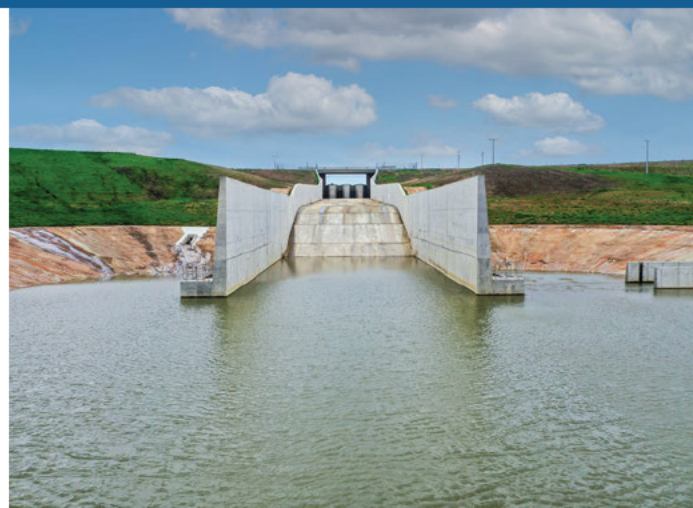
Response to Advertisement for Engineering and Related Services

Louisiana Department of Transportation and Development (DOTD)

Contract Identification No. 4400027092
IDIQ Contract for Dam Safety and Public Works Statewide

June 22, 2023

FREESE AND NICHOLS



900 Camp Street, Suite 354, New Orleans, Louisiana 70130 • 504-478-1065 | www.freese.com

FREESE AND NICHOLS

Innovative approaches
Practical results
Outstanding service

June 22, 2023

RE: IDIQ Contract for Dam Safety and Public Works Statewide | Contract No. 4400027092

Dear Selection Committee:

Freese and Nichols, Inc. (FNI) appreciates the continued opportunity to serve the Louisiana Department of Transportation and Development (DOTD) by submitting our proposal for the IDIQ Contract for Dam Safety and Public Works Statewide. FNI and our team are committed to delivering on this project by meeting DOTD's expectations as we have done for the Louisiana Watershed Initiative (LWI) Modeling Contracts LWI/State Projects Program (SPP) Group 2 Contract. By safely maintaining the function of Louisiana's dams, DOTD provides a crucial service to communities throughout the state. Our proposal presents our understanding of these services, example projects that demonstrate our experience and additional information to address the specific items required in the RFP. We also detail items of value that FNI provides to DOTD, including:

Proven Dam Program Experience – For this contract, we have assembled a team of experts who have worked together on dam, levee and related projects across the south. As a mid-sized engineering firm, FNI offers national technical expertise without the high overhead costs and bureaucratic hierarchy of the larger firms. We believe our track record and portfolio of related projects is second to none. FNI has extensive experience managing and coordinating multiple task orders under IDIQ contracts. Our recent experience with the Texas State Soil and Water Conservation Board (TSSWCB) and numerous other public agencies ***provides proven approaches that keep projects moving in a positive direction.***

Commitment to Client Service – Our team has a comprehensive understanding of the challenges facing the DOTD, based on our extensive history of planning, design and construction of similar projects. We have a legacy of stewardship of our clients' resources and appreciate the challenges that the State faces with respect to dam safety. We know that the DOTD demands excellence, and our project team includes technical experts to address any project which may arise as part of this IDIQ contract. Our team members recognize that frequent and effective project communication is critical to understand and achieve the project goals. As we have demonstrated on the LWI/State Projects Program (SPP) Group 2 project, the ***FNI team will work tirelessly to respond to DOTD's needs.***

Commitment to Quality – Quality is the cornerstone of our commitment to our clients and our approach includes leveraging our in-house technical experts to provide quality deliverables. Having many services in-house allows FNI to offer a comprehensive, seamless approach to any project. FNI was the first engineering firm to receive the Malcolm Baldrige National Quality Award, a prestigious recognition that awards excellence in organizational performance. This means that our staff is equipped with processes and procedures that facilitate ***responsive service and quality deliverables.***

Local Resources – Our team is specifically tailored to strike the optimum balance between full coverage of the contract requirements and responsive project management. Our decision-making structure is highly decentralized, allowing for client-centered and timely resolution of questions and issues. Jim Keith has proven his responsiveness and ability to quickly pull in appropriate resources from FNI for dam safety and public works projects. His broad water resources expertise will be backed by a deep bench of technical experts, nationally-recognized teaming partners, and local subs to serve DOTD on the wide range of projects anticipated on this contract. Our project team has local resources, with knowledge of the dams and flood risks in the region, that can be physically present to meet with DOTD staff on short notice.

Thank you again for the opportunity to submit our statement of qualifications. Please feel free to contact us with any comments or questions. We look forward to continuing to provide exceptional customer service to DOTD with this contract.

Sincerely,

Cody M. Cockroft, PE
Vice President/Principal
832-370-7603
cody.cockroft@freese.com

James Keith, PE,[TX] CFM
Vice President/Principal
214-217-2372
jim.keith@freese.com

DOTD FORM: 24-102

(Revised January 1, 2023)

PROPOSAL TO PROVIDE CONSULTANT SERVICES

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

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

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

1. Contract title as shown in the advertisement	IDIQ Contract for Dam Safety and Public Works Statewide
2. Contract number(s) as shown in the advertisement	Contract No. 4400027092
3. State Project Number(s), if shown in the advertisement	N/A
4. Prime consultant name (as registered with the Louisiana Secretary of State where such registration is required by law)	Freese and Nichols, Inc.
5. Prime consultant license number (as registered with the Louisiana Professional Engineering and Land Surveying Board (LAPELS) if registration is required under Louisiana law)	LAPELS No. EF.0000341
6. Prime consultant mailing address	900 Camp Street, Suite 354 New Orleans, Louisiana 70130
7. Prime consultant physical address (existing or to be established, if location is used as an evaluation criteria)	900 Camp Street, Suite 354 New Orleans, Louisiana 70130
8. Name, title, phone number, and email address of prime consultant's contract point of contact	Jim Keith, PE, CFM, Project Director 214-217-2372 | jim.keith@freese.com
9. Name, title, phone number, and email address of the official with signing authority for this proposal	Cody M. Cockroft, PE | Vice President / Principal 832-370-7603| cody.cockroft@freese.com

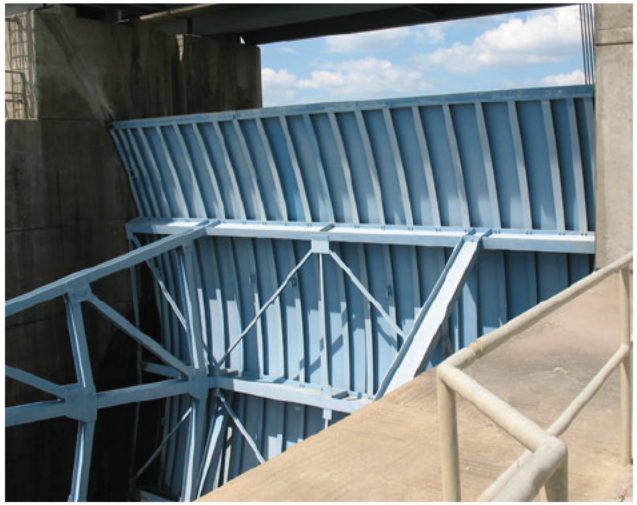
A Guide to Acronyms can be found on the last page of this document.

10. This is to certify that all information contained herein is accurate and true, and that the team presently has sufficient staff to perform these services within the designated time frame. By submitting this proposal, proposer certifies that it is not engaged in a boycott of Israel and it will, for the duration of its contract obligations, refrain from a boycott of Israel. Proposer also certifies and agrees that the following information is correct: In preparing its response, the proposer has considered all proposals submitted from qualified, potential subcontractors and suppliers, and has not, in the solicitation, selection, or commercial treatment of any subcontractor or supplier, refused to transact or terminated business activities, or taken other actions intended to limit commercial relations, with a person or entity that is engaging in commercial transactions in Israel or Israeli-controlled territories, with the specific intent to accomplish a boycott or divestment of Israel. The proposer also has not retaliated against any person or other entity for reporting such refusal, termination, or commercially limiting actions. DOTD reserves the right to reject the response of the bidder or proposer if this certification is subsequently determined to be false, and to terminate any contract awarded based on such a false response.	Signature above shall be the same person listed in Section 9: Date: June 22, 2023
11. If a Disadvantaged Business Enterprise (DBE) goal has been set for this advertisement, indicate which firm(s) will be used to meet the DBE goal and each firm(s)' percentage.	Firm(s): The Estopinal Group Firm(s)' %: 7%

SPECIALIZED DAM ENGINEERING EXPERIENCE

During the last 15 years, FNI has completed:

800+	Dam inspections and evaluations
205+	Breach analyses
115+	Probable maximum flood studies
115+	Emergency action plans
65+	Published papers, presentations, guidelines and books on dam engineering
60+	Dam rehabilitation designs
15	New dam designs



12. Past Performance Evaluation Discipline Table:

Evaluation Discipline(s)	% of Overall Contract	FNI	Dewberry	Lazenby	Nixon	Eustis	Fenstermaker	BHA	Estopinal
Other (water resource, structural, and H&H analyses and design, inspections, hazard mitigation planning, and community outreach)"	60%	55.3%	33%						11.7%
Survey	10%			25%	25%		25%	25%	
Geotech	15%	75%				25%			
CE&I/OV	10%	100%							
Environmental	5%	75%					25%		
Identify the percentage of work for the overall contract to be performed by the prime consultant and each sub-consultant.									
Percent of Contract	100%	58.2%	19.8%	2.5%	2.5%	3.8%	3%	2.5%	7%

*The past performance evaluations are: Road, Bridge, Traffic, CE&I/OV, Geotech, Survey, Environmental, Data Collection, Planning, Right-of-Way, CPM, ITS, Appraiser and Other. The crosswalk from the old categories to the new categories can be found at the link below: http://wwwsp.dotd.la.gov/Inside_DOTD/Divisions/Engineering/CCS/General%20Information/CPPR%20Crosswalk%20to%20New%20Evaluation%20Disciplines.pdf

13. Firm Size:

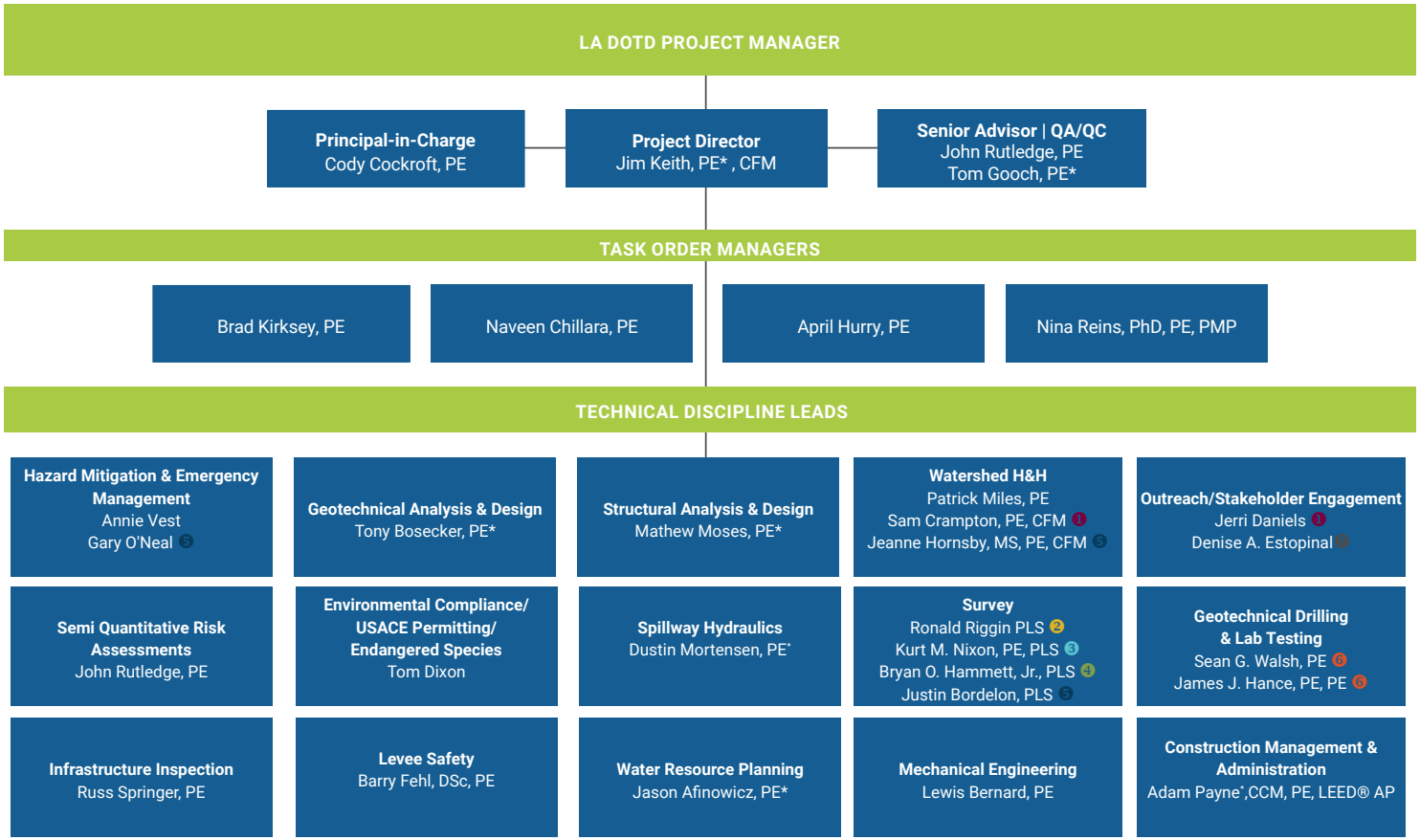
Firm Name	DOTD Job Classification	Number of personnel committed to this contract	Total number of personnel available in this DOTD Job Classification (if needed)
FREESE AND NICHOLS	Administrative	1	44
	CADD Technician	1	42
	CADD Operator	1	31
	Engineer	2	29
	Engineer Intern	4	131
	Engineer Other	6	192
	Environmental Professional	2	44
	Geologist	1	1
	GIS Analyst	1	23
	Inspector	1	123
	Project Office Manager	1	42
	Principal	2	83
	Supervisor Engineer	2	29
Dewberry	Clerical		232
	Engineer Intern		32
	Engineer		15
	Engineer Other		314
	Environmental Professional		7
	Supervisor Engineer	2	50
	GIS Analyst		95
	Principal		10
	Senior Technician		30
	Supervisor Other	1	25

Firm Name	DOTD Job Classification	Number of personnel committed to this contract	Total number of personnel available in this DOTD Job Classification (if needed)
LAZENBY & ASSOCIATES, INC.	CADD Drafter		3
	CADD Operator	1	1
	Clerical		3
	Engineer	1	6
	Engineer Intern	1	1
	Survey Instrument Man	2	2
	Survey Party Chief	2	2
	Principal	1	1
	Survey Rodman	2	2
	Supervisor Engineer		3
	Surveyor	1	1
	Inspector Certified		2
	Inspector		1
BRYANT HAMMETT & ASSOCIATES, LLC CIVIL ENGINEERING & LAND SURVEYING	Surveyor	1	2
	CADD Drafter	1	3
	Instrument Man	1	3
	Party Chief	1	2
	Rodman	1	3
	Technician	1	2
	Engineer	1	2
NIXON™ ENGINEERING SOLUTIONS	CADD Technician	1	1
	Engineer	1	1
	Instrument Man	1	1
	Party Chief	1	1
	Supervisor Engineer	1	1

Firm Name	DOTD Job Classification	Number of personnel committed to this contract	Total number of personnel available in this DOTD Job Classification (if needed)
EUSTIS ENGINEERING L.L.C. SINCE 1946	Principal	1	3
	Supervisor Eng	2	8
	Engineer	1	3
	Engineer Intern	1	2
	Engineering Aide	1	2
	Accountant	1	3
	CADD Technician	1	1
	Clerical	4	12
	Driller	2	7
	Geologist	1	3
	Inspector	6	29
	Inspector Certified	1	1
	Supervisor Other	5	10
	Technician	6	27
THE ESTOPINAL GROUP A PUBLIC COMMUNICATIONS FIRM	(Other) Strategic Communications and Community Engagement	3	5

14. Organizational Chart

Our team offers vast experience in evaluation, design, permitting and construction oversight of dams from more than 129 years of working for various clients, including international entities, federal agencies, state governments, local municipalities and private companies. ***Our depth of comprehensive and relevant dam safety and dam engineering experience comes from 2,000+ dam-related projects, including the design of 200+ new dams and 275+ major dam rehabilitation projects.*** Our team has won 20+ awards for dam-related projects within the last 20 years from organizations such as the United States Society on Dams (USSD), Association of State Dam Safety (ASDSO), American Society of Civil Engineers (ASCE), American Council of Engineering Companies (ACEC) and American Public Works Association (APWA).



*Denotes PEs licensed in a state other than LA.

Resumes for additional support staff, not shown on the organizational chart, have been included in the resume section.

Subconsultants

❶DEWBERRY ❷LAZENBY ❸NIXON ❹BHA ❺FENSTERMAKER ❻EUSTIS ❼ESTOPINAL

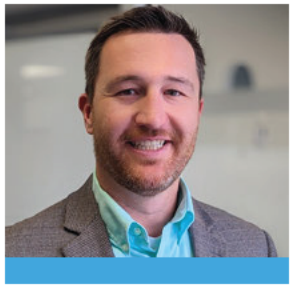
Prime Consultant Name: **FREESE AND NICHOLS, INC.**

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.	Cody Cockroft, PE	FNI	Professional Engineer PE.0037819	State of Louisiana	09/2023
2.	Cody Cockroft, PE	FNI	Professional Engineer PE.0037819	State of Louisiana	09/2023
3.	John Rutledge, PE	FNI	Professional Engineer PE.0025581	State of Louisiana	03/2024
4.	Brad Kirksey, PE	FNI	Professional Engineer PE.0046191	State of Louisiana	03/2024
5.	April Hurry, PE	FNI	Professional Engineer PE.0026384	State of Louisiana	03/2024
6.	Naveen Chillara, PE	FNI	Professional Engineer PE. 0032557	State of Louisiana	9/2024
7.	Ronald Riggin, PLS	Lazenby	Professional Land Surveyor PLS.0005119	State of Louisiana	9/2023
8.	Lewis Bernard, PE	FNI	Professional Engineer PE. 0036278	State of Louisiana	9/2023

CODY COCKROFT, PE

JOHN RUTLEDGE, PE



BRAD KIRKSEY, PE

APRIL HURRY, PE

NAVEEN CHILLARA, PE

LEWIS BERNARD, PE

Prime Consultant Name: **FREESE AND NICHOLS, INC.**

Cody Cockroft, PE | Principal-in-Charge

Freese and Nichols, Inc.			
Name	Cody Cockroft, PE	Years of experience with this firm/employer	16
Title	Vice President/Principal	Years of experience with other firm(s)/employer(s)	7
Degree(s) / Years / Specialization		BS | 2000 | Civil Engineering MS | 2006 | Engineering Management	
Active registration number / state / expiration date		Professional Engineer, Louisiana #0037819, 09/23	
Year registered	2013	Discipline	Civil Engineer

Contract role(s) / brief description of responsibilities

Principal-in-Charge | Cody Cockroft is a Vice President/Principal and one of the most experienced heavy civil design engineers in FNI's Water Resources Design practice. His comprehensive resume encompasses flood control, drainage, dam and levee engineering, stormwater and raw water canal conveyance projects. His diverse client base includes the U.S. Army Corps of Engineers (military and civil works), river authorities and water districts, drainage and flood control districts, and state, county and municipal governments.

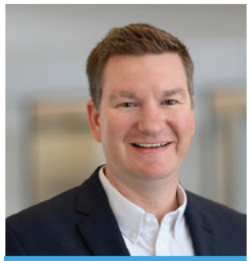
Cody has been actively engaged with various complex water resource design projects along the primary river systems of Texas, with a focus on those portions of the river along the Gulf Coast between the Lower Colorado and the Sabine. These projects involve complex alluvial and clay geostrata, pressurized groundwater and various geomorphological responses to extreme flooding and tidal influence.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
05/11-06/12	**Highlands Reservoir - Final Design | San Jacinto River Authority | Project Manager** FNI designed 15,000 LF of embankment improvements to restore a jurisdictional off-channel reservoir dam in addition to investigating related environmental issues. The project included designing 13,000 LF of hurricane-rated slope armoring and 10,000 LF of raised embankment crest, converting 8,000 LF of embankment into an earthen weir, and developing a new emergency spillway structure and two new low-flow outlets. FNI performed a detailed geotechnical analysis on the embankments which consisted of a finite element seepage analysis and sliding stability calculations for short- and long-term rapid drawdown conditions. FNI also designed and constructed an emergency spillway and two new low-flow structures (60 MGD).

Cody Cockroft, PE | Principal-in-Charge

11/18-05/20	**Toledo Bend Dam Part 12 Report | Toledo Bend Project Joint Operation | Project Manager** FNI performed a Federal Energy Regulatory Commission (FERC) inspection and report of the facilities, which is required every five years. This study included the engineering effort associated with approximately 30 outstanding FERC recommendations going back approximately 12 years.
03/13-12/15	**Industrial Reservoir Final Design | Gulf Coast Water Authority | Project Manager** FNI was contracted by the Gulf Coast Water Authority in 2009 as its Dam Safety Engineer and has continued to provide engineering design, analysis and construction management and inspection services for the Industrial Dam and Reservoir to the present day. The 9,500 acre-ft Industrial Reservoir (originally designed in the 1940's) is a dual chambered reservoir bounded by a 25,000-foot, 360-degree homogenous embankment and includes a gated emergency spillway, inlet canal emergency spillway (bleeder), two inlet structures (three, each, 72-inch diameter siphon conduits), and two outlet structures (two, each, 60-inch diameter siphon conduits). The eastern and southern embankments are incorporated into the Texas City Flood Protection Levee.In 2013, FNI was contracted by GCWA to perform the civil, structural, hydraulic and geotechnical design to rehabilitate the 70-yr old structure. This included: a detailed geotechnical analysis of critical sections of the embankment (slope stability, seepage analysis, and filter design), two new gated inlet siphon structures (and siphons), two new gated discharge siphon structures which required USACE approved filter design, various new energy dissipating structures, crest raising, realignment of the discharge canal (to maximize stability of the southern embankment) ,and a new uncontrolled emergency spillway at the terminus of the inlet canal. FNI coordinated the analyses, designs, and the permitting with TCEQ and the Galveston District and Tulsa District Corps of Engineers. FNI designed the contractor's ingress and egress plan, Care of Water Plan (surface water and groundwater) and led the procurement phase services with a Competitive Sealed Proposal strategy.
07/12-06/13	**Lake Conroe Dam Spillway | San Jacinto River Authority | Project Manager** FNI provided a detailed inspection of the five-gate emergency spillway, service spillway and stoplog system using high-angle rope–qualified inspectors and procedures as needed. FNI developed a structural model of the gates and a design-strengthening measure for any gates that appeared to be overstressed. FNI also provided inspection of the ogee crest spillway and slope pavement of the concrete-lined service spillway outlet and discharge channel.
12/08-09/09	**Dam Safety Inspections | Texas Commission on Environmental Quality | Project Engineer |** FNI performed dam safety inspections for 419 high- and significant-hazard dams during a seven-year period as part of three service contracts with the TCEQ. Multiple inspection teams consisting of approximately 12 FNI staff members and a subcontracted engineering firm performed the safety inspections. FNI met all of the TCEQ's report deadlines, many of which were fast-paced.

Jim Keith, PE*, CFM | Project Director



Freese and Nichols, Inc.			
Name	James (Jim) Keith, PE*, CFM	Years of experience with this firm/employer	10
Title	Principal/Vice President	Years of experience with other firm(s)/employer(s)	12
Degree(s) / Years / Specialization		BS | 2000 | Hydrology and Water Resources	
Active registration number / state / expiration date		Professional Engineer, Texas #105043, 09/23 Certified Floodplain Manager #0608-04N	
Year registered	2009	Discipline	Civil Engineer

Contract role(s) / brief description of responsibilities

Project Director | As Project Director, Jim will be the primary point of contact with DOTD for all projects arising from this contract, and will work with DOTD to identify the appropriate Task Order Manager to manage and deliver each specific Task Order. This mirrors the successful approach FNI recently took with the Cheniere Dam emergency repairs, where Jim acted as primary point of contact and directed FNI resources to engage with DOTD staff.

Jim is an FNI Principal/Vice President and has more than two decades of technical and managerial experience in water resources planning and design projects, having led large-scale watershed modeling and mapping projects in Louisiana. He has extensive experience in 1D and 2D hydraulic analyses using the HEC suite of software, as well as dam design and rehabilitation. Jim is currently serving as Project Manager for the LWI Region 2 Modeling Contract with DOTD.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
07/20 - Ongoing	**LWI Region 2 Modeling | DOTD | Project Manager** Jim oversees a robust team, including five watershed team leads and seven subconsultants. FNI is developing large-scale H&H models to create a statewide watershed-based floodplain management program. The five-year, $18 million contract involves the development of calibrated HEC-RAS models for use in consequence and risk assessment. Region 2 is made up of nine HUC-8 watersheds covering approximately 9,500 square miles in the north central part of the state.
10/20 - Ongoing	**LWI/SSP Group 2| DOTD | Principal-In-Charge** FNI is providing professional services on five dams within the LADOTD's Louisiana Watershed Initiative/State Projects Program (LWI/SPP) Group Two. Project objectives are to reduce/mitigate recurrent flooding and reduce the risk of catastrophic dam failure by modifying the structures to comply with current dam safety standards.

Jim Keith, PE*, CFM | Project Director

11/19-05/21	**Floodplain Program Management Assistance - Dam Safety | City of Dallas, TX | Senior Advisor** Jim provided senior oversight related to the overall goals of the program and supporting implementation of the dam safety activities primarily relating to stakeholder engagement. FNI is providing comprehensive dam safety program services supporting 11 City-owned dams with various analyses, assessments, and workshops. The project coordinates funding from three separate City departments - Dallas Water Utilities, the Storm Drain Management Fund and the Park and Recreation Department to analyze the spectrum of City-ownwed dams equally and to put forth a consistent dam safety message. A portion of the project will be funded via the new high hazard potential dams grant program from FEMA. Prior to the start of this project, FNI assisted the City in securing this grant funding. Public outreach will be included with two major project tasks: following updates to the City-wide emergency action plan (EAP) with the purpose of public education regarding dam safety; and as a fundamental component of a dredging feasibility study for White Rock Lake, a key recreational asset for the City. Additional project tasks include a spillway capacity analysis, a potential failure modes analysis, inspection training, an EAP tabletop exercise and an instrumentation review.
09/19-04/21	**Six Flood Retarding Structure (FRS) Rehabilitations | Texas State Soil and Water Conservation Board | Independent Technical Review** Jim was responsible for independent technical review of the model results pertaining to FEMA mapping impacts. FNI performed alternatives analyses, geotechnical investigations, environmental permitting and dam rehabilitation design for six dams in Texas. Each dam site had their own technical and project specific challenges, but the scope and scale of the overall program presented time constraint, management and production challenges. The project was managed over a compressed 18-month design timeline. The work production was performed by six separate design teams. Standard internal technical processes and standardized templates for both reporting and CAD designs were established at the program level, so that efficiency and uniformity could be achieved. The project includes coordination with TSSWCB (Client), NRCS-Texas, NRCS NDC-SMC, TCEQ, and Local Sponsor Organizations.
10/02-11/03	**French Lake Dam Emergency Repair and Downstream Study* | Fort Worth Water, TX | Assistant Project Manager** FNI is responbile for this project involved sizing a new spillway for French Lake Dam, a small structure located in a park in southwest Fort Worth. The HEC-1 program was used to calculate the in-stream flows, and HEC-RAS was used to model the effects of a dam breach on the downstream reach using unsteady flow analysis. Jim used the results of the analysis to size a new outlet structure for the dam and assisted the City in developing an EAP for the dam.

Nina Reins, PhD, PE, PMP |
Task Order Manager

Freese and Nichols, Inc.			
Name	Nina Reins, PhD, PE, PMP	Years of experience with this firm/employer	5
Title	Engineer VII	Years of experience with other firm(s)/employer(s)	16
Degree(s) / Years / Specialization		BS | 2001 | Structural/ Civil Engineering MS | 2005 | Civil and Environmental Engineering PhD | 2018 | Engineering and Applied Science	
Active registration number / state / expiration date		Professional Engineer, Louisiana #0033749, 09/24	
Year registered	2008	Discipline	Environmental Engineer

Contract role(s) / brief description of responsibilities

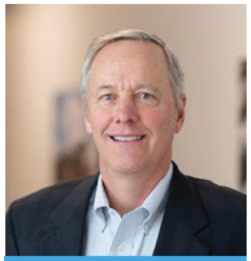
Task Order Manager | Nina Reins is a Senior Environmental Engineer with expertise in project and program management as well as coastal, civil, and environmental engineering. In her work as a coastal project manager, she handles all external and internal coordination and reporting, schedule and budget tracking, invoicing and manages all subcontractors. Nina has extensive experience in the processing of Joint Permit Applications for various types of work within the Louisiana Coastal Zone. She is a skilled technical writer and excels at presenting scientific data for both technical and public audiences. Nina regularly presents and moderates at coastal conferences and continues to serve on the selection committee for the State of the Coast Conference.

As part of her master's thesis, she performed an in-depth sediment analysis in the vicinity of the Old River Control Complex (published in 2010) which was based on USACE sediment data. With a dissertation focus on sediment analysis of the Lower Mississippi River, Nina just successfully defended her Ph.D. in Engineering and Applied Sciences at the University of New Orleans and is working on modifying the CHARIMA code with the goal of improving the sediment calculations for Lower Mississippi River produced by CHARIMA.

