Engineers
Project location	Hattiesburg, MS	Owner's Project Manager	John Weeks
Owner's address, phone, email			301 2nd Ave., Hattiesburg, MS 39401 601.544.1821, john@sd-w.com
Services commenced by this firm (mm/yy)	06/19	Total consultant contract cost ($1,000's)	$15M
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$764

The existing East Hardy Street Bridge is a two-lane bridge located on the Leaf River in Petal, MS that was identified for replacement through the Emergency Road and Bridge Repair Fund. The existing bridge was to be replaced with a new two-lane bridge to be constructed adjacent to the existing structure. The existing bridge is to remain in service while construction of the new bridge is performed. To date, the design phase is complete, which included engineering analyses, plans and specifications, design calculations, and reports to meet the requirements for MDOT roads and bridges standards. Construction notice to proceed is anticipated for early 2021.

Preliminary design services were initiated with review of site data available, which consisted of geotechnical investigation and engineering; topographic and boundary survey; existing bridge as built plans; studies/analysis, environmental assessments, and conceptual road alignment plans pertaining to the project. Upon completion of site data review and coordination, Royal attended the pre-design conference to outline procedures and to discuss contract administration details, design criteria, and to open the floor for client comment and input. Basis of the engineering design was provided and included foundation type, geotechnical conditions, loading conditions, and span arrangements. Royal also provided a structural design basis and criteria document that compiled and summarized the structural design criteria to be used in the design of structure and foundations. The document also included the acceptance criteria (per the latest MDOT Design Manual), as well as an outline of MDOT standard technical specifications for road and bridge construction. Conceptual Design and Field Review Plans depicted all items to be constructed as well as the layout and basis of design for all foundations and superstructure. Drawings included the following: preliminary bridge layout sheets, foundation plan, piling layout, span arrangement, roadway sections and layout, road profiles, typical sections, phase construction sheets, and an opinion of probable cost.

Approval of Field Review Plans was received on schedule, triggering Final Design Services. Final design services involved compilation and delivery of all revisions and changes from field inspection, survey notes, general provisions, estimate of probable cost, preliminary schedule and final contract plans. Bridge layout sheets included complete geometric controls, grades, clearances, topographic features, design data, quantities, and special notes. Substructure and superstructure plans contain pile notes and bearing requirements, pile layout, all dimensions convenient to construction, sufficient cross section details, beam sizes, types and spacing, elevations & crown details, reinforcing details, pile bearing requirements, types and sizes, prestressing data where required, phase construction sheets, notes and proper cross referencing. All design computations, pertinent sketches, quantity estimates, preliminary construction schedule and required special provisions were also provided. Construction engineering services will begin upon construction contract award and will consist of performance of periodic site inspections and quality checks, review and approval of submittals and shop drawings, and response to contractor RFI's concerning technical aspects of the bridge construction. Deliverables conform to applicable MDOT requirements and were prepared in accordance with all applicable codes which include, ASCE, ACI, AISC, ASTM.

Key Personnel: Michael Pugh, Carter O'Brien

17. Firm Experience:

Firm Name	Royal Engineers and Consultants, LLC	Past Performance Evaluation Discipline(s)*	Bridge
Project name	Magistrate Street at Corinne Canal	Firm responsibility (prime or sub?)	Prime
Project number	2014-24-00	Owner's name	St. Bernard Parish Government
Project location	St. Bernard Parish, LA	Owner's Project Manager	Donald R. Bourgeois, Jr.
Owner's address, phone, email			51125 East St. Bernard Highway, Chalmette, LA 70043 504.278.4313, dbourgeois@sbpg.net
Services commenced by this firm (mm/yy)	02/15	Total consultant contract cost ($1,000's)	$550 (programmatic)
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$540 (programmatic)

The project consisted of engineering and construction administration services for the replacement of Magistrate Street at Corinne Canal Bridge (Magistrate Street Bridge) in St. Bernard Parish (SBP), as part of the Parish's investment in bringing their roadways, bridges, culverts or other canal crossing structures and all associated infrastructure to meet current codes and standards and providing Hazard Mitigation measures for structures prone to repeated damages caused by high velocity flood waters, sediment and debris delivered by storm surges during hurricanes. The Magistrate Street Bridge scope included a full replacement of the existing two – 96" corrugated metal pipe culverts with a 26'-0" wide clear span, precast concrete structure. Royal performed an analysis of existing conditions and identified significant damages to the pipe ends as well as pipe breakage. These damages exacerbated existing subsidence, pipe separation, loss of hydraulic capacity and roadway failure. Due to the extent of the damages documented by the Royal Team, the project was deemed eligible for replacement by FEMA. Royal also conducted a cost analysis that ultimately justified a Hazard Mitigation solution (ConSpan Hazard Mitigation) for the replacement of the existing crossing with a lower-cost, resilient system that exceeded the existing hydraulic capacity of the canal. The ConSpan Hazard Mitigation alternative for the Magistrate Street Bridge replacement was determined as eligible, resulting in a FEMA-obligated scope and cost.

Engineering Services included civil engineering, design, surveying, geotechnical, field layout, bidding, construction administration, resident inspection, technical/engineering project close-out, construction management (CM) services. Royal produced the construction contract documents and bid package. Engineering deliverables included detailed design plans, comprehensive cost estimate, and CPM schedule to execute its engineering design services as well as construction management services. Royal performed a full hydraulic analysis of the existing canal and clear span concrete arch that was constructed. Elements of work included demolition and removal of the existing canal crossing, replacing the existing canal crossing with a precast concrete clear span con-span, driven timber piles, structural concrete grade beams, storm drainage, sanitary sewer replacement, waterline replacement, canal cleaning/shaping, riprap with flowable fill, roadway replacement, ADA ramps, sidewalks and incidental PCC pavement. Royal designed the interior height of the crossing to provide the cross-sectional area required for the drainage and engineered the roadway grades to raise the roadway while simultaneously not exceeding the maximum longitudinal slope required by LADOTD. Royal also designed vertical curves into the changes in the profile of the roadway to provide a seamless transition from the new to pre-existing roadway grade.

Key Personnel: Michael Pugh, Carter O'Brien, Katherine Foreman, Ryan Hebert

17. Firm Experience:

Firm Name	Royal Engineers and Consultants, LLC	Past Performance Evaluation Discipline(s)*	Bridge
Project name	Gallo Drive at 20 Arpent Canal	Firm responsibility (prime or sub?)	Prime
Project number	2014-24-00	Owner's name	St. Bernard Parish Government
Project location	St. Bernard Parish, LA	Owner's Project Manager	Donald R. Bourgeois, Jr.
Owner's address, phone, email			51125 East St. Bernard Highway, Chalmette, LA 70043 504.278.4313, dbourgeois@sbpg.net
Services commenced by this firm (mm/yy)	02/15	Total consultant contract cost ($1,000's)	$550 (programmatic)
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$540 (programmatic)

The project consisted of engineering and construction administration services for the replacement of Gallo Drive at 20 Arpent Canal Bridge (Gallo Drive Bridge) in St. Bernard Parish (SBP), as part of the Parish's investment in bringing their roadways, bridges, culverts or other canal crossing structures and all associated infrastructure to meet current codes and standards and providing Hazard Mitigation measures for structures prone to repeated damages caused by high velocity flood waters, sediment and debris delivered by storm surges during hurricanes. The Gallo Drive Bridge scope included a full replacement of the existing two – 60" concrete pipe culverts with a 26'-0" wide clear span, precast concrete structure. Royal performed an analysis of existing conditions and identified significant damages to the pipe ends as well as pipe breakage. These damages exacerbated existing subsidence, pipe separation, loss of hydraulic capacity and roadway failure. Due to the extent of the damages documented by the Royal Team, the project was deemed eligible for replacement by FEMA. Royal also conducted a cost analysis that ultimately justified a Hazard Mitigation solution (ConSpan Hazard Mitigation) for the replacement of the existing crossing with a lower-cost, resilient system that exceeded the existing hydraulic capacity of the canal. The ConSpan Hazard Mitigation alternative for the Gallo Drive Bridge replacement was determined as eligible, resulting in a FEMA-obligated scope and cost.

