Jefferson Parish
State of Louisiana

Statement of Qualifications 24-013

ROUTINE ENGINEERING SERVICES FOR WATER PROJECTS

Resolution No. 144203

JUNE 21, 2024

Contact:
Don Lancaster, PE
Project Manager
1340 Poydras Street, Suite 1950
New Orleans, LA 70112
504-875-4662
Don.lancaster@neel-schaffer.com

NEEL-SCHAFFER
Solutions you can build upon

June 21, 2024

Jefferson Parish Council
General Government Building
200 Derbigny Street, Suite 6700
Gretna, Louisiana, 70053

RE: **SOQ 24-013 Routine Engineering Services for Water Projects** *Resolution No. 144203*

Neel-Schaffer, Inc. (NSI) is pleased to respond to SOQ 24-013 Routine Engineering Services for Water Projects Resolution No. *144203*. We are a large, multi-disciplined consulting engineering firm with 500 professional, technical, and support staff operating business throughout the southern United States with Louisiana offices in New Orleans, Mandeville, Baton Rouge, and Lafayette. We have 47 staff members located in Louisiana offering the services of 24 registered Professional Engineers.

NSI is ranked in the top 200 in the *Engineering News Record* "Top 500 Design Firms" and previously named in the top 25 road and highway design firms in the nation by *Roads & Bridges* magazine. We employ a highly qualified team of professionals skilled in a variety of types of water projects including models for water systems, waterline distribution systems, transmission mains, water storage and treatment.

In addition, NSI has been selected repeatedly by LADOTD for on-going retainer contracts over the past eighteen years. This is an excellent indication of our firm's performance ability on public contracts and NSI's reputation as a consultant of choice by public agencies.

Our team includes **BFM Corporation, LLC** providing surveying and **Eustis Engineering, LLC** providing geotechnical.

Work under this contract will be performed in our New Orleans, LA office, located at 1340 Poydras Street, Suite 1950 with support provided by other Neel-Schaffer offices as required.

We look forward to the opportunity to be of service to Jefferson Parish.

Sincerely,

Don Lancaster, PE
Vice President / Engineer Manager

enclosure

NEEL-SCHAFFER

engineers | planners | surveyors | environmental scientists | landscape architects

P: 504.875.4662
1340 Poydras Street, Suite 1950
New Orleans, LA 70112
www.neel-schaffer.com

Neel-Schaffer, Inc.

Prime Consultant

TEC Professional Services Questionnaire

A. Project Name and Advertisement Resolution Number:

SOQ 24-013 Routine Engineering Services for Water Projects *Resolution No. 144203*

B. Firm Name & Address where Project work will be performed:

NEEL-SCHAFFER
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1340 Poydras Street, Suite 1950
New Orleans, LA 70112

C. Name, title, and contact information of Principal, as defined in Section 2-926 of the Jefferson Parish Code of Ordinances, who is a registered, licensed architect, professional engineer, or surveyor in the State of Louisiana:

Don Lancaster, PE *Vice President / Engineer Manager*
504-875-4662
Don.lancaster@neel-schaffer.com

D. Name and contact information of employee who is a registered and licensed architect, professional engineer, or surveyor in the State of Louisiana in the applicable discipline. A subcontractor may be substituted here only if the advertised Project requires more than one discipline.

Don Lancaster, PE *Vice President / Engineer Manager*
504-875-4662
Don.lancaster@neel-schaffer.com

E. Please provide the number of employees whose primary function corresponds with each category:

6 Administrative	___ Estimators	___ Specification Writers
___ Architects (Licensed)	1 Geologists	1 Structural Engineers
___ Chemical Engineers	___ Geotechnical Engineers	___ Graduate Engineers
25 Civil Engineers	___ Interior Designers	1 Project Managers
2 Construction Inspectors	___ Landscape Architects	___ Clerical
___ Ecologists	___ Land Surveyor	___ Grant/Funding Specialist
___ Electrical Engineers	___ Mechanical Engineers	___ Sanitary Engineers
3 Engineer Intern	___ Environmental Engineers	
___ Professional Land Surveyors	8 Other (Planners, Tech Support)	**47 TOTAL**

F. Is this submittal by a JOINT-VENTURE? Please check: YES ☐ NO ☒

If marked "No" skip to Section I. If marked "yes" complete Sections G-H.

TEC Professional Services Questionnaire

G. If submittal is by JOINT-VENTURE, list the firms participating and outline specific areas of responsibility (including administrative, technical, and financial) for each firm. Please attach additional pages if necessary.

1.

2.

N/A

H. Has this JOINT-VENTURE previously worked together? Please check: YES ☐ NO ☐

I. List all subcontractors anticipated for this Project. Please note that all subcontractors must submit a fully completed copy of this questionnaire, applicable licenses, and any other information required by the advertisement. See Jefferson Parish Code of Ordinances, Sec. 2-928(a)(3). Please attach additional pages if necessary.

Name & Address:	Specialty:	Worked with Firm Before *(Yes or No):*
1. **BFM Corporation** 15 Veterans Memorial Blvd Kenner, LA 70062	Surveying	**YES**
2. **Eustis Engineering, LLC** 3011 28th Street Metairie, LA 70002	Geotechnical	**YES**

J. Please specify the total number of support personnel that may assist in the completion of this Project:
47 .

TEC Professional Services Questionnaire

K. List the professional in charge, key persons, specialists, and individual consultants anticipated for this project and provide their relevant information below. If necessary, please attach additional documentation (i.e. resume) that demonstrates the employment history and experience of the firm's key persons that may assist in the completion of this Project. Please attach additional pages if necessary.

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Don Lancaster, PE *Vice President / Engineer Manager*

Project Assignment:

Project Manager

Name of Firm with which associated:

NEEL-SCHAFFER
Solutions you can build upon

Years' experience with this Firm:

24 years (*41 total*)

Education: Degree(s)/Year/Specialization:

BS / 1982 / Civil Engineering

Active registration: Year first registered/discipline:

1987 / Professional Engineer - Civil, LA 22821

Other experience and qualifications relevant to the proposed Project:

Don has 40 years of experience in civil engineering and project management. He manages Neel-Schaffer's offices in Mandeville and New Orleans, LA, as well as overseeing some of the company's largest design, bid and construction administration projects.

He has extensive experience in program and project management for large and small municipal and port related projects that include programming, design, bidding, and construction administration. His civil background includes ports; roads and bridges; streetscapes; structural; and water and wastewater.

Don is experienced in preparing contract documents for construction projects. He has coordinated and worked with many local, state, and federal agencies, including the Sewerage and Water Board of New Orleans, United States Corps of Engineers, Louisiana Department of Transportation and Development, the New Orleans Levee District, the Port of Gulfport, the Coastal Protection and Restoration Authority and numerous cities, parishes and counties.

RELEVANT EXPERIENCE

Bay Saint Louis Infrastructure Repairs, Bay St. Louis, MS, Project Manager for the planning, design, bidding, and construction management of this program. Supervised the engineering and support staff responsible for design and construction administration of over $70 million in water, sewer, gas distribution, roadway, and sidewalk improvements.

TEC Professional Services Questionnaire

South Jahncke Water Line Replacement Project, Covington, LA: Design, bid phase, and construction administration services for the replacement of water lines along S. Jahncke Avenue. This project consisted of design of the new water line and resident services, along with overlay of the existing roadway. The construction cost is approximately $370,000. The new water line improves water pressure in the immediate area and provides better flow capacity for areas of the City further away.

Repairs to MS River Fender Systems Oak Street and New River Water Intakes, New Orleans, LA: Project Manager for engineering services to New Orleans Sewerage and Water Board for a multi-phase effort to analyze the damaged dolphins and design replacement structures at the Oak Street and New River Intakes. The dolphins were damaged when a crude oil tanker traveling on the Mississippi River struck the New River Intake and then struck the Old River Intake before continuing down river. The intakes remained functional but the protective dolphin structures were damaged at both river intakes.

Unified New Orleans Plan (UNOP), New Orleans, LA: Infrastructure Assessment Advisor, Project Manager and Advisor for the Unified Recovery and Rebuilding Plan for the City of New Orleans and its neighborhoods. Served as the teams' assessment advisor for utilities (storm drainage, water, sewer, gas, electricity, telephone, cable). Work included development of a City-wide assessment guide; data collection for utility assessment; a detailed analysis of recovery needs and priorities; analysis of rebuilding scenarios with a presentation of alternatives at stakeholder workshops; and, development of a final recovery and rebuilding plan.

Port of Gulfport Restoration, Gulfport, MS, Project Manager for the planning, design, bidding, and construction management of the general engineering for this $570 million restoration program. Supervise and oversee the engineering and support staff responsible for design of this program to elevate the Port of Gulfport site from its existing elevation of 10 feet above mean sea level (MSL) to 25 feet MSL, which will protect the Port from future storm surges. Work includes an 84-acre expansion of the West Pier by filling the water bottom; relocating tenant facilities; new construction and renovation to create an expandable, modern container terminal; and road and rail upgrades required to support the expanded modernized facility.

Water Supply Upgrade for Hancock County Utility Authority, Hancock County, MS, Projects include three 500,000-gallon elevated storage tanks, three new water supply wells, associated transmission mains and a new water distribution system to service Bayside Park in Hancock County, Mississippi. Total estimated construction cost for the proposed facilities is $21 million.

NOLA Water Line Replacement Program, New Orleans, LA: Project Manager for design, construction administration, and resident inspection for water line replacements on over 80 blocks in the Mid-City, City Park and Dixon Neighborhoods. These replacement projects are part of the Joint Infrastructure Recovery Roads Program (JIRR) between the Sewerage and Water Board (S&WB) of New Orleans and the Department of Public Works (DPW). These projects include replacing undersized and aging infrastructure that was damaged during Hurricane Katrina. The 80+ blocks of water line improvements are separated into nine group projects and coordinated with DPW's roadway improvement projects. This coordination between S&WB and DPW allows each group to be bid as one project and reduces the impact on residents and businesses in the area. These projects are designed, bid and constructed in accordance to DPW's General Specifications for Street Paving and S&WB's General Specifications.