Nina Reins, PhD, PE, PMP |
Task Order 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).
06/22-12/23	**Dallas Floodway 277K Levee Raise | Kiewit Engineering Group Inc. | Project Engineer** As a subconsultant, FNI is providing support for the USACE Dallas Floodway 277K Levee project, which addresses several regional concerns with a focus on flood risk reduction for the citizens of Dallas. FNI's services include flood protection system design; hydraulic design; interior drainage analysis; topographic survey; geotechnical investigation; levee seepage, stability and settlement analyses; and structural design. Dr. Fehl provided input to the cost proposal and project schedule development as well as insight to the design-build aspects of the project.
11/19-09/22	**S2G Orange Coastal Storm Risk Management | U.S. Army Corps of Engineers - Fort Worth District | Project Manager** As a joint venture (JV) lead, FNI provided coastal engineering services and construction materials acquisition planning, which encompassed levee, floodwall and pump station infrastructure, to support a $1.9 billion USACE hurricane flood damage reduction project in Orange County, Texas. The JV team delivered preliminary geotechnical, civil, mechanical, electrical and structural engineering design services for the 3.3-mile Orange County segment.
04/18-Ongoing	**Lake Ralph Hall and Leon Hurse Dam | Upper Trinity Regional Water District | Project Team** FNI designed the new Leon Hurse Dam, a 2.3-mile-long, 108-foot-tall zoned earthen embankment dam, which will form Lake Ralph Hall. The $150 million facility includes a new roller compacted concrete and cast-in-place concrete spillway with a labyrinth weir overflow section, new excavated earthen emergency spillway, new pump station intake and low flow outlet structure with nine sluice gates, as well as approximately 6,500 feet of stream mitigation and restoration downstream of the dam.

John Rutledge, PE | Senior Advisor | QA/QC



Freese and Nichols, Inc.			
Name	John Rutledge, PE	Years of experience with this firm/employer	38
Title	Lead Technical Professional	Years of experience with other firm(s)/employer(s)	0
Degree(s) / Years / Specialization		MS | 1985 | Water Resources Engineering BS | 1983 | Civil Engineering	
Active registration number / state / expiration date		Professional Engineer, Louisiana #0025581, 03/24	
Year registered	1994	Discipline	Civil Engineer

Contract role(s) / brief description of responsibilities

Senior Advisor | QA/QC | As Senior Advisor, John will serve as the QA/QC Lead for the project, providing oversight and direction on the project's quality control and quality assurance activities. He will also provide continual technical assistance and oversight for the project manager and project team throughout the project.

John is a nationally recognized water resources professional with extensive experience in both large basin flood modeling and the design of dams, spillways and related hydraulic and riverine structures. His experience has focused on all aspects of hydraulic structures, from the H&H model for large basins to the civil and hydraulic design of dams and spillways. He has been engineer-of-record or lead engineer for the design of more than $400 million of construction for dams, levees and spillways, including new structures and rehabilitation projects. He has also served as a Senior Advisor for the design of numerous dam and levee construction and rehabilitation projects totaling more than $250 million. John currently serves as the Lead Technical Professional for the Water Resources Design Practice at FNI, making him the companywide expert on the subject.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
02/17-04/18	**Lewis Creek Spillway Design | APTIM Environmental & Infrastructure, Inc | Senior Advisor** John was senior advisor for the design and construction phase services for the project. FNI performed complete design and is performing construction oversight and administration. Project includes a new piano key spillway, new piezometers and relief wells and new spillway chute slabs and walls.

John Rutledge, PE | Senior Advisor | QA/QC

11/13-Ongoing	**Bois d'Arc Lake Water Supply Program | North Texas Municipal Water District | Project Manager** John was the project manager for the design and general representation of the client during construction of the $175 million dam and spillway component of the project. The 2-mile long zoned embankment dam had a maximum height of 90 feet and contained 5.5 million cubic yards of compacted fill. The spillway is a 60-foot-wide 3-cycle labyrinth spillway with an 875-foot-long chute and stilling basin. The project also includes soil cement slope protection, a soil bentonite slurry trench, a 1,500-foot-wide emergency spillway, and an eight gate intake tower that feeds two 72-inch pipes connecting to the 236-MGD pump station at the toe of the dam. Since 2003, FNI has partnered with NTMWD to permit and build a new $1.6 billion water supply system, continuously providing multidiscipline services comprising program management, water rights permitting, project management, design and construction management services to support the development of the reservoir.
04/18-Ongoing	**Lake Ralph Hall and Leon Hurse Dam | Upper Trinity Regional Water District, TX | Project Manager and Senior Advisor** John was the project manager for the conceptual design and senior advisor for the final design of the dam and spillway. FNI designed the new Leon Hurse Dam, a 2.3-mile-long, 108-foot-tall zoned earthen embankment dam, that will form Lake Ralph Hall. The $150 million facility includes a new 705-foot-long, 104-foot-tall RCC and CIP concrete spillway with a 120-foot-wide labyrinth weir overflow section, a new 1,700-foot-wide excavated earthen emergency spillway, a new pump station intake and low flow outlet structure.

Tom Gooch, PE* | Senior Advisor | QA/QC

Freese and Nichols, Inc.			
Name	Tom Gooch, PE*	Years of experience with this firm/employer	42
Title	Lead Technical Professional	Years of experience with other firm(s)/employer(s)	4
Degree(s) / Years / Specialization		BS | 1977 | Civil Engineering (Water Resources) BS | 1977 | Humanities and Science (Literature) MS | 1978 | Civil Engineering (Water Resources)	
Active registration number / state / expiration date		Professional Engineer, Texas #50668, 12/23	
Year registered	1982	Discipline	Civil Engineer

Contract role(s) / brief description of responsibilities

Senior Advisor | QA/QC | Tom Gooch has been involved in regional water planning in Texas since the program's inception and has provided leadership for FNI's involvement in the development of water supply plans for nine of the state's 16 planning regions. An FNI Vice President/Principal and the firm's Water Resources Planning Lead Technical Professional, Tom's background covers water supply planning, analyses of water rights, reservoir operation studies, water quality evaluations, analyses of flooding, preliminary design and cost estimates for water supply projects and transmission systems, economic analyses, and water and sewer rate studies. He has assisted multiple clients with the development and implementation of water conservation and drought response plans.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
06/79-Ongoing	**Water Supply Planning Assistance | North Texas Municipal Water District | Project Manager** FNI has provided ongoing water supply planning assistance to the District for more than four decades. FNI's planning strategies evolve as the District's needs change over time to include both short- and long-term solutions to sustain existing water supply and develop new sources to meet future demand. Planning efforts focus on complex water supply issues from initial planning and selection through implementation.

Tom Gooch, PE* | Senior Advisor | QA/QC

12/98-01/01	**SB I Region C | North Texas Municipal Water District | Project Manager** FNI is consulting for regional water planning covering the Dallas/Fort Worth Metroplex and surrounding counties. Development of population and water use projections, analysis of existing supplies and development of long-range water supply plans. Plans are updated every five years – completed four plans and working on the fifth.
05/19-Ongoing	**Bois d'Arc Lake Permitting and Environmental Mitigation | North Texas Municipal Water District | Project Team** FNI supported federal Section 404 permitting for Bois d'Arc Lake, including an alternatives analysis for Texas' first reservoir in 30 years. After the permit was granted, FNI supported the NTMWD staff to make data-informed operational decisions related to the operation, including a TCEQ-approved accounting plan and an operation manual, as well as incorporating Bois d'Arc Lake into the District's overall raw water system model.
11/13-Ongoing	**Bois d'Arc Lake Water Supply Program | North Texas Municipal Water District | Senior Advisor** FNI has partnered with NTMWD since 2003 to permit and build a new $1.6 billion water supply system, providing multidisciplinary services, such as program management, water rights permitting, project management, and design and construction management services to support the reservoir's development. Significant projects include 17,000 acres of environmental mitigation, 2 mile earthen dam, spillway and outlet structures, 420-MG terminal storage reservoir, 236-MGD raw water intake and pump station, 330-MGD high-service pump station and 60 miles of large-diameter raw and treated water pipelines.
04/21-Ongoing	**Long Range Water Supply Plan | North Texas Municipal Water District | Senior Advisor** FNI is providing a comprehensive plan to identify and evaluate long-range water supply options, build on and update existing studies, and incorporate recommendations into the CIP.

Brad Kirksey, PE | Task Order Manager

Freese and Nichols, Inc.			
Name	Brad Kirksey, PE	Years of experience with this firm/employer	14
Title	Associate	Years of experience with other firm(s)/employer(s)	0
Degree(s) / Years / Specialization		MS | 2009 | Civil Engineering - Water Resources BS | 2007 | Civil Engineering - Water Resources	
Active registration number / state / expiration date		Professional Engineer, Louisiana #0046191, 03/24	
Year registered	2021	Discipline	Civil Engineer

Contract role(s) / brief description of responsibilities

Task Order Manager | Brad is a firm Associate and Project Manager/Engineer in FNI's Water Resources Design Group. Brad's experience consists of the study, inspection, design, and rehabilitation of water resources facilities, including earthen embankment dams, concrete gravity dams, dam outlet works, flow control valves, and large outlet works gates. He is also experienced in the development of plans and specifications and in construction phase services.. Brad was responsible for overseeing the design of more than $200 million in dam rehabilitations and new dam construction.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
09/19-04/21	**Six Flood Retarding Structure (FRS) Rehabilitations | Texas State Soil and Water Conservation Board | Project Manager** FNI performed alternatives analyses, geotechnical investigations, environmental permitting and dam rehabilitation design for six dams in Texas. Each dam site had their own technical and project specific challenges, but the scope and scale of the overall program presented time constraint, management and production challenges. Brad was the project manager responsible for meeting an 18-month design timeline. With such a compressed timeline, Brad led a centralized project management and quality control team to lead the overall design program for all of the dams. The work production was then performed by six separate design teams, all under Brad's mangement. Standard internal technical processes and standardized templates for both reporting and CAD designs were established at the program level, so that efficiency and uniformity could be achieved.

Brad Kirksey, PE | Task Order Manager

10/20-Ongoing	**LWI/SSP Group 2| DOTD | Project Manager** FNI is providing professional services on five dams within the LADOTD's Louisiana Watershed Initiative/State Projects Program (LWI/SPP) Group Two. Project objectives are to reduce/mitigate recurrent flooding and reduce the risk of catastrophic dam failure by modifying the structures to comply with current dam safety standards.
04/18-Ongoing	**Lake Ralph Hall and Leon Hurse Dam | Upper Trinity Regional Water District, TX | Project Manager** Brad was responsible for managing the more than 50 people required to successfully complete this design. He successfully managed workload stresses and client requirements, all while ensuring the production of a quality project. FNI designed the new Leon Hurse Dam, a 2.3-mile-long, 108-foot-tall zoned earthen embankment dam, that will form Lake Ralph Hall. The $150 million facility includes a new 705-foot-long, 104-foot-tall roller compacted concrete (RCC) and cast-in-place (CIP) concrete spillway with a 120-foot-wide labyrinth weir overflow section, a new 1,700-foot-wide excavated earthen emergency spillway, a new pump station intake and low flow outlet structure with nine 7-foot by 7-foot sluice gates, as well as approximately 6,500 feet of stream mitigation and restoration downstream of the dam.
11/19-05/21	**Floodplain Program Management Assistance - Dam Safety | City of Dallas, TX | PFMA Facilitator** Brad was responsible for facilitating a Potential Failure Modes Analysis for White Rock Lake Dam which included industry dam safety experts and client personnel familiar with the site. FNI is providing comprehensive dam safety program services supporting 11 City-owned dams with various analyses, assessments, and workshops. The project coordinates funding from three separate City departments - Dallas Water Utilities, the Storm Drain Management Fund and the Park and Recreation Department to analyze the spectrum of City-owned dams equally and to put forth a consistent dam safety message. A portion of the project will be funded via the new high hazard potential dams grant program from FEMA. Prior to the start of this project, FNI assisted the City in securing this grant funding. Public outreach will be included with two major project tasks: following updates to the City-wide emergency action plan (EAP) with the purpose of public education regarding dam safety; and as a fundamental component of a dredging feasibility study for White Rock Lake, a key recreational asset for the City. Additional project tasks include a spillway capacity analysis, a potential failure modes analysis, inspection training, an EAP tabletop exercise and an instrumentation review.

Naveen Chillara, PE | Task Order Manager

Freese and Nichols, Inc.			
Name	Naveen Chillara, PE	Years of experience with this firm/employer	4
Title	Engineer VI	Years of experience with other firm(s)/employer(s)	17
Degree(s) / Years / Specialization		BS | 1999 | Civil Engineering MS | 2005 | Environmental Engineering	
Active registration number / state / expiration date		Professional Engineer, Louisiana #0032557, 09/24	
Year registered	2006	Discipline	Civil Engineer

Contract role(s) / brief description of responsibilities

Task Order Manager | Naveen Chillara is an FNI Associate and Project Manager in the Water Resources Design Group. He has extensive experience in water resources projects and has led large civil works projects that include the design of navigation locks, river diversion structures, raw water intake pumping stations, flood walls and levees. Naveen has flood protection experience in the rebuilding effort of the City of New Orleans post-Hurricane Katrina and coastal restoration in Louisiana. His work includes coordinating and conducting planning studies, performing detailed design and analysis of hydraulic structures and developing construction plans and specifications.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
04/21-Ongoing	**Shannon Pump Station | Gulf Coast Water Authority | Project Manager** Naveen serves as the Project Manager leading the team in performing design of cofferdam, river training features, pump intake and electrical building. His responsibilities include guiding his team through risk informed design process, obtain buy-in from stakeholders, optimize costs by recommending informed decisions by engagement of operation and maintenance personnel. The project includes bimonthly updates to project management plan, regular updates to Decision Matrix and maintaining a running action item lists.

Naveen Chillara, PE | Task Order Manager

11/18-03/21	**Lakeside River Plant Bank Stabilization | Lower Colorado River Authority | Project Manager** FNI provided design services for performing the bank stabilization repairs for a raw water intake pumping station. Naveen served as a project manager, developed alternatives to address the bank failures, performed the design of the riprap bank stabilization measures along with sheet pile to provide address geotechnical global stability. Naveen was the Engineer-of-record for the project.
11/19-12/20	**Shannon Pumping Plant Feasibility Study | Gulf Coast Water Authority | Project Manager** Naveen served as the project manager in developing the study to evaluate alternatives to rehabilitate the facility that is over 100 years in service. He led the study for site selection, intake alternatives, cofferdam alternatives and bank stabilization features. The project included development of conceptual level designs, alternative analysis, development of selection criteria, quantity and cost estimates
10/18-12/20	**Levee Improvements Feasibility Study | ExxonMobil Company | Assistant Project Manager** FNI performed a feasibility study to evaluate options for expanding the flood protection system for the entire refining facility. The feasibility study included developing alternatives and recommending preferred alignment for the flood protection system, two alternatives for the type of protection (e.g., technologies), an Opinion of Probable Construction Costs including quantities and cost estimates based on concept-level engineering, and anticipated construction methodology and schedule.

April Hurry, PE | Task Order Manager

Freese and Nichols, Inc.			
Name	April Hurry, PE	Years of experience with this firm/employer	2
Title	Engineer VII	Years of experience with other firm(s)/employer(s)	26
Degree(s) / Years / Specialization		BS | 1990 | Civil Engineering MS | 2002 | Civil Engineering Master of Public Policy | 2019 | Energy and Environmental Policy	
Active registration number / state / expiration date		Professional Engineer, Louisiana #0026384, 03/24	
Year registered	1995	Discipline	Civil Engineer

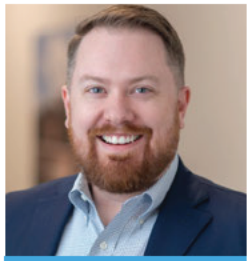
Contract role(s) / brief description of responsibilities
Task Order Manager | April Hurry is a civil and structural engineer and Project Manager in the firm's Western Gulf Coast Water Resources Design Group. April's experience includes design and construction of large civil works projects, including hurricane flood protection projects. She has extensive experience designing stormwater pumping station fronting protection, floodwalls, floodgates, stormwater drainage systems and levees. Prior to joining FNI, April was involved in New Orleans' post-Katrina recovery and flood risk-reduction projects.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
04/21-Ongoing	**Shannon Pump Station | Gulf Coast Water Authority | Site Civil Engineer** FNI is providing preliminary and final design services for GCWA's flagship five-bay pumping plant with a firm capacity of 180 MGD, a proposed design capacity of 240 MGD and a future firm capacity of 300 MGD. FNI visited several pumping plants, conducted a series of workshops and utilized a criteria matrix to determine the preferred alternative. With the feasibility study recommending a new facility, FNI is leading the pump station design, bank stabilization design, USACE permitting and construction management. April is leading the site civil design, including site layout, access roads, closed cell approach walls, discharge channel modifications, cofferdams and construction sequencing.

April Hurry, PE | Task Order Manager

10/19-Ongoing	**Mustang Reservoir Final Design	Gulf Coast Water Authority	Assistant Project Manager** FNI provided final design services for the Mustang Reservoir to raise the embankment height, flatten and protect the side slopes of more than eight miles of the embankment. The project also replaces outdated outlet and equalizer structures and provides two new uncontrolled spillways to meet the TCEQ's dam safety requirements. April is providing client communication, care of water requirements and review of project drawings and specifications.
06/20-Ongoing	**PAV03A S2G Port Arthur CSRM	U.S. Army Corps of Engineers - Fort Worth District	Civil Engineer** FNI is leading a multidisciplinary joint-venture team to design the levee and floodwalls for two segments of a 5.5-mile hurricane protection system in Port Arthur and its vicinity. FNI is the design lead for Zones 1 and 3, which includes raising 8,656 LF of levee, 3,324 LF of new floodwall, road crossing over the top of a levee, and fronting protection for two pump stations. April is on the Independent Technical Review team, reviewing each submittal to provide confirmation that proper design criteria and engineering procedures have been applied.
01/21-Ongoing	**Devers Pump Station Final Design	Lower Neches Valley Authority	Site Civil Engineer** FNI provided final design and procurement services for a new pump station and associated appurtenances for the Devers 1st Pump Station facility. The design accounts for five pumps at 40,000 GPM to create an ultimate capacity of 200,000 GPM. FNI is also providing cost estimation and preliminary engineering services for alternative pump station configurations.

Patrick Miles, PE | Watershed H&H



Freese and Nichols, Inc.			
Name	Patrick Miles, PE	Years of experience with this firm/employer	14
Title	Associate	Years of experience with other firm(s)/employer(s)	0
Degree(s) / Years / Specialization		BS | 2008 | Civil Engineering	
Active registration number / state / expiration date		Professional Engineer, Louisiana #0041886	
Year registered	2017	Discipline	Civil Engineer

Contract role(s) / brief description of responsibilities

Watershed H&H| Patrick Miles is an FNI Associate and serves as FNI's Water Resources Design Group H&H Lead. He specializes in H&H modeling for dams, levees, canals and spillways as part of dam safety assessments, rehabilitation design, PMF analyses and dam breach analyses. Patrick supports dam owners and regulatory agencies across the central and southeast U.S. to assess, maintain and rehabilitate their critical infrastructure, evaluate dam and levee safety risks and strengthen emergency preparedness. His H&H modeling abilities include extensive HEC-RAS experience extending to all components of 1D and 2D flow and utilizing corresponding GIS applications for model development, consequence assessment and map production. Applications of these modeling efforts consist of evaluating existing dams, analyzing proposed dam modifications, assessing spillway performance and design of new dams and reservoirs, and mapping flood hazards in large riverine environments. For the past seven years, Patrick has been the lead instructor for HEC-RAS 2D dam safety training seminars throughout Texas, Oklahoma, Georgia and North Carolina, as well as nationally through ASDSO for the past four years.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
07/20 - Ongoing	**Watershed Rehabiltation Plans | Watershed Rehabiltation Plans | H/H Engineer** Patrick helped prepare Supplemental Watershed Plans for two high-hazard dams as part of the NRCS' Watershed Rehabilitation Program. Work included conducting public meetings, performing H&H analyses (HEC-RAS and HEC-FDA), analyzing bathymetric surveys, preparing land-rights work maps, and developing rehabilitation alternatives and project cost estimates, as well as coordinating geotechnical analyses and environmental evaluations.

Patrick Miles, PE | Watershed H&H

11/19-05/21	**Bois d'Arc Lake Water Supply Program | North Texas Municipal Water District | H/H Engineer** Patrick developed a calibrated hydrologic model using HEC-GeoHMS, and HEC-HMS and an unsteady-flow hydraulic model using GeoRAS and HEC-RAS in order to model the proposed Bois d'Arc Lake dam. He evaluated standard flood events and the Probable Maximum Flood by utilizing HMR-52 and the State criteria for design of dams.
09/19-04/21	**Dam Assessment Study | Colorado River Municipal Water District | H/H Engineer** Site visits to each of 12 CRMWD dams, conducting dam inspections and developing hydrologic models and unsteady-flow hydraulic models to perform the multiple dam breach analyses and emergency action plans.
10/02-11/03	**Texas Dam Assessments | Natural Resources Conservation Service - Texas | Project Team** FNI provided planning assessments for 44 small/intermediate-sized dams with low-, significant- and high-hazard classifications throughout Texas and worked with Natural Resource Conservation Service (NRCS) staff and local sponsors in 13 counties. The assessment was used by local sponsors and the NRCS to evaluate costs and prioritize future projects as part of the NRCS' Watershed Rehabilitation Program. FNI's services included dam safety inspections, H&H analyses of using SITES program, breach analyses and inundation mapping, risk assessments, and development of rehabilitation alternatives and cost estimates.

Tony Bosecker, PE* | Geotechnical Lead

Freese and Nichols, Inc.			
Name	Tony Bosecker, PE*	Years of experience with this firm/employer	33
Title	Associate	Years of experience with other firm(s)/employer(s)	2
Degree(s) / Years / Specialization		BS | 1986 | Civil Engineering BS | 1988 | Geology	
Active registration number / state / expiration date		Professional Engineer, Texas #80158, 12/23	
Year registered	1995	Discipline	Civil Engineer

Contract role(s) / brief description of responsibilities

Geotechnical Lead | Tony Bosecker is an FNI Associate in FNI's Water Resources Group and one of the firm's highly qualified Geotechnical Engineers. His comprehensive geotechnical background includes dam inspections and rehabilitation, levee certifications, waste management facilities, earthwork, site development and stormwater drainage improvements. He is experienced in planning and coordinating geotechnical investigations, geotechnical analysis and site compatibility studies, permit applications, plans and specifications, construction phase services and closure plans.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
11/13-Ongoing	**Bois d'Arc Lake Water Supply Program | North Texas Municipal Water District | Geotechnical Engineer** FNI has partnered with NTMWD since 2003 to permit and build a new $1.6 billion water supply system, providing multidisciplinary services, such as program management, water rights permitting, project management, and design and construction management services to support the reservoir's development. Significant projects include 17,000 acres of environmental mitigation, 2 mile earthen dam, spillway and outlet structures, 420-MG terminal storage reservoir, 236-MGD raw water intake and pump station, 330-MGD high-service pump station and 60 miles of large-diameter raw and treated water pipelines.

Tony Bosecker, PE* | Geotechnical Lead

09/03-08/09	**Wheeler Branch Dam and Raw Water Pump Station | Somervell County Water District TX | Geotechnical Engineer** $17.2 million project including the Wheeler Branch Dam and Reservoir, the Paluxy River channel dam, the raw water pump station and the two-mile, 36-inch Wheeler Branch pipeline.
04/04-05/06	**Eagle Mountain Connection-Pipeline | Tarrant Regional Water District | Geotechnical Engineer** FNI designed the $139-million Eagle Mountain Connection Project that enables the Tarrant Regional Water District (TRWD) to meet increasing customer demands. This project was awarded the 2008 Gold Medal for Engineering Excellence from the Texas Council of Engineering Companies.
02/17-03/18	**Lewis Creek Spillway Design | APTIM Environmental & Infrastructure Inc. | Geotechnical Engineer** FNI performed analysis, design, and construction oversight and administration for repairs to the Lewis Creek Dam spillway, which had been exhibiting signs of distress. The design included a new piano-key weir, one of the first of its kind in the nation, as well as new piezometers, relief wells, spillway chute slabs and sheet pile walls. Due to its urgency, FNI fast-tracked the project, completing it within one year.

Mathew Moses, PE* | Structural Lead

Freese and Nichols, Inc.			
Name	Mathew Moses, PE*	Years of experience with this firm/employer	13
Title	Associate	Years of experience with other firm(s)/employer(s)	21
Degree(s) / Years / Specialization		MS | 1993 | Structural Engineering BS | 1991 | Civil Engineering	
Active registration number / state / expiration date		Professional Engineer, Texas #104462, 09/23	
Year registered	2009	Discipline	Civil Engineer

Contract role(s) / brief description of responsibilities

Structural Lead | Mathew Moses is a firm Associate and specialist in civil and structural engineering. His background includes detailed inspection, analysis and design of dams and related reinforced concrete, steel, masonry and timber structures. His specialized experience includes roller-compacted concrete (RCC) dam design, hydraulic and structural design, dam safety inspections, site investigations, pipeline inspections, concrete structure rehabilitation, and construction supervision and management.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
02/17-04/18	**Lewis Creek Spillway Design | APTIM Environmental & Infrastructure, Inc. | Project Manager** Mathew served as Project Manager and Engineer-of-record responsible for the replacement of an existing reinforced concrete ogee, chute and stilling basin as a result of slab heave and instability. The project included cellular cofferdam construction, demolition of existing spillway tainter gates, hoists and bridge deck, chute and stilling basin slab and wall replacement, new piano key weir, soil anchors, and new piezometers and relief wells. FNI performed complete design and is performing construction oversight and administration.

Mathew Moses, PE* | Structural Lead

04/18-Ongoing	**Lake Ralph Hall and Leon Hurse Dam | Upper Trinity Regional Water District, TX | Senior Structural Engineer** Mathew provided technical review and direction for RCC mix design and structural design of the new RCC dam, labyrinth weir and concrete spillway. FNI designed the new Leon Hurse Dam, a 2.3-mile-long, 108-foot-tall zoned earthen embankment dam, that will form Lake Ralph Hall. The $150 million facility includes a new 705-foot-long, 104-foot-tall RCC and CIP concrete spillway with a 120-foot-wide labyrinth weir overflow section, a new 1,700-foot-wide excavated earthen emergency spillway, a new pump station intake and low flow outlet structure with nine 7-foot by 7-foot sluice gates, as well as approximately 6,500 feet of stream mitigation and restoration downstream of the dam.
06/20-Ongoing	**Phase 1 – Lake Houston Dam Spillway Improvement Project | Coastal Water Authority (CWA), TX | Senior Structural Advisor** Mathew was responsible for reviewing and evaluating structural modifications to the existing dam, including adding concrete mass within the cells of the arch-buttress sections for stability, structural modifications to satisfy stress requirements, and replacement of spillway gates. FNI is serving as a Technical Advisor will be to advise and assist CWA throughout the project. This will consist of attending identified meetings, reviewing identified deliverables in draft form, and consulting with another consultant and their project team on the issues reviewed with respect to the safety of the existing dam and the feasibility of the proposed modifications. The initial phase will consist of assistance with the portions of the project already authorized. Continued assistance future phases of the project will be defined as they are authorized. The intent of the scope is to provide all the assistance requested and desired by CWA.
08/10-10/14	**Big Creek Bypass Drop Inlet Structure | Fort Bend County, TX | Lead Structural Engineer** Mathew was responsible for helical anchor layout and structural slab design. FNI provided the $3.5 million rehabilitation of a large, gated drop structure within a channelization project. The spillway and stilling basin can discharge up to 12,000 cubic feet per second and required emergency repair following a moderately sized storm even in the summer of 2010. Originally designed by others, the structure failed due to the hydraulic inadequacies of the existing stilling basin, which resulted in a 400-cubic yard hole measuring approximately 50-feet in diameter by 13-feet deep beneath the reinforced concrete discharge conduits. The hole created instability to the 50-feet-tall berm, which is where the conduits were founded. The scope of work included the design of an earth retention system; a pressure relief system; an anchoring system, including specialty piles beneath the basin; and dewatering considerations. FNI also oversaw the successful implementation of the repairs by the Owner's staff.

Annie Vest | Hazard Mitigation Lead

Freese and Nichols, Inc.			
Name	Annie Vest	Years of experience with this firm/employer	1
Title	Urban Planner	Years of experience with other firm(s)/employer(s)	12
Degree(s) / Years / Specialization		MA, Ball State University, Executive Development for the Public Sector MA, Ball State University, Adult and Community Education BS, Northwest Missouri State University, Psychology and Disaster Management	
Active registration number / state / expiration date		N/A	
Year registered	N/A	Discipline	N/A

Contract role(s) / brief description of responsibilities

Hazard Mitigation Lead | Annie Vest is a Mitigation and Disaster Planning Lead who has extensive, real-world experience in hazard mitigation, pre and post-disaster, and emergency management. She leads our hazard mitigation and disaster recovery planning services and support our clients in identifying and pursuing mitigation funding solutions through her in-depth knowledge of FEMA's Hazard Mitigation Grant Program (HMGP), Building Resilient Infrastructure and Communities, and Flood Mitigation Assistance programs. Her experience bridges a broad range of disciplines including stormwater, water resources, energy and resiliency planning. She has served as Project Manager for more than 100 jurisdictions in Oklahoma, and FEMA Hazard Mitigation Assistance applications including BRIC, Flood Mitigation Assistance (FMA) and the HMGP.

Annie is the Vice President of the National Hazard Mitigation Association. She currently serves as a Subject Matter Expert for the Department of Homeland Security CISA, Resilient Investment Planning and Development Working Group. She remains actively involved in the Oklahoma Floodplain Management Association, where she serves as the Community Support Committee Chair and oversees the Mitigation, Community Rating System, and Stormwater Quality subcommittees.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
07/22-Ongoing	**Stigler Lake Dam Analysis and Rehabilitation | City of Stigler OK | Staff Team |** FNI is performing survey, geophysical, and geotechnical investigations, which include slope stability and seepage analysis to define the apparent dam safety deficiencies and a report that includes alternatives discussion, permitting, and cost considerations as well as performing design services, bidding assistance, and construction oversight.

Annie Vest | Hazard Mitigation Lead

10/22-09/23	**North Texas Municipal Water District, Emergency Management Plan-Emergency Operations Plan| Wylie, TX | Assistant Project Manager |** Assistant Project Manager for the updates to the Water District's Emergency Management Plan which includes writing the base Emergency Management Plan for the District using a regional, integrated framework that is consistent with the latest state and local emergency plans while reflecting the hazards and existing resources within the Operational Area.
03/22-09-23	**Flood Plan | Oklahoma Water Resources Board | Oklahoma City, OK | Assistant Project Manager|** Assistant Project Manager developing a Comprehensive State Flood Plan that will provide a platform that is updatable, lead to a more resilient Oklahoma, identify gaps and integrate with Comprehensive Water Plan where feasible.
06/22-12/24	**On-Call Development Review and Planning Services | Hondo, TX | Staff Team|** FNI is providing on-call development review and planning-related services for the City of Hondo.
09/21-10/22	**Task Order 1 – Standard Operations and Risk MAP Production | Federal Emergency Management Agency | Staff Team|** As a member of the Advancing Resiliency in Communities team, FNI provided production and technical services in support of FEMA's Risk Mapping, Assessment and Planning (MAP) Program. Services included generating and evaluating flood hazard and risk information and support for the development and implementation of mitigation, planning, flood mapping and modeling activities for Zone 1 for FEMA's Risk MAP Program.