Engineering Services included civil engineering, design, surveying, geotechnical, field layout, bidding, construction administration, resident inspection, technical/engineering project close-out, construction management (CM) services. Royal produced the construction contract documents and bid package. Engineering deliverables included detailed design plans, comprehensive cost estimate, and CPM schedule to execute its engineering design services as well as construction management services. Royal performed a full hydraulic analysis of the existing canal and clear span concrete arch that was constructed. Elements of work included demolition and removal of the existing canal crossing, replacing the existing canal crossing with a precast concrete clear span con-span, driven timber piles, structural concrete grade beams, storm drainage, sanitary sewer replacement, waterline replacement, canal cleaning/shaping, riprap with flowable fill, roadway replacement, ADA ramps, sidewalks and incidental PCC pavement. Royal designed the interior height of the crossing to provide the cross-sectional area required for the drainage and engineered the roadway grades to raise the roadway while simultaneously not exceeding the maximum longitudinal slope required by LADOTD. Royal also designed vertical curves into the changes in the profile of the roadway to provide a seamless transition from the new to pre-existing roadway grade.

Bid and construction phase services included assistance with bid advertisement, conducting pre-bid meeting and bid opening, populating bid tabulation, making award recommendation, preparing the owner/contractor draft agreement, assuring SBP that the contractor produced and submitted all necessary insurance certificate, bond, and the schedule of values as per contract award. Royal's engineering and CM responsibilities during the Construction phase consisted of all planning and coordination with the contractor, starting with a Preconstruction meeting with all project associated personnel, through project close-out and all activities in between.

Key Personnel: Michael Pugh, Carter O'Brien, Katherine Foreman, Ryan Hebert

17. Firm Experience:

Firm Name	Royal Engineers and Consultants, LLC	Past Performance Evaluation Discipline(s)*	Bridge
Project name	Magnolia Converted Ped Bridge Rehabilitation	Firm responsibility (prime or sub?)	Prime
Project number	H.009938	Owner's name	LADOTD
Project location	New Orleans, LA	Owner's Project Manager	Justin Guilbeau
Owner's address, phone, email			PO Box 9180 Bridge City, LA 70096 504.253.6100, justin.guilbeau@la.gov
Services commenced by this firm (mm/yy)	02/18	Total consultant contract cost ($1,000's)	$176
Services completed by this firm (mm/yy)	10/18	Cost of consultant services provided by this firm ($1,000's)	$176

The project consisted of rehabilitating the Magnolia Bridge which crosses Bayou St. John at Harding Drive in Orleans Parish. The work will entail grading, base course, asphalt, steel rehabilitation (cleaning & painting), sheet pile installation and associated work to construct the subject project according to construction documents.

Royal provided Construction Administration and Resident Inspection Services for the restoration work. Royal provided construction management and resident inspection, quality assurance, administration, review of pay applications and closeout services. Staff included on-site and back-office support personnel including qualified Construction Managers and Resident Inspectors.

Back office services included general construction management & administration activities, document control, facilitation of pre-construction conference, bid review/ award recommendations work order basis, generation of details and quantities and management of work order process, review of pay applications and recommendations for payment, review proposed change orders for scope and cost reasonableness, prepare contract change orders, issue necessary interpretations and clarifications of the contract documents, evaluate and determine acceptability of substitute or "or-equal" materials and equipment , recommend substantial completion, and prepare substantial completion documentation, prepare/submit record drawings, assist with claims and disputes arising from construction, obtain warranty documentations, and conduct warranty period inspection, prepare and submit any required permits not the responsibility of the contractor to obtain, review contractor request for added days, and special work requests , and reviewing and tracking of material submittals.

Field services included assistance with technical issues arising during construction, assistance in coordination with utilities for relocations, facilitation of progress meetings, and preparation of agendas and minutes, monitoring and tracking of construction progress, recommendations of work to be rejected while in progress if not in accordance with contract , collection of field measurements for estimated pay item quantities, preliminary and final walk-throughs, and preparation of punch list.

Resident inspection services included observation of construction at all times the contractor worked on critical work items, inspection, measurement and appropriately tracking of work completed for pay requests, observation of utility impacts, observation of adjacent areas and/ or property impacts, preparation of daily field reports, photograph and/or documentation of work progress, coordination with A/E, DPW, and LADOTD on unforeseen items encountered during construction, coordinate with and monitor work performed by material testing agency, utilities, and other on-site visitors, preparation of memorandums or documentation required for field changes, verification of contractor providing adequate traffic control and site safety procedures, and preparation of incident reports.

Key Personnel: Michael Pugh

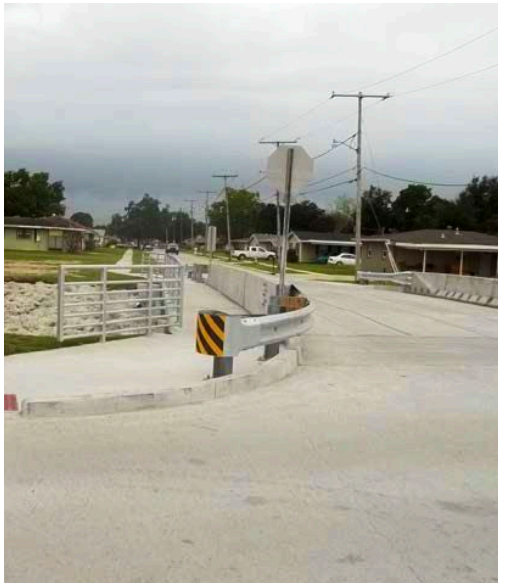
17. Firm Experience:

Firm Name	Royal Engineers and Consultants, LLC	Past Performance Evaluation Discipline(s)*	CE&I / OV
Project name	Plaza / Arpent Bridge	Firm responsibility (prime or sub?)	Prime
Project number	2011-35-03	Owner's name	St. Bernard Parish Government
Project location	St. Bernard, LA	Owner's Project Manager	Michael Pugh, P.E.
Owner's address, phone, email			4298 Elysian Fields Avenue, Ste. B New Orleans, LA 70122 (P) 504.283.9400 mpugh@royalengineering.net
Services commenced by this firm (mm/yy)	11/13	Total consultant contract cost ($1,000's)	$125,313
Services completed by this firm (mm/yy)	09/14	Cost of consultant services provided by this firm ($1,000's)	$681,035

Royal is contracted by St. Bernard Parish Government to provide engineering services for repairing, restoring, and/or replacing Parish-owned roadways and bridges to their Pre-Katrina condition, while preserving the historical value and intent of each facility.