Nola City-Wide Recovery Assessment, New Orleans, LA: Project Manager and Advisor for the Unified Recovery and Rebuilding Plan for the city of New Orleans and its neighborhoods. Served as the teams' assessment advisor for utilities (storm drainage, water, sewer, gas, electricity, telephone, cable). Work included development of a citywide assessment guide; data collection for utility assessment; a detailed analysis of recovery needs and priorities; analysis of rebuilding scenarios with a presentation of alternatives at stakeholder workshops; and development of a final recovery and rebuilding plan

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Warren Huggins, PE *Civil Engineer*
Project Assignment:
Civil Engineer: Transmission Line Design and Construction Administration
Name of Firm with which associated:
NEEL-SCHAFFER Solutions you can build upon
Years' experience with this Firm:
11 years (*12 total*)
Education: Degree(s)/Year/Specialization:
BS / 2012 / Civil Engineering
Active registration: Year first registered/discipline:
2018 / Professional Engineer - Civil, LA 42443
Other experience and qualifications relevant to the proposed Project:

Mr. Huggins has been in our New Orleans and Mandeville, LA offices since the fall of 2013. He designs and manages the construction of several FEMA, Funded Recovery Roads Program projects in New Orleans that include roadway reconstruction, ADA ramp improvements, water and sanitary sewer replacement and drainage improvements. Mr. Huggins previously joined our Ridgeland, MS office in the summer of 2012 for NSI's summer internship program. He's assisted in other disciplines such as airport design and planning, site design, coastal restoration, and bridge replacement.

RELATED EXPERIENCE

TM008 - Transmission Main and Water Main Replacement, New Orleans, LA: Project Manager for engineering design, bidding, construction administration and resident inspection services for an assortment of transmission, distribution water mains and sewer force main in several neighborhoods across New Orleans. The transmission main replacement includes 1,800 feet of 8"-12" distribution mains, over 750 feet of 20"-30" transmission mains, and over 500' of 48" transmission main. The sanitary sewer force main replacement includes over 500' of 30" force main and ties into a sewer pump station.

RR125 - Mid-City Group B - Waterline Replacement, New Orleans, LA: Project Engineer for design, construction administration and resident inspection for waterline replacement on over 56 blocks located in the Mid-City Neighborhood. The waterline replacement consisted of over 25,000 feet of 8"-12" and 1,500 feet of 16"-20" main line distribution.

RR104 - Lower Ninth Ward Northeast Group B, New Orleans, LA: Project Manager. Providing engineering services for the design, bidding, construction administration and resident inspection to reconstruct 24 blocks in the Lower Ninth Ward Neighborhood. This full reconstruction includes full depth roadway construction, drainage replacement and improvements, water line replacement, sewer line replacement, handicap ramp improvements, sidewalk / driveway improvements, and drain line inspection and cleaning. The utility replacement consisted of over 10,000 feet of 8"-12" main line distribution and over 1,000 feet of 8"-12" sanitary sewer.

RR025 - City Park Water Line Replacement Program, New Orleans, LA: Project Manager provided design, construction administration and resident inspection for water line replacement on 6 blocks located in the City Park Neighborhood. The

water line replacement consisted of over 1,000 feet of 8"-12" and 800 feet of 16"-20" main line distribution. This replacement project is part of the Joint Infrastructure Recovery Roads Program (JIRR) between the Sewerage and Water Board (S&WB) of New Orleans and the Department of Public Works (DPW).

RR103 - Lower Ninth Ward Northeast Group A - Project Engineer. Provided engineering services for the design, bidding, construction administration and resident inspection to repair and rehabilitate 82 blocks in the Lower Ninth Ward Neighborhood. This street rehabilitation project was part of the wave one Joint Infrastructure Recovery Roads program which is a comprehensive recovery strategy to repair Hurricane Katrina related damages on and beneath city managed streets throughout New Orleans. As the design consultant for the Department of Public Works, NSI coordinated with both the Sewerage and Water Board and FEMA throughout the scoping and design process.

Repairs to MS River Fender Systems Oak Street and New River Water Intakes, New Orleans, LA: Engineer for engineering services to New Orleans Sewerage and Water Board for a multi-phase effort to analyze the damaged dolphins and design replacement structures at the Oak Street and New River Intakes. The dolphins were damaged when a crude oil tanker traveling on the Mississippi River struck the New River Intake and then struck the Old River Intake before continuing down river. The intakes remained functional but the protective dolphin structures were damaged at both river intakes.

RR199 - West End Group G, New Orleans, LA: Project Manager. Neel-Schaffer is providing engineering services for the design, bidding, construction administration and resident inspection to reconstruct 6 blocks in the West End Neighborhood. This full reconstruction includes full depth roadway construction, drainage replacement and improvements, water line replacement, sewer line replacement, handicap ramp improvements, sidewalk and driveway improvements. The utility replacement consisted of over 3,000 feet of 8"-12" main line distribution and over 1,300 feet of 8"-12" sanitary sewer.

West St. Tammany Wastewater Treatment Consolidation, St. Tammany Parish, LA: Project Engineer. Provide modeling and design services to consolidate wastewater treatment throughout west St. Tammany Parish (west of the Tchefuncte River and south of I-12) into its regional treatment facilities.

South Jahncke Avenue Water Line Improvements, Covington, LA: Engineer Intern. Water distribution improvements that include replacing 1,600 feet of 4-inch water main with a 10-inch water main. Responsibilities include plan/profile design of new water main and pavement replacement.

Port of Gulfport (MS) Restoration Program, West Pier Construction Phase I and West Pier Facilities: Engineer Intern. Construction of $110 million in port improvements, including demolition, grading, storm drainage and site utilities, paving and roadway construction, electrical and site lighting, striping, railroad construction, transit shed, administration buildings, and maintenance and repair buildings. Responsibilities included developing construction constraints and sequencing plans for both projects.

Lower Ninth Ward Streetscape Phase II, New Orleans, LA: The second and final phase of "streetscape" beautification on North Claiborne Ave. in the Lower Ninth Ward neighborhood. Responsibilities included design of ADA ramps, landscaping, art plazas and previous concrete pedestrian walkways throughout the neutral ground and assistance with construction services. Construction cost is approximately $535,000.

Broad and Lafitte St. Streetscape, New Orleans, LA: "Streetscape" beautification project that ties in with the Lafitte Greenway Bicycle and Pedestrian Path project making the Mid-City neighborhood more accessible for pedestrians. Responsibilities included design of ADA ramps, striping with the addition of bike lines, street lighting additions and improvements, and landscaping and assisting with construction services. Construction cost is approximately $540,000.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Charles Adams, PE, PTOE, *Senior Project Engineer*
Project Assignment:
Project Engineer: Traffic
Name of Firm with which associated:
NEEL-SCHAFFER *Solutions you can build upon*
Years' experience with this Firm:
17 years (*30.5 total*)
Education: Degree(s)/Year/Specialization:
BS / 1992 / Civil Engineering
Active registration: Year first registered/discipline:
1997 / Professional Engineer, Civil, LA 27440
Other experience and qualifications relevant to the proposed Project:

Mr. Adams has over 30 years' experience in the area of Traffic Data Collection, Traffic Signal Timing, Traffic Signal design, Traffic Operations Analysis, Traffic Safety, ITS and Transportation Engineering. He manages a wide range of local and regional projects that vary in complexity from developing traffic control plans for major construction projects and traffic signal timing plans to performing roundabout feasibility studies and other traffic related studies for both public and private clients. Prior to joining Neel-Schaffer, Inc. Mr. Adams was employed by the Louisiana Department of Transportation and Development (LA DOTD) where he served as the State Traffic Engineer. Mr. Adams has extensive experience with managing and developing plans for traffic signals, traffic controls, and intersection improvements as well as performing roundabout analyses and Stage 0 Traffic Studies.

RELATED EXPERIENCE

Hurricane Ida Emergency Lighting and Signage project, New Orleans, LA: NSI performed day inspections of all signs and day and night inspections of all streetlights within Zone 3. Mr. Adams coordinated and oversaw all operations of the project as well as participated in inspections along the interstate system.

Hard Rock Hotel, New Orleans, LA: NSI prepared TTC plans for the demolition of the Hard Rock Hotel in downtown New Orleans. Mr. Adams prepared TTC and detour plans for the removal of the damaged hotel. Project Manager.

Tulane Avenue Chick-fil-A, New Orleans, LA: NSI performed a Traffic Assessment and circulation assessment for a new Chick-fil-A restaurant in the City of New Orleans. Mr. Adams performed analyses and observations and oversaw the circulation assessment. Project Manager.

I-10 & I-12 College Dr. Flyover Ramp, Baton Rouge, LA: NSI is performing IMR, TMP, preliminary design, final design, review of TTC plans, and signal design. Mr. Adams reviews all TTC plans and developing preliminary signal plans.

TEC Professional Services Questionnaire

Kansas Lane, Garrett Road Connector, Monroe, LA: NSI performing TMP for project as well as developing temporary signal design plans, developing permanent signal design plans, and developing fiber plans to relocate impacted fiber. Mr. Adams is preparing the TMP and all signal design plans. Project Manager

South city Parkway Extension - Lafayette, LA: This project will construct a new 1.7, mile, 4 lane median divided corridor between US 167 (Johnston Street) with Kaliste Saloom Road. The roadway and drainage design are being completed in conformance with LADOTD guidelines. Includes 5 multilane roundabouts. Mr. Adams is providing the Traffic Control Plans.

I-49 at Verot School Rd, Lafayette, LA: NSI is preparing design plans and reviewing the TTC plans and the TMP. Mr. Adams is reviewing the TTC plans and developing the TMP for the project.

Lucien Field Phase 3, Shreveport, LA: NSI is performing a Traffic Impact Assessment for a new phase of an existing subdivision. Mr. Adams is performing all analyses re-quired for the assessment. Project Manager.