Tom Dixon | Environmental Lead

Freese and Nichols, Inc.			
Name	Tom Dixon	Years of experience with this firm/employer	8
Title	Associate	Years of experience with other firm(s)/employer(s)	12
Degree(s) / Years / Specialization		MS | 2004 | Wildlife Ecology BS | 2001 | Wildlife Ecology	
Active registration number / state / expiration date		N/A	
Year registered	N/A	Discipline	Environmental Scientist

Contract role(s) / brief description of responsibilities

Environmental Lead | Tom Dixon is an FNI Associate and serves as an Ecologist, Project Manager and the FNI Austin office Environmental Team Lead. His background has focused on wildlife habitat management, coastal and wetland ecology, Southeastern U.S. plant community ecology, predictive statistical modeling, and ecological processes and functions. Prior to FNI, he conducted research and provided habitat management recommendations regarding federally listed species for the energy industry (birds) and the U.S. Navy (mammals). Duties include vegetation surveys, preliminary jurisdictional determinations and delineations, threatened and endangered species surveys, ecological functional, and the production of NEPA documents, such as Categorical Exclusions (CE), Environmental Impact Assessments (EIA), Environmental Impact Statements (EIS), reports and regulatory permits, which require working knowledge of various ecological concepts, and regulations such as NEPA, the Clean Water Act, the Endangered Species Act, the Rivers and Harbors Act, and the Coastal Zone Management Act.

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).
06/13-01/19	**Dam 7 Modernization | Upper Brushy Creek WCID, TX | Environmental Scientist** Tom was responsible for preparing and submitting the Pre-Construction Notification to the USACE to obtain Section 404 authorization to construct the project.Evaluation and rehabilitation with the addition of a reinforced concrete labyrinth weir to increase auxiliary spillway capacity and meet state dam safety criteria. Work included topographic surveys, geotechnical investigations, materials testing, H&H modeling, physical hydraulic modeling, environmental permitting and development of construction plans and specifications.

Tom Dixon | Environmental Lead

05/17-Ongoing	**Lake Brazos Dam Improvements | City of Waco, TX | Environmental Scientist** The Lake Brazos Dam was constructed in the late 1960s, allowing the City to impound water that had been appropriated to the City under its oldest water right. A significant flood occurred during construction of the labyrinth weir in 2007, and the embankment section's downstream slope suffered damage. Erosion of the downstream slope resulted in vertical cuts up to five feet deep in some areas. A 2014 dam safety inspection performed found that the condition of the existing sheet piling system at the toe of the embankment was worsening, therefore improvements to the embankment were necessary to provide adequate stability. FNI performed a detailed evaluation of the existing embankment in 2017 and developed repair alternatives to improve embankment stability. The client selected the alternative, which included constructing a new outlet works stilling basin and flattening the downstream embankment slope. The stilling basin was designed to buttress and stabilize the embankment from the downstream toe while protecting the downstream slope from further erosion. Tom led efforts to secure USACE authorization and USFWS approvals to implement various improvements to the Lake Brazos Dam structure, including USACE authorization to remove accumulated sediments and debris from the dam, and another to obtain USACE authorization to improve the embankment and stilling basin. These efforts included freshwater mussel surveys to comply with Endangered Species Act and cultural resource evaluations to comply with Section 106 of the National Historic Preservation Act.
03/13-01/19	**Martinez Dams 1, 2 and 3 Rehabilitation | San Antonio River Authority, TX | Environmental Scientist** Tom assisted a larger team with implementing the aquatic resource relocation plan, including electroshocking, data collection and relocation of aquatic resources. FNI provided services that included the evaluation and rehabilitation design of three high-hazard dams (Nos. 1, 2 and 3) to meet the state and NRCS dam safety criteria. The work also included topographic surveys, geotechnical investigations, material testing, H&H modeling, environmental permitting, development of construction plans and technical specifications and general construction oversight. The rehabilitation design also included oversight from the NRCS Central National Technology Support Center. Significant urban development had occurred downstream of Martinez Creek Floodwater Retarding Structures No. 1, 2 and 3 since their completion. As a result, the dams had been reclassified as high hazard dams and had failed to meet current dam safety and performance criteria. The SARA and NRCS have chosen to modernize the dams to address the identified safety deficiencies while preserving the level of flood control benefits.

Dustin Mortensen, PE* | Spillway Hydraulics

Freese and Nichols, Inc.			
Name	Dustin Mortensen, PE*	Years of experience with this firm/employer	19
Title	Associate	Years of experience with other firm(s)/employer(s)	0
Degree(s) / Years / Specialization		MS | 2004 | Hydraulics BS | 2003 | Civil Engineering	
Active registration number / state / expiration date		Professional Engineer, Texas #100000, 09/23	
Year registered	2007	Discipline	Civil Engineer

Contract role(s) / brief description of responsibilities

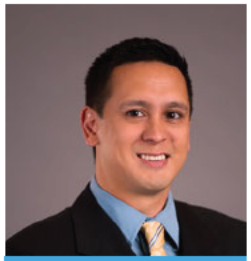
Spillway Hydraulics | Dustin Mortensen is an FNI Associate and a Water Resources Project Manager and Hydraulics Engineer who specializes in the design, rehabilitation and inspections of dams. A firm Associate, he has inspected more than 90 dams and is the Engineer-of-Record for 16 dam-modification projects. He is one of FNI's most experienced Project Managers/Engineers for the repair of historic dam structures and has managed projects for a wide variety of dam owners, from smaller municipalities and private entities to state-level and larger-scale river authorities. His background includes inspection, design and construction management of dam-related projects.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
01/16-10/18	**Buchanan Dam Spillway Analysis and LOMR | Lower Colorado River Authority, TX | Project Manager** Dustin was responsible for project management, analyzing multiple gate operating scenarios and the final report. FNI assisted LCRA update their flood operations procedures after implementation of major capital improvements at Buchanan Dam. Using HEC-RAS 2-D, FNI modeled inundation areas for several gate operating scenarios to identify potential impacts associated with spillway releases. FNI performed reservoir simulation modeling using HEC-ResSim to evaluate system-wide responses to flooding. The study involved developing a detailed gate operating plan for the Upper Highland Lakes (including Buchanan Dam) that included flood forecasting and time-varying reservoir guide curves to take advantage of LCRA's extensive system of automated stream and rainfall gauges.

Dustin Mortensen, PE* | Spillway Hydraulics

02/16-Ongoing	**Dam 22 Rehabilitation | Upper Brushy Creek WCID, TX | Project Engineer** Dustin was responsible for developing alternatives, preparing drawings and cost estimate. A slide occurred on the downstream slope of the dam, and rock riprap was installed as an emergency stabilization measure. After the event, FNI was retained to evaluate the existing conditions and options to repair the dam. The principal spillway conduit joints were found to be separating which led to a larger rehabilitation project. FNI is preparing the final design and construction documents to replace the principal spillway system and regrade the downstream slope and redistribute the rock riprap to meet slope stability requirements.
01/03-12/09	**Lake Brazos Labyrinth Weir | City of Waco, TX | Project Engineer** Dustin was responsible for developing rating curves for each spillway, evaluating sedimentation, scour, sizing riprap and preparing drawings. FNI provided design, bid and construction phase services for an award-winning, 3,000-foot-long labyrinth weir that combined the use of an existing dam site with an innovative spillway configuration. The project included survey, dam safety inspections and structural analysis of the existing structures; H&H modeling; physical hydraulic modeling; design of the replacement spillway; permitting and stakeholder coordination.
12/18-06/16	**Rehabilitation of Four Dams | U.S. Army Corps of Engineers - Fort Worth District, TX | Project Manager** Dustin was responsible for developing repair methods, preparing drawings. FNI provided design-build services to rehabilitate four dams, including erosion repair, vegetation removal and embankment and spillway modifications to meet the stringent TCEQ H&H and slope stability criteria. Also conducted a feasibility analysis on dredging of a dam.

Russ Springer, PE | Infrastructure Inspection



RUSS SPRINGER, PE

Freese and Nichols, Inc.			
Name	Russ Springer, PE	Years of experience with this firm/employer	15
Title	Engineer VI	Years of experience with other firm(s)/employer(s)	8
Degree(s) / Years / Specialization		BS | 2000 | Geological Engineering	
Active registration number / state / expiration date		Professional Engineer, Louisiana #0046219, 03/24	
Year registered	2010	Discipline	Geotechnical Engineer

Contract role(s) / brief description of responsibilities

Infrastructure Inspection | Russ Springer is a Geotechnical Engineer in FNI's Water Resources Design Group. He provides expertise on water resources projects, including dam investigations, levee certifications and geotechnical investigations. His experience includes field and laboratory geotechnical investigations, seepage and slope stability analyses, and structure stability and settlement.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
04/18-Ongoing	**Lake Ralph Hall and Leon Hurse Dam | Upper Trinity Regional Water District, TX | Project Manager** Russ was responsible for coordination of the subsurface investigation for the proposed dam project. Russ was also the geotechnical lead dam embankment design. FNI designed the new Leon Hurse Dam, a 2.3-mile-long, 108-foot-tall zoned earthen embankment dam, that will form Lake Ralph Hall. The $150 million facility includes a new 705-foot-long, 104-foot-tall RCC and CIP concrete spillway with a 120-foot-wide labyrinth weir overflow section, a new 1,700-foot-wide excavated earthen emergency spillway, a new pump station intake and low flow outlet structure with nine 7-foot by 7-foot sluice gates, as well as approximately 6,500 feet of stream mitigation and restoration downstream of the dam.

10/21-Ongoing	**West Shore Lake Pontchartrain Hurricane Storm Damage Risk Reduction System | U.S. Army Corps of Engineers - New Orleans District | Client Representative** Russ was responsible for management of the geotechnical analyses, including seepage and slope stability analyses for the new levee section and stability analyses for the proposed drainage structure and associated t-walls. FNI is providing civil, geotechnical, mechanical and electrical engineering design services for Reaches 105 and 108 of the West Shore Lake Pontchartrain HSDRR project consisting of 4.5 miles of earthen levee, three drainage structures and pile founded T-type floodwalls. The designs were conducted in accordance with all applicable design criteria, including the HSDRRS Design Guidelines.
10/06-12/21	**Lake Houston Dam Comprehensive Evaluation | Coastal Water Authority, TX | Project Team** Russ was responsible for performing the sliding and overturning analyses for the spillway section of the dam, including the existing condition and with proposed repair alternatives. Comprehensive evaluation of the Lake Houston Dam for the Coastal Water Authority before taking ownership of the dam from the City of Houston. Based on the effort in Phase A and B (completed by others at FNI), it was concluded that the dam does not meet all state dam safety factors under all conditions (including the PMF). Due to voids observed beneath the hearth of the spillway section of the dam have lost dead weight making it less resistant to overturning and sliding. It was important to observe how much stability of the dam depended on the tailwater associated with the hearth. Included update of the PMF, development of an EAP and geotechnical field exploration, including the use of piezometers.

Barry Fehl, DSc, PE, | Levee Safety

Freese and Nichols, Inc.			
Name	Barry Fehl, DSc, PE	Years of experience with this firm/employer	3
Title	Engineer VIII	Years of experience with other firm(s)/employer(s)	40
Degree(s) / Years / Specialization		BS | 1980 | Civil Engineering MEng | 1987 | Structures Doctor of Science | 1998 | Civil Engineering	
Active registration number / state / expiration date		Professional Engineer, Louisiana #0033185, 09/23	
Year registered	2007	Discipline	Civil Engineer

Contract role(s) / brief description of responsibilities

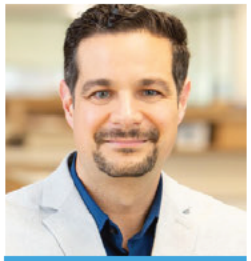
Levee Safety | Dr. Barry Fehl is a structural engineer with more than 40 years of design and project management experience. This experience includes many large projects, providing him an understanding of the requirements of these types of projects with respect to coordination, schedule, and budget. His primary expertise is related to the design and analysis of large, civil works projects, including flood protection and navigation. This includes working on pumping stations, floodwalls, levees, diversions, locks, and dams for projects located throughout the United States.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
06/20-Ongoing	**PAV03A S2G Port Arthur CSRM | U.S. Army Corps of Engineers - Fort Worth District | Design Engineer** Dr. Fehl is the Design Manager for Zones 1 and 3 providing guidance for laying out the project and assisting in making decisions about various project features. He provided detailed support for the development of the structural designs including the temporary flood protection needed for constructing the fronting protection at one of the pump stations. He was responsible for development of the DDR and Engineering Considerations and Instructions for Field Personnel and provided significant support to the development of the plans and specifications. He has also been coordinating with other members of the JV on resolution of comments from the USACE.

Barry Fehl, PE, DSc | Levee Safety

06/22-Ongoing	**Dallas Floodway 277K Levee Raise | Kiewit Engineering Group Inc. | Project Engineer** As a subconsultant, FNI is providing support for the USACE Dallas Floodway 277K Levee project, which addresses several regional concerns with a focus on flood risk reduction for the citizens of Dallas. FNI's services include flood protection system design; hydraulic design; interior drainage analysis; topographic survey; geotechnical investigation; levee seepage, stability and settlement analyses; and structural design. Dr. Fehl provided input to the cost proposal and project schedule development as well as insight to the design-build aspects of the project.
11/19-09/22	**S2G Orange Coastal Storm Risk Management | U.S. Army Corps of Engineers - Fort Worth District | Structural Engineer** As a joint venture (JV) lead, FNI provided coastal engineering services and construction materials acquisition planning, which encompassed levee, floodwall and pump station infrastructure, to support a $1.9 billion USACE hurricane flood damage reduction project in Orange County, Texas. The JV team delivered preliminary geotechnical, civil, mechanical, electrical and structural engineering design services for the 3.3-mile Orange County segment.
04/21 -Ongoing	**Shannon Pump Station | Gulf Coast Water Authority | Structural Engineer** FNI is providing preliminary and final design services for GCWA's flagship five-bay pumping plant with a firm capacity of 180 MGD, a proposed design capacity of 240 MGD and a future firm capacity of 300 MGD. FNI visited several pumping plants, conducted a series of workshops and utilized a criteria matrix to determine the preferred alternative. With the feasibility study recommending a new facility, FNI is leading the pump station design, bank stabilization design, USACE permitting and construction management.

Jason Afinowicz, PE | Water Resources Planning



JASON AFINOWICZ, PE

Freese and Nichols, Inc.			
Name	Jason Afinowicz, PE	Years of experience with this firm/employer	12
Title	Principal / Vice President	Years of experience with other firm(s)/employer(s)	7
Degree(s) / Years / Specialization		BS | 2001 | Agricultural Engineering MS | 2004 | Biological and Agricultural Engineering	
Active registration number / state / expiration date		Professional Engineer, Louisiana #0045627, 09/23	
Year registered	2021	Discipline	Civil Engineer

Contract role(s) / brief description of responsibilities

Water Resources Planning | Jason Afinowicz is an FNI Principal, Water Resources Planning Practice Leader and an experienced regional planning Project Manager. He has a wide variety of integrated water resource planning experience, including management of the 2006, 2011 and 2016 Region H Water Plans, and the 2006 and 2011 Region P Water Plans. His technical experience includes the development of long-term demand projections for municipal, industrial, and agricultural use, development, and evaluation of water management strategies including water rights development, infrastructure, conservation, and development reclaimed water strategies. Jason has also performed infrastructure supply planning for the North Fort Bend Water Authority and the North Harris County Regional Water Authority surface water conversion programs. He has also assisted in the development of water conservation and drought contingency plans for various wholesale water providers and provided a long-range evaluation of potential water supply alternatives. His additional experience in water supply includes cost analysis, decision support, hydraulic modeling, and TWDB planning and infrastructure funding programs. Jason has also managed and supported projects related to disaster recovery and stormwater management.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
01/11-01/17	**Region H 2016 Regional Water Plan | San Jacinto River Authority | Project Manager** FNI provided water resources planning engineering for the Region H Water Planning Group, including water demands projections, supply analysis, water management strategy analysis and evaluation, and conceptual-level cost estimation.

Jason Afinowicz, PE | Water Resources Planning

12/15-09/18	**Raw Water Supply Master Plan | San Jacinto River Authority | Project Manager** FNI prepared a long-range raw water master plan for the development and acquisition of future water supplies to support the growth of SJRA's customer service areas. FNI evaluated demand and supply scenarios and developed a decision support model to determine potential supplies and costs of alternative strategies. The master plan recommended numerous project portfolios for consideration and proposed an implementation plan that is adaptable to SJRA's changing needs over a 50-year planning horizon.
06/16-12/17	**Disaster Recovery Program Management | Harris County Flood Control District | Project Manager** FNI served as an extension of the District's engineering and environmental staff to manage their federally funded Disaster Recovery Program, providing on-call program management services county-wide over a multiyear period. Services included preliminary damage assessment, GIS data management, work plan development, grant and funding procurement and construction phase services. The Disaster Recovery Program responded to infrastructure damages sustained during the April 2016 Tax Day storm event, Hurricane Harvey in 2017 and Tropical Storm Imelda in 2019.
09/16-12/17	**LWOB Channel Restoration | Harris County Flood Control District | Project Manager** FNI performed a study to identify and evaluate channel restoration options for White Oak Bayou that address flood risk management, long-term maintenance, water quality, environmental concerns, adjacent area redevelopment and regional recreation impacts. The limits of the project encompass an existing, concrete-lined reach approximately 6,000 feet in length.

Lewis Bernard, PE | Mechanical Lead

Freese and Nichols, Inc.			
Name	Lewis Bernard, PE	Years of experience with this firm/employer	2
Title	Engineer VI	Years of experience with other firm(s)/employer(s)	15
Degree(s) / Years / Specialization		BS | 2006 | Mechanical Engineering	
Active registration number / state / expiration date		Professional Engineer, Louisiana #0036278, 09/23	
Year registered	2011	Discipline	Mechanical Engineer

Contract role(s) / brief description of responsibilities

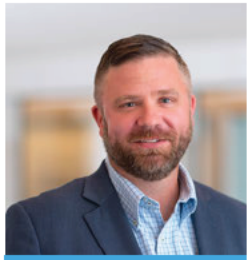
Mechanical Lead | Lewis Bernard is a Project Manager in FNI's Transmission and Utilities Group serving clients along the Gulf Coast and southeastern U.S. Lewis is an experienced Mechanical Engineer who has led diverse design teams on multimillion-dollar projects involving stormwater, wastewater and raw water pump stations. His expertise covers a wide range of pump station mechanical system elements, and he has experience with permitting from federal, state and local agencies. Lewis brings a strong understanding of every aspect of stormwater pump stations and the experience to lead projects involving the kinds of large pumps and drivers required to clear massive amounts of water during major storms.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
07/20 - Ongoing	**Devers Pump Station Final Design | Lower Neches Valley Authority | Project Manager** As the designer for mechanical systems, Lewis calculated system requirements, lead the pump selection and designed the intake basin, discharge piping and siphonic recovery system for the Devers 1st Pump station. In his role as project manager, Lewis assisted the civil and structural group in the station layout, access to maintenance heavy pumping components, and coordinated efforts between disciplines, including station automation and utilities. Lewis led a value-engineering effort to bring the station under budget to compensate for volatile market conditions.

Lewis Bernard, PE | Mechanical Lead

11/19-05/21	**Shannon Pump Station | Gulf Coast Water Authority | Process Engineer** FNI is providing preliminary and final design services for GCWA's flagship five-bay pumping plant with a firm capacity of 180 MGD, a proposed design capacity of 240 MGD and a future firm capacity of 300 MGD. FNI visited several pumping plants, conducted a series of workshops and utilized a criteria matrix to determine the preferred alternative. With the feasibility study recommending a new facility, FNI is leading the pump station design, bank stabilization design, USACE permitting and construction management.
09/19-04/21	**East Delivery System Pump Station Expansion Final Design | Lavaca-Navidad River Authority | Project Manager** FNI is performing an initial study to evaluate alternative methods of expanding the existing EDS pump station in the least obtrusive manner to avoid prolonged shutdowns.
10/02-11/03	**Lake Texoma Pump Station Expansion | City of Sherman, TX | Project Manager** FNI is performing an evaluation of the existing pump station conditions and projecting future demands then compiling this information into a recommendation for plant expansion.

Adam Payne, CCM, PE, LEED® AP
| Construction Management



Freese and Nichols, Inc.			
Name	Adam Payne, CCM, PE, LEED® AP	Years of experience with this firm/employer	14
Title	Principal / Vice President	Years of experience with other firm(s)/employer(s)	7
Degree(s) / Years / Specialization		MEng | 2014 | Civil Engineering BS | 2004 | Construction Science	
Active registration number / state / expiration date		Professional Engineer, Texas #120277, 03/24 Certified Construction Manager | LEED Accredited Professional	
Year registered	2015	Discipline	Construction Manager

Contract role(s) / brief description of responsibilities

Construction Management | Adam Payne is an FNI Principal and Vice President experienced in heavy civil and architectural projects, filling roles as an office-based construction manager, field-based resident engineer, construction manager and program-wide construction manager. Adam administers construction contracts and provides construction management and inspection services for FNI's clients. He also manages construction documentation, scheduling, cost estimating, contract change management and special construction inspections.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
11/14-Ongoing	**Bois d'Arc Lake Water Supply Program | North Texas Municipal Water District | Program Construction Manager and Project Manager** The project consists of a new $1.6 billion water supply system program that will deliver 175,000 acre-feet of water per year to customers of the NTMWD. Components for the program include a new dam and intake, reservoir clearing, raw water pump station, 210-MG raw storage reservoir, 17,000 acres of environmental mitigation, 70-MGD water treatment plant, high service pump station, 60 miles of raw and treated water pipelines, office facilities, recreational boat ramps and a maintenance building. Adam assisted with design phase and preconstruction services, such as constructability reviews, cost estimating, procurement of CMAR and development of a program management plan and standards for use during construction. A resident engineering, construction management and inspection staff of over 40 team members from FNI, subconsultants and NTMWD are assigned to the various projects in the program. Adam is managing the quality assurance effort during construction.

Adam Payne, CCM, PE, LEED® AP
| Construction Management

01/21-Ongoing	**Lake Ralph Hall and Leon Hurse Dam | Upper Trinity Regional Water District, TX | Construction Phase Manager and Senior Advisor** Serving as the Construction Phase Manager and Senior Advisor for the Lake Ralph Hall Leon Hurse Dam Construction. FNI designed the new Leon Hurse Dam, a 2.3-mile-long, 108-foot-tall zoned earthen embankment dam, that will form Lake Ralph Hall. The $150 million facility includes a new 705-foot-long, 104-foot-tall RCC and CIP concrete spillway with a 120-foot-wide labyrinth weir overfow section, a new 1,700-foot-wide excavated earthen emergency spillway, a new pump station intake and low fow outlet structure with nine 7-foot by 7-foot sluice gates, as well as approximately 6,500 feet of stream mitigation and restoration downstream of the dam. Adam provides day-to-day management of field staff, including resident engineers, construction managers and inspectors. Adam is providing quality assurance services in the form of the Senior Advisor by helping field staff with technical and contractual questions in the field.
03/11-12/12	**Dry Comal Creek Flood Retarding Structure | Comal County, TX | Construction Manager and Resident Representative** FNI services included the assessment, final design and construction of a new 1,500-foot-long RCC gravity dam. FNI performed site investigations, geotechnical analyses, stability analyses and final design, which included a deep cut-off wall and foundation improvements. Adam served as resident construction manager and inspector for both the deep cutoff wall and dam construction. He worked closely with FNI engineering staff as well as, Contractor, Comal County and TCEQ officials. Adam provided inspection services for reinforced CIP concrete construction, backfill and rip-rap placement and monitoring instrumentation installation. Adam was also responsible for coordinating the schedules for five night shift inspectors and all onsite meetings, document control, pay request and contract modification review.
06/10-08/11	**Calaveras No. 6 Flood Control Dam Rehabilitation Construction | Natural Resources Conservation Service - TX** Resident Representative, Assistant Project Manager | Adam served as the resident representative onsite providing daily inspection services for the rehabilitation construction of Calaveras No. 6 soil conservation dam. He worked closely with the Contractor, NRCS and SARA officials and was responsible for observation and documentation of all construction activities to include approximately 61,000 CY of excavation, 46,000 CY of earth fill, a 180-foot bore, and construction of a new concrete riser, impact basin, and principal spillway. Communicated progress to NRCS and SARA through daily construction reports, progress photos and concrete testing reports.

Dewberry			
Name	Sam Crampton, PE, CFM	Years of experience with this firm/employer	21
Title	Vice President	Years of experience with other firm(s)/employer(s)	1
Degree(s) / Years / Specialization		MEng | 2001 | Civil Engineering	
Active registration number / state / expiration date		Professional Engineer, Louisiana #37866, 09/23	
Year registered	2013	Discipline	Professional Engineer (Civil); Certified Floodplain Manager
Contract role(s) / brief description of responsibilities			
Watershed H&H			

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
2020-Present	**Louisiana Watershed Initiative Region 7 Modeling Contract, Florida Parishes, LA | Project Manager, Technical Lead** Development of HUC8 level HEC-HMS and HEC-RAS 1D/2D flood models for 8 HUC 8 watersheds throughout the Florida Parishes. Work included stakeholder engagement and workshops to gain local stakeholder buy-in to LWI and ensure models are fully leveraged. This included research and modeling of key infrastructure including levees, dams, locks, sills, and the incorporation of extensive airborne, bathymetry, and ground-based surveys. These models were leveraged to support local communities assess projects including diversion weirs, dams, levees and detention facilities.
2023	**Louisiana Watershed Initiative Group II Dams, Various Locations, LA | Dewberry Project Manager, H&H/Dam Break Modeling Subject Matter Expert** Working in collaboration with prime consultant Freese & Nichols, developed HEC-HMS and HEC-RAS 2D dam break models for a variety of frequency storms and probable maximum floods using the Probable Maximum Precipitation Study for Arkansas, Louisiana, Mississippi, and Oklahoma for Caney Lake, Cocodrie, Black Bayou, Iatt and Turkey Creek dams. Development of materials and participation in Probable Failure Mode Analysis workshops. Assessment of consequences including loss of life and economic losses associated with dam failures using HEC-FIA in support of a Semi-Quantitative Risk Assessment (SQRA).

05/17-05/19	**Amite River Basin Numerical Model | Amite River Basin | Project Manager/Technical Lead** Development of HUC8 scale numerical model to assess hydrology, hydraulics, and consequences using HEC-MetVUE, HEC-HMS, HEC-RAS (1-D/2-D), HEC-FIA, and ArcGIS. Services included: Stakeholder communication and engagement including briefings and exhibits for LA DOTD, state legislators, and the local community of practice. hydro-meteorologic modeling for historic and design storm development (implementing the watershed hydrology procedures of HMR 52 within MetVUE), hydrologic model development. Development of economic and life safety consequence model to support hazard mitigation. Development of technical reports. Assessment of concept projects including the Darlington Reservoir, levee extensions, levee modifications, and the use of temporary levees/dams. The Darlington Reservoir simulations included an approximately 3-mile long, 90 feet high dam embankment holding back nearly 1M acre-feet of floodwaters. Additional work included working with Livingston Parish to simulate the concept of pre-event draw-down for offline mining ponds to determine whether pre-event draw-downs provided substantial flood control benefits. This included developing concept inflow diversion structures and outlet control structures to optimize flood attenuation.
02/17-Present	**Murphey Candler Park Dam Safety Services, Brookhaven, GA | Engineer-of-record** Permitting of the high-hazard potential dam. Quarterly safety inspections including biannual inspection reports 2017-Present. Dam break inundation modeling using HEC-RAS 2D. Development of Operations and Maintenance Plan. Development of Emergency Action Plan. Coordination of underwater inspection by a dive team. Development of repair and maintenance documents. Inspection of repairs. Development of plans and specifications for Cured in Place rehabilitation of principal spillway pipe.
03/15-Present	**Bartow County GA Dam Safety Services (High Hazard Potential Dams) | Project Manager/Technical Lead** Dam break inundation modeling, Development of EAPs, review of hazard potential, watershed hydrologic and hydraulic models and biannual dam inspections for 4 high hazard potential NRCS watershed dams.
01/06-Present	**Gwinnett County GA Dam Safety Services for 14 NRCS Watershed Dam Structures (High and Significant Hazard Potential) | Project Engineer/Subject Matter Expert** Development of watershed hydrology and hydraulics for 14 NRCS dams including PMF and fractional PMF design inflows and EAP maps. Dam break inundation modeling using HEC-HMS and HEC-RAS for sunny day and storm-in-progress events. Services also included a losses avoided study following the Roller Compacted Concrete embankment hardening of dam Y15 where HEC-FIA was used to determine the potential economic benefits of the dam rehabilitation following the 2009 flood of record.

Dewberry			
Name	Seth Bradley, PE	Years of experience with this firm/employer	10
Title	Project Engineer	Years of experience with other firm(s)/employer(s)	0
Degree(s) / Years / Specialization		MS | 2012 | Civil Engineering MS | 2009 | Civil Engineering	
Active registration number / state / expiration date		Professional Engineer, Louisiana #42121, 03/24	
Year registered	2017	Discipline	Professional Engineer (Civil)

Contract role(s) / brief description of responsibilities

Lead Hydrologic/Hydraulic 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).
03/19 – 10/20	**West Feliciana Parish Phase 2 | West Feliciana Parish| Project Engineer** Managed FEMA CTP Phase 2 tasks and performed H&H analysis for a successful update of all streams in West Feliciana Parish as a result of the Discovery Process in previous years. The community asked for updated engineering and mapping based on FEMA's BLE results. Met and worked with the Parish Engineer to detail the scope of work and prepare recommendations for needs to FEMA. Study included 220 miles of limited detail study using HEC-HMS and HEC-RAS and incorporated BLE data into Phase 2 products to provide coverage for the entire parish. Seth assisted in the packaging and submittal of deliverables, including survey, terrain hydrology, hydraulics, floodplain mapping and flood risk products.
12/17-03/18	**LaSalle Parish Study | LaSalle Parish | Project Engineer/Task Manager** Scoped the Parish-wide study to modernize and update flood hazard information while providing additional non-regulatory flood risk assessments. Study incorporated over 678 miles of FEMA BLE, 140 miles of approximate analysis and 35 miles of a limited detail studied streams. Managed tasks and MIP submittals including survey, H&H and floodplain mapping. Updated flood hazard data and risk assessments provide the Parish and Communities with access to critical data necessary for flood permitting, planning, development and flood mitigation.