As part of this contract, Royal conducted design and construction management services for the replacement of the Plaza /Arpent bridge. The existing culvert configuration was found to be inadequate to handle the increased flow of water during major rain events. The new bridge is 52 ft x 32 ft, and included removal and replacement of 400 sy of roadway pavement, 1250 ft concrete piles; and installation of 56 feet of concrete pipe, over 100 LF of guard rail, a handicap ramp, 5" rollover, 6" and 8" barrier concrete curb, and 190 LF of handrail.

Engineering Services included civil engineering, design, surveying, geotechnical, field layout, bidding, construction administration, resident inspection, technical/engineering project close-out, construction management services. Royal produced detailed design plans, comprehensive cost estimates, and CPM schedules to execute its engineering design services. Royal also supported the bid and contract phase including assistance with bid advertisements, conducting pre-bid meetings and bid openings, populating bid tabulations and making award recommendations, preparing the owner/contractor draft agreements, assuring SBPG that the contractors produced and submitted all necessary insurance certificates, bonds, and the schedule of values as per each contract award. Royal's engineering and CM responsibilities during the Construction phase consisted of all planning and coordination with the contractor, starting with a Preconstruction meeting with all project associated personnel, through project close-out.



Key Personnel: Michael Pugh

17. Firm Experience:

Firm Name	Batture, LLC	Past Performance Evaluation Discipline(s)*	Survey
Project name	LA SAFE Gretna Resilience District Kickstart Phase I	Firm responsibility (prime or sub?)	Sub
Project number	N/A	Owner's name	City of Gretna / Waggonner & Ball (Prime)
Project location	Gretna, LA	Owner's Project Manager	Amelia Pellegrin
Owner's address, phone, email			2200 Prytania St, New Orleans, LA 70130 504.524.5308, andy@wbae.com
Services commenced by this firm (mm/yy)	08/19	Total consultant contract cost ($1,000's)	Unknown
Services completed by this firm (mm/yy)	08/20	Cost of consultant services provided by this firm ($1,000's)	$180

The Gretna Resilience District Kickstart is a parish-owned Resilient Infrastructure and Community Nonstructural Mitigation/Flood Risk Reduction project. This phase of the project focuses on Gretna City Park, an existing public space that occupies nearly 100 acres in the center of the City of Gretna. The existing amenities are focused primarily on passive use with lots of open space, an existing retention pond, forested areas, and some pathways connection to limited parking areas. Aside from the primary goal of the project, which is to address localized flooding and repetitive loss in the district, other goals include: improving access to the park and connectivity into its interior, introduce more active programming elements, provide landmarks and destinations within the park, provide additional parking, repair existing structure on site such as the outfall weir on Claire Ave, designate pedestrian routes through the park with the use of trails, expand and enhance the existing pond system, improve water quality within the park and district to provide a healthier habitat for local wildlife, and introduce interpretive signage to educate the public about water quality and green infrastructure.

Waggonner & Ball Architecture/Environment (WBAE) (the project architects) worked with the City of Gretna on an 8-week programming/ scenario planning phase prior to beginning design on the Gretna Park Resiliency Improvements project. Once this initial phase was complete Batture worked directly with WBAE and the project landscape architect (Carbo Landscape Architecture) for the design phase. Batture was responsible for all H&H modeling (and surveying associated with the modeling); structural engineering of the renovation weir structure platform, proposed overflow weir structures for the expanded lagoon system, and new event pavilion; civil site design and grading; stormwater management design; habitat assessments; sedimentation and erosion control; and some cost estimation for the project.

Key Personnel: Robert Mora, Roderick Richardson

17. Firm Experience:

Firm Name	Batture, LLC	Past Performance Evaluation Discipline(s)*	Survey
Project name	Mid-Breton Sediment Diversion	Firm responsibility (prime or sub?)	Sub
Project number	N/A	Owner's name	CPRA / Stantec
Project location	Plaquemines Parish, LA	Owner's Project Manager	Dan Grandel
Owner's address, phone, email			1340 Poydras St, Ste 1420, New Orleans, LA 504.322.3050 ext 109, dan.grandel@stantec.com
Services commenced by this firm (mm/yy)	03/19	Total consultant contract cost ($1,000's)	Unknown
Services completed by this firm (mm/yy)	06/19	Cost of consultant services provided by this firm ($1,000's)	$150

The Mid-Breton Sediment Diversion Project is located on the east side of the Mississippi River near river mile 68 above Head of Passes (AHP). The intent of the project is to capture sediment laden water from the Mississippi River and then convey that captured water and sediment to the Breton Sound Basin. Stantec is providing programming, design, and construction administration for the the design and construction of the Mid Breton Sediment Diversion Project. Batture LLC provided topographic & right-of-way surveying for a portion of LA Hwy 39 in support of the project in accordance with DOTD drawing standards.

Key Personnel: Robert Mora, Roderick Richardson

17. Firm Experience:

Firm Name	Batture, LLC	Past Performance Evaluation Discipline(s)*	Survey
Project name	Stage 0/Phase I and Stage I/Phase Infrastructure Improvements: Causeway Boulevard at US 90/Jefferson Highway	Firm responsibility (prime or sub?)	Sub
Project number	N/A	Owner's name	New Orleans Regional Planning Commission (Agency)
Project location	Jefferson Parish, LA	Owner's Project Manager	Jeffrey W. Roesel
Owner's address, phone, email			10 Veterans Blvd, New Orleans, LA 70124 504.483.8500, jroesel@norpc.org
Services commenced by this firm (mm/yy)	03/19	Total consultant contract cost ($1,000's)	Unknown
Services completed by this firm (mm/yy)	08/20	Cost of consultant services provided by this firm ($1,000's)	$152.87

Batture, LLC assisted Design Engineering, Inc. in generating the Stage 0/Stage 1 report for the improvement of the Causeway Boulevard/ Jefferson Highway interchange to accommodate additional traffic from the Ochsner Hospital expansion. The Stage 0 identified various alternatives and potential utilities, environmental constraints, or other issues that could influence the concept's feasibility, timing, and impact on the physical, natural, and human environment. Batture produced the "Environmental Impacts" report section, including DOTD's Stage 0 Environmental Checklist.

In Phase II, Batture provided environmental and surveying services including right-of-way surveying and identified any conflicting issues present for the revised Stage 0 and Phase 1. Building on information gathered in Phase I of this project, Batture provided a revised Stage 0 Environmental Checklist/Narrative, Phase I Environmental Site Assessment, Preliminary Environmental Assessment, FONSI, and Stage I Report.

Key Personnel: Robert Mora, Roderick Richardson

17. Firm Experience:

Firm Name	Huval & Associates, Inc.	Past Performance Evaluation Discipline(s)*	Bridge
Project name	Retainer Contract for Bridge Preservation Statewide	Firm responsibility (prime or sub?)	Prime
Project number	4400002537	Owner's name	LADOTD
Project location	Louisiana, Statewide	Owner's Project Manager	Kurt Brauner, P.E.
Owner's address, phone, email			1201 Capitol Access Rd., Baton Rouge, LA 70804 225.379.1933, kurt.brauner@la.gov
Services commenced by this firm (mm/yy)	08/12	Total consultant contract cost ($1,000's)	$6,000
Services completed by this firm (mm/yy)	07/17	Cost of consultant services provided by this firm ($1,000's)	$4,800

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

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

LA 182 & LA 58 Movable Bridge Rehab, T. O. H.010006.5: Preliminary Plans for two movable bridges in Lafourche and Terrebonne Parishes including rehabilitation necessary for bridges to remain in service for 30-40 additional years. Includes structural, mechanical, electrical, architectural, and paint system and concrete surface improvement. Jeanerette End Wedge Repair, T.O. 009467.5: Site Visit and Evaluation, Preliminary Plans and Final Plans for the rehabilitation of this swing span bridge on LA 671 in Iberia Parish. The intent of this Project is to correct any mechanical and electrical deficiencies of the bridge end wedge system, balance wheels, live load shoes, and center pivot bearing.