Parkway High School, Bossier City, LA: NSI performed a Safety Study and Circulation Study at the high school and the surrounding intersections. Mr. Adams performed the analyses and observations for this project. Project Manager.

Swan Lake Road at Innovation Drive, Bossier City, LA: NSI performed intersection analyses and signal design plans for the intersection. Mr. Adams performed intersection analyses and developed the signal plans. Project Manager.

Swan Lake Road Speed Study, Bossier City, LA: NSI performed speed studies along Swan Lake Road from US 80 to Modica Lott Road. Mr. Adams oversaw the analyses and prepared the report of findings. Project Manager.

LA 840-6 at Oliver Road, Monroe, LA: NSI performed a traffic study for the intersection to determine whether left turn lane phasing would be appropriate for the Oli-ver Road approaches. Mr. Adams oversaw the analyses for the project. Project Manager.

LA Tech Student Housing Study, Ruston, LA: NSI performed a traffic study for new student housing complex that would serve LA Tech University. Mr. Adams performed all intersection analyses for the project. Project Manager

Venture Global LNG Traffic Study, Plaquemines, LA: NSI performed numerous traffic assessments for a new LNG facility along LA 23 in south Plaquemines Parish. Mr. Adams performed intersection analyses, prepared TTC plans, and reviewed construction sequencing to reduce the impact on the traveling public.

W Esplanade Ave at Carrollton Street, Metairie, LA: NSI is preparing preliminary and final signal design plans for the intersection of W Esplanade Ave and Carrollton Street. Mr. Adams is preparing the signal plans. Project Manager.

St Vincent Avenue at 84th Street, Shreveport, LA: NSI prepared preliminary and final traffic signal plans for the intersection. Mr. Adams prepared preliminary and final signal plans. Project Manager.

Golden Pass LNG Safety Study, Port Arthur, TX: NSI performed traffic safety assessments along FM 87 for the entrances to the LNG facility as well as developing signing plans and lighting plans for each entrance. Project Manager.

Hollywood Road Extension, Houma, LA: NSI performed a Traffic Study for the extension of Hollywood Road over Black Bayou creating a new intersection with LA 182. Mr. Adams oversaw and assisted with analyses.

Remco Drive Extension, Haughton, LA: NSI performed a traffic study to determine feasibility for extending Remco Drive from US 80 to Bodcau Station Road. Mr. Adams performed observations and analyses. Project Manager.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Steve Hazen, PE *Senior Project Manager*
Project Assignment:
Civil / Structural Engineer: Water and Structural
Name of Firm with which associated:
NEEL-SCHAFFER Solutions you can build upon
Years' experience with this Firm:
15 years (*48 total*)
Education: Degree(s)/Year/Specialization:
BS / 1974 / Civil Engineering
Active registration: Year first registered/discipline:
1979 / Professional Engineer - Civil, LA 18087
Other experience and qualifications relevant to the proposed Project:

Steve joined Neel-Schaffer in 2008 and has nearly 50 years of experience. He has worked as a Structural, Hydraulics and Soils Engineer with a primary focus on highway and railway bridges, structural design for buildings, facilities, hydrological analysis, and drainage design for projects. He recently served as the structural designer for several facilities at the Port of Gulfport as well as many bridge and roadway projects in Harris County, TX.

RELATED EXPERIENCE

Port of Gulfport Restoration, Gulfport, MS: Senior Project Engineer responsible for the structural design of three vehicle maintenance and repair buildings, three gate interchange structures, Customs and Border Patrol building and cross dock inspection facility for the Mississippi State Port Authority.

Oak Glen Drainage Improvements, Harris County, TX: The project covers approximately 59 acres of subdivision drained by roadside ditches and culverts. These ditches drain and discharge into two separate outfalls. Flat topography and sediment buildup resulted in the reduced capacity of this drainage system. Most of the ditches do not meet the minimum slope criteria with occasional adverse slopes of the ditches, and low-lying residential lots with grades below the roads. The proposed improvements will be sized to achieve the Atlas 14 100-year level of service and combine roadside ditches with inlets draining into a storm sewer system sized for the 100-year event. Prior to outfalling into the channel, peak flow impacts are being mitigated within two proposed detention ponds.

Repairs to MS River Fender Systems Oak Street and New River Water Intakes, New Orleans, LA: Project Engineer. Providing engineering services to New Orleans Sewerage and Water Board for a multi-phase effort to analyze the damaged dolphins and design replacement structures at the Oak Street and New River Intakes. The dolphins were damaged when a crude oil tanker traveling on the Mississippi River struck the New River Intake and then struck the Old River Intake before continuing down river.

TEC Professional Services Questionnaire

LA 167, Quitman to Lincoln Parish Line, Jackson Parish, LA: Senior Project Manager responsible for 6.05 miles of hydraulics, drainage, and bridge design. PS&E Mylar's submitted 9/27/05. Construction Cost: $17.4 million.

Master Plan for LA 117 Corridor: Project Engineer responsible for Hydraulic Analysis, bridge sizing and budget construction cost estimates.

Preliminary Bridge Plan, LA 3032 over Red River, Shreveport, LA: Project Engineer for new bridge approach structure for existing LA 3032 main span bridge over Red River. Mr. Hazen's work included evaluation of existing structure for possible continued use. There were concerns about existing bridge deck and well as the silicon steel beams in the approach spans. Ultimately LaDOTD chose to demolish the approach spans and bents and main span superstructure. The main span piers were retained as supports for the replacement steel girders and concrete deck. The H-pile column bents and steel beams in the approach spans were demolished and replaced with two column concrete bents, prestressed concrete beams spans and cast in place concrete deck.

Mueschke Road Improvement, Harris County, TX: Design required hydrological analysis of extensive area and roadway drainage design to establish roadway profile above 100 yr. flood elevation.

Master Plan for LA 117 Corridor: Hydraulic Analysis evaluation for 32-mile corridor between Hagewood and Leesville, LA.

Westpark Tollway, Section 2, Houston, TX: Bridge design for interchange structure and construction cost estimates for the Harris County Toll Road Authority.

Flournoy-Lucas Road/Ellerbe Road Intersection, Shreveport, LA: Roadway and drainage improvements for joint participation by LADOTD/City of Shreveport. Construction cost: $2.2 million. Responsible for Hydraulic Analysis.

Youree Drive (LA 1), Shreveport, LA: Prepared a hydrologic and hydraulic analysis for a major drainage outfall structure for Shreveport Department of Public Works. Total estimated construction cost is $3,000,000; Phase One construction cost was $850,000.

Arthur Ray Teague Parkway, LA: Responsible for design of railroad underpass structure roadway drainage analysis and prepared documents for required permits for Arthur Ray Teague Parkway, between La 3105 and Isle of Capri Blvd. $9,450,000.00 total project construction cost; $1,000,000 for underpass.

Mandeville Lakefront Wetlands Restoration, Mandeville, LA: Senior Structural Engineer. Situated between two "hard" shorelines, a mature cypress forest is rapidly eroding. The project will prevent further degradation of the existing wetlands and restore a functioning wetlands ecosystem within the area. Storm water from the Galvez and Massena outfalls will be directed through created wetlands, improving water quality within Lake Pontchartrain.

Calcasieu-Sabine Large-Scale Marsh and Hydrologic Restoration Project, Calcasieu Parish, LA: Senior Structural Engineer. Design Integration Services that include a combination of initial project management activities, initial data gap analysis preliminary data collection, design integration planning, including project E&D work breakdown structure and cost estimates, optimization planning and initial optimization tasks, and other project planning.

Slidell Ring Levee: Slidell East Segments (PO-184), Slidell, LA: Senior Structural Engineer. Feasibility evaluation of alternative alignments for flood protection and resiliency for the eastern side of Slidell and conceptual planning and engineering for the required alignment features. Provide Independent Technical Review of conceptual design alternatives and development of capital and construction costs for project features. Review of structural conflicts and land right issues associated with conceptual alignments.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Shelia Grisham, *Senior CADD Designer*
Project Assignment:
CADD
Name of Firm with which associated:
NEEL-SCHAFFER Solutions you can build upon
Years' experience with this Firm:
4 years (*32 total*)
Education: Degree(s)/Year/Specialization:
Associates / 1992 / Industrial Technology
Active registration: Year first registered/discipline:
N/A
Other experience and qualifications relevant to the proposed Project:
Ms. Grisham joined Neel-Schaffer in 2020 and has diverse experience as a Senior CADD Designer supporting municipal and commercial clients. She has developed preliminary to final construction plans for LADOTD, City of New Orleans, City of Baton Rouge, the Port of New Orleans, Port of St. Bernard, Ascension Parish and St. Tammany Parish among others. She has developed residential and commercial Site Development Projects for private clients. She is proficient AutoCAD Civil 3D, MicroStation, ProjectWise, Adobe Acrobat, InRoads SS2 and Open Roads. **RELATED EXPERIENCE** **RR104 - Lower Ninth Ward Northeast Group B, New Orleans, LA:** Drafting and support for engineering services for the design, bidding, construction administration and resident inspection to reconstruct 24 blocks in the Lower Ninth Ward Neighborhood. This full reconstruction includes full-depth roadway construction, drainage replacement and improvements, water line replacement, sewer line replacement, handicap ramp improvements, sidewalk / driveway improvements, and drain line inspection and cleaning. The utility replacement consisted of over 10,000 feet of 8"-12" main line distribution and over 1,000 feet of 8"-12" sanitary sewer. **RR199 - West End Group G, New Orleans, LA:** Drafting and support for engineering services for the design, bidding, construction administration and resident inspection to reconstruct 6 blocks in the West End Neighborhood. This full reconstruction includes full depth roadway construction, drainage replacement and improvements, water line replacement, sewer line replacement, handicap ramp improvements, sidewalk, and driveway improvements. The utility replacement consisted of over 3,000 feet of 8"-12" main line distribution and over 1,300 feet of 8"-12" sanitary sewer. **TM008 - Transmission Main and Water Main Replacement, New Orleans, LA:** Drafting and support for engineering design, bidding, construction administration and resident inspection services for an assortment of transmission, distribution water mains and sewer force main in several neighborhoods across New Orleans. The transmission main

replacement includes 1,800 feet of 8"-12" distribution mains, over 750 feet of 20"-30" transmission mains, and over 500' of 48" transmission main. The sanitary sewer force main replacement includes over 500' of 30" force main and ties into a sewer pump station.