05/17-05/19	**Amite River Basin Numerical Model | Amite River Basin | Project Engineer** Development of HUC8 scale numerical model to assess hydrology, hydraulics and consequences using HEC-DSS, HEC-DSSVUE, HECSSP, HEC-MetVUE, HEC-HMS, HEC-RAS (1-D/2-D), HEC-FIA, HEC-WAT and ArcGIS. Services included: Stakeholder communication and engagement, including briefing and exhibits for DOTD, state legislators and the local community of practice, hydro-meteorologic modeling for historic and design storm development (implementing the watershed hydrology procedures of HMR 52 within MetVUE), hydrologic model development. 1D and 2D hydraulic model development, model calibration and validation. Development of economic and life safety consequence model. Development of technical reports. Assessment of concept projects including the Darlington Reservoir, levee extensions, levee modifications and the use of temporary dams. The Darlington Reservoir simulations included an approximately three mile long, 90-feet-tall dam embankment holding back nearly one million-acre-feet of floodwaters. Additional work included working with Livingston Parish to simulate the concept of pre-event draw down for offline mining ponds to determine whether pre-event drawdowns provided substantial flood control benefits. This included developing concept inflow diversion structures and outlet control structures to optimize flood attenuation.
04/13-6/16	**Boeuf Watershed, Franklin, and West Carroll Parishes | LA Phase 2 H&H (FEMA PTS Region 6) | Project Engineer** Dewberry was the lead for this regional H&H study under the FEMA PTS Contract for West Carroll Parish and Franklin Parish in northeast Louisiana. The services consisted of data collection and gap analysis, 1D and 2D hydraulic modeling, field work, GIS analysis, reports, and stakeholder communication and engagement. A tiered modeling approach was developed, which included approximately 128 miles of the Boeuf River streams that was controlled by break out flows from the Boeuf River where a medium detail, coupled 1-D/2-D model was developed. Channel geometry was measured from aerials and depths of channel were assumed using engineering judgment from field reconnaissance which involved measuring water depths with basic tools at accessible locations. The 2-D grid was developed using LiDAR data where it is available for West Carroll Parish and for areas to the West, either the state LiDAR or USGS DEM was used for the West overbank of the Boeuf River.

Dewberry			
Name	Jerri Daniels	Years of experience with this firm/employer	14
Title	Associate Vice President, Department Manager	Years of experience with other firm(s)/employer(s)	9
Degree(s) / Years / Specialization		MS | 2000 | Geography BS | 1998 | Biology	
Active registration number / state / expiration date		N/A	
Year registered	N/A	Discipline	N/A

Contract role(s) / brief description of responsibilities
Stakeholder Engagement and Outreach

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
05/17-05/19	**Amite River Basin Numerical Model | Amite River Basin | HEC-FIA Lead/Stakeholder Engagement** Lead for stakeholder engagement which included outreach to local stakeholders to collect data and input upon project initiation. This also included numerous client, stakeholder and legislator briefings pertaining to project progress and findings. Lead for development of the HEC-FIA life safety and economic losses model. This involved extensive research to develop an asset inventory by conflating local tax and census data with LiDAR derived building footprints which were the backbone of life safety and economic consequence estimates. This model was used to assess project benefits for the conceptual Darlington Reservoir which provided meaniful data for elected officials and the public.
03/19-Ongoing	**West Feliciana Parish Phase 2 | West Feliciana Parish | Project Manager** Managing FEMA CTP Phase 2 modeling for successful update of all streams in West Feliciana Parish as a result of the Discovery Process in previous years. The community asked for updated engineering and mapping. We met and worked with the Parish Engineer to detail the scope of work and prepare recommendations for needs to FEMA. Project is near completion, with final databases currently being developed for FEMA.

01/17-06/19	**CTP Discovery and Modeling Projects in LWI Modeling Contract Region No. 7 | HUC8 Watershed in Region 7 | Project Manager, Contract Manager** Conducted FEMA Region VI Phase 1 Discovery Projects for four HUC8 watersheds in Region 7: Bayou Sara-Thompson, Tickfaw, Amite, Liberty Bayou Tchefuncte. Project management included updates to FEMA and DOTD CTP contract management. Gathered data on each watershed, creating a comparison of newly created Flood Risk information to compare to historic Flood Insurance Rate Map data and conducted meetings to discuss those results with all community officials in each watershed. This also included congressional briefings and data deliveries to the communities. Needs and concerns related to flooding for all watersheds was collected, documented, and delivered to FEMA for recommendations on updated engineering needs to more accurately identify the flood risk.
04/13-6/16	**Boeuf Watershed, Franklin, and West Carroll Parishes | LA Phase 2 H&H (FEMA PTS Region 6) | Project Manager** Dewberry was the lead for this regional H&H study under the FEMA PTS Contract for West Carroll Parish and Franklin Parish in northeast Louisiana. The services consisted of data collection and gap analysis, 1D and 2D hydraulic modeling, field work, GIS analysis, reports, and stakeholder communication and engagement. A tiered modeling approach was developed, which included approximately 128 miles of the Boeuf River streams that was controlled by break out flows from the Boeuf River where a medium detail, coupled 1-D/2-D model was developed. Channel geometry was measured from aerials and depths of channel were assumed using engineering judgment from field reconnaissance which involved measuring water depths with basic tools at accessible locations. The 2-D grid was developed using LiDAR data where it is available for West Carroll Parish and for areas to the West, either the state LiDAR or USGS DEM was used for the West overbank of the Boeuf River.

Dewberry				
Name	Jeff Cowan, PE		Years of experience with this firm/employer	41
Title	Senior Associate, Senior Project Manager		Years of experience with other firm(s)/employer(s)	0
Degree(s) / Years / Specialization			BS | 1981 | Civil Engineering	
Active registration number / state / expiration date			Professional Engineer, Virginia #019977, 07/23	
Year registered	1989	Discipline	Professional Engineer (Civil);	
Contract role(s) / brief description of responsibilities				
QA/QC				

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
5/08 – 6/10	**Lake Accotink Dam Rehabilitation, Fairfax County, Fairfax County, VA | Project Manager, Engineer-of-record** Responsible for periodic dam safety inspections, evaluations, hydrologic/hydraulic analysis, rehabilitation design, and construction administration. The structure is an earth fill dam approximately 28 feet high and 300 feet long, with a concrete slab and buttress spillway structure. Managed concrete testing services performed by a concrete testing subconsultant and completed a comprehensive concrete delamination survey over the entire slab and buttress spillway. Managed the preparation of plans and specifications for concrete repairs, toe drain installation, and piezometer installation which were constructed in 2008 and 2009. Managed and performed dam break analysis and inundation mapping, including an incremental damage analysis justifying a reduction in the required spillway design flood.
2/19 – Ongoing	**Lake Hydaway Dam, Lynchburg, VA | Engineer-of-record** Currently in the process of designing the new earthen dam including a drainage collection system, a clay core, an NRCS riser design, a multi-phase Erosion & Sediment Control Plan, dam cross-sections, emergency spillway details, a UBBR impact-basin, a spillway cutoff wall, construction cost estimates. Dewberry will also be involved with construction administration including bidding services. A design report will be submitted to DCR as part of the preliminary design review.

7/02 – 10/07	**Big Cherry Dam, Town of Big Stone Gap, Big Stone Gap, VA | Project Manager** Responsible for the preliminary and final design of a new RCC dam located immediately downstream of an existing, unsafe cyclopean concrete gravity dam. Directed geotechnical field investigations, bathymetric and field surveys, preliminary design and alternative evaluation, and final design and preparation of construction plans and specifications. Directed all 404/401 permitting activities and determination of increased reservoir safe yield. Also directed dam break analysis and preparation of dam breach inundation mapping.
7/06 – 9/08	**Lake of the Woods Dam, Lake of the Woods Association, Orange County, VA | Project Manager/Engineer-of-record** Performed dam inspections and evaluation of rehabilitation options and options to increase spillway capacity for two dams within this residential community. Directed final design and preparation of construction plans and specifications for spillway upgrades at the Main Dam including the addition of an RCC auxiliary spillway, a gated crest section for an existing chute spillway, a Keystone floodwall across a low area adjacent to the right dam abutment, and repairs to the existing low-level drain. Directed dam break analysis and preparation of inundation zone mapping for both dams and also performed incremental damage analysis to determine if a reduction in the required spillway design flood (SDF) was warranted.
11/15 – 5/18	**Horsepen Dam Alteration (D/B Project Associated with Route 606 Widening), Dulles Airport, Loudoun County, VA | Engineer-of-record** As part of the Route 606 widening project the Design Build Team of Dewberry and Shirley Contracting Corporation was tasked to perform alterations to Horsepen Dam, a major flood control reservoir constructed in the early 1960s to mitigate flooding due to increased runoff from Dulles Airport. The dam is a high-hazard, state-regulated dam owned by MWAA operating under a Conditional Operation and Maintenance Certificate due to inadequate spillway capacity. The widening of Route 606 to a 4-lane divided highway required relocation of the earthen auxiliary spillway, widening and raising the crest of the highway/dam embankment, construction of a major bridge over the new realigned auxiliary spillway, and lengthening the existing drop inlet principal spillway box culvert. To avoid having to demolish and reconstruct the downstream end of the existing box culvert a concrete protection slab supported on piles was constructed overtop the existing box culvert to take the load of the additional dam embankment fill associated with the Route 606 widening. Increasing the dam height as part of the Route 606 widening enabled the dam's spillway system to safely convey the required spillway design flood resulting in the issuance of a Regular Dam O&M Certificate from VA DCR after construction. The final design was completed in April 2015 and DCR issued a Dam Alteration Permit in May 2015. Construction of the dam alteration was substantially complete in the summer of 2018. Dewberry provided full construction administration services.

Bryant Hammett & Associates, LLC			
Name	Bryant O. Hammett, Jr., PLS	Years of experience with this firm/employer	39
Title	Principal / Owner	Years of experience with other firm(s)/employer(s)	6
Degree(s) / Years / Specialization		BS / 1978 / Civil Engineering	
Active registration number / state / expiration date		Civil Engineer #20605 / LA / 03/31/2024 Professional Land Surveyor #4552 / LA / 03/31/2024 Environmental Engineer #20605 / LA / 03/31/2024 Civil Engineer #09394 / MS / 12/31/2023	
Year registered	1983	Discipline	Civil Engineer, LA
Year registered	1996	Discipline	Environmental Engineer, LA
Year registered	1985	Discipline	Professional Land Surveyor
Year registered	1985	Discipline	Civil Engineer, MS

Contract role(s) / brief description of responsibilities

Civil Engineer and Professional Land Surveyor | As a registered Civil Engineer and Professional Land Surveyor, Bryant has been the sole proprietor of BHA since 1984 and managed a staff of over 30 employees. As former infrastructure manager for the Louisiana OCD-DRU, Hammett performed and oversaw professional civil, structural and transportation engineering work related to the planning, design, development, construction and maintenance of projects. He is the surveyor of record for several parishes located throughout Louisiana. Bryant will be the Principal-in-Charge for BHA, overseeing schedules and budgets and the overall project. He will execute all contracts for the firm.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
06/20-12/21	**LWI Region 2 Modeling | DOTD | Principal** Bryant oversees one of the surveying teams for this project. BHA is part of the team which will implement modeling in Region 2, consisting of 10 parishes in North Louisiana. The first task was collecting existing survey data in the areas, including existing channel surveys, engineering drawings, proposed design plans, and other data, as well developing overall budgets and methodologies for data collection for the region. Current tasks include topographic and bathymetric survey data collection for the following channels to be incorporated into the model terrain. Bayou Batholomew, Bayou DeLoutre, Bayou Darbonne, Lower Ouachita, Castor Bayou, Dugdemona River, Little River, and Lower Red River. The survey data will aid in the development of the H&H models to create a statewide waster-shed based floodplain management program.

04/20-10/21	**Dickory Avenue Extension | DOTD | Principal** BHA completed a LA DOTD survey of the proposed Dickory Avenue extension corridor connecting Dickory Avenue to Jefferson Hwy. BHA performed a topographic survey collecting information on items such as culverts, drains, inlets, pavements, bushes, trees, perimeter outlines of heavily wooded areas, vegetation, utility poles, overhead electric, fences, curbs, driveways, etc. Cross sections were collected, as well as all utility features. A drainage map in accordance with DOTD guidelines was completed. BHA oversaw the project from inception to final deliverable.
04/09-04/10	**Mainline Levee Item 365-R | Fifth Louisiana Levee District | Principal** BHA performed a 4.5 mile right-of-way survey for the Fifth District Levee Board and the USCOE for the construction of a new levee. Work included recovery of existing control points and levee baseline, location of existing property lines on affected parcels, determinatio of required right-of-way from each parcel, preparation of an overall right-of-way map, and developing a legal description of each right-of-way parcel. Construction layout on a relief well ditch, establishing horizontal control and vertical control, and verified plan items such as stationing, alignment and various datum conversions per USACE specifications and requirements.
12/13-12/15	**Sidney A. Murray Jr. Hydroelectric Station Bank Stability Analysis & Channel Bank Monitoring | Louisiana Hydroelectric Ltd | Principal** The Bank Stability Failure project consisted of repair work to both the east and west banks of the Mississippi River for the intake channel of the existing Sidney A. Murray Jr., Hydroelectric Power Plant. A failure occurred on the east intake channel bank between Station 0+80 and Station 2+25 and on the east intake channel bank between Station 0+17 and Station 0+65. BHA provided topographic and hydrographic surveying on the east and west banks; all cross sections were taken parallel to the power plant, and extended sufficiently beyond the failure zone to provide an idea of the pre-failure geometry of the structure.
05/16-Ongoing	**Port of Vidalia | Vidalia Port Commission | Principal** BHA is currently the design professional for a $40MM port being construction in Vidalia, LA. Breaking ground in 2016, BHA recently assisted in the certification of the 145-acre port obtaining LED Certified Site status. The two-phase project includes a loading and unloading facility and the construction of a slack water slip, for river traffic to utilize, for loading and off-loading cargo at most all river stages. BHA is providing the Vidalia Port Commission with engineering and surveying services. Duties include, but are not limited to, studies, permitting, design, cost estimates, search for funding opportunities, and topographic, hydrographic and boundary surveying.
03/15-06/16	**Bayou Conway/ Panama Canal Channel Improvements | East Ascension Consolidated Gravity Drainage District | Principal** ABHA was part of a team which evaluated the feasibility of constructing a project in the southeastern area of East Ascension Parish which is drained by Bayou Conway and Panama Canal, due to severe flooding from Hurricane Isaac in 2012 and the heavy rain storms of late May 2014. The intent of the study is to evaluate alternatives and provide a recommendation that will prevent flooding through either efficiently moving drainage downstream and/or blocking backwater riverine or storm surge from heading upstream but that does not result in increased flooding impacts in St. James Parish. Survey services included: Establish centerline; take profile shots; take cross sections across bayou; establish TBMs, survey and map overhead existing utility lines, culvert crossings, water control structures (gates, weirs, etc.), cross roads, bridges, and other Canal crossings, any cross drainage channels, and other planimetric features within the identified survey limits.

Bryant Hammett & Associates, LLC			
Name	Jeff Carey	Years of experience with this firm/employer	11
Title	Survey Technician	Years of experience with other firm(s)/employer(s)	4
Degree(s) / Years / Specialization		BS / 2009 / Disaster Management	
Active registration number / state / expiration date		ASFPM, US-10-05305 / LA / 01-2025 LSI.748 / LA / 03-2024 881664 / LA / 12-2024	
Year registered	2010	Discipline	Certified Floodplain Manager, LA
Year registered	2023	Discipline	Land Survey Intern, LA
Year registered	2013	Discipline	Residential Contractor, LA

Contract role(s) / brief description of responsibilities
Survey Technician | As a survey technician for Bryant Hammett & Associates, Jeff manages fieldwork, collects data in the field and performs field-checking duties at project completion. He manages boundary and topographic surveys and all surveying activity required for engineering, rights-of-way, and construction projects. He is involved in all aspects of land surveying projects, including land descriptions and elevation certificates. He has managed several projects from project execution to completion on numerous pipeline construction projects, roadway projects, levee construction projects, property boundary surveys, cadastral surveys, topographic surveys, differential GPS real time hydrographic surveys, GPS static surveys for horizontal and vertical control, planimetric surveys, elevation surveys and subdivision layout. He is an ATSSA certified Flagger, Traffic Control Technician, and Traffic Control Supervisor

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
06/20-12/21	**Bainbridge Canal Closure and Roadway Improvements | Jefferson Parish Public Works | Survey Technician** BHA performed a topographic, cross section, and utility survey of an area along the westbound lanes of Veterans Blvd. from Virginia to Bainbridge (not eastbound lanes), then continuing down Bainbridge to the entrance to the Airport, as well as the canal along Bainbridge Avenue. BHA established horizontal and vertical reference points for the project; collected topographic features such as culverts, drains, inlets, pavements, trees, utility poles, curbs, heavily wooded areas, vegetation, property lines, driveways; cross sections were taken along the route and included shots across the drainage canal. All utility features were collected, such as valves, hydrants, meters, utility poles, utility boxes, etc. Carey provided onsite management, field checking, and scheduling for this project.

01/19-04/19	**Grafton Dr, Breckenridge, LaQuinta Inn Sewer Lift Station Upgrades | St. Tammany Parish Government| Survey Technician** Jeff served as the survey technician for a topographic and boundary survey for the upgrade of three sewer pump station sites in Slidell, LA. The surveys obtained topographic, utility and elevation data for each site. Additionally, property corner information, parcel, and boundary data were delivered. Carey managed all data, crew activities, and final field checking.
06/21-03/23	**Southeast Arkansas and Northeast LA Multimodal Freight Corridor Improvement | Lake Providence Port Commission | Survey Technician** The Southeast Arkansas Economic Development District was awarded $10.5MM to rehabilitate 91 miles of continuous short line railroad, including 91 miles of tract to Class 2 capacity, seven bridge upgrades, and the extension of shortline rail access to Port of Lake Providence and Madison Parish Port. BHA provided topographic and utility surveying along Segments D & C for 6.5 miles of railroad. Segment C included approximately 20,000 feet, and Segment D included Madison Parish Port (13,000 feet). Carey oversaw the project from project scoping to field oversight to final deliverables.
07/18-09/18	**Slope Paving | Orleans Levee District | Survey Technician** In support of a Slope Paving project along 17th Street Canal, Orleans Avenue Canal, and London Avenue Canal in New Orleans, BHA performed alignment, topographic and cross section surveys of the existing levees, structures, and features at 10 locations. BHA performed topographic surveys of the levees and floodwalls, including centerlines, utilities, trees and other features within the survey limits. Carey managed the field work and QAQC for this project.
09/17-01/18	**E. Rutland Street Drainage Improvements | St. Tammany Parish | Survey Technician** Mr. Carey oversaw the surveying required for a flood improvements study associated with August 2016 flooding in the parish. The surveying required consisted of profiles to establish ground elevations along roadways and specific alignments
11/22-04/13	**Ormond Oaks/Primrose Canal Drainage Improvements Projects | St. Charles Parish Government | Survey Technician** As part of an overall parish drainage improvement project, BHA provided topographic, cross section, utility and right-of-way surveying in areas of St. Charles Parish. Areas included: 1) Primrose Canal from the Cousin Canal to the Blouin Canal and 2) Canal A, Carriage Canal and Dunleith Canal, Carriage Canal and Houmas Canal. All drainage culverts entering the canals were identified with a size, type, and invert measurement. Visible and accessible utility features within the canal right-of-way were surveyed and mapped. These features include items such as valves, hydrants, meters, utility poles, utility boxes, overhead electric lines, communication systems, etc. Carey managed this entire project, from initial site recon to final deliverables.

Nixon Engineering Solutions, LLC			
Name	Kurt M. Nixon, PE, P.L.S.	Years of experience with this firm/employer	13
Title	Principal / Senior Engineer	Years of experience with other firm(s)/employer(s)	10
Degree(s) / Years / Specialization		MS / 2011 / Water Resources BS / 2000 / Civil Engineering	
Active registration number / state / expiration date		PE 31339 / LA / Sept 30, 2024 PLS 5072 / LA / Sept 30, 2024 PE 109336 / TX / June 30, 2024 PE 15125 / AR / Dec 31, 2023	
Year registered	2004	Discipline	Civil Engineer / Surveying

Contract role(s) / brief description of responsibilities

Principal/Senior Engineer | Kurt has over 23 years of Engineering and Surveying experience in water resource projects. As both an engineer & surveyor he has had the opportunity to practice in both disciplines. He is fluent in both the engineering side of modeling and construction plans, but also the survey side of boundary law, data collection and construction layout. This unique perspective is a valuable asset to any water resource project.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
09/20-Present	**LWI Region 2 | DOTD | Assistant Project Manager & Surveyor** This project is the largest and most ambitious modeling project in the history of Louisiana. The plan is to model flooding across the entire state to be able to manage future flood risk. The entire state was split into seven regions with a different prime consultant for each region. Region #2 encompasses 13 parishes in the north central portion of Louisiana. This includes thousands of miles of streams to study and hundreds of structures to survey. Nixon Engineering Solutions is a sub-consultant to Freese and Nichols, Inc (FNI) on this project. Kurt coordinated the survey data collection, processing, and deliverables and assisted FNI with engineering modeling in the a few of the urban areas and general project planning.

10/19-12/20	**Kinsey Scout Pond Dam | Boy Scouts of America | Project Manager** The Northwest Louisiana Council, Boy Scouts of America hired Nixon Engineering Solutions to design and develop construction plans and manage the construction project for a 28.8' tall zoned earthen dam in North Louisiana. This dam resulted in a 16.9-acre pond (at pool stage) for the Boy Scouts to use as a recreation area for their activities. Kurt oversaw the oversight and coordination of the entire project, developing the initial feasibility study and dam location, gathering needed topographic data, construction layout for the contractor, periodic site inspections, and review of soil testing data. The end result was a beautiful new pond approved by DOTD dam safety office and used by thousands of boy scouts each year to enhance their camp experience.
06/17-11/18	**Benoit Bayou and Benoit Bayou Lateral Drainage Study | City of Bossier City | Project Manager & Modeler** Large complex drainage study for 8 square mile area in Bossier City and Bossier Parish. Kurt was the Project Manager and Professional of Record. Specific responsibilities and relevant experience include: meeting with the City and other stake holders to establish the scope and parameters of the project, oversight and coordination of survey field data (Both ground and LIDAR surveys), creation of the hydrologic model in HEC-HMS, oversight and assistance in building the 1D/2D combined HEC-RAS model, design and installation of gauge to provide ongoing feedback to model, analysis of model data, summary and recommendation of data in engineering report, presentation of findings to local government bodies, and preparation of FEMA map change documents.
03/18-06/18	**Woolworth Road Landfill | Pivotal Engineering, LLC | Surveyor** Boundary and Topographic survey of 435-acre landfill as a sub consultant. Much of the topographic survey was performed using an aerial laser scanner. Kurt was as the Survey Manager and Survey Professional of Record. Specific responsibilities and relevant experience included: meeting with Project Engineer to decide the best and most efficient method to collect a large amount of survey data in a short time versus cost, scheduling and daily oversight of survey crews, oversight and coordination of drafting and presentation of data, title research and review of deeds, review and reconciliation of property corner data, set missing property corners, and review legal descriptions.
08/16-07/17	**Red River Levee Maintenance | Bossier Levee District | Project Manager** This project analyzed 50+ miles of Red River highwater marks and correlated them to gauge data. Then used that information to isolate 5500ft of levee for improvements. Kurt was as the Project Manager and Professional of Record. Specific responsibilities and relevant experience include: meeting with the town to establish the scope and goals of our task, gathering of all relevant data, oversight of compilation of data into single spreadsheet, analysis of data, presentation and summary of data in easy to read maps for Bossier Levee District, oversight and coordination of survey data needed for construction plans, development of construction documents, assistance with advertisement, bidding, contracts and bonding, routine site visits, oversight and coordination of testing lab and construction inspector, cand ontract close out.

Nixon Engineering Solutions, LLC			
Name	Jared Boogaerts, PE	Years of experience with this firm/employer	11
Title	Project Engineer	Years of experience with other firm(s)/employer(s)	0
Degree(s) / Years / Specialization		BS / 2012 / Civil Engineering	
Active registration number / state / expiration date		PE #41026 / LA / March 31, 2025	
Year registered	2016	Discipline	Civil Engineer

Contract role(s) / brief description of responsibilities
Engineer |Jared has 11+years of Engineering and Surveying experience in water resource projects. As an engineer he has developed construction plans and specifications for a wide range of projects, performed hydrologic and hydraulic analyses including breach analyses, BFE determinations, and water withdraw studies. Additionally, he has experience in surveying, drafting, project management, and construction administration.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
09/20-Present	**LWI Region 2 / Task Order #2 | DOTD | Project Engineer** This project is the largest and most ambitious modeling project in the history of Louisiana. The plan is to model flooding across the entire state to be able to manage flood risk. The entire state was split into seven regions with a different prime consultant for each region. Region #2 encompasses 13 parishes in the north central portion of Louisiana. Task Order #2 is the survey and modeling work for 5 of those parishes. Just Task Order #2 includes thousands of miles of streams to study and hundreds of structures to survey. Nixon Engineering Solutions is a sub-consultant to Freese and Nichols, Inc (FNI) on this project. My primary role in this project is to assist with hydraulic modeling. As part of this role so far, I have developed an unsteady state model that combined 8 different reaches, over 25 surveyed structures, and more than 285 cross-sections in the D'Arbonne watershed.
10/19-12/20	**Kinsey Scout Pond Dam | NORWELA | Project Engineer** This was a dam design and construction project. The Northwest Louisiana Council, Boy Scouts of America hired Nixon Engineering Solutions to design and develop construction plans and manage the construction project for a 28.8' tall zoned earthen dam in North Louisiana. This dam resulted in a 16.9-acre pond (at pool stage) for the Boy Scouts to use as a recreation area for their activities. My roles included project engineer, drafter, surveyor, and inspector. Part of this process included working with DOTD to determine the dam hazard classification via hydrologic and hydraulic studies and breach analyses. Biddable construction plans including estimated quantities, cross-sections, plan and profile sheets, siphon and spillway details, and specifications were generated by our office. The project management portion included construction inspection, soils test verifications and survey measurements.

12/21-3/22	**Gary Brown Pond | Gary Brown | Project Engineer** For this project we were tasked with the survey, design, and permitting of a Zoned Earthen Embankment Dam. The 26' dam with concrete spillway has a surface area at pool stage of 36 acres. It was constructed for a private citizen in CADDo Parish, LA with the purpose of recreation and selling frac water. My role in this project included assistance with gathering of all needed topographic data, H&H study modeling (including multiple breach models), Hazard Classification Report, preparation of stamped Construction Documents & Specifications, submittal and approval through DOTD Dam Safety Program, periodic construction observations, and final as-built survey. Nixon Engineering subbed out the GeoTechnical analysis and slope / stability calculations to Dave Rambaran, PE at DRGeoES, LLC. From initial concept to final as-built the entire project was completed in under five months.
05/12-Present	**Surface Water Withdraw Studies | Various Oil & Gas Companies | Project Engineer** Over 55 water withdrawal studies have been completed by Nixon in the last 6 years in Union, Lincoln, Bossier, CADDo and Desoto Parishes as well as several in Texas and Arkansas. Jared served as project engineer, survey party chief, and surveyor. He oversaw site visits, data collection, velocity and flow measurements via an Acoustic Doppler Current Profiler (ADCP), channel surveys via GPS and robotic total station, hydrologic and hydraulic modeling, generation of rating curves, gage analysis including frequency and duration analyses, interpretation of state low-water findings, and standing water body volume calculations. The results of the above tasks to generate a water withdrawal analysis report that set limitations on the duration, volume, rate, and location of water withdrawals to minimize stream impacts. These reports are used for acquiring DNR and USACE permits.
06/17-11/18	**Benoit Bayou and Benoit Bayou Lateral Drainage Study | Bossier City | Project Engineer** This was a large drainage study with an 8 square mile watershed including rural and urban areas in Bossier Parish and Bossier City. My roles were project engineer and survey party chief. My responsibilities included building and calibrating 1D/2D hydraulic models using a combination of aerial LiDAR and traditional survey data. Based on this data I created multiple flood maps for several flood conditions and composed the report summarizing the findings. I collected portions of the survey data including channel cross sections, culvert crossings, and bridge geometry. I assisted with the installation of a real time stream gage. I was also responsible for calibrating the gage and setting up the reporting features.
08/2016-07/2017	**Red Chute Levee Maintenance | Bossier Levee District | Project Engineer** 5500 feet of the Red River Levee was raised to correct insufficient freeboard. Jaredserved as project engineer, survey party chief and surveyor. and assisted with multiple topographic surveys of the levee, initially as part of the design phase and later as part of the construction phase, creating a set of detailed construction plans, and pre-construction meetings with the contractor, inspector, and owner.
06/16-12/17	**Ockley Drainage Basin Storage Project | City of Shreveport | Project Engineer** The City of Shreveport proposed to address the high water that occurs in Ockley Ditch during significant rain events. A Hydrologic and Hydraulic study was required to determine potential solutions. For this project we were tasked with modeling and calibrating the existing conditions and designing various storage areas and structures throughout to reduce the water surface in key areas. Parts of this process include communicating with City Officials to determine key calibration points, processing existing rainfall data to match historic events, locating, and designing potential storage areas, and compiling a comprehensive report detailing the study methods and results. The City of Shreveport plans to move forward with construction documentation based on our study.

Lazenby & Associates, Inc.					
Name	James S. Ellingburg, PE			Years of experience with this firm/employer	14
Title	Project Engineer			Years of experience with other firm(s)/employer(s)	0
Degree(s) / Years / Specialization			BS / 2008 / Civil Engineering		
Active registration number / state / expiration date			PE 0037236 / Louisiana / 09/30/2022		
Year registered	2012	Discipline	Civil Engineer		

Contract role(s) / brief description of responsibilities

Project Engineer | James has over 14 years of experience in developing roadway plans on both LDOTD and local roadway projects. James is familiar with the LDOTD Roadway Design Procedure and Details Manual and the LDOTD Hydraulics Manual, as well as AASHTO design standards for roadway design. James has assisted in hydraulic analysis and design, as well as roadway design and preparation of roadway plans, on a variety of roadway projects. James has successfully completed the following continuing education classes, workshops, and seminars: LA Specific Traffic Control Technician Course, 2020 (refresher); LA Specific Traffic Control Supervisor Course, 2020 (refresher); Designing Streets for Pedestrians and Bicyclists Workshop, 2016; Highway Safety Manual Workshop, 2016; Roundabout Design Workshop, 2013; Traffic Engineering Analysis Process & Report Class Module 1, 2 & 3, 2021; and One-Dimensional Modeling of River Encroachments with HEC-RAS Class, 2022.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
05/08-06/15	**State Project No. H.002622: Arkansas Road (LA 616) | Ouachita Parish | Engineer Technician / Staff Engineer** James initially checked the topographic survey in the field for accuracy, later assisting the project engineer with development of existing drainage maps, drainage design maps, utility adjustments, and developing roadway plans. James also assisted with roundabout designs, and sequence of construction in both Preliminary and Final plan development. This project consisted of widening a 3.2-mile portion of LA 616 from a two-lane section to a five-lane urban roadway, and included four multi-lane roundabouts that required extensive geometric design and graphical grade development in order to meet AASHTO and LDOTD standards and requirements for safety. Once construction began, James provided construction support on an as-needed basis by answering field questions from the contractor or LDOTD.