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

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

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

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

Key Personnel: David S. Huval, Sr., Supervisor Engineer | Thomas Gattle, Project Manager/Lead Design | Colby Guidry, Lead Bridge Design, Ratings, Bridge Inspections | Justin Peltier, Bridge Design, Inspections | Malcolm Huval, Movable Bridge Design, Construction Support | Lee Hupperich, Movable Bridge Design | Reid Romero, Bridge Design, Ratings

17. Firm Experience:

Firm Name	Huval & Associates, Inc.	Past Performance Evaluation Discipline(s)*	Bridge
Project name	I-49 South-US 90 Albertson Pkwy to Ambassador Design Build	Firm responsibility (prime or sub?)	Sub
Project number	H.010620	Owner's name	LADOTD
Project location	Broussard, LA	Owner's Project Manager	Peggy Jo Paine, P.E.
Owner's address, phone, email			1201 Capitol Access Rd., Baton Rouge, LA 70804 225.379-1065, peggy.paine@la.gov
Services commenced by this firm (mm/yy)	01/15	Total consultant contract cost ($1,000's)	N/A
Services completed by this firm (mm/yy)	06/19	Cost of consultant services provided by this firm ($1,000's)	$1,006

Huval & Associates, Inc. (HUVAL) prepared final bridge plans and live load rating reports for the project in accordance with the AASHTO LRFD Bridge Design Specifications, Bridge Design & Evaluation Manual, American Railway Engineering and Maintenance-of-Way Association (AREMA) Manual, and the BNSF Guidelines for Railroad Grade Separation Projects. The project required a new US 90 overpass structure at Albertson Parkway and also required that the existing US 90 BNSF Railway overpass structure to be replaced. This work had to be performed while maintaining two lanes of vehicular traffic in each direction. HUVAL was also responsible for the design of the frontage road bridges over the BNSF Railway.

1 US 90 BNSF Railway overpass was designed with a 34.1 degree skew and required three construction phases in order to maintain vehicular traffic. The approaches are 120 ft. BT-72 p.p.c. girders spans and the main span is a 136 ft. BT-72 p.p.c. girder span. The superstructure is supported by concrete column bents and pile footings. The overall bridge width is 125'-6". The frontage road bridges also consists of BT-72 p.p.c. girder spans supported by column bents and pile footings.

The US 90 Over Alberton Parkway overpass consists of a BT-72 p.p.c. girder bridge with 120 ft. approach spans and a 136 ft. main span. The superstructure is supported by concrete column bents and pile footings. The overall bridge width is 125'-6".

Additionally, HUVAL provided construction engineering services for the Contractor.

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

Key Personnel: David S. Huval, Sr., Principal | Thomas M. Gattle, Project Manager/Lead Engineer | Colby Guidry, Design Engineer | Matt Hebert, Design Engineer | Justin Peltier, Design Engineer

17. Firm Experience:

Firm Name	Huval & Associates, Inc.	Past Performance Evaluation Discipline(s)*	Bridge
Project name	LA 443: Tangipahoa River Bridge Replacement	Firm responsibility (prime or sub?)	Prime
Project number	H.012728.5	Owner's name	LADOTD
Project location	Tangipahoa Parish	Owner's Project Manager	Paul Vaught III, P.E.
Owner's address, phone, email			1201 Capitol Access Road, Baton Rouge, LA 70804 225.379.1816, paul.vaughtiii@la.gov
Services commenced by this firm (mm/yy)	09/16	Total consultant contract cost ($1,000's)	$300
Services completed by this firm (mm/yy)	09/17	Cost of consultant services provided by this firm ($1,000's)	$300

Huval & Associates, Inc. (HUVAL) provided final bridge and roadway design plans, design and rating calculations and a construction cost estimate for the emergency replacement of the existing bridge over the Tangipahoa River in Tangipahoa Parish. During the August flood of 2016, the existing bridge substructure suffered extensive scour damage which required an immediate closure of the structure. Due to the long detour and high ADT, LADOTD required an emergency replacement of the existing bridge.

LADOTD gave a timeline of only eight weeks to perform a complete topographic survey and submit 100% final bridge and roadway design plans. In addition to the emergency timeline, the project had to be designed and constructed within the existing right-of-way and could not interfere with another bridge structure located approximately 250ft east of the existing bridge to be replaced. LADOTD also required that the low chord elevation of the new bridge be set to maximize the design storm flood year while also meeting all other project constraints. The design of the bridge also had to meet the LADOTD minimum design guidelines for design speed and ADT.

To meet these project constraints, HUVAL investigated multiple superstructure types and vertical aligments in order to minimize a rise in finished grade while providing a low chord elevation which maximized the design storm flood year. Through analysis, a combination of LG-25 p.p.c. girder approach spans and LG-36 p.p.c. girder main spans were used to deliver a project which met or exceeded all of LADOTD's project requirements. HUVAL met all of LADOTD's required submittals on or ahead of schedule.

HUVAL also provided LADOTD with construction support for the project.

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

Key Personnel: David S. Huval, Sr., Principal **|** Thomas Gattle, Project Manager, Roadway Design Engineer **|** Justin Peltier, Bridge Design Engineer **|** Reid Romero, Bridge Design Engineer **|** Colby Guidry, Bridge Design Q.C.

18. Approach and Methodology:

PROJECT OVERVIEW

LADOTD wishes to replace the existing concrete bridge at the South Suburban Canal on West Metairie Avenue in Metairie, LA, an urban, high-traffic area within Jefferson Parish. The approaches are concrete roadway with curb and gutter drainage. The bridge site has several visible above ground utility crossings, which will require consideration during design and coordination with Jefferson Parish Representatives. This bridge does not appear to have significant horizontal or vertical curves. The Royal Team is familiar with bridge projects of similar scope and magnitude.

If awarded this project, Royal and its team members, Batture and Huval, will begin work immediately following the Notice to Proceed. Royal will schedule a project kickoff meeting with LADOTD to discuss phase specifics, introduce team members, designate roles, and establish the project schedule.

STAGE 3, PART 1 TOPOGRAPHIC SURVEY

Survey

Immediately following the kickoff meeting and before beginning the survey field work, Royal and Batture will arrange an on-site meeting with the Parish Representative to verify the project location and obtain any additional relevant site information. After the initial site visit, Royal and Batture will begin the survey phase of the project. Batture will perform the Topographic Survey per the Off System Bridge Guidelines and the DOTD Location & Survey Manual.

Batture will then perform a centerline and cross-section survey capturing the topography of the existing bridge and roadway within 500 ft of each end of the bridge and 25 ft beyond the existing/apparent R/W. Stream topography will also be captured within 150 ft upstream and downstream of the bridge, at minimum, with sufficient information captured for Royal to perform hydraulic analyses.