RR125 - Mid-City Group B - Waterline Replacement, New Orleans, LA: Drafting and support for design, construction administration and resident inspection for water line replacement on over 56 blocks located in the Mid-City Neighborhood. The waterline replacement consisted of over 25,000 feet of 8"-12" and 1,500 feet of 16"-20" main line distribution.

DeSaix Blvd Bridge Replacement, New Orleans, LA: Drafting and support for engineering services for the design, bidding and construction administration to replace the existing bridge over Bayou St. John. During the scoping phase of this project, the City of New Orleans Department of Public Works, City Park and the local neighborhood association expressed a desire to retain aesthetic features of the existing bridge while maintaining clearance for recreational boaters and kayakers underneath the bridge; and, provide improved and safe access for bicycles and pedestrians. Neel-Schaffer is accommodating the stakeholders by providing a pre-stressed slab span bridge providing a wider bridge with increased clearance and longer spans than the typical bridges crossing Bayou St. John. Precast fascia panels are being used to provide arches like the existing bridge and decorative lighting is included at the request of the Park and neighborhood association. Ms. Grisham is providing plans for this project. CADD Designer

Repairs to MS River Fender Systems Oak Street and New River Water Intakes, New Orleans, LA: Drafting and support for engineering services to New Orleans Sewerage and Water Board for a multi-phase effort to analyze the damaged dolphins and design replacement structures at the Oak Street and New River Intakes. The dolphins were damaged when a crude oil tanker traveling on the Mississippi River struck the New River Intake and then struck the Old River Intake before continuing down river. The intakes remained functional but the protective dolphin structures were damaged at both river intakes.LA3241: LA 435 to LA 40/LA 41 Bridge Preliminary Plans (I-12 to Bush) (LA DOTD), St. Tammany Parish, LA: Ms. Grisham provided preliminary and final design plans for this project. CADD Designer

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Phillip Gibson, PE, *Senior Project Manager*
Project Assignment:
Project Engineer: Transmission Lines and Water Treatment
Name of Firm with which associated:
NEEL-SCHAFFER Solutions you can build upon
Years' experience with this Firm:
21 years (*31 total*)
Education: Degree(s)/Year/Specialization:
BS / 1990 / Civil Engineering MS / 1994 / Civil Engineering
Active registration: Year first registered/discipline:
1999 / Professional Engineer - Civil, LA 28379
Other experience and qualifications relevant to the proposed Project:
Mr. Gibson re-joined Neel-Schaffer in 2018 and serves as the manager of the Central Mississippi Water/Wastewater Department, working out of the firm's Jackson office. Mr. Gibson has over 30 years of experience, including 15 years (1992-2007) with Neel-Schaffer. He has completed dozens of water and wastewater projects associated with a variety of engineering services for state, municipal, and private clients. He has design and project management expertise in potable water wells, elevated storage tanks, ground storage tanks, water treatment plants, water treatment plant pump stations, potable water distribution systems, wastewater treatment plants, large and small wastewater pump stations, and wastewater collection systems. The construction costs of these projects have ranged from $300,000 to $108 million. Mr. Gibson has overseen the construction on most of the projects he has designed or managed. **RELATED EXPERIENCE** **O.B. Curtis Water Treatment Plant Expansion, Jackson, MS:** Project Manager/Designer for extensive pilot plant studies and design phase. The design provided for upgrades to existing raw water pump station, sludge collection system, ACH, KMnO4, polymer, chlorine, ammonia, and chlorine dioxide chemical feed systems, sludge thickening, sludge dewatering, and SCADA system. New components added to the plant included 60-inch raw water line, 54 inch and smaller yard piping, ultraviolet disinfection, chlorine scrubber system, pre-oxidation basin, rapid mix basins, flocculation basins, and submerged ultrafiltration membranes. The expansion brought capacity to 50-mgd initially with ultimate capacity of 58 MGD. The construction cost of Phase I was $55.3 million. **O.B. Curtis Water Treatment Plant Expansion, Jackson, MS:** Pilot Plant Study Engineer. Operated, collected data, and performed lab analyses for an ozone pilot column, a conventional treatment pilot plant, a conventional filter pilot plant, an upflow high-rate clarifier pilot plant, and a submerged membrane packaged system.

TEC Professional Services Questionnaire

PECO Foods Water Treatment Plant, Pocahontas, AR: Design Engineer for a 2.25-MGD iron removal plant that is classified as a Ground Water Under the Influence of Surface Water System. This means the plant must meet all the regulations/requirements of a surface water treatment plant. Provided process design engineering services, plan production and technical specifications for this water treatment plant. Project includes a flash mix, coagulation basin, three upflow solids contact clarifier, six gravity dual media filters, UV disinfection, transfer pump station, 625,000-gallon ground storage tank, service pump station, and chemical feed systems. Construction cost was $8.5 million.

Renovations to J.H. Fewell Water Treatment Plant, Jackson, MS: Project Manager for design services and construction plans and specifications for sludge collection system, replacement of non-operating filter valves and actuators, ACH, KMnO4, polymer, chlorine, ammonia, and chlorine dioxide chemical feed systems, chlorine scrubber system, ultraviolet (UV) disinfection, electrical improvements for new systems, SCADA system upgrade, and yard piping. Plant capacity after renovation increased to 25-MGD, and construction cost was $10.75 million.

South Water Treatment Plant Design, Columbus, MS: Design Engineer for this 8-MGD Water Treatment Plant. The project included design services and construction plans and specifications for coke tray aerators, upflow solids contact clarifier, variable head multi-media filters with air scour system, and chemical feed systems.

North Water Treatment Plant Renovation, Columbus, MS: Design Engineer for a $4.8 million project to renovate this 4-MGD Water Treatment Plant. Construction involved the addition of a new 4-MGD iron removal treatment train. Elements included two 2-MGD deep wells, coke tray aerator, solids contact clarifier, new chemical feed systems, new service and backwash pumps, and two 750,000-gallon pre-stressed concrete ground storage reservoirs.

Water Treatment Plant Improvements for Culkin Water District, Culkin, MS: Mr. Gibson served as Project Manager and Design Engineer for this project that included design services and construction plans and specifications for transfer pump station and building, 1-MG pre-stressed concrete clearwell, high service pump addition, and yard piping. The construction cost was $1.126 million.

East Wastewater Treatment Facility Traveling Bridge Filters, McComb, MS: Project Engineer. Project included design services and construction plans and specifications for dual train traveling bridge filter, polymer and alum chemical feed systems, and yard piping. The construction cost was $765,000.

2018 CDBG Sewer Improvements, Newton, MS: Design Engineer for this ongoing CDBG project that consists of rehabilitating sewer lines from approximately Ford Avenue and Frances Avenue to and under Northside Drive (Hwy 80). The piping has a diameter of 10-inches and is approximately 4,155 linear feet long. The first step of the rehabilitation will be to conduct Closed Circuit Television (CCTV) inspection and cleaning of the entire length of sewer lines. The inspection by CCTV will precisely locate and identify all defects in the underground piping. A report of the inspection will be prepared and used to determine the specific rehabilitation for each segment of piping. It is anticipated the sewer piping will be rehabilitated by Cured-In-Place Pipe (CIPP) lining. The brick manholes will be rehabilitated to with a watertight coating. Inflow and infiltration should be eliminated through this section of collection pipeline as a result of the project.

Sewage Collection Improvements, Simmons & Robinson Street Sewer and Hordge Lane Sewer Rehabilitation, Edwards, MS: Design Engineer for this CDBG project that consists of providing grinder pumps station to unsewered residents on Simmons Street and Robinson Street and the rehabilitation of 750 feet of 8-inch sewer lines to eliminate blockages and overflows. The sewer lines will be rehabilitated using Cured-In-Place (CIPP) lining.

East Meridian Pump Station, Meridian, MS: Design Engineer for this project that consists of intercepting a gravity line passing outside of the East Meridian WWTP fence and the installation of a duplex 750-gpm pump station. The project is needed to help prevent overflows of this gravity line due to excess infiltration and inflow. The gravity line flows to Meridian's South WWTP. The design of the project is complete, and construction has been delayed by Meridian.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Craig Alexander, PE, *Water Resources Project Manager*
Project Assignment:
Project Engineer: Water Systems and Storage
Name of Firm with which associated:
NEEL-SCHAFFER Solutions you can build upon
Years' experience with this Firm:
4 years (*18 total*)
Education: Degree(s)/Year/Specialization:
BS / 2006 / Civil Engineering
Active registration: Year first registered/discipline:
2010 / Professional Engineer, Civil, TX 107117
Other experience and qualifications relevant to the proposed Project:

Mr. Alexander joined Neel-Schaffer in 2020 and serves as a Water Resources Project Manager in the firm's Arlington (TX) office. He has over 15 years of engineering experience, working on a variety of civil and water resource projects as a Design Engineer and Project Manager.

His experience includes a total of 12 years with other consulting engineering firms and three years (July 2014-July 2017) working as a Civil Engineer/Project Manager for the City of Grand Prairie, TX. In that role, he managed consultants in the design of capital improvement projects, managed the construction of capital improvement projects, and designed water/sewer/paving/drainage for in-house capital improvement projects.

Craig's experience also includes single-family and residential and commercial land development. Craig is active in the Water Environment Association of Texas and the Underground Construction Technology Association.

RELATED EXPERIENCE

Upper Pressure Plane Water Line Improvements, Mansfield, TX: Neel-Schaffer is providing engineering design services for this project to upgrade and expand the City of Mansfield's water system. These new water mains include: 9,700 LF of new 16-inch diameter water, 1445 LF of new 12-inch diameter water line, and replacement of approximately 6,000 LF of existing 10-inch water line.