12/10-10/12	**State Project No. H.003854: Bossier North-South Corridor Roadway and Bridges (I-220/Swan Lake Road Interchange to Crouch Road) | Bossier Parish | Staff Engineer** James worked on the development of existing drainage maps, design drainage maps, roadway drainage plans, and assisting with roadway and bridge design and plan development for both Preliminary and Final plans. This project consisted of reconstruction and realignment of a 3.7-mile section of Swan Lake Road and construction of a new 4.2 mile roadway connecting Swan Lake Road and Crouch Road. The southern portion of the project contains an urban three-lane section, while the northern segment is a rural, two-lane roadway. There are three bridge sites on the project.
11/11-01/12	**State Project No. H.004684: El Camino East/West Corridor, Route LA 6 | Natchitoches Parish | Staff Engineer** James developed existing drainage maps for a LDOTD Topographic Survey.
09/17-Present	**State Project Nos. H.004774 & H.007300: Kansas Lane – Garrett Road Connector and I-20 Improvements | Ouachita Parish | Staff Engineer** James assisted with generating topographic survey deliverables, developing existing drainage maps for the topographic survey portion of the project. During the design and plan preparation portion of the project, James has performed drainage design, developed design drainage maps, and assisted with design of five multi-lane roundabouts, developing graphical grades and assisting with geometric design. This urban project includes five multilane roundabouts and interstate ramp modifications that required extensive geometrics and graphical grades in order to meet AASHTO and LDOTD standards and requirements for safety. The final plans are currently 98% complete.

Lazenby & Associates, Inc.			
Name	Ronald J. Riggin, II, PE, PLS	Years of experience with this firm/employer	11
Title	Project Engineer	Years of experience with other firm(s)/employer(s)	6
Degree(s) / Years / Specialization		BS / 2006 / Civil Engineering	
Active registration number / state / expiration date		P.L.S. #0005119/ LA / 03/31/2023 PE #0036016 / LA / 03/31/2023	
Year registered	2014	Discipline	Professional Land Surveyor
	2011		Professional Civil Engineer

Contract role(s) / brief description of responsibilities

Ronald is familiar with the requirements of the LDOTD Location and Survey Section for conducting topographic surveys, property surveys and hydrographic surveys. Ronald is responsible for quality control of all survey data obtained by survey crews in conducting topographic surveys, property surveys, and hydrographic surveys. Ronald has over five (5) years of experience in conducting and performing topographic surveys, property surveys, and developing right-of-way maps. Ronald has successfully completed LA Specific Traffic Control Technician Course, 2020 (refresher); LA Specific Traffic Control Supervisor Course, 2020 (refresher); and ATSSA Course for Traffic Flagger, 2020. On this project, Ronald meets the MPR Requirement No. 8.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
05/08-06/15	**Retainer Contract For Professional Surveying Services | Statewide | Project Surveyor** Project Surveyor responsible for coordination and supervision of survey field crews performing topographic surveys and property surveys on 14 Task Orders for an accumulated value of $436,473.00 for LDOTD State Projects at various locations in northern Louisiana.
04/13-06/16	**S.P. # H.008768 – Hydrographic Survey Monitoring of Existing Bridges | Statewide (North Region) | Project Surveyor** Performed hydrographic surveys on 14 Task Orders for monitoring scour at major bridge sites in north Louisiana. Duties included supervision of survey crews, analysis of survey data and the development of required hydrographic survey reports at the various bridge locations.
04/14-Ongoing	**Multiple Residential Developments | Ouachita Parish | Project Surveyor** Professional Surveyor of Record for developing topographic surveys and Property Surveys for private clients on residential developments and commercial developments in Ouachita Parish and northern Louisiana. Professional EOR for the overall design of residential and commercial developments.

03/15-08/17	**S.P. # H.011742 – Ole Highway 15 Improvements (US 80 – Arkansas Road (LA 616)) | Ouachita Parish | Project Engineer and Project Surveyor** Performed a topographic survey of a 2.2 mile section of Ole Hwy 15 from US 80 to LA 616 and then was the project engineer responsible for roadway design which consisted of cold planning to remove existing AC surfacing, in-place cement stabilization of existing base course, AST interlayer and asphaltic concrete overlay.
05/16-02/18	**Steep Bayou Sewer Main project of the West Ouachita Sewerage District No. 5. | Ouachita Parish | Project Surveyor** Performed a topographic survey of the alignment for a sewer main trunk line from I-20 to New Natchitoches Road along Steep Bayou in Ouachita Parish. He also conducted a boundary survey of the ROW parcels along this route and developed the necessary ROW maps and legal descriptions.
09/18-Ongoing	**Retainer Contract For Professional Surveying Services | Statewide (North Region) | Project Surveyor** Performing hydrographic surveys on major bridge structures in northern Louisiana for monitoring channel scour. Duties include supervision of field crews, analysis of survey data and development of required hydrographic survey reports at the various bridge locations for submission to the DOTD.

Lazenby & Associates, Inc.			
Name	Randy C. Hammons, PE	Years of experience with this firm/employer	21
Title	Project Engineer	Years of experience with other firm(s)/employer(s)	8
Degree(s) / Years / Specialization		BS / 1993 / Civil Engineering	
Active registration number / state / expiration date		PE #0029504 / LA / 09/30/2023	
Year registered	2001	Discipline	Civil Engineering

Contract role(s) / brief description of responsibilities

Randy has in excess of 25 years of experience in planning and designing highways and bridges on transportation projects in Louisiana, Arkansas, Mississippi, and Tennessee. Randy has approximately 15 years of experience supervising and processing topographic survey data, including establishing survey control, calculating existing alignments, creating digital terrain models (DTM's), and developing existing drainage maps for LDOTD projects. Randy has successfully completed LA Specific Traffic Control Technician Course, 2020 (refresher) and LA Specific Traffic Control Supervisor Course, 2020 (refresher).

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).
10/14-06/17	**State Contract No. 4400004541: Retainer Contract for Professional Surveying Services l Statewide l Project Engineer** This retainer contract contained eight task orders processing topographic survey field data and development of topographic survey maps and imagesfor various projects at a cost of $811,513 over a 3-year period.
01/17-01/20	**State Contract No. 4400009384: Retainer Contract for Professional Surveying Services l Statewide l Project Engineer** This retainer contract contained six task orders processing topographic survey field data and development of topographic survey maps and images for various projects at a cost of $989,478 over a 3-year time frame.
10/19-Present	**State Contract No. 4400015236: Retainer Contract for Professional Surveying Services l Statewide l Project Engineer** This retainer contract has contained fifteen task orders to processing topographic survey field data and developing topographic survey maps and images for various projects at a cost of $1,825,144 over a 5-year time frame.
01/20-Present	**State Contract No. 4400017710: Retainer Contract for Professional Surveying Services l Statewide l Project Engineer** This retainer contract has contained one task order to perform topographic surveys at a cost of $393,871 over a 5-year time frame.

Lazenby & Associates, Inc.			
Name	Noah J. Sampognaro, EI	Years of experience with this firm/employer	2
Title	Engineering Intern	Years of experience with other firm(s)/employer(s)	0
Degree(s) / Years / Specialization		BS / 2020 / Civil Engineering	
Active registration number / state / expiration date		E.I. 0034746 / LA / 09/30/2023	
Year registered	2021	Discipline	Civil Engineering (E.I.)

Contract role(s) / brief description of responsibilities

Noah has 2 years of experience in performing drainage design, hydraulic analysis, roadway design, and preparation of roadway plans on a variety of LDOTD and local roadway projects. Noah passed his PE Civil Transportation exam in October 2022 and is currently enrolled in the University of Wyoming Cadastral Surveying Certificate Program. Noah is familiar with the LDOTD Roadway Design Procedure and Details Manual and the LDOTD Hydraulics Manual, as well as AASHTO design standards for roadway design. Noah also assists in processing topographic survey and mobile LIDAR data, creating survey centerline alignments (ALG's) using horizontal regression analysis, developing digital terrain models (DTM's), and producing existing drainage maps for LDOTD topographic surveys.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
01/22-01/23	**State Project No. H.015052 l Ouachita Parish l Engineer Intern** This project consisted of performing a complete topographic survey along I-20 from the Well Road Interchange to the LA 34 (Stella Mill St) Interchange in Ouachita Parish. It also included portions of Well Road, Downing Pines Road, Thomas Road, and LA 34 (Stella Mill St) for a total cumulative length of 25,625 ft (4.85 miles). Data was collected using GPS receivers, robotic total stations, SX-10 terrestrial scanners, and a terrestrial mobile LIDAR scanner. Noah assisted in post-processing the survey data, extracting mobile LIDAR data using TOPO Dot software, and creating the existing drainage map. He also assisted in quality control measures by comparing field data collected by the survey crew to LDOTD as-built drawings.
10/19-Present	**State Contract No. 4400015236: Retainer Contract for Professional Surveying Services l Statewide l Project Engineer** This retainer contract has contained fifteen task orders to processing topographic survey field data and developing topographic survey maps and images for various projects at a cost of $1,825,144 over a 5-year time frame. Noah assisted in post-processing topographic survey data which was collected with the use of GPS receivers, robotic total stations, and SX-10 terrestrial scanners, as well as using TOPO Dot software to extract data collected with a terrestrial mobile lidar scanner. His duties also included creating survey centerline alignments (ALG's) and associated reports using horizontal regression analysis, developing existing digital terrain models (DTMs), and producing existing drainage maps.

01/21-Present	**Ouachita Parish Police Jury Road Program | Ouachita Parish | Engineering Intern** Noah has assisted with the Ouachita Parish Police Jury Road Program. His duties consist of post-processing topographic survey data, developing pavement preservation roadway plans, including design of cross drain structures, superelevation correction calculations, and quantity calculations, to preserve and extend the life of Ouachita Parish roadways, some of which are constructed under the DOTD Urban Systems program.
06/21-Present	**City of Monroe Urban Systems | Monroe, LA | Engineering Intern** Noah has assisted with City of Monroe roadways designed under the LDOTD Urban Systems program. His duties consist of post-processing topographic survey data, developing pavement preservation roadway plans, including hydraulic design, quantity calculations, and construction cost estimates.
08/22-Present	**US 165 Turn Lanes at Scott Drive | Ouachita Parish | Engineering Intern** Noah assisted in the development of roadway plans and post-processing the topographic survey data, including creating the existing digital terrain model (DTM), drainage design, and quantity calculations. This project, which was prepared for the Ouachita Parish School board, consists of adding a left and right turn lane on US 165 and traffic signal modifications at Scott Drive in Sterlington, LA.

Eustis Engineering L.L.C.			
Name	Gwendolyn P. Sanders, PE	Years of experience with this firm/employer	30
Title	President	Years of experience with other firm(s)/employer(s)	0
Degree(s) / Years / Specialization		MS / 1992 / Engineering BS / 1990 / Civil Engineering	
Active registration number / state / expiration date		PE #0027104 / LA / 9-30-2023	
Year registered	1997	Discipline	Civil Engineer

Contract role(s) / brief description of responsibilities
As President, Gwendolyn will be responsible for the overall services provided by Eustis Engineering.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
03/13-05/16	**Bayou Chene Flood Protection and Diversion Structure | Bayou Chene | Engineering Manager** Gwendolyn took a senior role in allocating resources for the completion of our engineering services. She also performed an Independent Technical Reviews for various aspects of the project.
09/12-02/18	**Floodgate Structure at Falgout Canal | Terrebonne Parish | Engineering Manager** Eustis Engineering developed geotechnical recommendations and analyses to support the design of flood protection at Falgout Canal in Terrebonne Parish, Louisiana. Flood protection consisted of a 195-ft swinging barge floodgate in Falgout Canal and braced walls that extended from the floodgate and tie-in to an earthen levee alignment on the northern and southern sides of Falgout Canal. As our Engineering Manager, Gwendolyn again allocated resources to complete pile load capacity estimates as well as stability and seepage analyses for the floodgate and braced walls. She also performed an Independent Technical Review for the most recent phase of the project.
03/12-04/12	**Houma Navigational Canal Lock Complex Optimization | Engineering Manager** Gwendolyn and other members of our staff performed engineering analyses necessary for a reconnaissance level of design including, but not limited to, global stability, pile foundations, temporary retaining structures, and allowable excavation cuts for an earthen lock chamber. For the temporary retaining structure analyses, Gwendolyn reviewed two-dimensional analyses of a multi-level braced cofferdam, and evaluated consolidation settlement and means to accelerate the rate of consolidation settlement in these areas.

Eustis Engineering L.L.C.					
Name	James J. Hance, PE			Years of experience with this firm/employer	19
Title	Senior Project Manager			Years of experience with other firm(s)/employer(s)	4
Degree(s) / Years / Specialization			MBA / 2011 / Business Administration MS / 2003 / Civil Engineering BS / 1998 / Civil Engineering		
Active registration number / state / expiration date			PE #0031270 / LA / 9-30-2024		
Year registered	2004	Discipline	Civil Engineer		

Contract role(s) / brief description of responsibilities
As a Senior Project Manager, James will be responsible for managing a variety of design and construction phase projects; management of staff engineers and development of their skill set; and development of scopes of work.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
03/12-04/12	**Houma Navigational Canal Lock Complex Optimization | Sr. Project Manager** James worked closely with URS to provide reconnaissance level design documentation and examine changes for the 100-year level risk reductions.
03/13-05/16	**Bayou Chene Flood Protection and Diversion Structure | Bayou Chene | Geotechnical Engineer** James represented Eustis Engineering as the sole geotechnical engineer attending design team meetings of four design firms. Significant effort was spent on developing an appropriate field exploration program and defining a consistent design criteria document for the design firms to reference. Eustis Engineering self-performed the entire field exploration program that involved accessing land, marsh/swamp, and marine areas. The marine operations were performed by two means: a truck-mounted drill rig positioned on a jack-up boat and a skid rig delivered to locations with a small shallow draft elevating boat.
09/12-02/18	**Floodgate Structure at Falgout Canal | Terrebonne Parish| Quality Control** Eustis Engineering performed numerous geotechnical studies as a subconsultant for the Terrebonne Levee & Conservation District for various reaches of the Morganza to the Gulf project. We worked closely with the structural engineer to model soil-structure interaction analyses. James directed and performed quality control design review of lateral load-deflection analyses of pipe piles planned to support the floodgate structure and adjoining walls. In addition, James reviewed geotechnical evaluations of structures (i.e. swing gates, barge gates, and floodwalls) and levee tie-ins for various projects.

Eustis Engineering L.L.C.					
Name	Sean G. Walsh, PE			Years of experience with this firm/employer	10
Title	Engineering Manager			Years of experience with other firm(s)/employer(s)	5
Degree(s) / Years / Specialization			MS / 2010 / Civil Engineering BS / 2007 / Civil Engineering		
Active registration number / state / expiration date			PE #0037905 / LA / 9-30-2023		
Year registered	2013	Discipline	Civil Engineer		

Contract role(s) / brief description of responsibilities
As Engineering Manager, Sean is responsible for personnel resource allocation, the overall engineering schedule, and execution of engineering services. Sean also functions as a mentor to the engineering staff.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
09/12-02/18	**Floodgate Structure at Falgout Canal | Terrebonne Parish | Project Manager** Eustice Engineering oversaw the geotechnical design of a ground improvement and surcharge plan associated with earthen to wall tie-ins at Falgout Canal. Sean and the team's responsibilities included the design of a wick drain field, monitoring settlement and pore water pressures in the foundation soils, and providing settlement curve estimates during construction for the project. With this program, the team used settlement plates, vibrating wire transducers for pore water pressure measurements, spider magnet extensometers, inclinometers, and settlement gauges all set up for real-time autonomous monitoring. The purpose of the program was to avoid impacts to the floodwall and floodwall foundations when co-existing with an earthen levee section subject to excessive ground surface settlements. The program was a success for the project owners.
03/13-05/16	**Bayou Chene Flood Protection and Diversion Structure | Bayou Chene | Geotechnical Engineer** Sean directed the activities associated with an extensive geotechnical field exploration to support the design of the earthen and structural systems that would collectively be used to provide flood protection to the project area. Geotechnical engineering design recommendations were developed for a braced sheetpile floodwall, float-in barge gate, earthen levee tie-ins at the floodwall extents, dredging design recommendations, levee design and construction recommendations, levee settlement, pile settlement, estimates of allowable axial and lateral pile capacities, and deep-seated and local stability analyses of walls and gates. Our engineering analyses and recommendations were generally in accordance with the Coastal Protection and Restoration Authority's (CPRA's) Louisiana Flood Protection Design Guidelines (LFPDG) dated 16 July 2015.

C. H. Fenstermaker & Associates, L.L.C.			
Name	Justin Bordelon, PLS	Years of experience with this firm/employer	17
Title	Manager, Surveyor	Years of experience with other firm(s)/employer(s)	0
Degree(s) / Years / Specialization		BS / 2009 / Business Administration	
Active registration number / state / expiration date		PLS 5271 / LA / 03.31.2024	
Year registered	2021	Discipline	Professional Land Surveyor

Contract role(s) / brief description of responsibilities
Hydrographic Survey, Justin Bordelon is a Professional Land Surveyor. His initial surveying work included performing underwater acoustic investigations and hydrographic survey. As he gained more experience, Justin became the underwater acoustic investigation manager and worked on many projects, including an inspection of over 100 bridges for the Louisiana Department of Transportation and Development. He then became a Survey Crew Manager and managed crews in Lafayette, Shreveport, and Midland, TX. Justin currently coordinates and supervises activities of field and office personnel for remote sensing projects. He also acts as Project Manager and assists in pre-project planning and post data collection analysis. Additionally, he is responsible for client interaction and coordination.

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).
2011-2012	**Acoustic Survey, Underwater and Structural Inspection of State Maintained Dams | Statewide, LA | Field Team Crew Leader** Fenstermaker was contracted to perform dam system evaluations of fourteen (14) state-maintained dam systems issued through separate Task Orders including Bundicks Creek Dam, Lower Anacoco Dam, Vernon Lake Dam, Grand Reservoir Dam, Ivan Lake Dam, Iatt Lake Dam, Bayou Cocodrie Dam, Chicot Lake Dam, Lake Claiborne Dam, Black Bayou Dam, Nantachie Lake Dam, Smithport Lake Dam, Kepler Creek Dam, and Turkey Creek Dam. Justin served as the Field Team Crew Leader and lead acoustic technician on this project.
10/22	**Chilhowee Dam Survey | Blount County, TN | Project Manager** Fenstermaker used a multi-beam bathymetry sonar for the Tailrace and downstream areas of this hydroelectric dam. UAI supplied the boat for the survey activities. The sonar was used to produce a 3D point cloud model, to establish current conditions of the structures, and to establish a 3D Digital Baseline for future inspections. This data enabled the client to determine changes in the area over time. Fenstermaker also deployed a fiber-optic tethered underwater ROV (Remotely Operated Vehicle) to capture high-definition underwater photography of any scour or undermining conditions along the tailrace concrete structure, including the training walls and rip-rap embankment. Justin served as the project manager and was responsible for coordinating field crews, providing survey support, and reviewing data.

10/22-12/22	**GRDA Salina & Pensacola Dam Survey | Mayes County, OK | Project Manager** Fenstermaker served as a sub-consultant to UAI and performed all advanced technologies services for the project. UAI performed multibeam, Sidescan Sonar, and LiDAR data collection along the upstream and downstream sides of the Salina Dam and on the upstream side of the Pensacola Dam. Justin served as Fenstermaker's project manager and was responsible for coordinating field crews, processing data, reviewing data, and preparing contour maps and project deliverables.
01/23-02/23	**City of Marlin TX-1038 & TX-1037 Dam | Falls County, TX | Project Manager** Fenstermaker served as a sub-consultant to UAI and performed all advanced technologies services for the project. Justin served as Fenstermaker's project manager and was responsible for coordinating survey tasks and the field crew, performing quality control on collected data, reviewing and updating data, and preparing deliverables for the client.
04/22-ongoing	**Louisiana Terminal Site Topographic Survey and Utility Mapping | St. Bernard Parish, LA | Project Manager** The Port of New Orleans selected Fenstermaker to perform topographic survey and utility mapping services for use in conceptual designs and permit applications for a port terminal project. The topographic survey will be performed using aerial LiDAR and orthorectified aerial imagery. Fenstermaker will perform a bathymetric survey of the wharf project survey area and a magnetometer survey within the limits of the bathymetric survey. For the utility mapping portion of the project, Fenstermaker will obtain readily available data from utility owners on underground utilities including water, sanitary sewer, storm drainage, electrical, gas, telephone, streetlight, and bridge. Justin is serving as Project Manager, has coordinated site visits, managed project planning and scheduling, reviewing control network, acquiring DOTD permitting for deep rod monuments, and coordinating field crews, reviewing collected data, and preparing reports and final deliverables.
07/20-08/20	**Pointe-a-La-Hache Ferry Landings | Plaquemines Parish, LA | Quality Control** The project consisted of performing a rehabilitation of the Pointe-La-Hache East Bank and West Bank Ferry Landings for the ferry crossing the Mississippi River. The rehabilitation includes the replacement of the existing Ramp Bridge and its substructures and foundations, replacement of the existing Ramp Bridge lift towers, replacement of the existing pile and chain dolphins, and all associate roadway tie-ins and site development. As a sub to Modjeski and Masters, Fenstermaker performed sidescan sonar for the hydrographic survey of the ferry landings to support the design of the rehabilitation. Justin performed quality control on the collected sidescan and MS1000 data, processed data, performed a mosaic analysis and processed mosaic files, and prepared deliverables for the client.
07/20-05/22	**Lake Maurepas Diversion Canal Survey | St. John the Baptist Parish, LA | Project Manager** Justin served as the Project Manager to survey the Lake Maurepas Diversion Canal from the Mississippi River to the Maurepas Swamp. This project included, multibeam, single-beam and magnetometer survey on the Mississippi River, a complete topographic survey along the diversion canal route from the Mississippi River to Interstate 10 utilizing LiDAR, Photogrammetry and Conventional Surveying methods. Tasks included coordination with AECOM, CPRA, Marathon, coordinating and scheduling field crews, overseeing office data processing and deliverable generation.

C. H. Fenstermaker & Associates, L.L.C.			
Name	Jeanne Hornsby, MS, PE, CFM	Years of experience with this firm/employer	17
Title	Director, Engineer	Years of experience with other firm(s)/employer(s)	2
Degree(s) / Years / Specialization		BS / 2005 / Civil Engineering MS / 2007/ Hydraulics and Environmental Engineering	
Active registration number / state / expiration date		PE 36717 / Louisiana / 03.31.2024	
Year registered	2011	Discipline	Civil Engineering

Contract role(s) / brief description of responsibilities

H&H, Jeanne Hornsby, MS, PE, CFM is an Engineering Director at Fenstermaker with 18 years of engineering, project management, and quality control experience. Her main responsibilities include managing, designing, and completing quality control on multi-million-dollar projects that range from roadway design and construction to coastal and storm water management for both the public and private sectors. She leads Fenstermaker's Water Resources Team and her expertise has developed through the successful completion of numerous numerical modeling analyses, roadway drainage designs, and stormwater master plans in Louisiana, Texas, and Florida. She has also worked closely with the DOTD on roadway design projects and Environmental Impact Statements. She has held this role on various projects and has completed quality reviews for agencies, including Calcasieu Parish Police Jury, Lafayette Consolidated Government, CPRA, DOTD, City of Scott, and City of Carencro. She was instrumental in generating the current quality control process for Fenstermaker's engineering division. She is well versed in a variety of hydrologic and hydraulic software and applications including the USACE HEC suite (HEC-HMS, HEC-RAS, HEC-DSS, HEC-METVUE, HEC-FIA), DOTD HYDRWIN Software, Danish Hydraulic Institute (DHI) MIKE Suite, and accompanying GIS applications. She is also a certified floodplain 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).
06/20-Ongoing	**Louisiana Watershed Initiative | Region 4 (De Soto, Sabine, Vernon, Rapides, Beauregard, Allen, Jefferson Davis, Calcasieu, and Cameron Parishes)| Lead H&H Engineer** Jeanne is serving as the Lead Hydrologic & Hydraulic Engineer for the Louisiana Watershed Initiative Region 4, an unprecedented project that will manage the future flood risk in the State of Louisiana through watershed-based solutions. Jeanne is responsible for the oversight of all hydrologic and hydraulic tasks, data collection, model development, and engineering to successfully complete an interactive, usable, and manageable hydraulic and hydrologic Region 4, which encompasses De Soto, Sabine, Vernon, Rapides, Beauregard, Allen, Jefferson Davis, Calcasieu, and Cameron Parishes in the State of Louisiana. These models will consider the degree to which communities within a watershed are hydraulically and hydrologically connected, and will lead decisions regarding land use, policy, and infrastructure must now be coordinated, made, and implemented at the watershed level if flood risk is to be effectively managed.

04/18-Ongoing	**Calcasieu Parish Regional (HUC 8) Watershed Modeling & Planning | Calcasieu Parish, LA | Project Manager** Jeanne is the lead client contact, project manager, and lead hydraulic modeler directly responsible for all aspects of the project including developing one- and two-dimensional watershed models (Using HEC-HMS and HEC-RAS), developing future planned conditions, developing floodplain and watershed management ordinances, evaluating mitigation projects utilizing the Deltares Dynamic Adaptive Pathways and Policies (DAPP) process, completing a detailed hydraulic inventory, updating their flood alert system, generating a drainage report card, and conducting all public and agency meetings.
03/17-present	**Coulee Mine Branch and Tributaries: Hydraulic Re-Study | Lafayette Parish, LA | Project Manager** Jeanne is the Project Manager and lead numerical modeler. Fenstermaker was requested by the Lafayette Consolidated Government to provide professional hydraulic modeling, hydrologic monitoring, and topographic surveying services to revise the effective Flood Insurance Rate Map data for Coulee Mine Branch and Tributaries. The scope of the study includes hydraulic modeling and re-mapping of the regulatory floodplain, base flood elevation, and floodway designations for the following study reaches: 1) Coulee Mine Branch from the downstream cross section at Congress Street to confluence with N. University Ave. Coulee; 2) N. University Ave. Coulee from the confluence with Coulee Mine Branch eastward to Patterson Street (1.6 channel miles total studied). The existing hydraulic study does not account for major channel improvements as well as land use changes that have occurred since the time of publication prior to 2000. The objectives of the project are to provide: a topographic survey database for the study reaches including channel and structure surveys, a photo database of the hydraulic structures located in the study reaches, a basin-wide HEC-HMS model, a steady HEC-RAS model which meets FEMA's requirements for an Enhanced Study (Detailed Riverine) Hydraulic Model, digital Map Products (floodplain and floodway boundaries, flood risk tabulations) which meet FEMA's requirements for Digital Flood Insurance Rate Map (DFIRM) production, and coordinate with LCG for the Letter of Map Revision (LOMR) process with FEMA.
02/14-01/19	**Ile des Cannes Watershed Study (HUC 10) & Physical Map Revision | Lafayette Parish, LA|** Fenstermaker was contracted to develop a hydrologic and hydraulic numerical model and map the flood zones and floodways of the Ile de Cannes Watershed. Jeanne developed an unsteady HEC-RAS model, calibrated and validated the model using data collected from two different storm events, and then used the model to determine the 100-year flood extents. She also assisted in the preparation of the Letter of Map Revision (LOMR) submittal to FEMA which resulted in a Physical Map Revision (PMR) that impacted 11 Flood Insurance Rate Maps (FIRM) panels. This effort is estimated to be the largest LOMR prepared in the U.S.
02/11-Ongoing	**Tete Bayou (HUC 12) and Bayou Parc Perdu (3-HUC 12) Watershed Study and Regional Detention Implementation | Iberia Parish, LA | Assistant Project Manager** Jeanne assisted the project manager in developing a funding application through the FEMA Region VI Hazard Mitigation Grant Program (HMGP) from the presidentially declared disaster (LA-4277), which impacted Iberia Parish in August of 2016. Jeanne is the lead technical numerical modeler for the development of a one and two dimension hydrologic and numerical models using both HEC-HMS and HEC-RAS to develop inundation maps for various storm events for both existing conditions and proposed project conditions to perform a benefit/cost analysis. Jeanne aided in the research of all sub-basin hydrologic characteristics such as SCS runoff curve numbers, lag time, and stream routing criteria. Jeanne aided the lead technical engineer in setting up both an HEC-HMS and HEC-RAS one-dimension numerical model used for all existing computation hydraulics.

C. H. Fenstermaker & Associates, L.L.C.					
Name	Travis Bodin, MBA, PLS, PMP		Years of experience with this firm/employer	19	
Title	Vice President, Survey and Mapping		Years of experience with other firm(s)/employer(s)	1	
Degree(s) / Years / Specialization			BS / 2004 / Industrial Technology MBA / 2021 / Business Administration		
Active registration number / state / expiration date			PLS No. 5067 / LA / 03.31.2024		
Year registered	2011	Discipline	Professional Land Surveyor		

Contract role(s) / brief description of responsibilities

Survey, Travis Bodin, MBA, PLS, PMP has extensive surveying, management, and coordination experience. He has served as the Lead Professional Land Surveyor for projects across Louisiana. His responsibilities have included the management of surveying/ROW services, utility relocation coordination, coordinating with parish, state, and federal agencies and sub-consultants, cost estimating, scoping, scheduling and planning, resource management, and construction management services. With his background in surveying and project management, Travis has performed and participated in multi-million-dollar projects consisting of large scale topographic and bathymetric surveys, development of high accuracy GPS networks, landowner notification and documentation, the development of DTM, infrastructure documentation, GIS integration, and process and procedure development. Travis has conducted management duties for both field and office activities on survey and engineering projects.