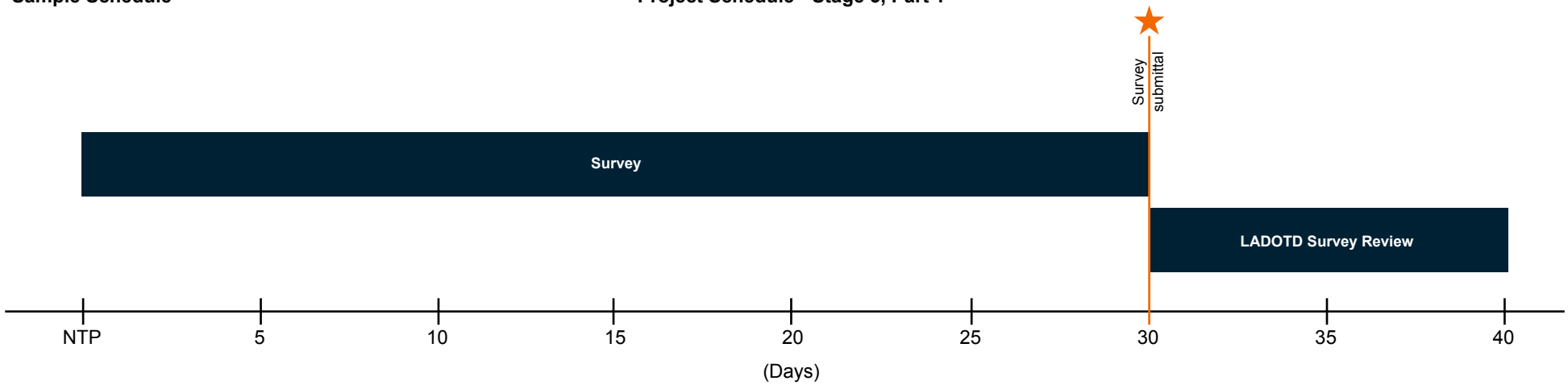
The survey will include all existing structures, large trees within the project area, horizontal and vertical control, utility data, existing/apparent R/W, and bridge features such as gutter lines, center bents, and low chords. Also, included in the survey will be any known existing utilities to be accommodated during design.

Submission

All final survey submittals to LADOTD will be packaged and provided in accordance with the off-system bridge guidelines. The survey shall be completed within 30 days of the NTP and given to LADOTD for review.

Sample Schedule

Project Schedule - Stage 3, Part 1



18. Approach and Methodology:

STAGE 3, PART 3 PRELIMINARY PLANS

After completing and accepting the survey phase, Royal, Batture, and Huval will begin Part 3 of the project. Part 3 primarily consists of the Hydraulics Report, preliminary plans, and environmental clearance. Estimated timelines for completion of stage tasks and deliverables are included in the Sample Schedule graphic on the next page.

Hydraulics Report

Royal will perform hydraulic studies for the bridge site and prepare a hydraulic report including any viable alternates such as a bridge, reinforced concrete box culverts, or other Cross Drain Pipe options. The studies and proposed designs will be per the Off System Bridge Guidelines, the DOTD Bridge Design Manual, and the 2011 DOTD Hydraulics Manual. Royal will begin the hydraulic study by gathering available hydraulic data, such as existing bridge plans, flood studies, gage data, and effective FIRM HEC-RAS models from DOTD, the Parish, and other entities.

Royal will delineate the floodplain for the channel using available topographic maps and LiDAR elevation data. Design discharge at the crossing site will be determined using the USGS or NRCS Method under Chapter 3 of the DOTD Hydraulics Manual, depending on the size of the drainage area. The 2, 5, 10, 25, 50, 100, and 500-year flood discharges will be determined, and discharge-frequency curve plotted.

Royal will then perform a hydraulic analysis using HEC-RAS to establish an existing conditions model and proposed bridge design alternatives models. The topographic survey data of the channel obtained by Batture will be utilized as input cross-sectional data for the model. If necessary, the existing conditions model will be calibrated to reconcile the modeled conditions with the effective FEMA floodplain model. The proposed conditions models will be compared against the existing conditions model to ensure backwater increase requirements are met. Bridge scour will be estimated per FHWA's "Evaluating Scour at Bridges" (HEC-18). Efforts will be made through design to minimize the effects of scour and preventative/protective measures incorporated into the design.

50% Completion

Concurrently to the Hydraulics report, Royal, with the assistance of Huval, will begin the initial project layout and design review using Huval's extensive experience with bridges of this structure type, size, span, geography, and crossing type. This initial design will allow for a more rapid adjustment toward a completed preliminary design during the receipt and approval of the survey and hydraulic data, rather than a linear timeline for the design that would not begin until all data is collected and approved.

To improve design efficiency and consistency with other state projects, standard bridge plans will be considered foremost in the design. However, should standards fail to satisfy the requirements of the project, a site-specific design will be utilized.

Royal will also identify, design, and layout the necessary preliminary traffic detour plans associated with the construction efforts, which may require more than one traffic plan or detour route depending on the need for multiple phases of construction identified in the early design review. Quite often, complications with traffic design have an impact on bridge design specifics. Therefore, we believe it is pertinent to review the potential for complications as part of a larger effort than just the required construction signage.

Solicitation of Views / Environmental - Pre Plan in Hand Meeting

The environmental process will play a significant role in the delivery of the project on schedule. To minimize or eliminate the environmental impact of this project, Royal will attempt to utilize as much of the existing structure's footprint as possible within the design. Once the preliminary layout of the bridge replacement design has been accepted, a field crew will perform a site investigation using the latest Corps of Engineers Wetland Delineation Manual. The site investigation will be confirmed with aerial base maps, and wetlands within the project footprint will be reported. Pictures, soil samples, plant communities, hydrology, and other pertinent information will be noted in the Wetland Determination Data Form as required. The report will be submitted to the U.S Army Corps of Engineers.

After approval of the replacement structure and before the submission of the PIH plans, Royal and Batture will begin the Solicitation of Views (SOV), which will be mailed to all required Parish, governmental agencies, and private parties, as shown on the roster provided by LADOTD. Upon receiving responses to the SOV, Royal will prepare the Categorical Exclusion Document as required.