1.5 MG Copper Ridge Tank Rehabilitation, Richardson, TX: Provide inspections, rehabilitation design, bid documents and specifications for the 1.5 MG Copper Ridge Elevated Storage Tank Rehabilitation including removal of existing paint material and repainting the interior and exterior of the tank, and repainting City logos. Prepare Engineer's Opinion of Probable Cost for the tank rehabilitation. This scope of services addressed deficiencies and recommendations to comply with industry standards including TCEQ, AWWA, and OSHA.

TEC Professional Services Questionnaire

New 3.1 MG Booster Pump Station and Southeast Pressure Plane Improvements, Northlake, TX: The project includes four major components: the 20-inch water transmission lines, the 3.1-MGD Pump Station and 0.50-MG ground storage tank, and the proposed 0.75-MG elevated storage tank. The 20-inch transmission line begins at the City of Fort Worth meter located near I35W and Raceway Drive. The transmission line extends through several multi-family and commercial properties approximately 3,500 LF to the new proposed ground storage tank facility south of SH114. Our scope of services includes full easement preparation services and permitting, including a TxDOT permit for crossing SH114 at Dale Earnhardt Way. The project includes coordination with the City of Fort Worth staff for the hydraulic analysis and modeling as part of the preliminary engineering report phase.

McCree 2.5 MG Elevated Tank, Garland, TX: The scope of services included water system modeling and water storage tank site selection analysis. Neel-Schaffer provided design for a new 2.5-MG Composite elevated storage tank constructed on the 1.24-acre tract on the southwest corner of the intersection of McCree Road and Leon Road. The basic services included tank design documents, all tank appurtenances, site civil grading, access drives, site paving, site drainage, on-site water layout, landscaping, irrigation, fencing, pedestrian and vehicle gates, lighting, electrical, erosion control plan, security, supervisory control and data acquisition (SCADA), and design surveying.

Holly Tank Rehabilitation, Richardson, TX: Provided engineering design services for the rehabilitation of the existing 1.0-million-gallon Holly elevated water storage tank. This rehabilitation included the removal of the existing coating material and re-painting the interior and exterior of the tank, along with the repair or replacement of ladders, safety climbing systems, platforms, vents, access tubes, balcony safety rails, and other miscellaneous items that were identified during prior tank inspections. Also included as part of the design were site grading modifications to allow the site to drain properly. In addition to engineering design services.

1.25 MG New Elevated Tank, Main Street, City of Rowlett, TX: This project included the construction of a 1.25-MG CET on Main Street in Rowlett. As a part of this project, we designed approximately 4,000 feet of 16-inch water pipe to serve the new elevated tank. This new tank serves the upper pressure plane area of the City's water system as identified on the master plan. Our work included the design of the site improvements package for the elevated tank, which consisted of the access drive, site layout, grading, drainage, lighting, landscaping, screening walls, security gates, and all tank appurtenances.

Turkey Peak Pump Station Ground Storage Tank, Burleson, TX: Neel-Schaffer is providing engineering services for this project to replace the existing 0.42 MG Turkey Peak Ground Storage Tank (GST) with a 2.0 MG GST. To relocate the 3.0 MGD Brushy Mound Pump Station to the Turkey Peak site and abandon the two ground storage tanks at the Brushy Mound site.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Derek Cheatham, PE *Senior Vice President*
Project Assignment:
Project Engineer: Transmission Lines and Storage
Name of Firm with which associated:
NEEL-SCHAFFER Solutions you can build upon
Years' experience with this Firm:
12 years (*30 total*)
Education: Degree(s)/Year/Specialization:
BS / 1994 / Civil Engineering
Active registration: Year first registered/discipline:
1999 / Professional Engineer - Civil, TX 85410
Other experience and qualifications relevant to the proposed Project:
Mr. Cheatham has 30 years of experience as a consulting engineer, with an emphasis on the design of roadway, drainage, water, and wastewater related projects. His experience includes many types of roadway and drainage projects including rural roadways, local, collectors and major arterials. His roadway related design experience also includes trail and sidewalk improvement projects within public corridors including providing complete PS&E documents for a local government project with the TxDOT Fort Worth District. Mr. Cheatham's proven drainage related experience includes design and analysis of hydrology, detention systems, outlet structures, storm drain systems, culverts, and inlets. He also has extensive utility engineering experience including water and wastewater improvement projects such as gravity systems, force mains, small lift stations, large transmission water lines and distribution lines. This includes coordinating with TxDOT on multiple projects for utility permitting approvals for new utility installations. Overall, Mr. Cheatham has a wide variety of engineering experience with transportation related infrastructure projects. **RELATED EXPERIENCE** **McCree 2.5 MG Elevated Tank, Garland, TX:** Project Manager. The scope of services included water system modeling and water storage tank site selection analysis. Neel-Schaffer provided design for a new 2.5-MG Composite elevated storage tank constructed on the 1.24-acre tract on the southwest corner of the intersection of McCree Road and Leon Road. The basic services included tank design documents, all tank appurtenances, site civil grading, access drives, site paving, site drainage, on-site water layout, landscaping, irrigation, fencing, pedestrian and vehicle gates, lighting, electrical, erosion control plan, security, supervisory control and data acquisition (SCADA), and design surveying. **Holly Tank Rehabilitation, Richardson, TX:** Provided engineering design services for the rehabilitation of the existing 1.0-million-gallon Holly elevated water storage tank. This rehabilitation included the removal of the existing coating material

and re-painting the interior and exterior of the tank, along with the repair or replacement of ladders, safety climbing systems, platforms, vents, access tubes, balcony safety rails, and other miscellaneous items that were identified during prior tank inspections. Also included as part of the design were site grading modifications to allow the site to drain properly. In addition to engineering design services.

SSH66 East Sewer Line, City of Rowlett, TX: Serving as Project Manager for this project, which includes upgrading the existing SH66 east sewer line to meet the future projected sewer flows. Trenchless rehabilitation methods were utilized to avoid utility conflicts, existing driveways, and other improvements, which will provide the best over-all engineering solution. The trenchless technologies include pipe-bursting and cured-in-place pipe (CIPP). In addition, the design includes line upgrades with traditional trenching methods. The project consists of 14,900 L.F. of sewer pipe in sizes ranging from 30" to 10" diameters.

20" Water Line (White Chapel Blvd. To Town Square): Design Engineer for this project, which included constructing a water transmission line along SH 114 from Town Square to White Chapel Blvd. The pipeline was designed as bar wrapped concrete cylinder pipe. Due the physical constraints of the existing features such as trees, landscaping, and other utilities a large portion of the sewer line improvements was designed for installation by trenchless construction methods. In addition, we project consisted of a 12" PVC water line along SH 114 to complete the distribution system. The design project included over 7000 feet of 20 inch and over 1370 feet of 20-inch water lines by boring. The total cost for the water improvements was $1.73 million.

16" Water Lines to serve the Kirby Road Elevated Tank: Project Manager for the design of a new 2.0 MG elevated tank on Kirby Road in Rowlett, TX. Kirby Road is located along the new President George Bush Turnpike (PGBT) corridor. As a part of this project, we designed 2682 L.F. of 16" diameter water pipe to serve the new elevated tank. In addition, we designed an additional 668 L.F. of 16" diameter water pipe that was bid as an alternate. This pipe was designed to provide a looped connection from the tank supply line to Miller Road. The construction cost for this project was $3.7 million.

Denton Creek Regional Wastewater System: Graham Branch, Alignment Study for Segments A, B, C, C-1, C-2, D, & D-1: Served as Design Engineer for this project, which included preparing a technical report, to address the general alignment of the proposed system. Also, the report included determining the line sizes based upon sewer flows of each entity, and the opinion of probable cost of the system. Once the system and related costs were defined, the cost was divided among each participating entity on a pro-rate basis based upon each party's projected 20-year sewer flow. The report analyzed various routes for the proposed Graham Branch Project. The project will serve Argyle, Flower Mound, and Northlake. The design project included over 3,500 feet of 42 inch and over 4,200 feet of 36-inch sewer lines. The total estimated cost for all the segments and lift station was $20,940,000.

1.25 MG New Elevated Tank, Main Street, City of Rowlett, TX: Project Manager. This project included the construction of a 1.25-MG CET on Main Street in Rowlett. As a part of this project, we designed approximately 4,000 feet of 16-inch water pipe to serve the new elevated tank. This new tank serves the upper pressure plane area of the City's water system as identified on the master plan. Our work included the design of the site improvements package for the elevated tank, which consisted of the access drive, site layout, grading, drainage, lighting, landscaping, screening walls, security gates, and all tank appurtenances.