With his wide range of managerial and technical experience, Travis was able to obtain his Project Management Professional Certification (PMP No. 2269869) which is acknowledged by agencies around the world as the leading certification for project managers. Travis is experienced in the use of the newest versions of MicroStation, AutoCAD, and Trimble Business Center, Office 365, and Primavera 6.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., “designed drainage”, “designed girders”, “designed intersection”, etc. Experience dates should cover the time specified in the applicable MPR(s).
04/2020-Ongoing	**Louisiana Watershed Initiative | Region 4 (De Soto, Sabine, Vernon, Rapides, Beauregard, Allen, Jefferson Davis, Calcasieu, and Cameron Parishes) | Lead Surveyor** Travis is serving as the Lead Surveyor for the Louisiana Watershed Initiative Region 4, an unprecedented project that will manage the future flood risk in the State of Louisiana through watershed-based solutions. Travis’s responsible for all aspects of surveying, data collection, and management to successfully complete an interactive, usable, and manageable hydraulic and hydrologic Region 4, which encompasses De Soto, Sabine, Vernon, Rapides, Beauregard, Allen, Jefferson Davis, Calcasieu, and Cameron Parishes in the State of Louisiana. These models will consider the degree to which communities within a watershed are hydraulically and hydrologically connected, and will lead decisions regarding land use, policy, and infrastructure must now be coordinated, made, and implemented at the watershed level if flood risk is to be effectively managed.

05/19-03/21	**S.P. H.005967 Port of Lake Charles Rail at W. Sallier St. | Calcasieu Parish, LA | Project Principal** Fenstermaker completed the topographic and boundary surveys, established control, processed data, reviewed title reports, established property boundaries, and mapped encumbrances for the ~0.75 miles Railroad Relocation. DOTD survey feature codes were utilized for this project, and DOTD right-of-way maps along with COGOWIN legal descriptions were created. Travis is serving as Project Principal and providing QA/QC for this project.
09/13 – 01/19	**DOTD Permit No. 153198, 153357, 153587: Sasol LCCP-Heavy Haul Road Engineering and Construction (LA378 & LA379) | Calcasieu Parish, LA | Lead Surveyor** Travis served as the Lead Surveyor in providing topographic, boundary, and route surveying to aid in the coordination with public and state agencies for the construction of a 2.4-mile roadway. Services include mapping for the acquisition of agreements between Sasol and third-party utilities, platting for acquisition and dedication of property needed for various construction activities and state agencies, and Quality Control services of construction activities that were conducted which included monument review and location mapping. Travis was responsible for field coordination, data processing, ROW generation, servitude and ROW mapping and topo surveys.
12/08 - 07/18	**DOTD Permit No. 03030387: Kaliste Saloom Road Widening, Intersection Improvements, Bridge, and CE&I (LA 3073 to LA 733) (Amb. Caffery to E. Broussard Rd) | Lafayette Parish, LA | Surveyor Project Manager** Travis served as the Surveyor Project Manager. Fenstermaker performed the topographic survey of all cross street and road tie-ins, cross sections for the purpose of an existing elevation DTM and parcel boundaries effected by the ROW. Travis was responsible for field crew coordination, topo/boundary surveys, ROW plats, monuments, data processing, plats and legal descriptions.
12/17 – 08/18	**City of Carencro 2018 Asphalt Overlay | Lafayette Parish, LA | Survey Principal** Fenstermaker was contracted to provide surveying, design, utility coordination, temporary traffic control and construction administration and inspection. The project was located along several different roadways within the City. The planned construction includes milling, overlay and patching along approximately 2,350-ft. of Hector Connoly Road, 1,250-ft. along W. Butcher Switch Road, and 290-ft along Guilbeau Road. The project is following DOTD Road Design Manual and MUTCD standards and procedures. Travis served as Survey Principal.
02/20-12/20	**East Delacroix Marsh Creation and Terracing (BS-37) Project, Breton Sound | St. Bernard Parish, LA | Survey Manager** This CWPPRA funded project aims to create and nourish 406 acres of marsh and construct approximately 12,950 linear feet of terraces. If constructed, this project would help to protect the community of Delacroix, Louisiana from storm surge. Fenstermaker was tasked by CPRA to perform topographic, bathymetric, and hydrographic surveys of the access and pipeline corridors, marsh creation, terracing and borrow areas. Fenstermaker's scope also includes a geophysical survey and archeological survey of the borrow area. Travis served as survey manager.
2017-2020	**Queen Bess Island Restoration (BA-202) Project | Jefferson Parish, LA | Survey Manager** Survey Technician Fenstermaker is the Prime consultant for CPRA's Queen Bess Island Restoration project. On this task, Fenstermaker provided a topographic survey to locate existing levees, rock dives, pool areas, cuts and trenasses. Travis served as the survey manager on this project.

C.H. Fenstermaker & Associates, LLC			
Name	Gary O'Neal, CFM	Years of experience with this firm/employer	2
Title	Grants Subject Matter Expert/Specialist	Years of experience with other firm(s)/employer(s)	14
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
Grants Subject Matter Expert/Specialist Gary O'Neal, CFM has extensive experience in Hazard Mitigation and Grant work. He provides technical assistance to applicants focusing on the full spectrum of FEMA HMA programs while also assisting on CDBG and several other sources of grant-based funding solutions. He has worked to create grant programs for clients that provide comprehensive assistance throughout the grant management life cycle. This Grant process begins with Pre-Award and Award activities moving through Post Award Monitoring and consulting through the Implementation, Closeout and Post-Closeout. His specific areas of expertise include program and project management, Benefit Cost Analysis, application development, technical assistance, reporting and monitoring, payment processing and reconciliation, budgeting, and cost reasonableness reviews.

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).
2004-2018	**Technical Support Related to FEMA Hazard Mitigation Assistance (HMA) Programs - Hazard Mitigation Grant Program (HMGP), Flood Mitigation Assistance (FMA) Grant Program, Pre-Disaster Mitigation (PDM) Grant Program - Governor's Office of Homeland Security & Emergency Preparedness (GOHSEP)** Mr. O'Neal worked as the State Applicant Liaison (SAL) 2 for GOHSEP. In this role he served as the primary liaison for GOHSEP's Regions 4 and 5 in South Louisiana. Working with dozens of Parishes, he was responsible for the provision of all application development assistance for HMA grant programs, as well as serving as the direct liaison to assist with payment reimbursement and technical assistance-related issues. In his role at GOHSEP, he was responsible for the state-level management of over $100,000,000.00 in FEMA Hazard Mitigation Assistance (HMA) funded projects for Parishes, Cities, Towns, Drainage Districts and Planning and Levee Districts across the State of Louisiana.
2017-2020	**Louisiana Watershed Initiative - GOHSEP/QES** Mr. O'Neal assisted in GOHSEP's Region 4's development of a regional approach to the HMGP allocation of $25 million because of the August 2016 Flooding (DR-4277), which is viewed as a model of collaboration and cooperation that served as the basis for Louisiana's Watershed Initiative multijurisdictional approach. While at QES, Mr. O'Neal was the lead consultant for the Calcasieu Watershed Regional Steering Committee on behalf of the Region's Fiscal Agent, the Calcasieu Parish Police Jury.

2018-2020	**Senior Project Manager for Hazard Mitigation Assistance and CDBG Quality Engineering and Surveying, LLC (QES)** Mr. O'Neal was involved in the business development, public outreach, application development, grant writing, RFI and approval process of approximately $21,800,000.00 in approved and obligated HMA Grants (HMGP, FMA & PDM) and an additional $400,000 in CDBG-DR contracts in just over a two year period in his role as the Senior Project Manager and Grant Consultant of Record for Quality Engineering and Surveying in the following municipalities: City of Scott, Louisiana, City of Denham Springs, Louisiana, City of Walker, Louisiana , Acadia Parish, St. Martin Parish, St. Mary Parish & Iberia Parish.
07/22-ongoing	**Jefferson Parish Technical Assistance (Jefferson Parish, LA)** Jefferson Parish has retained Fenstermaker for technical assistance relating to grant application development, preparation of support documentation. and benefit cost analyses (BCA) for the Building Resilient Infrastructure and Communities (BRIC) and Hazard Mitigation Grant (HMGP) programs. Mr. O'Neal prepared the HMGP grant application for the Parish's Segmented Rock Breakwater project. He also prepared the BRIC grant applications for the Parish's Sewer Lift Station and Safe Room projects. His additional responsibilities included contributing his expertise to the Benefit Cost Analysis for the Safe Room application and responding to RFIs.
02/21-ongoing	**Cameron Parish Grant Management Assistance (Cameron Parish, LA)** Mr. O'Neal is serving as the project manager for all FEMA Grant Management Services for the Parish under this contract. He leads a team of engineers and planners to develop Cameron's HMA grant application. Funds awarded through this program will reduce the impact of natural disasters and both prevent and reduce future losses and impacts.
10/22-ongoing	**St. Martin Parish Grant Writing (St. Martin Parish, LA)** Mr. O'Neal is the lead Project Manager in charge of the contract to handle all federal grant-writing for the Parish of St. Martin, Louisiana. The Parish currently has approximately $15 million under active management or being written via applications across FEMA HMGP and FMA.
12/21-11/22	**4570 Alcide Bonin Canal & Road Drainage (St. Martin Parish, LA)** St. Martin Parish tasked Fenstermaker with facilitating elevation, reconstruction, and other developments or improvements to homes, businesses, or other structures in accordance with applicable FEMA and GOHSEP grant programs. Fenstermaker's services to the Parish included leading public meetings with the Parish, homeowners, contractors, and other stakeholders; obtaining supporting documentation for homeowner participation, such as voluntary participation agreements and benefit cost analyses (BCAs); overall grant management administrative tasks; conducting risk assessments, assessing and inventorying projects; and developing and implementing mitigation strategies. Mr. O'Neal was responsible for grant application development, BCA review and revision, coordinating with GOHSEP, and reviewing the statement of work (SOW).
01/21-04/21	**North Canal Improvement Project (East Baton Rouge Parish, LA)** The City of Baker selected Fenstermaker to utilize Hazard Mitigation Grant Program (HGMP) funding to deepen and widen the canal to improve flow characteristics and capacity. Mr. O'Neal is providing Hazard Mitigation Assistance subject matter expertise as needed. He assisted on modification of the budget and additional funds request and reviewed the available supporting documentation. Mr. O'Neal also consulted on the Benefit Cost Analysis Method and compilation.

The Estopinal Group (TEG)					
Name	Denise A. Estopinal			Years of experience with this firm/employer	20
Title	Founder and CEO			Years of experience with other firm(s)/employer(s)	20
Degree(s) / Years / Specialization			BA, Louisiana State University (1981) (Jorunalism) / MPA, The University of New Orleans (2000) (Public Administration)		
Active registration number / state / expiration date			N/A		
Year registered	N/A	Discipline	Strategic Communications, Organizational, Community, Government and Corporate Relations Strategist		

Contract role(s) / brief description of responsibilities
Outreach/Stakeholder Engagement As Communications and Community Engagement Project Lead and Chief Communications Specialist, Denise Estopinal will work collaboratively with the Project Manager and the team to develop and implement strategic communications tactics and community engagement activations. She will direct the TEG team in its communications tactical support of the project. This support will include development of targeted regional marketing/communications strategies, collateral materials development, and on-the-ground, social and on-line community engagement efforts. Denise is a strategic communication, organizational, community and corporate relations executive, who creates, plans, and executes effective programs and initiatives to ensure success of the chief executive, management team, public agency, non-profit, corporation and foundation committed to operational and organizational excellence, best practices, accountability and positive brand identification and public relations.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
11/19 – present	**Sewerage and Water Board of New Orleans Rate Study | New Orleans, LA | Chief Communications and Community Engagement Strategist** As Chief Communications and Community Engagement Strategist for the Sewerage and Water Board of New Orleans Rate Study, Denise recommends and consultants on public messaging, collateral material development and targeted public engagement strategies with community stakeholders.
8/13 – 6/14	**St. Bernard Parish Government Flood Risk: Safety, Control and Responsibility Campaign | St. Bernard Parish, LA | Chief Communications and Community Engagement Strategist** As Chief Communications and Community Engagement Strategist for St. Bernard Parish Government Flood Risk: Safety, Control and Responsibility campaign, Denise led the communications component of project which raised awareness and educated St. Bernard Parish residents about flood risk and hazard mitigation efforts, as well as provided resources and assistance to facilitate citizens' responsible decisions during hurricane, storm, and flood events. The project also focused on the partnership between St. Bernard Parish Government and the Lake Borgne Basin Levee District - Working Together, Ensuring Safety.

5/16 – 12/17	**Entergy New Orleans - Ninemile Napoleon-Derbigny Transmission System Upgrade - Power to Grow Project | New Orleans, LA | Chief Communications and Community Engagement Strategist** As Chief Communications and Community Engagement Strategist for Entergy New Orleans - Ninemile Napoleon-Derbigny Transmission System Upgrade - Power to Grow Project, Denise lead a 10-member communications implementation team and participated in a 30-member interdisciplinary team of Entergy engineers, government relations and communications and outreach consultants. The project represented a $30 million capital investment in the electric transmission infrastructure throughout customer neighborhoods.

The Estopinal Group (TEG)			
Name	Ian Mundee	Years of experience with this firm/employer	15
Title	Creative and Technology Director	Years of experience with other firm(s)/employer(s)	15
Degree(s) / Years / Specialization		BA, University of Virginia (1991) (Graphic Design)	
Active registration number / state / expiration date		N/A	
Year registered	N/A	Discipline	Interfaces with project leads on "user friendly" content, themes, and presentation and directs content, design, and production of collateral materials, and social web-based communications.

Contract role(s) / brief description of responsibilities
Creative and Technology Director. As Creative and Technology Director, Ian Mundee will create direct, implement, and manage strategies to include creative design; website development; social and online media platform integration and content management. Ian improves upon an organization's system by bringing a creative team together to surround the client with experts. He is a communications strategist, a writer, a designer and a technology specialist.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
11/19 – present	**Sewerage and Water Board of New Orleans Rate Study | New Orleans, LA | Creative and Technology Director** As Creative and Technology Director, Ian developed infographics and collateral materials demonstrating the complex funding, organizational structure and operations of The Sewerage and Water Board of New Orleans and the elements of its rate study.
8/13 – 6/14	**St. Bernard Parish Government Flood Risk: Safety, Control and Responsibility Campaign | St. Bernard Parish, LA | Creative and Technology Director** As Creative and Technology Director, Ian directed content, design, and production of flood risk public information brochures and designed a web-based communications network that disseminated branded information to community stakeholders for the St. Bernard Parish Government Flood Risk: Safety, Control and Responsibility Campaign.
5/16 – 12/17	**Entergy New Orleans - Ninemile Napoleon-Derbigny Transmission System Upgrade - Power to Grow Project | New Orleans, LA | Creative and Technology Director** As Creative and Technology Director, Ian translated complex utility operations into creative easy-to-understand information which consisted of info graphics, targeted neighborhood safety maps and collateral materials for the Entergy New Orleans - Ninemile Napoleon-Derbigny Transmission System Upgrade - Power to Grow Project.

The Estopinal Group (TEG)					
Name	Angelle Cambre Skaggs			Years of experience with this firm/employer	10
Title	Senior Communications Manager			Years of experience with other firm(s)/employer(s)	18
Degree(s) / Years / Specialization			BA, Nicolls State University (2001) (Graphic Design)		
Active registration number / state / expiration date			N/A		
Year registered	N/A	Discipline	Content Manager, Technology and Community Engagement Support		
Contract role(s) / brief description of responsibilities					
Senior Communications Manager. As a Sr. Communications, Angelle Cambre Skaggs will manage content, support website construction, and assist with technical online and social media and community engagement strategies. Angelle has deep experience working on projects for utilities and state government agencies. Clients benefit from her "hands-on" approach, which is based on 20+ years of web construction, print and digital communications and community engagement activations.					

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).
8/13 – 6/14	**St. Bernard Parish Government Flood Risk: Safety, Control and Responsibility Campaign | St. Bernard Parish, LA | Sr. Communications Manager** As Sr. Communications Manager, Angelle assisted the Creative and Technology Director manage technical content and images. Implemented the web-based news network. Provided the Chief Communications Strategist with community engagement support, for the St. Bernard Parish Government Flood Risk: Safety, Control and Responsibility Campaign.
5/16 – 12/17	**Entergy New Orleans - Ninemile Napoleon-Derbigny Transmission System Upgrade - Power to Grow Project | New Orleans, LA | Sr. Communications Manager** As Sr. Communications Manager, Angelle assisted the Creative and Technology Director design and produce collateral materials and provide website and social media integration. She managed technical content and daily updates across all communications products and media channels. Interfaced daily with the project executive team and the crisis communications planning and implementation team for the Entergy New Orleans - Ninemile Napoleon-Derbigny Transmission System Upgrade - Power to Grow Project.
2/13-10/14	**Regional Planning Commission's Public Participation Guide and its Citizen Participation and Community Outreach | Sr. Communications Manager** As Sr. Communications Manager, Angelle assisted TEG Principal and the Creative and Technology Director in the design, content management and on-the-ground community engagement support for the Regional Planning Commission's Public Participation Guide and its Citizen Participation and Community Outreach activations. Working with RPC Staff and partners, TEG shaped the content for the guide that defined the RPC as a regional policy and decision-making body and informed the public and regional elected leaders about the mission and responsibilities of the agency.

Bois d'Arc Lake Water Supply Program | Bonham, TX

Freese and Nichols, Inc.				**Past Performance Evaluation Discipline (s)***	Other
Project name	**Bois d'Arc Lake Water Supply Program**			**Firm responsibility (prime or sub?)**	Prime
Project number	N/A	Owner's name	North Texas Municipal Water District (NTMWD)		
Project location	Bonham, TX			Owner's Project Manager	Ms. Aliza Caraballo, PE
Owner's address, phone, email	505 E. Brown St., Wylie, TX 75932 | 972-442-5405 | acaraballo@ntmwd.com				
Services commenced by this firm (mm/yy)	10/03	Total consultant contract cost ($1,000's)		$1,066,000	
Services completed by this firm (mm/yy)	07/23*	Cost of consultant services provided by this firm ($1,000's)		$80,000	
* Pre 2013, the project was planning/permitting/environmental efforts. Design/Program Management/Construction Management/Inspection were all post 2013.					

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

FIRM'S ROLE:
FNI has worked continuously with the NTMWD to permit and build the Bois d'Arc Lake (BDL) reservoir since 2003. The BDL Water Supply Program includes more than $1.6 billion of infrastructure to implement a new water source for the growing NTMWD service area by 2022. BDL will deliver 175,000 acre-feet of water per year to NTMWD customers. When complete, BDL will be the first major Texas reservoir built in 30 years.

FNI has provided comprehensive multidiscipline services, including site assessment, feasibility analyses, environmental permitting and mitigation, engineering design, operational planning and program management/ construction management services to support the development of the reservoir.

FNI is the Engineer-of-Record for several significant projects associated with the program, including a new dam, spillway and reservoir, pump stations and intake structure, transmission pipeline, access roads and a 17,000-acre environmental mitigation site. FNI is also the overall Program and Construction Manager for all the projects comprising the BDL Water Supply Program.

Major projects completed by FNI include:

- Environmental Mitigation Planning, Design and Monitoring
- Water Rights Permitting
- Reservoir Dam and Spillway
- Raw Water Pump Station, Intake Tower and Pipeline
- Terminal Storage Reservoir
- Leonard Water Treatment Plant High Service Pump Station
- Lake Operations Plan
- Comprehensive Plan and Zoning
- Road and Bridge Improvements
- Program Management
- Construction Management and Inspection
- Public Outreach

TEAM MEMBERS INVOLVED: Jim Keith, Tony Bosecker, Patrick Miles, John Rutledge, Tom Gooch, Brad Kirksey, Russ Springer

Six Flood Retarding Structure (FRS) Rehabilitations | Temple, TX

Freese and Nichols, Inc.				**Past Performance Evaluation Discipline (s)***	Other
Project name	**Six Flood Retarding Structure (FRS) Rehabilitations**			**Firm responsibility (prime or sub?)**	Prime
Project number	N/A	**Owner's name**	Texas State Soil and Water Conservation Board		
Project location	Temple, TX			**Owner's Project Manager**	Mr. Steve Bednarz, PE
Owner's address, phone, email	3129 Executive Dr, Temple, TX 76502 | 254-773-2250 | sbednarz@tsswcb.texas.gov				
Services commenced by this firm (mm/yy)	09/19	**Total consultant contract cost ($1,000's)**			$5,298
Services completed by this firm (mm/yy)	04/21	**Cost of consultant services provided by this firm ($1,000's)**			$4,270
Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)					

FIRM'S ROLE:
The TSSWCB, in collaboration with NRCS, contracted with FNI for the rehabilitation design of six flood retarding structures in Wise, Kaufman, Gillespie and Rockwall counties in Texas.
The design is based on NRCS and TCEQ dam safety criteria. FNI's scope of work was for the performance of detailed time and cost estimate, bid schedule, plans, construction specifications, design report, analysis of impacts to downstream floodplain, storm water pollution prevention plan and quality assurance plan for the design of six dams. FNI's work also included an environmental evaluation to address potential environmental impacts, such as threatened and endangered species, water quality, floodplain management, invasive species, cultural resources and Clean Water Act permitting requirements.

The project was performed by six separate design teams led by a single program manager with single oversight by a quality control review team. This project team organization allowed for simultaneous development of the submittal, which was then provided to NRCS in a sequential patterns to allow for timely reviews. Three of the dams were rehabilitated with the addition of structural spillways; two consisted of a stepped RCC spillway over the embankment, and one site consisted of a labyrinth weir to significantly increase discharge capacity during the design flood. The remaining three dams were rehabilitated with regrading of the existing earthen auxiliary spillway and raising of the earthen embankment. A new principal spillway with new intake riser was added to all six dams. Each project required coordination with TSSWCB, NRCS, TCEQ and the local sponsor organization.

Each dam site had their own technical and project specific challenges, but the scope and scale of the overall program presented time constraint, management and production challenges. Namely, the TSSWCB indicated that an ***18-month design timeline was required to meet the NRCS-prescribed funding deadlines.*** With such a compressed timeline, FNI proactively formed a centralized project management and quality control team to lead the overall design program for all of the dams. The work production was then performed by six separate design teams. Standard internal technical processes and standardized templates for both reporting and CAD designs were established at the program level, so that efficiency and uniformity could be achieved. Another management approach was to stagger the submittal schedules for all of the sites to reduce the potential for production bottlenecks, both internally and for the client review steps. Each of the design teams were selected based on workload projections and individual technical expertise. This approach allowed for on-time submittals for all critical deadlines and an across-the-board 5-star review from TSSWCB.

TEAM MEMBERS INVOLVED: John Rutledge, Jim Keith, Brad Kirksey, Dustin Mortensen, Mathew Moses, Adam Payne, Naveen Chillara, Patrick Miles, Russ Springer, Tom Dixon

Toledo Bend Dam EOR Services | Burkeville, TX

Freese and Nichols, Inc.				**Past Performance Evaluation Discipline (s)***	Other
Project name	**Toledo Bend Dam EOR Services**			**Firm responsibility (prime or sub?)**	Prime
Project number	N/A	**Owner's name**	Sabine River Authority of Texas		
Project location	Burkeville, TX			**Owner's Project Manager**	Donald Iles, CPM
Owner's address, phone, email	450 Spur 135, Burkeville, TX 75932 | 409-565-2273 | diles@sratx.org				
Services commenced by this firm (mm/yy)	2010	**Total consultant contract cost ($1,000's)**			$6,500
Services completed by this firm (mm/yy)	Ongoing	**Cost of consultant services provided by this firm ($1,000's)**			$6,500

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

FIRM'S ROLE:
FNI has been performing as the Engineer-of-Record for Toledo Bend Dam since 2009. Toledo Bend Dam is a 108-foot-high Toledo Bend Dam, which impounds 4.477 million acre-feet of water along the Texas–Louisiana border. Constructed in 1967, the dam has an overall length of 11,000 feet with an ogee crest controlled by 11 radial tainter gates, each measuring 40 feet wide and 29 feet high. These services have been contracted through the Toledo Bend Project Joint Operation, which includes representatives from the Sabine River Authority of Texas and the Sabine River Authority of the State of Louisiana. Cody Cockroft represents the project as the Independent Consultant (IC) as all engineering services must satisfy the regulatory requirements of the Federal Energy Regulatory Commission (FERC). Projects that procured contractors for construction had to satisfy the Texas Water Code and the State of Louisiana Bid Laws.

As the FERC IC, FNI is responsible for all of the dam safety requirements of the dam per the FERC Part 12 process. This includes: Five-year Part 12 Inspection, Report, and Analysis, update to the Supporting technical Information Documents (STID), Three-year Dam Safety and Surveillance Monitoring Plan, Dam Safety and Surveillance Monitoring Report (completed yearly), Potential Failure Modes Analyses, and a yearly dam inspection with FERC representatives. FNI monitors and reports on 102 piezometers, 51 relief wells, 64 survey monitoring points and four inclinometers. The instrumentation data is compared with warning levels or threshold values based on stability analysis, historic records and potential failure modes. FNI completed the study phase of the project in May 2011 and subsequently developed the design for the repairs identified in the study.

FNI has provided Engineer-of-Record Services for:

Toledo Bend Gate Rehabilitation. FNI provided a detailed inspection and structural analysis of the 11 radial tainter gates and associated gate hoist system. FNI performed a two-week high-angle rope inspection of all 11 radial tainter gates and a comprehensive inspection and mechanical and electrical evaluation of the associated gate hoist system.

Stability Analysis - FNI performed an in-depth study of the embankment, powerhouse and spillway to characterize the dam's structural behavior under various loading conditions.

Toledo Bend Relief Well Design - FNI designed four new relief wells that will penetrate a deep, confined aquifer. The pump and active relief well system is to reduce the pore water pressure of the soil strata in which the powerhouse and the powerhouse stilling basin reside.

Toledo Bend Spillway Repairs - In 2016, Toledo Bend Dam experienced the flood of record with a peak flow of more than 200,000 cubic feet per second, resulting in damage to the spillway.

TEAM MEMBERS INVOLVED: Cody Cockroft, John Rutledge, Mathew Moses, April Hurry, Dustin Mortensen

Wide Water Supply Planning and Dam Engineering Support | Austin, TX

Freese and Nichols, Inc.				**Past Performance Evaluation Discipline (s)***	Other
Project name	**Wide Water Supply Planning and Dam Engineering Support**			**Firm responsibility (prime or sub?)**	Prime
Project number	N/A	**Owner's name**	Lower Colorado River Authority		
Project location	Austin, TX			**Owner's Project Manager**	Nathan Gullo, PE
Owner's address, phone, email	PO Box 220, Austin, TX 78767 | 512-473-3200| nathan.gullo@lcra.org				
Services commenced by this firm (mm/yy)	2012	**Total consultant contract cost ($1,000's)**			$5295
Services completed by this firm (mm/yy)	Ongoing	**Cost of consultant services provided by this firm ($1,000's)**			$5295
Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)					

FIRM'S ROLE:
LCRA owns and operates six large, high-hazard hydropower dams on the Colorado River (known as the Highland Lakes Dams) and other high- and significant-hazard dams at their power plants and irrigation districts. In the late 1980s,

LCRA developed a risk-based prioritization that served as the framework for dam improvements and upgrades. Since 1989, LCRA has retained FNI to assist with dam safety engineering following this framework to bring the dams into compliance with current dam safety standards.

FNI has performed in-depth studies and designed improvements to multiple dams in LCRA's portfolio. Key aspects have included dam safety inspections, comprehensive reviews, engineering evaluations and analyses, potential failure mode analyses, dam modification alternatives development, dam safety instrumentation and automated data acquisition system design, development of reports, plans and specifications, and engineering support during construction. We have worked as the lead design firm in collaboration with specialty subconsultants, universities and peer review boards. Features were evaluated and designed using state and federal guidelines, such as USACE, Federal Energy Regulatory Commission (FERC) and U.S. Bureau of Reclamation (USBR).

Dam Safety Comprehensive Reviews
FNI has performed five comprehensive reviews and risk assessments of Wirtz Dam (2019), Mansfield Dam (2007, 2016), Tom Miller Dam (2015), Buchanan Dam (2017) and Inks Dam (2018), which are all large, high-hazard dams, operated by LCRA. LCRA comprehensive reviews are traditionally scheduled on a 5- to 10-year cycle and require teams experienced in dam safety and the fields of structural, geotechnical, hydraulic and mechanical engineering. Key aspects of FNI's comprehensive review services include: extensive data review, development of an inspection plan, visual inspection, evaluation of dam design against current dam safety practices, risk evaluation, dam safety instrumentation data review, targeted stability analysis and report preparation including recommendations. The recommendations cover operational improvements, immediate dam safety action, additional investigations and long-term actions. These reviews were generally performed in accordance with Reclamation practices.

TEAM MEMBERS INVOLVED: Tom Gooch, Tony Bosecker, John Rutledge, Mathew Moses, Brad Kirksey, Dustin Mortensen, Patrick Miles

2021 Texas Regional Water Planning | Multiple Regions, TX

Freese and Nichols, Inc.		Past Performance Evaluation Discipline (s)*	Other
Project name	2021 Texas Regional Water Planning	Firm responsibility (prime or sub?)	Prime
Project number	N/A	Owner's name	Texas Water Development Board
Project location	Multiple Regions, TX	Owner's Project Manager	Temple McKinnon
Owner's address, phone, email	1700 N. Congress Avenue, Austin, TX 78701 | 512-463-7847 | temple.mckinnon@twdb.texas.gov		
Services commenced by this firm (mm/yy)	12/15	Total consultant contract cost ($1,000's)	$23,000
Services completed by this firm (mm/yy)	04/21	Cost of consultant services provided by this firm ($1,000's)	$10,800

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

FIRM'S ROLE:
FNI is providing services for the fifth planning cycle by working with eight of 16 regions, as prime consultant for Regions A, C, F and H and as a subconsultant for Regions B, E, G and I. In response to the drought of 1996, the State of Texas passed comprehensive legislation to address the state's water planning needs. A key part of this process was the regional water planning process. In this process, the state is divided into 16 different regions. The planning for each region is overseen by the Regional Water Planning Group, which consists of stakeholders representing various interests in the region. FNI has played an integral role in state-sponsored regional water plans since the first round of planning in 1998.

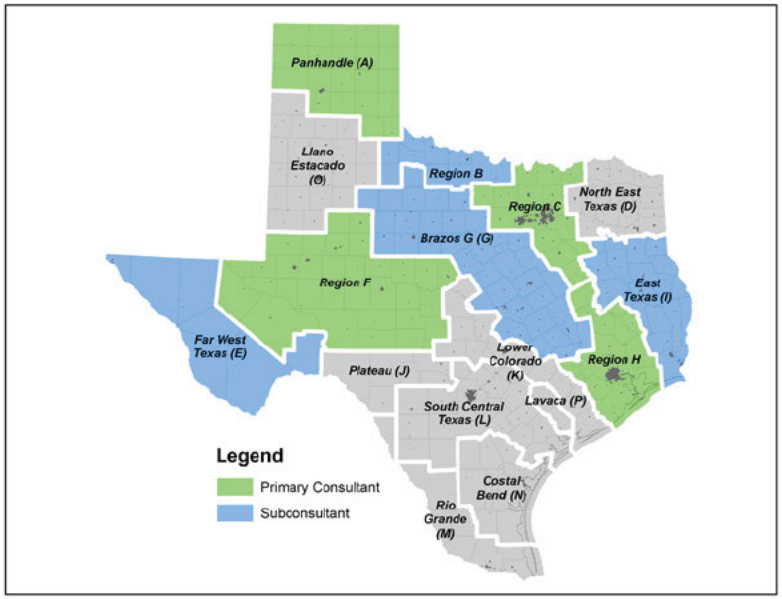
The plans are updated every five years. Currently, on the fifth planning cycle, FNI is a consultant in 8 of the 16 regions.