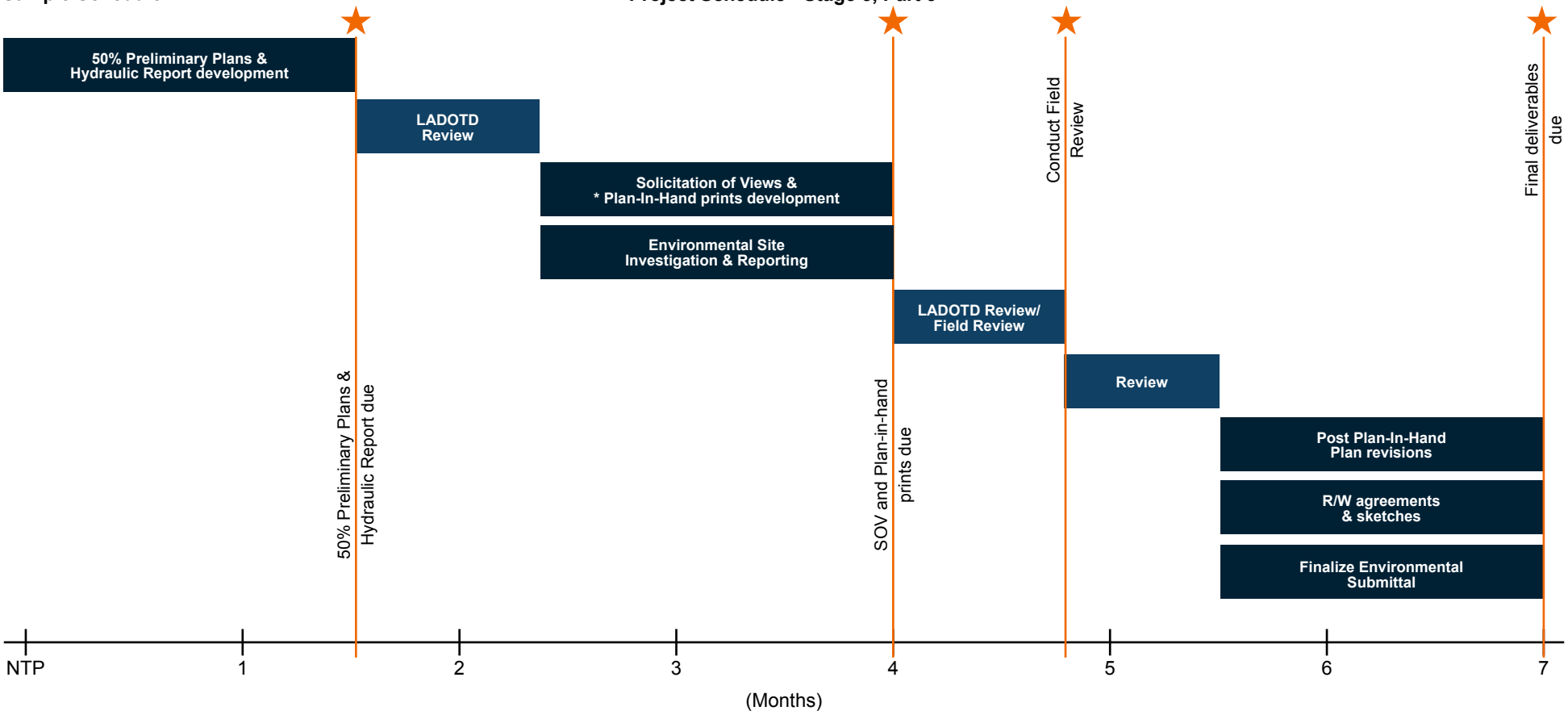
Plan in Hand — Post Plan in Hand - Environmental Submission

After a successful Plan in Hand meeting, Royal will incorporate any final revisions into the preliminary plans. Once final grades and alignment are determined, the R/W requirements will be submitted to the Program Coordinator. The final Environmental clearance package will be submitted to the Program Coordinator. The final preliminary bridge plans will include the Typical Section, Plan and Profile, Drainage Map, Construction Signing Sheet, General Bridge Plan, and Cross-sections.

18. Approach and Methodology:

Sample Schedule

Project Schedule - Stage 3, Part 3



* Schedule to be adjusted if Pre-plan-in-hand prints are required.

SUMMARY

Royal has completed numerous projects in the Greater New Orleans area and have decades of experience with projects of similar scope and magnitude. We are prepared to bring the necessary resources, experience, and expertise to deliver this project quickly and with excellent quality. The Royal team appreciates the review of our proposal and consideration for this project we look forward to working with LADOTD.

19. Workload:

Firm(s)	Past Performance Evaluation Discipline(s)*	State Project Number	Project Name	Remaining Unpaid Balance**
Royal	N/A	N/A	N/A	N/A

19. Workload:

Firm(s)	Past Performance Evaluation Discipline(s)*	State Project Number	Project Name	Remaining Unpaid Balance**
Batture, LLC	N/A	N/A	N/A	N/A

19. Workload:

Firm(s)	Past Performance Evaluation Discipline(s)*	State Project Number	Project Name	Remaining Unpaid Balance**
Huval & Associates, Inc.	Bridge	S.P. H. 011235	I-49 South @ Verot School Road Lafayette Parish – Design Phase Supp. #1&2	$50,045
Huval & Associates, Inc.	Bridge	S.P. H.004774.5	Kanas Lane-Garrett Road Connector – Supp #1	$10,448
Huval & Associates, Inc.	Bridge	S.P. H.009497.6	LA 106: Bayou Bouef - Construction Services	$18,549
Huval & Associates, Inc.	Bridge	S.P. H.011808.5	LA 10: Company Canal – Construction Services	$27,715
Huval & Associates, Inc.	Bridge	S.P. H.010000.6-2	US 171 Over Calcasieu River – Construction Services	$48,104
Huval & Associates, Inc.	Bridge	S.P. H.011485.6	LA 336-1 Bayou Teche Bridge @ Breaux Bridge Construction Services	$93,851
Huval & Associates, Inc.	Bridge	S.P. H. 012650.6	Bridge Repair District 62 - Construction Services	$25,337
Huval & Associates, Inc.	Bridge	S.P. H.012451.6	Dist. 04 Bridge Repairs - Construction Services	$20,456
Huval & Associates, Inc.	Bridge	S.P. H.010006.5	LA 58 Petit Caillou Bridge Rehabilitation	$1,481
Huval & Associates, Inc.	Bridge	S.P. H.002868.5	Ambassador/BNSF Frontage Road Bridges	$4,547
Huval & Associates, Inc.	Bridge	S.P. H.003370	I-220 / I-20 Interchange IMP & BAFB Access	$191,473
Huval & Associates, Inc.	Bridge	S.P. H.008226	Cheniere Spillway & Bridge Replacement	$0
Huval & Associates, Inc.	Bridge	S.P. H.004791	LA 23: Belle Chasse Bridge and Tunnel (HBI)	$1,571,297
Huval & Associates, Inc.	Bridge	S.P. H.001352.5	Comite Diversion Bridge at LA 67 – Construction Services	$104,625
		S.P. H.002273.5	Comite Diversion Bridge at LA 19 & LA 19 Railroad – Const. Services	
Huval & Associates, Inc.	Bridge	S.P. H.004100	I-10 CMAR – Segment 1 Design	$3,745,531
Huval & Associates, Inc.	Bridge	S.P. H.014560.5	LA 94: Vermillion River Bridge Replacement	$108,643
Huval & Associates, Inc.	Bridge	S.P. H.014747	Southern University Ravine Project	$288,069
Huval & Associates, Inc.	Bridge	S.P.H.014052-2	LA 151: I-20 Overpass Deck Replacement	$35,824
Huval & Associates, Inc.	Bridge	S.P.H.014587.6	LA 302: Kerner Ferry Bridge	$0

20. Certifications/Licenses:

Royal

Michael Pugh, P.E.

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

Mr. Michael Leon Pugh Jr.

License/Certificate Type - Number	Expiration Date
PE.0030911	03/31/2024

Status: Active

William Fontenot, Jr., P.E.

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

Mr. William Dean Fontenot Jr.

License/Certificate Type - Number	Expiration Date
PE.0041036	03/31/2023

Status: Active


PROOF OF TRAINING
THIS CERTIFICATE HEREBY RECOGNIZES THAT
William Fontenot Jr.
has attended
Traffic Control Technician-LA State Specific
Training Course
12/14/2021 to 12/14/2025
Training Valid Through
Director of Training
Baton Rouge, LA
Location
President, CEO


PROOF OF TRAINING
THIS CERTIFICATE HEREBY RECOGNIZES THAT
William Fontenot Jr.
has attended
Traffic Control Supervisor-LA State Specific
Training Course
12/15/2021 to 12/15/2025
Training Valid Through
Director of Training
Baton Rouge, LA
Location
President, CEO

Courtney Kall, P.E.