North Park Development, Southlake, TX: Project Manager. The scope of this project included the construction of a new 20-acre park facility featuring three competition lacrosse fields. The project is located along Dove Road near the intersection of White Chapel Boulevard in Southlake, Texas. Working with the project architect Schrickel, Rollins and Associates, we provided the civil engineering services for the major drainage components and the site grading for the entrance drive and right turn lane. Cost $6,666,000.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Janis Dinardo, PE *Project Engineer*
Project Assignment:
Project Engineer: Water Transmission Lines
Name of Firm with which associated:
NEEL-SCHAFFER Solutions you can build upon
Years' experience with this Firm:
10 years (*21 total*)
Education: Degree(s)/Year/Specialization:
BS / 2001 / Environmental Engineering MS / 2007 / Civil Engineering
Active registration: Year first registered/discipline:
2007 / Professional Engineer - Civil, MS 17951
Other experience and qualifications relevant to the proposed Project:
Ms. Dinardo joined Neel-Schaffer in 2014 and has over 20 years of experience in civil engineering. She also has more than seven years of related experience. Prior to joining the firm, Ms. Dinardo worked with a nationally recognized engineering and consulting firm. Her previous experience included providing design engineering services for sewer collection, sewer lift stations, water distribution, ground storage water tanks, and storm drainage systems along the Gulf Coast. Ms. Dinardo has served as a project manager and gained extensive experience with permitting procedures with all the local and federal agencies. Ms. Dinardo is currently the President of ASCE Gulf Coast Branch. **RELATED EXPERIENCE** **West 28th Water Main Improvements, Gulfport, MS:** Provided design services for the replacement of water distribution lines in the Dolans Racetrack subdivision. The project includes approximately 16,540 LF of new 4- to 8-inch diameter water mains, fire hydrants, water services and pavement replacement. Neel-Schaffer also provided bidding and construction phase services. **Design of Site Utilities and Storm Water Quality Facilities, Port of Gulfport, MS:** Served as project manager and design engineer for the restoration of wastewater and water infrastructure facilities. The project also includes the design of two sanitary sewer lift station, eight stormwater quality units, a ground storage water tank and elevated equipment platform. Prepared design drawings and specification, coordinated with regulatory agencies and managed internal multidisciplinary units. **Hurricane Katrina Infrastructure Repairs, Water, Sewer & Drainage Lines, Area 06 Buena Vista West Phase 1 and Rehabilitation of Campground Lift Station, City of Biloxi, MS:** Served as project manager and design engineer for the City's Hurricane Katrina related FEMA-funded restoration of its damaged sewer collection, water distribution, and storm drainage systems for a project area with an estimated construction cost over $14 million. Coordinated with the program

manager for the city, design engineers in adjacent project areas, regulatory agencies and utility companies.

Repair and Replacement of Water and Sewer Systems for Area 1, City of Gulfport, MS: Served as project engineer and assistant project manager for the replacement of utilities as a result of Hurricane Katrina. Prepared contract documents and coordinated with subcontractors, regulatory agencies, and other engineering firms doing work within and adjacent to the project area.

Road and Drainage Improvements, Phase 2, Popp's Ferry Road Relocation, City of D'Iberville, MS: Serving as lead design engineer for roadway improvements including reconstruction and widening, drainage and utility relocation. Neel-Schaffer is currently providing design phase services. The project is funded by the Mississippi Development Authority (MDA).

Road and Drainage Improvements, Phase 1, City of D'Iberville, MS: Galleria Parkway and Popp's Ferry Road Improvements, City of D'Iberville: Served a lead design engineer for roadway improvements including reconstruction and widening, drainage and water relocation. The project was funded by the Mississippi Development Authority (MDA).

Storm Drainage Design Keesler Air Force Base, Biloxi, MS: Served as a lead design engineer for the replacement and rehabilitation of Keesler Air Force Base's storm drain system. On the airfield, approximately 5,600 LF of 15- to 48-inch storm drainpipe were removed and replaced. The rehabilitation included installing approximately 5,600 linear feet of 18- to 72-inch Cured-in Place pipe. The project also included removal and replacement of concrete paving in the taxiway and apron areas.

Biloxi Sewer System CMOM Gap Study, Biloxi, MS: Neel Schaffer completed a sewer system Capacity Management, Operation and Maintenance (CMOM) Gap Study for the City of Biloxi. The study reviews the existing City of Biloxi wastewater collection and transmission system for compliance with a CMOM Program that is consistent with EPA Guidance. The study will provide a summary of the status of the City's existing CMOM-related programs and provide recommendations on measures to improve the City's Program.

Three Rivers Road from O'Neal Road to Duckworth Road Gravity Sewer: Neel-Schaffer performed design phase services that included the preparation of construction drawings and specifications for installation of approximately 1,500 LF of gravity sewer main and 750 LF of pressure sewer main for Three Rivers Road, from O'Neal Road to Duckworth Road. The project provides sewer to unserved areas currently on septic systems. The project currently is awaiting authority to advertise for bidding.

Old Highway 49 and Orange Grove Road Sewer, Gulfport, MS: Neel-Schaffer completed design phase services for the installation of approximately 2,500 LF of gravity sewer main for Orange Grove Road, from Old Highway 49 to the city limits. The project also provides sewer to unserved areas currently on septic tanks and a new subdivision. The project was constructed by the City of Gulfport.

Gulf Region Master Plan, Six Gulf Region Counties of Mississippi: Assisted in the development of a master plan to recommend infrastructure for long-term growth and recovery from Hurricane Katrina to six Gulf Region Counties. Evaluated storm water infrastructure needs pre- and post-Katrina, determined future needs, developed cost alternatives, and prioritized recommendations.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Colby Curtis, PE *Engineer Intern*
Project Assignment:
Project Engineer
Name of Firm with which associated:
NEEL-SCHAFFER Solutions you can build upon
Years' experience with this Firm:
1 year (*4 total*)
Education: Degree(s)/Year/Specialization:
BS / 2020 / Civil Engineering
Active registration: Year first registered/discipline:
2024 / Professional Engineer - Civil, LA 49117
Other experience and qualifications relevant to the proposed Project:

Mr. Curtis joined Neel-Schaffer's New Orleans office in July 2023 and serves as an Engineer Intern in the Water Resources Group.

Prior to joining Neel-Schaffer, he worked for three years at the United States Army Corps of Engineers in the Hydraulics Branch for both the Vicksburg and New Orleans District offices.

RELATED EXPERIENCE

St. Tammany Parish Grande Maison Subdivision Drainage: Addressing subdivision flooding issue in Mandeville, LA. Contributed writing Existing Data Memo, Modeling Report, prepared client presentation, reviewed HEC-RAS and PCSWMM model, and created plan sheets for proposed alternatives.

East Baton Rouge Parish Port Hudson-Pride Road Bank Scour: Near the crossing of the Comite River, the Port Hudson-Pride Road was experiencing erosion, weakening bank stabilization along the north side of the road. To mitigate this, developed a HEC-RAS 2D model to analyze velocities in the bend in the existing condition as well as testing multiple river training structures in the model to provide the client with the most stable and cost-effective option. Calculated rip rap Gradations and design parameters for a potential bendway weir.

New Orleans Department of Public Works DeSaix Bridge Replacement: Design of a replacement bridge in Bayou St. John, City of New Orleans. Obtained needed permitting to begin construction phase of project. Reviewed submittals and RFIs, checked monthly quantities usage, updated meeting notes, created invoice letters for contractors and subconsultants.

St. Tammany Parish Pelican Park Water Well and Tank: The park experienced a pump failure at an existing well during the Aug 2023 drought. Built an InfoWater Pro Water System model to evaluate their current system as well as the benefits

of adding another well. The model also evaluated installing fire hydrants and increasing the system's pipe size.

Bossier City, LA Jimmie Davis Bridge: Internal technical review of the Drainage Calculations for the proposed ditches, culverts, inlets, and storm drains.

Murphy, TX Maxwell Creek No Rise Study: The city is adding two pedestrian bridges on either side of East FM 44 road at the crossing of Maxwell Creek as well as low crossing a half mile downstream. A hydraulic analysis was performed to document any increase in water surface elevation and mitigate this increase in the stream due to these added obstructions to meet the FEMA required No Rise condition.

Haltom City, TX Huddleston Street No Rise Study: The city is repaving Huddleston Street as well as adding curb and gutter, inlets and storm drains, and sidewalks on either side. The street crosses Stream WB4, which flows through a culvert. A hydrologic and hydraulic analysis was performed to document the changes in runoff and mitigate any increase in water surface elevation in the stream to meet the FEMA required No Rise condition.

New Orleans Sewerage and Water Board Saltwater Intrusion: The saltwater wedge moving up the Mississippi River posed a threat to the City of New Orleans' drinking water as it receives its supply from two intakes on both banks. Helped with preliminary design plans, permitting for the Algiers Intake, and with the initial pipe layout options for the Carrollton Intake in a tight timeframe to meet the Sewerage and Water Board's urgent needs.

City of New Orleans Green Infrastructure Toolkit: Performed an audit and made revisions to the City's standard details, specifications, toolkit calculator, and general guidance document. The details and specifications of focus for NSI's effort were porous concrete pavement, edge restraints, cleanouts, and pavers for sidewalks, alley ways, and parking lanes.

McComb, MS, Donna Heights Drainage: Addressing subdivision flooding issue in McComb, MS. Calculated hydrologic runoff and hydraulic routing. Built HEC-RAS model to reflect existing conditions and to propose alternative solutions to problem.

TEC Professional Services Questionnaire

L. Work by Firm or Joint-Venture members which best illustrates current qualifications relevant to this project. Please include any and all work performed for Jefferson Parish. Please attach additional pages if necessary.