The regional planning process requires frequent updates and approval by the Regional Water Planning Group at public meetings. The development of clear, concise presentations of highly technical material for these meetings is an integral component of our regional water planning work.

Regional planning requires data entry and use of the state's Regional Planning Database (DB22). Data generated in the planning process is entered into the database by consultants, and the information is then used to generate various statewide and regional reports.

FNI has developed internal tools that are used to facilitate and augment the use of the statewide database and collect and distribute information to stakeholders.

TEAM MEMBERS INVOLVED: Jason Afinowicz, Tom Gooch



Amite River Basin Numerical Model (ARBNM) | LA Statewide

Dewberry Engineers, Inc.				Past Performance Evaluation Discipline (s)*	Other
Project name	**Amite River Basin Numerical Model (ARBNM)**			Firm responsibility (prime or sub?)	Prime
Project number	PO#2000261901 Retainer Contract# 4400008293 LN: 1	Owner's name	Louisiana Department of Transportation & Development		
Project location	LA Statewide			Owner's Project Manager	Edward Knight, PE
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70804-9245 | 225-279-3007 | edward.knight@la.gov				
Services commenced by this firm (mm/yy)	05/17	Total consultant contract cost ($1,000's)		$2,136	
Services completed by this firm (mm/yy)	05/19	Cost of consultant services provided by this firm ($1,000's)		$1,675	
Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)					

FIRM'S ROLE:
Development of HUC8 watershed scale numerical model to assess hydrology, hydraulics and consequences using HEC-MetVUE, HEC-HMS, HEC-RAS (1-D/2-D), HEC-FIA, HEC-WAT and ArcGIS. Services included:

- Stakeholder communication and engagement including briefings and exhibits for LA DOTD, state legislators, and the local community of practice pertaining to the model capabilities and results of demonstration projects including the Darlington Reservoir.
- H&H evaluation, mitigation planning and design concepts
- Hydro-meteorological modeling for historic and design storms implementing the watershed hydrology procedures of HMR 52 as fractional Probable Maximum Precipitations (PMP) within MetVUE, integrated with HEC-HMS
- 1D and 2D HEC-RAS hydraulic model development and calibration using tiered approaches
- Development of economic and life safety consequence model using HEC-FIA and HEC-LifeSim. This included development of an asset inventory by developing LiDAR derived building footprints conflated with census, NSI and local tax information.
- Assessment of concept projects including the Darlington Reservoir, levee modifications and the use of temporary dams. The Darlington Reservoir simulations included an approximately 3 mile long, 90 feet high dam embankment holding back nearly 1million acre.feet of floodwaters. HEC-FIA was successfully used to demonstrate $2.2 billion of potential economic benefits and 20,500 structures protected from flooding had the Darlington Reservoir been in place during the August 2016 flood.

Using the ARBNM, Dewberry worked with Livingston Parish to simulate the concept of pre-event draw down for offline gravel pits to determine whether they provided substantial flood control benefits if dedicated as flood control facilities. This included the development of inlet and outlet control structure design concepts to allow gravity driven pre-event drawn down and diversion of peak flood volumes to optimize flood attenuation benefits. The study demonstrated another successful implementation of the ARBNM.

TEAM MEMBERS INVOLVED: Seth Bradley, Sam Crampton, Jerri Daniels

Murphey Candler Dam Safety Services | Brookhaven, GA

Dewberry Engineers, Inc.				Past Performance Evaluation Discipline (s)*	Other
Project name	**Murphey Candler Dam Safety Services**			Firm responsibility (prime or sub?)	
Project number	N/A	Owner's name	City of Brookhaven		
Project location	Brookhaven, GA			Owner's Project Manager	Tom Roberts, PE
Owner's address, phone, email	4362 Peachtree Road NE, Brookhaven, GA 30319 | 404.906.2747 | tom.roberts@brookhavenga.gov				
Services commenced by this firm (mm/yy)	04/17	Total consultant contract cost ($1,000's)			$340
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)			$320
Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)					

FIRM'S ROLE:
Dewberry has been providing turn-key dam safety services including infrastructure inspections, inundation modeling, operations and maintenance and emergency action planning for Murphey Candler Dam within the City of Brookhaven since 2017. Murphey Candler Dam is a High Hazard Potential Dam constructed in 1953 and has approximately 1,530 acre-feet of storage volume.

Dewberry's services for this project include:

- Research into historical records, issues, repairs and plans pertaining to the dam from state dam safety program archives
- Permitting of the high hazard dam with the GA Safe Dams Program
- HEC-HMS watershed hydrologic modeling (performed under contract with DeKalb County) to determine inflows to and through the reservoir and downstream floodplain
- HEC-RAS dam breach modeling and inundation mapping
- Development of an Emergency Action Plan (EAP) using the NRCS EAP template
- Development of an Operations & Maintenance (O&M) Manual
- Quarterly and biannual dam inspections including coordination with dive teams and review of ground penetrating radar
- Post flood assessments to identify potential damage and debris build up at dam
- Coordination and review of CCTV footage for principal spillway pipes that identified joint separation, seepage and general deterioration
- Development of plans and specifications for maintenance and minor repair of the earthen embankment and concrete spillway
- Construction inspection of repaired items
- Development of detailed plans and specifications for the rehabilitation of the principal spillway using cured in place pipe methods and reconstruction and replacement of the outlet control structure

TEAM MEMBERS INVOLVED: Sam Crampton, Seth Bradley, Jeff Cowan,

Seven Oaks Lake Dam | John's Creek, GA

Dewberry Engineers, Inc.				Past Performance Evaluation Discipline (s)*	Other
Project name	**Seven Oaks Lake Dam**			Firm responsibility (prime or sub?)	Prime
Project number	N/A	Owner's name	City of John's Creek		
Project location	John's Creek, GA			Owner's Project Manager	Chris Haggard, PE
Owner's address, phone, email	11360 Lakefield Drive, Johns Creek, GA 30097 | 678.512.3253 | chris.haggard@johnscreekga.gov				
Services commenced by this firm (mm/yy)	11/18		Total consultant contract cost ($1,000's)		$4,140
Services completed by this firm (mm/yy)	12/19		Cost of consultant services provided by this firm ($1,000's)		$4,140
Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)					

FIRM'S ROLE:
Dewberry developed construction plans and permitting documents for the 32-feet-high Seven Oaks Lake Dam in the City of Johns Creek in order to bring the dam into compliance as a Category I High Hazard Potential dam with the Georgia Safe Dams Program (GASDP). Seven Oaks Lake Dam was reclassified from Category II to Category I in 2018 as a result of hazard creep, and Dewberry initially completed a Visual Inspection Report (VIR), which included an watershed hydrologic and hydraulic study to evaluate the existing spillway capacity, and identified any deficiencies and rehabilitation or repair needs.

Dewberry developed a proposed design consisting of upgrading the principal spillway pipe system to a 48-inch pressure rated HDPE pipe, replacing the outlet control riser structure and headwall, disconnecting the street drainage system from the spillway and re-routing, installing a filter drain system, instrumentation, and a low-drain siphon system, extensive tree removal, and regrading of the upstream and downstream slopes. Construction drawings, technical specifications, and cost estimates were provided to the City for the proposed design. Dewberry also assisted with public outreach, and completed an Operations and Maintenance Manual, EAP, and Technical Memorandum for the dam design. Dewberry also provides ongoing services to include quarterly and biannual engineer inspections, owner coordination, and will provide construction management services during the construction phase of the project.

Dewberry is providing public outreach assistance for the City which included presentation briefings to the owner and property owners adjacent to the dam, coordination for easement acquisition, and assistance in developing a Memorandum of Agreement between the City and dam owner. Outreach messaging has focused on regulatory drivers, project overview, project status, estimated schedule and cost, and long-term operation and maintenance.

TEAM MEMBERS INVOLVED: Sam Fleming

US 371: KCS RR Overpasses (HBI)| Webster Parish

Lazenby & Associates, Inc.				**Past Performance Evaluation Discipline (s)***	Survey
Project name	**US 371: KCS RR Overpasses (HBI)**			**Firm responsibility (prime or sub?)**	Prime
Project number	S.P.N. H.012030	Owner's name	Louisiana Department of Transportation and Development		
Project location	Webster Parish			Owner's Project Manager	Steve A. LeBlanc, PLS
Owner's address, phone, email	P.O. Box 94245, Baton Rouge, LA 70804-9245 |225-379-1292 | Steve.LeBlanc2@la.gov				
Services commenced by this firm (mm/yy)	12/22	Total consultant contract cost ($1,000's)		$222.3	
Services completed by this firm (mm/yy)	Current	Cost of consultant services provided by this firm ($1,000's)		$222.3	
Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)					

FIRM'S ROLE:
Lazenby & Associates, Inc. is the prime consultant on this project, performing topographic surveying services within the existing US 371/ I-20 interchange ROW for existing roadway lighting improvements. Approximately 3,800 feet along US 371 (urban minor arterial) and 5,600 feet along I-20 (urban interstate) located in Minden, LA, is included in the topographic survey limits.

Static/RTK GPS survey methods were used to establish horizontal and vertical control for the field survey. Conventional survey methods using total stations and digital levels were used to collect the topographic survey data for the project. In addition, 3D LiDAR point clouds were collected using both stationary terrestrial tripod-mounted scanners and UAV scanner payload. Topographic features were extracted from the 3D point cloud, such as hard surface pavement, bridge structures, traffic signs, overhead truss sign supports, guardrails, and existing traffic lighting. UAV photogrammetry was collected to assist with the QA/QC validation of the topographic survey. In addition to the collection of topographic survey features, other surveying services include the establishment of referenced iron rods along the project to define the GPS control, locating and research of ownership of all utilities within the limits of the topographic survey using LA One Call and preparation of an existing drainage map of the project area. An existing DTM was developed using surface elevations collected, and existing alignments were calculated along the US 371/I-20 corridors, including all interchange ramps.

TEAM MEMBERS INVOLVED: Ronald J. Riggin, Randy C. Hammons, James S. Ellingburg, Noah J. Sampognaro

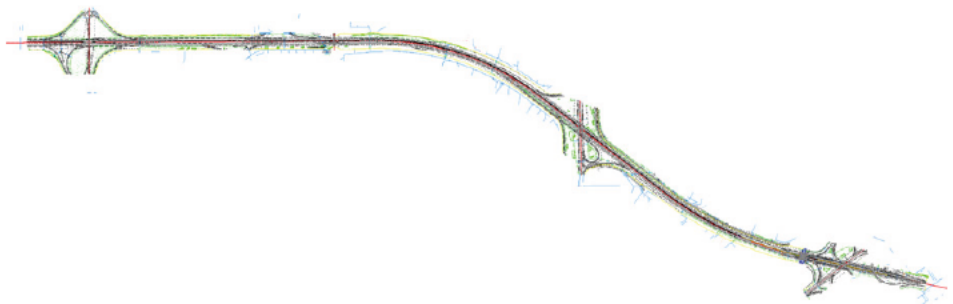
I-20 Widening/Overlay (Vancil Rd to LA 34) | Ouachita Parish

Lazenby & Associates, Inc.				**Past Performance Evaluation Discipline (s)***	Survey
Project name	I-20 Widening/Overlay (Vancil Rd to LA 34)			Firm responsibility (prime or sub?)	Prime
Project number	S.P.N. H.015052	Owner's name	Louisiana Department of Transportation and Development		
Project location	Ouachita Parish			Owner's Project Manager	Steve A. LeBlanc, PLS
Owner's address, phone, email	P.O. Box 94245, Baton Rouge, LA 70804-9245 |225-379-1292 | Steve.LeBlanc2@la.gov				
Services commenced by this firm (mm/yy)	05/22	Total consultant contract cost ($1,000's)		$393.9	
Services completed by this firm (mm/yy)	01/23	Cost of consultant services provided by this firm ($1,000's)		$393.9	
Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)					

FIRM'S ROLE:
Lazenby & Associates, Inc. is the prime consultant on this project, performing topographic surveying services within the existing I-20 ROW for existing interstate widening & overlay. Approximately 20,815 feet (3.94 mi) along I-20 (urban interstate) thru West Monroe, LA, is included in the topographic survey limits, including portions of 3 urban principal arterial and 1 urban major collector interchanges/ overpasses.

Static/RTK GPS survey methods were used to establish horizontal and vertical control for the field survey. Conventional survey methods using total stations and digital levels were used to collect the topographic survey data for the project. In addition, 3D LiDAR point clouds were collected using both stationary terrestrial tripod-mounted scanner and mobile scanning. Topographic features were extracted from the 3D point cloud such as hard surface pavement, bridge structures, traffic signs, overhead truss sign supports, guardrails, and existing traffic lighting. 360 camera images collected with the mobile LIDAR and georeferenced aerial imagery were used to assist with the QA/QC validation of the topographic survey. In addition to the collection of topographic survey features, other surveying services include the establishment of referenced iron rods along the project to define the GPS control, locating and research of ownership of all utilities within the limits of the topographic survey using LA One Call and preparation of an existing drainage map of the project area. An existing DTM was developed using surface elevations collected and existing alignments were calculated along the I-20 corridor, interchanges and overpasses.

TEAM MEMBERS INVOLVED: Ronald J. Riggin, Randy C. Hammons, James S. Ellingburg, Noah J. Sampognaro



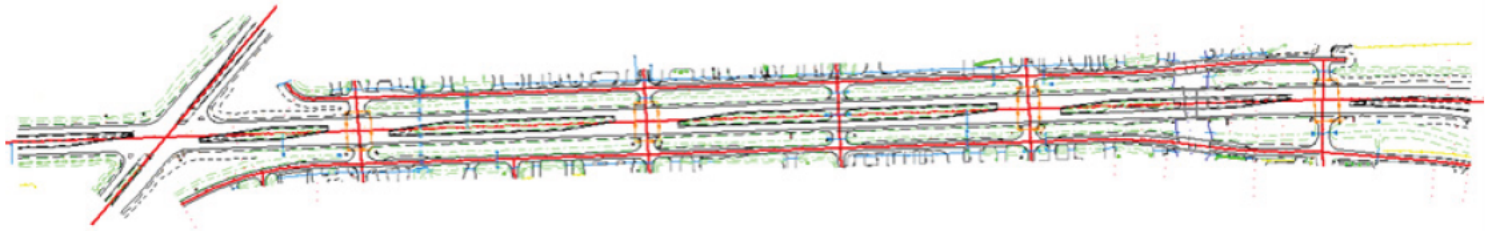
US 165 Lighting from LA 15 (Winnsboro Rd) to Century Boulevard | Ouachita Parish

Lazenby & Associates, Inc.				**Past Performance Evaluation Discipline (s)***	Survey
Project name	**US 165 Lighting from LA 15 (Winnsboro Rd) to Century Boulevard**			**Firm responsibility (prime or sub?)**	Prime
Project number	S.P.N. H.015052	Owner's name	City of Monroe (Urban System Project)		
Project location	Ouachita Parish			Owner's Project Manager	Curt Kelley
Owner's address, phone, email	P.O. Box 123, Monroe, LA 71201 | 318-329-2210 | lacurtis.kelly@ci.monroe.la.us				
Services commenced by this firm (mm/yy)	09/16	Total consultant contract cost ($1,000's)			$59.7
Services completed by this firm (mm/yy)	12/16	Cost of consultant services provided by this firm ($1,000's)			$59.7
Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)					

FIRM'S ROLE:
Lazenby & Associates, Inc. is the prime consultant on this project, performing topographic surveying services within the existing US 165 ROW to design roadway lighting improvements. The topographic survey limits include approximately 5,100 feet along US 165 (urban principal arterial) located in Monroe, LA.

Static/RTK GPS survey methods were used to establish horizontal and vertical control for the field survey. Conventional survey methods using total stations and digital levels were used to collect the topographic survey data for the project. Georeferenced aerial imagery was used to assist with the QA/QC validation of the topographic survey. In addition to the collection of topographic survey features, other surveying services include establishing referenced iron rods along the project to define the GPS control and locating and researching ownership of all utilities within the limits of the topographic survey using LA One Call. An existing DTM was developed using surface elevations collected and existing alignments were calculated along the US 165 corridor, including all side and frontage roads.

TEAM MEMBERS INVOLVED: Ronald J. Riggin, Randy C. Hammons, James S. Ellingburg, Noah J. Sampognaro



Certification and Accreditation of Marvin Braud Pump Station and Laurel Ridge Levee Systems | Ascension Parish, LA

Bryant Hammett & Associates, LLC				**Past Performance Evaluation Discipline (s)***	Surveying
Project name	Certification and Accreditation of Marvin Braud Pump Station and Laurel Ridge Levee Systems			**Firm responsibility (prime or sub?)**	Sub
Project number	6562-1	**Owner's name**	East Ascension Consolidated Gravity Drainage District #1		
Project location	New Orleans, LA			**Owner's Project Manager**	Melissa Kennedy
Owner's address, phone, email	1024 E Ascension Complex Blvd, Gonzales, LA 70737; (225) 450-1340; makennedy@hntb.com				
Services commenced by this firm (mm/yy)	04/15	**Total consultant contract cost ($1,000's)**			N/A
Services completed by this firm (mm/yy)	06/16	**Cost of consultant services provided by this firm ($1,000's)**			117,900
Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)					

FIRM'S ROLE:
The East Ascension Consolidated Gravity Drainage District engaged professionals to provide engineering and surveying services necessary for the Certification and Accreditation of Marvin Braud Pump Station protection (North and West), and existing Laurel Ridge levee systems in the Parish. The parish-built levee system will be accredited by FEMA as providing protection from a 100-year flooding event; accreditation would mean reduced flood insurance premiums for parts of the parish.

BHA surveyed over 10 miles of levee in Ascension Parish providing general alignment, topographic, and hydrographic surveys in accordance with USACE New Orleans Minimum Survey Standards. Specific services provided were as follows:

- Establish centerline; profiles along the centerlines at 100 or 200 ft. longitudinal intervals
- Cross sections every 200 feet, with at least 9 points, 3 points at the bottom and 3 points for each side slope. Cross section survey extends a minimum 100ft on each side of the Bayou centerline at every 10 ft. interval. Shots at all grade break points and abrupt variations in topography.
- Survey and map existing overhead and underwater utility lines, culvert crossings, water control structures (gates, weirs, etc.), cross roads, bridges, and other Canal crossings, any cross drainage channels, and other planimetric features within the identified survey limits. All the utility and culvert survey data shall be tied to the centerline by stations and offsets.
- Prepare a photo report with general photos of the levee system labeled by C/L station and direction. Take photos of all culvert/ drainage structures, roadway crossings, ramps, and other features, labeled and correlated by stationing and numbering system.

Task orders under this main project included:
- Marvin Braud Pump Station
- Marvin Braud and Laurel Ridge Levee System

TEAM MEMBERS INVOLVED: Bryant Hammett, Jeff Carey

Lake Borgne T-Wall and Sheet Pile Wall Survey/West Return Wall and Lakefront Walls | Orleans, Jefferson, St. Bernard Parishes, LA

Bryant Hammett & Associates, LLC				**Past Performance Evaluation Discipline (s)***	Surveying
Project name	Lake Borgne T-Wall and Sheet Pile Wall Survey/West Return Wall and Lakefront Walls			Firm responsibility (prime or sub?)	Prime
Project number	L2990063	Owner's name	Lake Borgne Basin Levee District/Flood Protection Authority-E		
Project location	Orleans, Jefferson, St. Bernard Parishes, LA			Owner's Project Manager	Chris Humphreys
Owner's address, phone, email	6920 Franklin Ave. New Orleans, LA 70122; 504-286-3108; chumphreys@floodauthority.org				
Services commenced by this firm (mm/yy)	02/22	Total consultant contract cost ($1,000's)			N/A
Services completed by this firm (mm/yy)	08/22	Cost of consultant services provided by this firm ($1,000's)			122
Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)					

FIRM'S ROLE:

BHA performed surveys of the Lake Borgne T-Walls and Sheet Pile Wall located in St. Bernard Parish, and the West Return Levee Wall in Jefferson Parish, and the Lakefront Levee Walls in Orleans Parish. The Flood Authority identified approximately 36 miles of T- Walls and 2 miles of Sheet Pile to be surveyed.

Control points were established for the project to provide horizontal and vertical reference points for the project. All control points were established with NGS OPUS Solutions. BHA set approximately 24 control points to conduct the survey of the T-Walls and Sheet Pile Wall utilizing a base/rover setup.

BHA is collecting elevation data on the top of the T-Walls and Sheet Pile Wall at 250-foot intervals within the survey limits. Additional elevation shots are being collected near major changes in the alignment of the T-Walls and Sheet Pile or fluctuations in height of the walls.

For a portion of the T-Walls, BHA included aerial imagery of 25 miles of T-Walls and Sheet Piles. This provided a comprehensive digital surface model of the entire area. The addition of the photogrammetry survey allows for topographic features to be shown in a survey deliverable, along with imagery showing current conditions. A surface will be created with the elevation points collected during the flight to include elevations on the footings and hard surfaces adjacent to the T-Walls and Sheet Pile. Also, information on the flood gates was included in the Photogrammetry Survey.

TEAM MEMBERS INVOLVED: Bryant Hammett, Jeff Carey

Waterline Improvements throughout Jefferson Parish | Jefferson Parish, LA

Bryant Hammett & Associates, LLC				Past Performance Evaluation Discipline (s)*	Surveying
Project name	Waterline Improvements throughout Jefferson Parish			Firm responsibility (prime or sub?)	Sub
Project number	Various	Owner's name	Jefferson Parish Department of Water		
Project location	Jefferson Parish, LA			Owner's Project Manager	Reda Youssef
Owner's address, phone, email	1221 Elmwood Park BlvdJefferson, LA; 504-736-6000; Reda.Youssef@jeffparish.net				
Services commenced by this firm (mm/yy)	02/22	Total consultant contract cost ($1,000's)		N/A	
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)		859	
Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)					

FIRM'S ROLE:
BHA is currently providing professional surveying services for a public works project for the design and construction administration of waterline improvements projects throughout Jefferson Parish. For over 18 miles of roadway, working for 16 different consultants, BHA provides the following surveying services:

- Establish control points using GPS technology with OPUS Observations
- Set Temporary Benchmarks to aid in construction
- Topographic Surveys include features that are visible and accessible and are surveyed to identify the northing, easting and elevation value for each data point. Topographic features include items such as culverts, drains, inlets, pavements, bushes, trees, perimeter outlines of heavily wooded areas, vegetation, utility poles, overhead electric, fences, curbs, driveways, etc.
- Cross Section Survey: Cross Section data will be collected at 50-foot intervals within the survey corridor, including 50-feet down all intersecting streets. Plotted cross section sheets will be provided, with elevations identified at the apparent r/w line, centerline, edge of existing pavement, and sidewalks.
- Utility Survey: Visible and accessible utility features (Level C) will be surveyed and mapped. These features include items such as valves, hydrants, meters, utility poles, utility boxes, overhead electric lines, communication systems, etc. For underground utilities, BHA will contact Louisiana One Call to prompt the marking of underground utility lines by the respective utility owner. All resulting paint marks will be surveyed and mapped to show the apparent line routes. Manhole inverts for drainage and sewerage lines will be obtained in the field for profile information. Data for surcharged manholes or other inaccessible (bolted shut) manholes will be noted.
- Right of Way: BHA will place an apparent right of way line along the route, which will be based upon field evidence, limited research, and the Jefferson Parish GIS maps.
- Plan and profile base map for permit drawings at each State Highway Railroad crossings

TEAM MEMBERS INVOLVED: Bryant Hammett, Jeff Carey

IDIQ Retainer Contract for Environmental Permitting Services | Statewide

C. H. Fenstermaker & Associates, LLC				**Past Performance Evaluation Discipline (s)***	Environmental
Project name	**IDIQ Retainer Contract for Environmental Permitting Services**			**Firm responsibility (prime or sub?)**	Prime
Project number	H.003014, H.001842.2, H.011137.1, H.011152.2, H.003184	Owner's name	Louisiana Department of Transportation and Development		
Project location	Statewide			Owner's Project Manager	Robert Lott
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802 | 225-242-4504 | robert.lott@la.gov				
Services commenced by this firm (mm/yy)	01/15	Total consultant contract cost ($1,000's)		$81.10	
Services completed by this firm (mm/yy)	09/19	Cost of consultant services provided by this firm ($1,000's)		$81.10	
Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)					

FIRM'S ROLE:

H.003014 I-10: E JCT I-49 to Atchafalaya Floodway The proposed project required pavement rehabilitations and additional travel lanes along I-10, from the east junction of LA HWY 328 continuing eastward to the Atchafalaya Floodway Bridge. The wetland delineation was limited to the existing road ROW. The approximate point-of-beginning was in Breaux Bridge, Louisiana and traversed approximately 6.5 miles eastward to the point-of-ending. Fenstermaker conducted the delineation in accordance with the 1987 U.S. Army Corps of Engineers (COE) *Wetlands Delineation Manual* and the Regional Supplement to the COE *Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region*.

H.001842.2 LA 471: Dartigo Creek and Creek Bridges The project required relocating and elevating a 0.662-mile section of LA 471 and replacing three bridge structures along a new alignment. The project was on LA 471 and began approximately 1125 feet north of Dartigo Road and LA 471 intersection and proceeded northward along LA 471, approximately 225 feet north intersection of Big Hiss Road and LA 471. The existing bridge structures were treated timber trestle bridges with two lanes and no shoulders. The three new concrete slab span bridges with 30-foot clear roadway widths were planned for construction. The construction plans included an embankment to raise the roadway and bridges above the 25-year flood elevation. The project also included the addition of new drainage pipes.

H.011137.1 I-12: LA 21 to LA59 US190 and H.011152.2 I-12 LA21 I-12: US190 to LA59 The project required pavement rehabilitations and additional travel lanes along I-12, beginning approximately one mile and one-tenth west from the junction of LA 21 and continuing eastward to LA 59. The delineation was limited to the existing road ROW and the required ROW for the proposed construction. Fenstermaker conducted the wetland delineation in accordance with the 1987 U.S. Army COE *Wetlands Delineation Manual* and the *Regional Supplement to the COE Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region* (Version 2.0, November 2010).

H.003184 I-10 Widening Fenstermaker conducted a routine wetland delineation and completed a report. The project required pavement rehabilitations and additional travel lanes along I-10, from the Texas state line continuing eastward to just east of Coone Gully. The delineation was limited to the existing road ROW. The approximate point-of-beginning was near the base of Sabine River Bridge-Louisiana and traversed approximately 9.9 miles eastward to the point-of-ending. Fenstermaker conducted the delineation in accordance with the 1987 U.S. Army COE *Wetlands Delineation Manual* and the Regional Supplement to the COE *Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region*. The project corridor was approximately 9.9 miles long and covered approximately 360 acres.

TEAM MEMBERS INVOLVED: Chris Guidry; Coy LeBlanc

Louisiana Watershed Initiative (LWI) Modeling Contract – Region 4, 5 and 6 | Statewide

C. H. Fenstermaker & Associates, LLC				**Past Performance Evaluation Discipline (s)***	Survey, Other (H&H)
Project name	**LWI Modeling Contract – Region 4, 5 and 6**			**Firm responsibility (prime or sub?)**	Prime (Region 4) Sub (Region 5 and 6)
Project number	4400017090 Region 4 4400017091 Region 5 4400017092 Region 6	Owner's name	Louisiana Department of Transportation and Development		
Project location	Statewide			Owner's Project Manager	Billy Williamson
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802 | 225-379-3023 | billy.williamson@la.gov				
Services commenced by this firm (mm/yy)	Region 4: 04/20 Region 5: 01/22 Region 6: 11/20		Total consultant contract cost ($1,000's)		Region 4: $10,443.99
Services completed by this firm (mm/yy)	Ongoing		Cost of consultant services provided by this firm ($1,000's)		Region 5: $629.91 Region 6: $1,624.77
Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)					

FIRM'S ROLE:

LWI Region 4 H&H Modeling: Fenstermaker was contracted by DOTD for this unprecedented project that will manage the future flood risk in the State of Louisiana through watershed-based solutions. Fenstermaker oversaw all H&H tasks, data collection, model development, and engineering to complete interactive, usable, and manageable hydraulic and hydrologic models. These models considered the degree to which communities within a watershed are hydraulically and hydrologically connected. The models will lead decisions regarding land use, policy, and how infrastructure must be coordinated, made, and implemented at the watershed level to effectively manage flood risks. In addition to developing a modeling approach for each watershed, Fenstermaker coordinated with local government officials and stakeholders, performed a data gap analysis, and provided survey services, including verifying the existing data, ensuring the data met FEMA standards, and obtaining new data. Scalable HEC-HMS hydrologic and coupled 1D-2D HEC-RAS hydraulic models were developed and can be modified to support future needs of the State.

LWI Regions 4, 5 and 6 Survey: Fenstermaker performed surveys at structure and channel locations throughout regions 4, 5, and 6 in Louisiana to support H&H modeling. This effort spanned multiple parishes and waterways across watershed regions around the state and used topographic, bathymetric and laser scanning to provide refined topography for modeling purposes. Fenstermaker collected survey data in the North American Datum of 1983 (NAD 83) horizontal datum, Epoch 2010. The projected coordinate system used was the State Plane Coordinate System, Louisiana South (1702) Zone, and the vertical datum used was the North American Vertical Datum of 1988 (NAVD 88) utilizing Geoid 12B. Survey work also used the LSUC4G network and GPS instrumentation with a standard accuracy of approximately 10 cm horizontally and 10 cm vertically. All data was collected utilizing DOTD survey feature codes. Field crews utilized Survey 123 software to create a live data experience while data was sent from the field to the office staff for processing. The ArcGIS Survey123 application was linked to Fenstermaker's database and utilized by field crews through a mobile phone or tablet to access features such as assigned/completed survey points, bridge and culvert evaluation forms, image uploading, field hazard alerts (e.g., beaver dams, obstructions, etc.), and access issues.