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

Mrs. Courtney Williams Kall

License/Certificate Type - Number	Expiration Date
PE.0037306	03/31/2023

Status: Active


PROOF OF TRAINING
THIS CERTIFICATE HEREBY RECOGNIZES THAT
Courtney Kall
has attended
Traffic Control Supervisor-LA State Specific
Training Course
Vice President of Member Services
Baton Rouge, LA
Location
President, CEO


Certificate of Training
this certifies that
Courtney Kall
has successfully completed the training
program requirements for
ATSSA Online Flagger Certification Training Course
Awarded on this 22nd day of November 2021

Carter O'Brien, P.E.

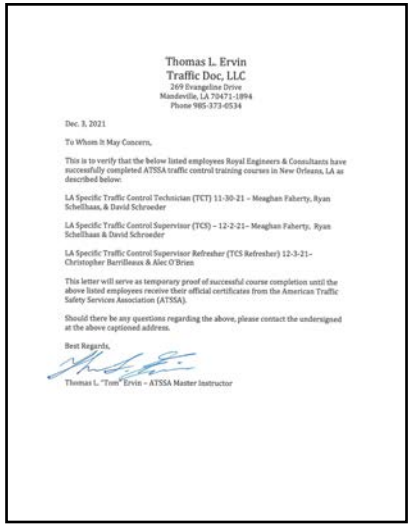
LOUISIANA PROFESSIONAL
ENGINEERING & LAND SURVEYING BOARD
(LAPELS)
9643 Brookline Avenue, Suite 121
Baton Rouge, LA 70809
Phone (225) 925-6291
www.lapels.com

Mr. Alec Carter O'Brien

License/Certificate Type - Number	Expiration Date
PE.0043647	03/31/2024

Status: Active


Certificate of Training
this certifies that
Alec O'Brien
has successfully completed the training
program requirements for
ATSSA Online Flagger Certification Training Course
Awarded on this 27th day of January 2021


Thomas L. Ervin
Traffic Doc, LLC
269 Evangeline Drive
Mandeville, LA 70471-1894
Phone 985-373-6534

Dec. 3, 2021

To Whom It May Concern,

This is to verify that the below listed employees Royal Engineers & Consultants have successfully completed ATSSA traffic control training courses in New Orleans, LA as described below.

LA Specific Traffic Control Technician (TCT) 11-30-21 – Meaghan Faherty, Ryan Schellhaas, & David Schroeder

LA Specific Traffic Control Supervisor (TCS) – 12-2-21– Meaghan Faherty, Ryan Schellhaas & David Schroeder

LA Specific Traffic Control Supervisor Refresher (TCS Refresher) 12-3-21– Christopher Barrilleaux & Alec O'Brien

This letter will serve as temporary proof of successful course completion until the above listed employees receive their official certificates from the American Traffic Safety Services Association (ATSSA).

Should there be any questions regarding the above, please contact the undersigned at the above captioned address.

Best Regards,

Thomas L. "Tom" Ervin – ATSSA Master Instructor

20. Certifications/Licenses:

Royal

Laudun Landry, P.E.

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

Mr. Laudun Micheal Landry

License/Certificate Type - Number: PE.0045878
Expiration Date: 03/31/2024
Status: Active

Katherine Foreman, P.E.

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

Ms. Katherine Ann Foreman

License/Certificate Type - Number: PE.0046031
Expiration Date: 03/31/2024
Status: Active

Ryan Hebert, P.E.

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

Mr. Ryan Jude Hebert

License/Certificate Type - Number: PE.0046577
Expiration Date: 09/30/2022
Status: Active

PROOF OF TRAINING

Katherine Foreman
has attended
Traffic Control Technician-LA State Specific
Training Course

Director of Training
President, CEO

PROOF OF TRAINING

Ryan Hebert
has attended
Traffic Control Technician-LA State Specific
Training Course

Director of Training
President, CEO

PROOF OF TRAINING

Katherine Foreman
has attended
Traffic Control Supervisor-LA State Specific
Training Course

Director of Training
President, CEO

PROOF OF TRAINING

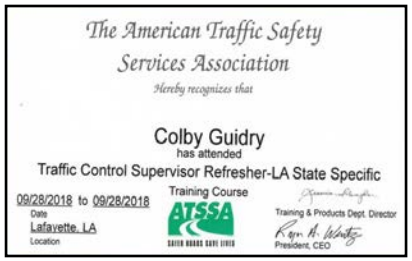
Ryan Hebert
has attended
Traffic Control Supervisor-LA State Specific
Training Course

Director of Training
President, CEO

20. Certifications/Licenses:

Huval

Colby Guidry



The American Traffic Safety Services Association

Hereby recognizes that

Colby Guidry

has attended

Traffic Control Supervisor Refresher-LA State Specific Training Course

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

Lafayette, LA
Location

ATSSA

Training & Products Dept. Director

President, CEO

20. Certifications/Licenses:

Batture

Batture, LLC
Professional Engineering Firm – EF 0005566
Professional Land Surveying Firm – VF 0000719
Hudson Initiative Certification
Disadvantaged Business Enterprise Certification

Professional Land Surveyor (LA)
Robert Mora, PE, PLS, ENV-SP – 05042

ATSSA Traffic Control Technician (LA)
Clifford “Kip” Montero (exp. 5/24/2026)
Roderick Richardson (exp. 5/24/2026)

ATSSA Traffic Control Supervisor (LA)
Clifford “Kip” Montero (exp. 5/25/2026)
Roderick Richardson (exp. 5/25/2026)

Roderick Richardson

Clifford “Kip” Montero

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

SUMMARY OF ROYAL'S QA/QC GOAL

Royal and its design team have completed numerous successful bridge designs. Royal will be the primary designer on the project handling the design with Huval's assistance. Royal will utilize LADOTD's Bridge design QC/QA process along with its internal checklists, processes, and procedures that meet or exceed the requirements of this project.

Royal's goal as with any project is to provide the highest standard design in a timely and cost-effective manner. In order to accomplish this Royal has developed this Quality Control – Quality Assurance plan with the ultimate goal of delivering a quality set of construction plans and minimize or eliminate errors. Royal understands that QC/QA is its sole responsibility and LADOTD is not responsible for reviewing the plans for errors.

DESIGN TEAM

The designers and QC/QA Personnel are clearly identified in the table below. The team is highly qualified to perform the work. Detailed resumes and qualifications for the below listed personnel are provided in Section 1 of the DOTD Form 24-102.

Title/Role	Name	Company
Engineer of Record	Michael Pugh, P.E.	ROYAL
Designer (Hydraulics/Civil)	Katherine Foreman, P.E.	ROYAL
Designer (Structural)	Laudun Landry, P.E.	ROYAL
Reviewer (Hydraulics/Civil)	William Fontenot, P.E.	ROYAL
Reviewer (Structural)	Colby Guidry, P.E.	HUVAL
Survey Reviewer	Ryan Hebert, P.E.	ROYAL
Detailer	Shaun Tynes	ROYAL
Detail Checker	Justin Peltier, P.E.	HUVAL
Constructability Review	Carter O'Brien, P.E.	ROYAL

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

GLOSSARY

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

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

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

Design Checker: Engineer responsible for performing a full technical review of the design calculations, special provisions, drawings, and cost estimates. Must be either a licensed professional engineer or engineer intern, however, if the designer is a engineer intern the design checker must be a professional engineer.