PROJECT NO. 1

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
TM008 - Transmission Main and Water Main Replacement *New Orleans, LA* Sewerage and Water Board of New Orleans Steven Giang, PE, PMP 504-865-0659	NSI is providing engineering design, bidding, construction administration and resident inspection services for an assortment of transmission and distribution water mains in several neighborhoods across New Orleans. This project is funded through FEMA and is unique in that the sites are scattered throughout the City. The design is also unique in that each work area presents different scopes, challenges and replacement requirements. Below lists some of the unique design features for the project: • Project featured needs for surveying, subsurface utility exploration (SUE), and geotechnical investigations. • 50-inch steel transmission water main replacement: +/- 400 LF · Requires 50-inch line stops and temporary bypass system design · Requires new 48-inch butterfly valve and vault · Requires design of multiple bends, drainage relocation and pavement restoration design • 30-inch cast iron transmission main and 27-inch cast iron sewer force main replacement: +/- 550 LF · Requires sequencing of construction to ensure temporary service to customers is installed · Requires complex layout design in a 50 foot right of way · Requires design and coordination to tie into existing sewer pump station · Requires full block reconstruction, including the relocation of subsurface drainage • 20-inch cast iron water main over the Palmetto Canal: +/-100 LF · Requires design of a separate structural support system to span the Palmetto Canal and ensure minimal down time · Requires exploratory excavation to locate buried features • 8-inch thru 12-inch distribution water mains: +/- 500 LF · Requires replacement of distribution mains at four separate locations and the pavement restoration associated with it In addition to traditional engineering design services, permitting services are also being provided to navigate the USACE, LADOTD, and Flood Protection Authority's jurisdictional requirements are met. The opinion of probable construction cost is approximately $5.4 Million.	
Completion Date *(Actual or estimated)*:	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
07/2024	$5,400,000 (Construction)	$421,000 (Fee)

TEC Professional Services Questionnaire

PROJECT NO. 2		
Project Name, Location and Owner's contact information:	**Nature of Firm's Responsibility:**	
S. Jahncke Avenue Waterline Replacement Project *Covington, LA* City of Covington Callie Baker, PE 985-892-1811 ext. 245	Neel-Schaffer was contracted by the City of Covington, Louisiana, to provide design, bid phase, and construction administration services for the replacement of water lines along S. Jahncke Avenue. This project consisted of design of the new water line and resident services, along with overlay of the existing roadway. The new water line is meant to improve water pressure in the immediate area and provide better flow capacity for areas of the City further away.	
Completion Date *(Actual or estimated)*:	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
08/2016	$438,000 (Construction)	$54,000 (Fee)

PROJECT NO. 3		
Project Name, Location and Owner's contact information:	**Nature of Firm's Responsibility:**	
Bay St. Louis Infrastructure Repairs *Bay St. Louis, MS* City of Bay St. Louis William Buddy Zimmerman 228-304-1202 bzimmerman@baystlouis-ms.gov	Following Hurricane Katrina in 2005, Neel-Schaffer assisted the city of Bay St. Louis with damage assessments for utilities and drainage infrastructure caused by Hurricane Katrina's storm surge. Neel-Schaffer performed hydraulic analysis to determine water losses in the water distribution system and used closed circuit television and smoke testing for examinations of sewer mains. Neel-Schaffer presented the damage assessment results to FEMA on behalf of the city in March of 2006. FEMA developed project worksheets describing the funding and approved reconstruction for repairs. Following the assessment phase, Neel-Schaffer provided project management, design, bidding, and construction administration and Inspection services. Neel-Schaffer also assisted the city of Bay St. Louis with the documentation necessary to assure full funding of eligible costs by the FEMA0. To accomplish design work to repair the water, sewer, natural gas and drainage infrastructure, the project area was divided into three drainage basins. To increase the efficiency of the design phase, design teams were assigned to each basin. The four-year construction project was divided into five phases, beginning in March of 2007. The first phase of construction was completed in July of 2009. The final project was completed in April of 2011 and the construction cost of all the projects totaled $55 million.	
Completion Date *(Actual or estimated)*:	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
04/2011	$55,000,000	$6,600,000 (Fee)

TEC Professional Services Questionnaire

PROJECT NO. 4		
Project Name, Location and Owner's contact information:	**Nature of Firm's Responsibility:**	
Hancock County Water Supply (W7) *Hancock County, MS* Hancock County Utility Authority David C. Pitalo 228-467-3702 davidphcua@bellsouth.net	After Hurricane Katrina, the Mississippi Legislature authorized the formation of county utility authorities and tasked them with the development of infrastructure to ensure the orderly growth and sharing of infrastructure resources within their counties. Through funding from the CDBG program, administered by the Mississippi Department of Environmental Quality (MDEQ), Neel-Schaffer assisted the Hancock County Utility Authority (HCUA) with this project to provide a water distribution network for affected areas located in south Hancock County. Neel-Schaffer provided conceptual design support in conjunction with Mississippi Engineering Group to define the scope and 30 percent design of the "W7" project, as part of the Gulf Region Water and Wastewater Master Plan of 2007. Construction of the "W7" project was completed in 2012. The project included the design and construction of 127,000 linear feet of 16" water transmission mains, three wells each more than 1,000 gallons per minute capacity, and three elevated water storage tanks of 500,000 gallons capacity each. Each elevated storage tank is 53 feet in diameter and has a high-water level ranging from 143 to 153 feet above mean sea level (MSL). The elevated platforms for the wells are made of structural steel. Each component, designed by our structural engineers to the FEMA standards for wind loading in our coastal zone. Also, the chlorination building, generator, automatic transfer switch, and motor control panel are all rated for a minimum 140 mph wind load.	
Completion Date *(Actual or estimated)*:	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
06/2011	$15,900,000	$2,500,000 (Fee)

PROJECT NO. 5	
Project Name, Location and Owner's contact information:	**Nature of Firm's Responsibility:**
Columbus North Treatment Plant Renovations *Columbus, MS* Columbus (MS) Light and Water Department Angela Verdell 662-328-7192 averdell@columbuswaterandlight.com	Neel-Schaffer was selected by the Columbus (MS) Utilities Commission to provide complete design and construction phase services to renovate the City of Columbus North Water Treatment Plant as part of the conversion from surface water supply to a groundwater supply. The two-phased renovation project yielded a modern plant capable of producing 6 million gallons per day (MGD) of potable water. The design provided for continuous plant operation during the construction process. Water for this plant is supplied by four deep wells, each having a capacity of 2-MGD. The well water is high in iron and carbon dioxide and has a pH of approximately 6.0.

TEC Professional Services Questionnaire

PROJECT NO. 5		
	Phase 1 involved the addition of a new 4-MGD iron removal treatment train. Elements included: • Two 2-MGD deep wells • Coke tray aerator • 75-foot Solids contact clarifier • New chemical feed systems • New service and backwash pumps • Two 750,000-gallon pre-stressed concrete ground storage reservoirs *Phase 1 was completed in 1994 at a cost of $4.8 million.* **Phase 2 consisted of the following renovations and additions:** • Complete replacement of filter underdrains / media • Addition of air scouring equipment • New filter control system • Renovation of control building • Renovation of coke tray aerator and clarifier • Addition of SCADA system • Demolition of surface water treatment train • Construction of backwash surge tank and sludge lagoons *Phase 2 construction was completed in 1998 at a cost of $3.8 million.*	
Completion Date *(Actual or estimated)*:	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
06/1998	$8,600,000	$3,800,000 (Fee)

PROJECT NO. 6	
Project Name, Location and Owner's contact information:	**Nature of Firm's Responsibility:**
RR125, Mid-City Group B Waterline Replacement *New Orleans, LA* Sewerage and Water Board of New Orleans Mark Van Hala, PE 504-930-7223 mvanhala@swbno.org	NSI provided design, construction administration and resident inspection for the waterline replacement on over 56 blocks located in the Mid-City Neighborhood of New Orleans. The waterline replacement consisted of over 25,000 feet of 8"-12" and 1,500 feet of 16"-20" main line distribution. This replacement project is part of the Joint Infrastructure Recovery Roads Program between the Sewerage and Water Board of New Orleans and the Department of Public Works. It includes replacing undersized and aging infrastructure that was damaged during Hurricane Katrina. The 56+ blocks of water line improvements were packaged into one large DPW project and coordinated with DPW's design engineer's roadway improvement project. Coordination between S&WB and DPW allowed each group to be bid as one project and reduced the impact on residents and businesses in the area.

TEC Professional Services Questionnaire

PROJECT NO. 6		
	This project was designed (2020), bid (2021) and is currently under construction with an estimated completion date in spring of 2023. The overall project was bid and awarded for over $24 Million dollars where the waterline replacement accounted for over $5 million. Neel-Schaffer is continuing to provide services to the S&WB for the construction administration and resident inspection. Neel-Schaffer worked closely with our DBE sub consultant to ensure design, budget, schedule, and construction are completed and meet the client's expectations.	
Completion Date *(Actual or estimated)*:	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
05/2023	$25,000,000 (Construction)	$345,000 (Fee)

PROJECT NO. 7		
Project Name, Location and Owner's contact information:	**Nature of Firm's Responsibility:**	
RR025, City Park Group A Waterline Replacement *New Orleans, LA* Sewerage and Water Board of New Orleans Mark Van Hala, PE 504-930-7223 mvanhala@swbno.org	NSI provided design, construction administration and resident inspection for water line replacement on six blocks located in the City Park Neighborhood of New Orleans. The water line replacement consisted of over 1,000 feet of 8"-12" and 800 feet of 16"-20" main line distribution. This replacement project is part of the Joint Infrastructure Recovery Roads Program between the S&WB of New Orleans and the Department of Public Works. The six blocks of water line improvements were packaged into one large DPW project and coordinated with DPW's design engineer's roadway improvement project. Coordination between S&WB and DPW allowed each group to be bid as one project and reduces the impact on residents and businesses in the area. This project was designed (2019), bid (2020) and completed construction in 2022. The overall project was bid and awarded for over $6 Million dollars where the waterline replacement accounted for over $740 Thousand. Neel-Schaffer worked closely with our DBE sub consultant to ensure design, budget, schedule, and construction were completed and met the client's expectations.	
Completion Date *(Actual or estimated)*:	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
11/2022	$6,100,000 (Construction)	$740,000 (Fee)

TEC Professional Services Questionnaire

PROJECT NO. 8		
Project Name, Location and Owner's contact information:	**Nature of Firm's Responsibility:**	
RR104 - Lower Ninth Ward Northeast Group B *New Orleans, LA* City of New Orleans Mohanad Abdelfattah 504-658-8037 Mohanad.Abdelfattah@nola.gov	Engineering services for the design, bidding, construction administration, and resident inspection for the reconstruction of 24 blocks in the Lower Ninth Ward neighborhood. The utility replacement consisted of over 10,000 feet of 8"-12" main line distribution and over 1,000 feet of 8"-12" sanitary sewer. Neel-Schaffer provided engineering services for the design, bidding, construction administration, and resident inspection to reconstruct 24 blocks in the Lower Ninth Ward Neighborhood. The project was part of the Joint Infrastructure Recovery Roads Program and was a comprehensive recovery strategy to repair Hurricane Katrina-related damages on and beneath city-managed streets throughout New Orleans. As the design consultant for the Department of Public Works, NSI coordinated with both the Sewerage and Water Board and their consultant throughout the design process and construction. The full reconstruction included full depth roadway construction; drainage replacement and improvements; water line replacement; sewer line replacement; handicap ramp improvements; sidewalk/driveway improvements; and drain line inspection and cleaning. In addition to design and bid phase services, we provided construction management with the assistance of DBE subconsultants. These subconsultants provided surveying, design, and resident inspection services during the construction.	
Completion Date *(Actual or estimated)*:	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
09/2022	$8,800,000 (Construction)	$834,000 (Fee)