TEAM MEMBERS INVOLVED: Jeanne Hornsby, Travis Bodin

Underwater Acoustic Survey and Structural Inspection of State Maintained Dams | Statewide

C. H. Fenstermaker & Associates, LLC				Past Performance Evaluation Discipline (s)*	Survey
Project name	**Underwater Acoustic Survey and Structural Inspection of State Maintained Dams**			Firm responsibility (prime or sub?)	Prime
Project number	State Project No. 700-99-0459	Owner's name	Louisiana Department of Transportation and Development		
Project location	Statewide		Owner's Project Manager	Public Works & Water Resources Division, Dam Safety	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802 | 225-379-300 | DamSafetyInfo@la.gov				
Services commenced by this firm (mm/yy)	10/08	Total consultant contract cost ($1,000's)		$1,200	
Services completed by this firm (mm/yy)	03/12	Cost of consultant services provided by this firm ($1,000's)		$1,200	
Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)					

FIRM'S ROLE:
The Louisiana Department of Transportation and Development (DOTD) contracted Fenstermaker to perform dam system evaluations of 14 state-maintained dam systems, including the Bundicks Creek Dam, Vernon Lake Dam, Lower Anacoco Dam, Ivan Lake Dam, Iatt Lake Dam, Grand Bayou Reservoir Dam, Bayou Cocodrie dam, Lake Clailborne Dam, Black Bayou Dam, Smithport Lake Dam, Turkey Creek Dam, Nantachie Lake Dam, Kepler Creek Dam, and Chicot Lake dam.

Fenstermaker provided an evaluation of the dam systems to evaluate baseline conditions that show repetitive, direct comparative capability going forward. Fenstermaker established the local survey control monument to provide this capability and performed underwater acoustic imaging (UA) and profiling of submerged components of the spillways and the adjacent upstream and downstream water bottoms.
A high-definition terrestrial Lidar (HDS) scan of the exposed sections of the spillway and the landmass surrounding the headwater and tailwater was performed. UAI and profiling of the spillway and drawdown structure intake and gate systems were performed where applicable. A visual and safety inspection of the dam system was also performed. As a follow-up, an underwater inspection of all underwater surfaces of the intake structure, its associated hardware, and the discharge conduit was performed by a dive contractor with an emphasis on areas or abnormalities observed on the UAI data.

TEAM MEMBERS INVOLVED: Justin Bordelon

Benoit Bayou and Benoit Bayou Lateral Drainage Study | Bossier City, LA

Nixon Engineering Solutions, LLC				Past Performance Evaluation Discipline (s)*	Other (H&H), Survey
Project name	Benoit Bayou and Benoit Bayou Lateral Drainage Study			Firm responsibility (prime or sub?)	Prime
Project number	0017.17.01	Owner's name	City of Bossier City		
Project location	Bossier City, LA			Owner's Project Manager	Mark Hudson, PE
Owner's address, phone, email	620 Benton Road, Bossier City, LA 71111 / 318-741-8568 / hudsonm@bossiercity.org				
Services commenced by this firm (mm/yy)	06/17			Total consultant contract cost ($1,000's)	$117
Services completed by this firm (mm/yy)	11/17			Cost of consultant services provided by this firm ($1,000's)	$85
Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)					

FIRM'S ROLE:
The City of Bossier City wanted to open up an area within an existing FEMA Floodplain for development with the building of Innovation DriveExtension. This existing undeveloped land is a natural low area located immediately upstream of I-220. Box culverts under the interstate restrict flow from Benoit Bayou and Benoit Bayou Lateral during large rainfall events and cause water to back up and store on the undeveloped property. Uncontrolled development in this area will remove this storage and cause significant additional flooding of the existing homes and businesses along the Airline Corridor area.

The existing FEMA model was outdated and did not accurately represent the current conditions of the basin. Therefore, NES began by collecting a significant amount of survey data including 8 square miles of new aerial LiDAR data, 71 stream cross-sections, 8 bridges, and 12 culvert crossings. All of this data was collected for the entire length of Benoit Bayou (44,053ft) and Benoit Bayou Lateral (11,498ft). This data was used to build an updated hydrologic model in HEC-HMS.

The resulting hydrographs were used in an unsteady HEC-RAS model that incorporated 1D and 2D elements including cross-sections, lateral and inline structures, bridge and culvert crossings, and multiple storage areas. NES also installed and monitors a gage on Benoit Bayou to calibrate and update the existing hydraulic model.

TEAM MEMBERS INVOLVED: Kurt Nixon, Jared Boogaerts

Gary Brown Pond Dam | CADDo Parish, LA

Nixon Engineering Solutions, LLC				Past Performance Evaluation Discipline (s)*	Survey, Other: Dam
Project name	Gary Brown Pond Dam			Firm responsibility (prime or sub?)	Prime
Project number	0116.21.45	Owner's name	Gary Brown		
Project location	CADDo Parish, LA			Owner's Project Manager	Gary Brown
Owner's address, phone, email	1619 Jimmie Davis Hwy., Bossier City, LA, 318-746-0211, bbi@brownbuilders.com				
Services commenced by this firm (mm/yy)	11/21			Total consultant contract cost ($1,000's)	$20
Services completed by this firm (mm/yy)	02/22			Cost of consultant services provided by this firm ($1,000's)	$20
Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)					

FIRM'S ROLE:
For this project we were tasked with the survey, design, and permitting of a Zoned Earthen Embankment Dam. The 26' dam with concrete spillway has a surface area at pool stage of 36 acres. It was constructed for a private citizen in CADDo Parish, LA with the purpose of recreation and selling frac water. Our role in this project included assistance with gathering of all needed topographic data, H&H study modeling (including multiple breach models), Hazard Classification Report, preparation of stamped Construction Documents & Specifications, submittal and approval through DOTD Dam Safety Program, periodic construction observations, and final as-built survey. Nixon Engineering subbed out the GeoTechnical analysis and slope / stability calculations to Dave Rambaran, PE at DRGeoES, LLC. From initial concept to final as-built the entire project was completed in under five months.

TEAM MEMBERS INVOLVED: Kurt Nixon, Jared Boogaerts

Kinsey Scout Pond Dam | Keatchie, LA

Nixon Engineering Solutions, LLC				Past Performance Evaluation Discipline (s)*	Survey, Other: Dam
Project name	Kinsey Scout Pond Dam			Firm responsibility (prime or sub?)	Prime
Project number	0004.18.02	Owner's name	NORWELA Council, Boy Scouts of America		
Project location	Keatchie, LA			Owner's Project Manager	Jeffery Brasher
Owner's address, phone, email	3508 Beverly Place, Shreveport, LA 71104 / 318-868-2774 / Jeffery.Brasher@scouting.com				
Services commenced by this firm (mm/yy)	10/19	Total consultant contract cost ($1,000's)		$65	
Services completed by this firm (mm/yy)	12/20	Cost of consultant services provided by this firm ($1,000's)		$44	
Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)					

FIRM'S ROLE:
The Northwest Louisiana Council, Boy Scouts of America hired Nixon Engineering Solutions to design and develop construction plans and manage the construction for a 28.8' tall zoned earthen dam in North Louisiana. This dam resulted in a 16.9-acre pond (at pool stage) for the
Boy Scouts to use as a recreation area for their activities. Part of this process included working with DOTD to determine the dam hazard classification via hydrologic and hydraulic studies and breach analyses. Biddable construction plans including estimated quantities, crosssections,
plan and profile sheets, siphon and spillway details, and specifications were generated by our office. The project management
portion included construction inspection, soils testing and survey measurements.

TEAM MEMBERS INVOLVED: Kurt Nixon, Jared Boogaerts

18. Approach and Methodology:

FNI has reviewed the DOTD's Scope of Services in Attachment A of Contract No. 4400027092. The following sections are intended to demonstrate a typical task order that covers the tasks in Attachment A.

- FNI is familiar with all aspects of dam analysis, maintenance, and operations, as well as inspection, comprehensive reviews, risk assessments, dam safety instrumentation, and safety monitoring. Our expertise comes from working on dams and reservoirs in complex geologic settings providing water diversion, flood control, water supply, hydropower, and recreation benefits.
- FNI has extensive experience with earthen embankment, concrete gravity, soil-cement, RCC, rock-fill, multiple-arch, slab-and-buttress, timber crib dams, and temporary cofferdam.
- FNI offers vast experience in evaluation, design, permitting, and construction oversight of dams from over 129 years of working for various clients, including international entities, federal agencies, state governments, local municipalities, and private companies.

Our depth of relevant and comprehensive dam safety and dam engineering experience comes from 2,000+ dam-related projects, including the design of 200+ new dams and 275+ major dam rehabilitation projects. FNI develops efficient and innovative designs for dams and appurtenances in accordance with appropriate design codes and technical guidelines. Our innovation and technical capabilities have led to an impressive portfolio of award-winning projects and client testimonials that demonstrate our experience, competence, and reputation. Our team has won 20+ awards on innovation and excellence for dam-related and heavy civil projects in the last 20 years from the USSD, ASDSO, ASCE, ACEC and APWA. FNI has a long history of working with owners, regulators, and professional societies to improve the dam industry by providing single or multi-day training sessions or classes through professional societies.

Preliminary Engineering and Analyses

FNI provides exceptional technical capabilities for planning, site selection, inspection, analysis, and permitting. FNI also has extensive experience with dam safety compliance work including comprehensive reviews, emergency action plans, tabletop exercises, operations and maintenance plans, and gate operation plans. Our high quality and timely performance are demonstrated by our internal client surveys (4.8 average out of 5) for dam-related work for the past 10 years. We regularly perform and oversee detailed geotechnical explorations, climbing inspections, dam safety instrumentation data review, and risk analysis for the evaluation and design of dam-related projects. We specialize in using advanced numerical and physical modeling tools for seismic, structural, hydrologic, hydraulic, geomorphologic, geotechnical, and risk-informed analyses.

Infrastructure Inspection

FNI's inspection team is intimately familiar with Louisiana Dam Safety requirements and will support the DOTD in complying with state regulations and protecting the public. Numerous members of our Project team have led inspection efforts for agencies with a similar portfolio of dams and also as part of numerous NRCS assessment projects. FNI will prepare inspection reports in accordance with DOTD requirements and provide inspection photos to DOTD for its records. FNI can also perform maintenance inspections to meet DOTD's recommendation for dam owners to have regular observations of their dams. FNI has a team of local staff members who are available to perform inspections, as requested, and can serve as the DOTD's eyes in the field. Our inspection team consists of dam engineers and specialists in geotechnical, structural, stormwater and hydraulics aspects of dam design and water resources. FNI is also available to perform post-rain-event inspections to determine if damage occurred at the dam as a result of the rain event and to provide recommendations for further evaluation and/or potential repairs.

Hazard Mitigation Planning

FNI and many of our team members have been involved in Potential Failure Mode Analysis (PFMA) programs for dam safety for more than 15 years. Many of our staff have gone through training conducted by the Federal Energy Regulatory Commission (FERC), Bureau of Reclamation (BOR), and USACE. FNI has conducted PFMAs and Failure Mode and Effects Analyses (FMEAs) for power and mining dams, as well as in-depth PFMA and risk assessments for major dam modifications and post-Oroville spillway reviews for FERC-licensed dams. We have also used risk-based approaches to help clients assess a portfolio of dams or gates.

Our team has completed a wide variety of dam break modeling for federal- and state-regulated dams, and we use HEC-RAS to develop riverine hydraulic models and establish inundation mapping for sunny day, unusual, and extreme events, as well as incremental analysis to determine inflow design floods. We have also developed Emergency Action Plans (EAPs) and EAP updates and tabletops exercises for many of these projects, as well as EAP-led desktop and function exercises.

Our team has extensive experience analyzing the potentially catastrophic impacts of small to large dam failures. Analyzing risk and consequences associated with dam failures or managing their emergency response requires an accurate estimation of the extent, magnitude, and severity of the expected flood. FNI utilizes a wide range of tools and software to provide thorough dam break model results. We are proficient in the application of H&H modeling software, such as the USACE HEC-HMS, HEC-ResSim, and HEC-RAS, including advanced two-dimensional (2D) flow, as well as InfoWorks ICM, FLOW-3D, LifeSim, and others.

H&H Analyses

FNI and our team includes industry leaders in the evaluation of surface water for water supply, flood control, hydropower, and stormwater management. We have experts in hydrologic, hydraulic and sediment transport computer modeling to provide the DOTD with data for informed decision making. We have an unrivaled depth of stormwater management and water resources staff that have worked on complex projects in Louisiana, Texas, Arkansas, and across the Southeast United States.

Team member Dewberry is an H&H specialty firm that brings expertise in performing a H&H assessments for dams, levees and other water resources infrastructure projects.

Erosion Mitigation

The FNI team includes industry leaders in sediment transport studies and modeling. Our team includes engineers, scientists, geomorphologists and geologists who have completed many projects for numerous clients including private entities, municipalities, counties, and state and federal agencies across the U.S and internationally. Our team's relevant experience encompasses more than 160 stream and river projects, including stream/river assessments. We are highly experienced in sediment yield estimation, sediment transport modeling, and fluvial geomorphology. We use HEC-RAS, FlowSED/PowerSED, and Flow3D models. Our river channel experience also includes analysis of channel stability and bank retreat as well as design of protective measures such as riprap, articulated concrete blocks, bioengineering solutions, and structural hardening solutions. With our expertise on river channels, we often support planning and design of new infrastructure or infrastructure rehabilitation for dams, pump stations, levees, and floodwalls on or along rivers and streams.

As demonstrated in the LWI Group 2 Dam Contracts, LWI H&H models from four different regional consultants were successfully leveraged to perform hydrologic and hydraulic analysis of five dams.

These models enabled a greater level of detail to be performed while compressing schedules by successfully leveraging the Probable Maximum Precipitation Study for Arkansas, Louisiana, Mississippi, and Oklahoma in support of Probable Failure Mode Analysis, Dam Break Analysis and Semi Quantitative Risk Assessment

Detailed Water Resource Design

In addition to the project work discussed above, our team provides exceptional technical capabilities for project design including surveying, geotechnical investigations and analysis, construction document preparation, bid support, and construction observations.

Surveying

FNI has strategically selected three surveying firms to provide local expertise and capacity throughout the state. Bryant Hammett Associates (BHA), C.H. Fenstermaker, and Nixon Engineering Solutions are trusted Louisiana firms with a long history of providing services to DOTD for dams, levees, and other public works projects. Our team has performed numerous topographic surveys utilizing photogrammetric, remote sensing, lidar, and field survey, all of which our survey and geospatial personnel are adept at implementing efficiently for the project and client requirements. Our field teams employ Real Time Kinematic (RTK) GPS, conventional robotic Total Station, and Uncrewed Aerial Systems (drone) technologies. The topographic surveys include location and elevation of topographic and planimetric features for design, construction, master planning, operations, as-built conditions, and structure stability studies. We also have the capability to provide attribute data for surveyed features utilizing client specific feature coding. All data are checked by field personnel for errors, completeness, and accuracy. Our mapping and field information are compatible with AutoCAD, MicroStation, and ESRI data systems.

Geotechnical Analysis and Design

Successful geotechnical analyses and design require an understanding of potential failure modes, design standards, and site-specific characteristics. Our experience has shown that site-specific data is extremely critical for analysis accuracy. Adequate sampling, proper testing, and field measurements from instrumentation have allowed FNI to analyze existing conditions, develop cost-effective designs, and verify performance. In providing these services, we will perform additional site investigations, as needed, to provide analyses based on sound information. FNI will prepare recommendations for the design and document design reference guidelines, material properties and strength parameters, pressures, loads and load combinations, and required factors of safety.

Structural Analysis and Design

A significant part of our Water Resource Design practice are structural projects, such as gate repairs, dewatering systems, post-tensioned anchors, concrete repairs and mechanical improvements to gate operation and stoplog deployment. In the performance of this work, it is important to establish potential failure modes and an appropriate approach for analysis and design using industry standard criteria. Dam-related structures will be analyzed and designed using finite element structural analysis software programs. Concrete and steel structures will also be evaluated in accordance with the respective design codes. Models of existing structures will be based on as-built drawings, field measurements, material tests and observed conditions. We have learned that physical models are a valuable tool for refining a design or verifying computer analyses. The results of these studies can ultimately result in significant construction cost savings.

Plan Preparation

Our team can use Civil 3D or MicroStation to develop comprehensive three-dimensional models of any water resource design projects. This approach to design helps to clearly communicate the design concepts early and often in the project lifecycle. Developing fully interactive three-dimensional models also makes it easier to generate construction drawings when the time comes. Our philosophy for drawing development is to show things clearly and correctly regardless of whether it takes one sheet or many sheets to do so. The most important part of drawing development is to avoid conflicts, contradictions, or confusion that could lead to unforeseen costs during the construction of the project.

Collaborative Project Delivery (CPD)

CPD methods, developed from the traditional design-bid-build approach, bring design and construction in closer alignment by involving the contractor in the design process. These approaches include Construction Manager at Risk (CMAR), Design-Build (DB) (both fixed price and progressive) and Public-Private Partnership (P3). These approaches foster a collaborative relationship with the owner, engineer and contractor.

FNI is experienced in each of these delivery methods, both from the owner and contractor perspectives. Once retained, the FNI team helps the owner evaluate their capital plans to determine if CPD approaches are feasible and appropriate. If an FNI CPD approach is selected, our team has the resources to represent the owner's best interests. We verify best practices are followed and confirm that the job is completed successfully.

Construction Support

Our construction management expertise has been fine-tuned over 129 years. Whether we are providing construction services for a project we designed, or serving as your third-party construction manager, we are experts in managing your risk and controlling your costs. This proven approach consistently results in projects that are constructed safely, on schedule, within budget, and with fewer headaches for our clients.

The FNI construction inspection team includes personnel that are registered professional engineers, as well as experienced inspectors that may not have a degree or license. Our construction inspection team has experience in providing daily on-site inspections and engineering during construction phase services in support of the project.

FNI built our team to provide DOTD with highly experienced project managers, construction inspectors, and construction managers. Our inspectors are experienced in wide range of projects involving various types of hydraulic structures including dams, levees, canals and river channels, as well as vertical construction projects. Our personnel have managed multimillion dollar projects, overseeing all aspects from planning, strategy and design to inspection and post-construction work.

FNI brings DOTD competence and experience on several projects where we provided construction management services for channel repair, levee rehabilitation, ecosystem restoration, or other projects involving construction in areas with sensitive environmental resources.

Typical Schedule/Work Breakdown Structure

Without specific durations, a detailed schedule is difficult to prepare, but demonstrates the approach recently used on the LWI-SSP Group 2 project, whereby LWI H&H models in development were leveraged in conjunction with PMP estimates and supplemental survey data to analyze dam failure and develop risk reduction measures for 5 dams. This approach allowed FNI to quickly advance the H&H modeling efforts to meet DOTD schedule requirements. FNI will work collaboratively with DOTD to develop achievable schedules for any Task Orders awarded from this contract.

19. Workload:

Firm(s)	Past Performance Evaluation Discipline(s)*	State Project Number	Project Name	Remaining Unpaid Balance**
Freese and Nichols (FNI)				
FNI	Other	2000603331	LWI Region 2 Modeling - Task Order 2	$1,848,869
FNI	Other	2000630828	LWI Region 2 Modeling - Task Order 3	$3,515,597
FNI	Other	2000726065	TO1 - Bayou Cocodrie Structure Modification	$122,702
FNI	Other	2000727640	TO2 - Turkey Creek Infrastructure Hardening	$115,885
FNI	Other	2000727647	TO3 - Black Bayou Hardening & Runoff Retention	$145,880
FNI	Other	2000727671	TO4 - Caney Lake Flood Surcharge Management	$165,219
FNI	Other	2000727723	TO5 - Iatt Lake Drawdown Improvements	$112,130
Dewberry Engineering (Dewberry)				
Dewberry	Survey	2000660906, 2000412071	GIS support for Statewide Topographic Mapping Program	$2,600,270
Dewberry	Other (Eval ID 4623)	4400017093, 44-17093	LWI Region 7, Task Order 2	$1,186,619
Dewberry	Other (Eval ID 4623)	4400017093, 44-17093	LWI Region 7, Task Order 3	$3,035,436
Dewberry	Other (Eval ID 4623)	4400017092, Unknown (Subconsultant)	LWI Region 6, Task Order 2 – QA/QC	$141,343
Dewberry	Other (Eval ID 4623)	4400017092, Unknown (Subconsultant)	LWI Region 6, Task Order 3 – QA/QC	$290,877
Dewberry	Other (Eval ID 4623)	440001067, Unknown (Subconsultant)	LWI Region 1, Task Order 2 – QA/QC	$49,111
Dewberry	Other (Eval ID 4623)	440001067, Unknown (Subconsultant)	LWI Region 1, Task Order 3 – QA/QC	$210,941

Firm(s)	Past Performance Evaluation Discipline(s)*	State Project Number	Project Name	Remaining Unpaid Balance**
Dewberry	Other (Eval ID 4623)	4400023102 Group 2 Spillway Rehabilitations, , Unknown (Subconsultant)	LA DOTD Spillway Rehabilitation	$252,414
Barrett Hammond & Associates (BHA)				
BHA	Survey	NA	LWI Region 2 Modeling - Task Order 2	$1,327
BHA	Survey		LWI Region 2 Modeling - Task Order 3	$45
Nixon Engineering Services				
Nixon	Survey	2000603331	LWI Region 2 Modeling - Task Order 2	$3,951
Nixon	Survey	2000630828	LWI Region 2 Modeling - Task Order 3	$81,666
Fenstermaker				
Fenstermaker	Road	Contract No. 4400020291 State Project No. H.012869	LA 182 / Renaud Roundabout	$246,852
Fenstermaker	Bridge	Contract No. 4400025023 State Project No. H.015513	Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program District 03 - Eleanor Road Over Coulee	$200,000
Fenstermaker	Bridge	Contract No. 4400025023 State Project No. H.015335	Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program District 03 - Puma Road Over Coulee	$200,000
Fenstermaker	Bridge	Contract No. 4400025023 State Project No. H.015516	Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program District 03 -Beiber Road Over Nezpique Bayou	$200,000
Fenstermaker	Bridge	Contract No. 4400025023 State Project No. H.015512	Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program District 03 - Mullins Road Over Tate Bayou	$200,000

Firm(s)	Past Performance Evaluation Discipline(s)*	State Project Number	Project Name	Remaining Unpaid Balance**
Fenstermaker	Bridge	Contract No. 4400025023 State Project No. H.015511	Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program District 03 - E. Martial Ave Over Coulee	$200,000
Fenstermaker	Bridge	Contract No. 4400025023 State Project No. H.015515	Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program District 03 - Andover Road Over Indian Bayou Lateral	$200,000
Fenstermaker	Bridge	Contract No. 4400025023 State Project No. H.015514	Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program District 03 - Sarah Dee PKWY. Over Coulee	$200,000
Fenstermaker	Bridge	Contract No. 4400025023 State Project No. H.015505	Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program District 03 - Solid Wastewater Road Over Bayou Boeuf	$200,000
Fenstermaker	Bridge	Contract No. 4400025023 State Project No. H.015510	Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program District 03 - Phillip Street Over Drainage Bayou	$200,000
Fenstermaker	Bridge	Contract No. 4400025023 State Project No. H.015509	Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program District 03 - Huval Street Over True Canal	$200,000
Fenstermaker	Bridge	Contract No. 4400025023 State Project No. H.015508	Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program District 03 - Adam Guidry Road Over Coulee	$200,000
Fenstermaker	Bridge	Contract No. 4400025023 State Project No. H.015507	Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program District 03 - Minos Road Over Coulee	$200,000
Fenstermaker	Bridge	Contract No. 4400025023 State Project No. H.015506	Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program District 03 - Aristide Road Over Coulee	$200,000

Firm(s)	Past Performance Evaluation Discipline(s)*	State Project Number	Project Name	Remaining Unpaid Balance**
Fenstermaker	Bridge	Contract No. 4400025023 State Project No. H.015517	Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program District 03 - Guegnon Street Over Youngs South Coulee	$200,000
Eustis Engineering, LLC (Eustis)				
Eustis	Geotech	Contract No. State Project No. H.015028.6	State of Louisiana Department of Transportation and Development (DOTD) Bayou Barataria Bridge, Jefferson Parish, Louisiana	$0
Eustis	Geotech	Contract No. 4400019017 State Project No. H.015028.6	State of Louisiana Department of Transportation and Development (DOTD) Bayou Barataria Bridge, Jefferson Parish, Louisiana	$0
Eustis	Geotech	Contract No. 4400019530 State Project No. H.007273	State of Louisiana Department of Transportation and Development (DOTD) New Magazine Street Improvements between Leake Avenue to Avenue East Drive New Orleans, Louisiana	$9,601
Eustis	Geotech	Contract No. State Project No. H.013897	State of Louisiana Department of Transportation and Development I-10 and I-12 College Drive Flyover Ramp Design-Build Project East Baton Rouge Parish, Louisiana	$28,160
Lazenby & Associates (Lazenby)				
Lazenby	Bridge	4400025025 (L&A, Inc. 22E048.00)	Infrastructure Investing & Jobs Act (IIJA) Off-System Bridge Program – District 05 (13 Off-System Bridge Structures) (8% Complete)	$1,667,995

Firm(s)	Past Performance Evaluation Discipline(s)*	State Project Number	Project Name	Remaining Unpaid Balance**
Lazenby	Roadway	4400010428 H.004774.5 (L&A, Inc. 17E051.00)	Kansas Lane-Garrett Road Connector & I-20 Improvements, Ouachita Parish (Road Design-Urban & Road Design-Controlled) (98% Complete)	$129,212
Lazenby	Survey	4400015236 (L&A, Inc. 18S053.00)	IDIQ Contract for Topographic Surveys – Statewide (District 04, 05, 08 & 58) No Active Task Orders At This Time	N/A
		4400017710 (L&A, Inc. 19S056.00)	IDIQ Contract for Topographic Surveys – Statewide No Active Task Orders At This Time	N/A
		4400019714 (L&A, Inc. 20S038.00)	IDIQ Contract for Hydrographic Surveys - Statewide (Districts 04, 05, 08 & 58) T.O. #2 – Hydrographic Surveying Services – Statewide (Districts 04, 05, 08 & 58) (60% Complete)	$35,410
The Estopinal Group (Estopinal)				
Estopinal	N/A	N/A	N/A	N/A

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

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

20. Certifications/Licenses:

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

The first paragraph under Proposal Requirements on page 9 of the Advertisement states that licenses and certificates are not required to be submitted.

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

N/A

22. Sub-consultant information:

Firm Name	Address	Point of Contact and Email Address	Phone Number
Dewberry Engineers Inc.	9026 Jefferson Highway, Suite 205 Birmingham, AL 35244	Sam Crampton scrampton@dewberry.com	404-308-1286
Bryant Hammett & Associates, LLC (BHA)	6885 Hwy 84 West Ferriday, LA 71334	Bryant O. Hammett, Jr. bhammett@bha-engineers.com	318-757-6576
Nixon Engineering, LLC	1628 Benton Road Bossier City, LA 71111	Kurt Nixon knixon@nixoneng.com	318-747-9669
Fenstermaker	4045 Ernest Street Lake Charles, LA 70605	Butch Babineaux, PE butch@fenstermaker.com	281-630-2501
Lazenby & Associates, Inc.	2000 North 7th Street West Monroe, LA 71291	Paul D. Fryer, PE, PLS pfryer@lazenbyengr.com	318-237-1203
Eustis Engineering, L.L.C.	202 Park West Drive Scott, LA 70583	Chad Held, PE cheld@eustiseng.com	225-706-5562
The Estopinal Group	2826 Constance St. New Orleans, LA 70115	Denise A. Estopinal denise@estopinalgroup.com	504-495-2564

23. Location:

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

N/A

GUIDE TO ACRONYMS

FREESE AND NICHOLS

LEADS

- L — LEARN CONTINUOUSLY
- E — ENGAGE AS FAMILY
- A — ACT WITH INTEGRITY
- D — DELIVER QUALITY
- S — SERVE ALWAYS

ACEC American Council of Civil Engineering Companies
ADCP Acoustic Doppler Current Profiler
APWA American Public Works Association
ARBNM Amite River Basin Numerical Model
ASCE American Society of Civil Engineers
ASDSO Association of State Dam Safety Officials
AST Asphalt Surface Treatment
BCR Benefit-to-Costs Ratio
CCM Certified Construction Manager
CDT Construction Document Technologist
CE Categorical Exclusions
CFD Computational Fluid Dynamics
CFM Certified Floodplain Manager
CIP Cast-in-Place
CMAR Construction Management at-Risk
CPRA Coastal Protection and Restoration Authority
CPT Cone Penetration Test
DCR Dam Conservation and Recreation
DDCWSA Douglasville-Douglas County Water and Sewer Authority
DDR Design Documentation Report
DNR Department of Natural Resources
DRPS Difficult Run Pump Station
EA Environmental Assessment
EAP Emergency Action Plan
EIA Environmental Impact Assessments
EIS Environmental Impact Statements
EOR Engineer-of-Record
FEMA Federal Emergency Management Agency
FERC Federal Energy Regulatory Commission
GDM Geotechnical Design Manual
HSDRR Hurricane and Storm Damage Risk Reduction
HSDRRS Hurricane and Storm Damage Risk Reduction System
H&H Hydrologic and Hydraulic
LCRA Lower Colorado River Authority
LID Low Impact Development
LRFD Load and Resistance Factor Design
MG Million Gallons
MGD Million Gallons a Day
MIP Mapping Information Platform
NEPA National Environmental Protection Agency
NRCS Natural Resources Conservation Service
NTMWD North Texas Municipal Water District
O&M Operations and Maintenance
OPCC Opinion of Probable Construction Costs
OWRB Oklahoma Water Resources Board
PDT Project Development Team
PE Professional Engineer
PFMA Potential Failure Mode Analyses
PLS Professional Land Surveyor
PMF Probably Maximum Flood
QA/QC Quality Assurance/Quality Control
RCC Roller Compacted Concrete
ROW Right-of-Way
SARA San Antonio River Authority
SCADA Supervisory Control and Data Acquisition
SDP Safe Dams Program
SLO Sponsoring Local Organization
SME Subject Matter Expert
SQRA Semi-Quantitative Risk Analysis
SSA Storm and Sanitary Analysis
SUE Subsurface Utility Engineering
SWP Supplemental Watershed Plan
TA Technical Advisor
TCEQ Texas Commission on Environmental Quality
TRWD Tarrant Regional Water District
TSSWCB Texas State Soil and Water Conservation Board
TVA Tennessee Valley Authority
UBBR United State Bureau of Reclamation
USACE United States Army Corps of Engineers
USDA United States Department of Agriculture
USFWS United States Fish and Wildlife Services
USSD United States Society on Dams
UWRL Utah Water Research Laboratory
VIR Visual Inspection Report
WCID Water Control and Improvement District
WSLP West Shore Lake Pontchartrain
WTP Water Treatment Plant

FREESE AND NICHOLS
900 Camp Street, Suite 354
New Orleans, LA 70130
504-478-1065
www.freese.com