Detailer: Individual responsible for preparing drawings. This individual/s is responsible for development of the drawing through the use of required CAD technology.

Detail Checker: Engineer responsible for performing a full technical and accuracy review of prepared details/drawings.

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

Red Team Review: Team review following completion of initial QC and QA reviews. Comments from review to be incorporated into plans prior to submittal.

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

SOFTWARE AND DOCUMENT CONTROL

Royal's team is familiar with all necessary drafting and design software, including - CADConform, Microstation, InRoads, and ProjectWise as required by the LADOTD and all drawings will conform to LADOTD Software and Deliverables Standards for Electronic Plans. The design team will use software for bridge design that is listed on the DOTD Bridge Design Section's Pre-Approved Software List. If a need arises to utilize other software, such software will be submitted to the Bridge Design Engineer Administrator for approval prior to use. All pertinent communications, project files, submissions, and documentation of the QC/QA process will be saved within Royal's internal filing system. Final calculation books and other final design documents will be submitted to LADOTD at the completion of the project.

SURVEY PHASE

Batture will produce the survey in accordance with the procedures as shown on pages 13-17 of the Off-system bridge guidelines. Royal will review the field books, topography points and using information from maps/site visits will ensure all necessary points are picked up.

- FIELD BOOKS SUBMITTED BY Batture, REVIEWED BY ROYAL
- PACKAGING CHECK SUBMITTED BY ROYAL, REVIEWED BY Batture

DESIGN PHASE

DESIGN CRITERIA – PROJECT DEVELOPMENT

Using the design criteria submitted and approved by Royal to LADOTD, Royal will follow the design criteria to establish the Bridge Type, size, at this location. All design assumptions, exemptions, etc will be listed on the design criteria checklist. The design criteria will be updated if necessary but sent to LADOTD for review and approval.

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

DESIGN CALCULATIONS, PLAN DEVELOPMENT, AND REVIEW

QC PROCESS

The quality control phase is governed by the designer/design checker and detailer/detail checker roles. Generally, at the completion of each detail or design the designated checker will independently confirm or redline the submission.

Each designer on the Royal team is responsible for producing, maintaining, and reviewing their own details and plans prior to submitting for review. Royal will implement the design checker as noted in the LADOTD QC/QA process. The design checker will be the engineer responsible for producing independent calculations and reviewing those submitted by the designer. Work produced by the CADD detailer will be checked by the responsible designer. All detailed, designed, or calculated work on this project will be independently reviewed by a licensed Professional Engineer.

All calculations that are reviewed, edited, or redlined will be included with the final submission package. All corrected errors will be noted and updated, the calculations from design check(s) will be included with the final submission.

Design checkers shall review for correctness, verifying that the design is adequately reflected in the plans and details.

Quality Assurance

The quality assurance phase is defined by the review of QC process to ensure procedures are being followed, and processes are complete. The reviewer is responsible for assuring designs and details are following LADOTD Bridge Design common practices and guidelines.

Reviewers will be charged with identifying any constructability issues, safety, or site issues. Reviewer will provide designer comments or concerns with critical or complicated structures. Upon completion by the designated project reviewer Royal will hold a red team review with all personnel involved in the detail and design phase.

At the completion of the QA process by the Reviewer, the QC/QA form (provided in the appendix) will be signed by the designer, design checker, detailer, detail checker, and reviewer.

RED TEAM REVIEW (FINAL REVIEW BEFORE SUBMISSION)

Royal and Huval will have a final team review of all calculations, plans, hydraulics, and environmental. Comments produced from the Red Team Review will be noted during the meeting to be incorporated prior to final submission.

FINAL REVISIONS BASED UPON RED TEAM REVIEW

Designer and detailer will encompass all comments made from the red team review. Royal and Huval will ensure that all design calculations, review/check calculations are packaged.

APPENDIX

- Design Criteria Checklist
- Final Calculation Book Checklist
- QA Information Package Checklist
- QC/QA Certification
- Peer Review Resolution Agreement

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

DESIGN CRITERIA CHECKLIST

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

___ **Cover Sheet**
The following information must be included on the cover sheet:
- LADOTD project number
- Project name
- Revision date
- The Supervisor or Team Leader's signature and date

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

___ **Design Assumptions and Design Exceptions**
All design assumptions and design exceptions received must be included in this section along with supporting documents.

___ **General Information**
The general information as listed below should be included in this section:
- Bridge information (no. of bridges, bridge clear width, length, no. of lanes, lane width, shoulder width, etc.)
- Road information (roadway classifications, design speed, traffic data, etc.)
- Vertical datum
- Vertical and horizontal clearances
- Other relevant information

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

___ **Design Factors**
The ductility factor ∏D, redundancy factor ∏R, and operational importance factor ∏I shall be listed in this section.

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

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

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

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

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

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

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

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

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

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

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

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

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

___ **Electrical/Lighting Design**
All electrical design criteria shall be included in this section if applicable. Standard Plans should be listed if they are utilized.

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

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

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

FINAL CALCULATION BOOK CHECKLIST

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

___ **Cover Sheet**
The following information must be included on the cover sheet:
- LADOTD project number
- Project name
- The title of "Final Calculation Book"
- The EOR's seal with signature and date

___ **Final Calculation Book Check List**

___ **QC/QA Certifications**

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

___ **Design Criteria**

___ **Final Hydraulic Analysis Report from Hydraulic Engineer**

___ **Final Geotechnical Analysis Report from Geotechnical Engineer**

___ **Superstructure Design Calculations**

___ **Substructure Design Calculations**

___ **Quantity Calculations**

___ **Special Provisions/NS-Items**

___ **Construction Cost Estimate**

___ **As-Designed Rating Report**

___ **List of All Final Electronic Design Files and File Locations (ProjectWise directory name)**
Consultants shall submit the final calculation book to LADOTD bridge task managers; the submittal shall be on a CD or Flash Drive or placed to a designated ProjectWise folder including the following information:

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

___ **All Electronic Design Files**

___ **A PDF File of the As-Designed Rating Report Only**
The final calculation book for in-house projects shall include the same files listed above for consultant projects. The final calculation book and other final design documents for all projects including in-house and consultant projects shall be uploaded to the archiving location designated in the record retention policy within 30 calendar days after the stamped final plans are delivered.

QA INFORMATION PACKAGE CHECKLIST

Project No.:

Project Description:

___ Calculation Book

___ Plans

___ Special Provisions

___ Cost Estimate

___ Other Documents _____

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

QC/QA CERTIFICATION

Project No.:

Project Name:

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

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

PEER REVIEW RESOLUTION AGREEMENT

Project No.:

Project Name:

We, the undersigned Peer Reviewer, Supervisor or Team Leader of the design team, and LADOTD Representative for this project, have reviewed and accepted the attached peer review resolutions. We certify that the peer review has been performed in accordance with the LADOTD Bridge Design Section policy on QC/QA.

Team Members	Name	Signature
Peer Reviewer		
Supervisor or Team Leader		
LADOTD Representative		

22. Subconsultant information:

Firm Name (as registered with Louisiana's Secretary of State)	**Address**	**Point of Contact & email address**	**Phone Number**
Batture, LLC	5110 Freret Street New Orleans, LA 70115	Robert Mora bmora@batture-eng.com	504.261.7143
Huval & Associates, Inc.	922 West Pont Des Mouton Rd. Lafayette, LA 70507	Colby Guidry, P.E. cguidry@huvalassoc.com	337.234.3798

23. Location:

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