PROJECT NO. 9	
Project Name, Location and Owner's contact information:	**Nature of Firm's Responsibility:**
Bayside Park Water Distribution System (W8) *Bayside Park, MS* Hancock County Utility Authority David C. Pitalo 228-467-3702 davidphcua@bellsouth.net	After Hurricane Katrina, the Mississippi Legislature authorized the formation of county utility authorities and tasked them with the development of infrastructure to ensure the orderly growth and sharing of infrastructure resources within their counties. Through funding from the CDBG program, administered by the Mississippi Department of Environmental Quality (MDEQ), Neel-Schaffer assisted the Hancock County Utility Authority (HCUA) with this project to provide a water distribution network for affected areas located in south Hancock County. Neel-Schaffer provided conceptual design support in conjunction with Mississippi Engineering Group to define the scope and 30 percent design of the HCUA "W8" project, as part of the Gulf Region Water and Wastewater Master Plan of 2007. Since that time, the W8 project includes the following design features: • Construction of 40,000 linear feet of 12" water mains

PROJECT NO. 9		
	• Construction of 90,000 linear feet of 6" and 8" water mains The project involved replacing approximately 25 miles worth of water distribution system connecting several neighborhoods that were inundated and damaged by Hurricane Katrina. Neel-Schaffer provided design, modeling, production of plans, geotechnical investigations, surveys, bid phase services, and program management services during construction.	
Completion Date *(Actual or estimated)*:	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
09/2010	$21,000,000 (Construction)	$4,000,000 (Fee)

PROJECT NO. 10		
Project Name, Location and Owner's contact information:	**Nature of Firm's Responsibility:**	
Pelican Park New Well and Storage Tank *Mandeville, LA* Recreation District #1 Pelican Park Suzanne Reeder, Executive Director suzannereeder@pelicanpark.com	To support the implementation of a new water well at Pelican Park Neel-Schaffer, Inc. (NSI) developed a hydraulic model to match the park's existing water system and determine its efficiency of delivering pressurized flow to the park's fields while also meeting their potable supply needs, as well as analyzed multiple scenarios with a third well providing redundancy in place. NSI used these findings and the results from the test well to properly design the well, tank, site, and size the motor, pump, and specify the needed accessories.	
Completion Date *(Actual or estimated)*:	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
2024	$1,100,000	$90,000

TEC Professional Services Questionnaire

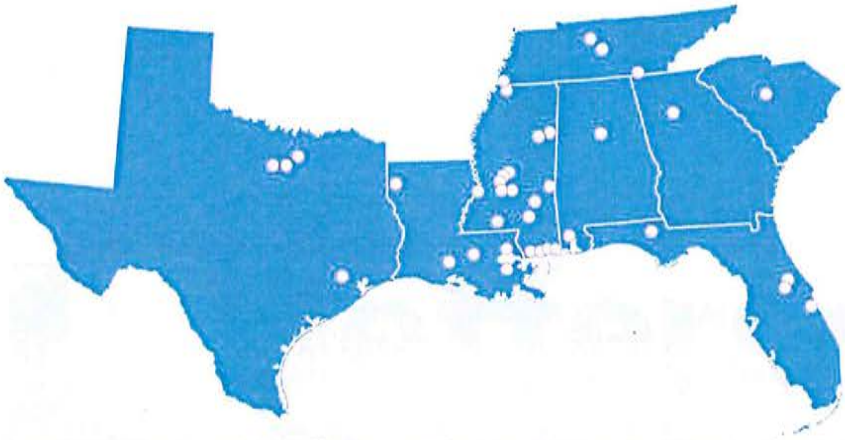
M. List all prior and / or on-going litigation between Firm and Jefferson Parish. Please attach additional pages if necessary.

Parties:		Status / Result of Case:
Plaintiff:	Defendant:	
1.		
2.		
3.		
4.		

TEC Professional Services Questionnaire

N. Use this space to provide any additional information or description of resources supporting Firm's qualifications for the proposed project.

Neel-Schaffer is a multi-disciplined engineering and planning firm that was founded in 1983 and today is one of the largest private, employee-owned firms in the South, with over 600 employees working out of 37 offices across nine states. A multi-disciplined engineering and planning firm, it encompasses a group of specialized companies with offices in Louisiana, Mississippi, Alabama, Florida, Georgia, Kentucky, Tennessee, and Texas. We provide engineering, emergency management, landscape architecture, environmental, surveying, geotechnical, strategic planning, and community development services to clients throughout the Southern US.



Engineering News-Record has listed Neel-Schaffer among the Top 500 Design Firms in the United States annually since 1994, ranking 202 in 2024. Our corporate structure emphasizes local service, with a regional touch. It allows our engineers, geologists, biologists, technicians, and project managers to maintain deeply local connections with clients in the many communities we serve, while having the resources of a much larger regional firm at their disposal. This allows us to provide a full-service approach to program development, design, and construction management for your project.

WATER PROJECTS

NSI has been providing consulting services to water and sewer utility providers for the entire 40 years of our company's existence. Our first project was a rehabilitation of the lines and interceptors of a provider's large drainage basin. We are currently still working on projects in this basin. As our firm has grown, we have become the engineer of record for small and large utility providers, the latest being the Lafayette Utility System. We provide consulting services on all aspects of the utility systems from rate studies, hydraulic studies, condition surveys, distribution and collection line upgrades, line expansions, new plants, and day-to-day management of maintenance crews on water and wastewater projects throughout the Southeast US.

PROFESSIONAL TRAINING AND EXPERIENCE

NSI employs a highly qualified team of professionals skilled in a variety of engineering disciplines. This multi-disciplinary approach allows for a more holistic blend of experience and services to meet every client's needs. Our firm includes some 225 registered professionals, including engineers, surveyors, biologists, and geologists. We employ coastal, civil, structural, hydraulic, geotechnical, environmental, water, wastewater, electrical, traffic, transportation, highway, and bridge engineers along with environmental scientists, biologists, geologists, hydrologists, cost estimators, urban planners, landscape architects, and public outreach professionals. We also employ administrators to manage local and wide area networks for CADD and information management systems such as GIS. Professional services can be provided for the complete scope of a project including planning, surveying, design, and construction phase services.

TEC Professional Services Questionnaire

KEY PERSONNEL

Don Lancaster, PE manages Neel-Schaffer's Mandeville office and has over 40 years of experience in civil engineering and project management. He is the Civil Design Manager for Neel-Schaffer's Louisiana offices and serves as the manager for Neel-Schaffer's current work as part of the $570 million Port of Gulfport (MS) Restoration project. The design is completed and construction on new port facilities will be completed in September 2018. Prior to joining Neel-Schaffer in 2003, Mr. Lancaster was Design Manager for a national firm overseeing the Sewerage and Water Board of New Orleans' Sewer System Evaluation and Rehabilitation Program (SSERP) and the Sewerage and Water Board's (S&WB) Sewer System Rehabilitation for Hurricane Katrina Emergency Recovery Efforts. Soon after joining Neel-Schaffer, he managed the design and construction of over $55 million of roadway, water, sewer and gas system repairs to Bay St. Louis (MS) infrastructure. This effort was funded by FEMA and is intended to restore the City infrastructure that was severely damaged in Hurricane Katrina.

Warren Huggins, PE has been in our New Orleans and Mandeville, LA offices since the fall of 2013. He designs and manages the construction of several FEMA, Funded Recovery Roads Program projects in New Orleans that include roadway reconstruction, ADA ramp improvements, water and sanitary sewer replacement and drainage improvements. Mr. Huggins previously joined our Ridgeland, MS office in the summer of 2012 for Neel-Schaffer, Inc.'s summer internship program. He's assisted in other disciplines such as airport design and planning, site design, coastal restoration, and bridge replacement.

CAPACITY FOR TIMELY COMPLETION

Neel-Schaffer has a current monthly billing capacity in excess of $5 million. As the following chart indicates, we can easily assimilate additional projects into our current workload.

LOCATION OF PRINCIPLE OFFICE

Our New Orleans LA office, located at 1340 Poydras Street, Suite 1950 will undertake the design for required improvements with support provided by other Neel-Schaffer offices as required.

ADVERSARIAL LEGAL PROCEEDINGS WITH PARISH

Neel-Schaffer has never entered litigation with Jefferson Parish or other public sector clients.

PRIOR SUCCESSFUL COMPLETION OF PROJECTS

NSI employs a highly qualified team of professionals skilled in a variety of engineering disciplines. Our multi-disciplinary approach allows for a more holistic blend of experience and services to meet every client's coastal needs.

Our local presence ensures our work is informed and coordinated with the issues, governance, and opportunities unique to that region. As a result, we have been able to form effective partnerships with government agencies, non-profits, and other private companies, administering coastal initiatives to meet their needs and those of communities.

Neel-Schaffer routinely provides services on an on-call basis for our clients. We currently are providing services to CPRA for a three-year multiple task order award contract. We also hold four on-call contracts with LADOTD to provide various services. Our St. Tammany Coastal Master Plan is performed as a Task Order contract and most of our work on Corps of Engineers projects has been performed under task order contracts.

SIZE OF FIRM

Neel-Schaffer has over 600 professional and technical employees, including planners and engineers with specialization in roadway and bridge design. We have 47 staff members located in Louisiana offering the services of 23 registered Professional Engineers."

PAST PERFORMANCE

In its performance rating of Neel-Schaffer, the US Army Corps of Engineers, Vicksburg District, concluded that we "consistently produced well organized, well-engineered, professional work." The rating also noted "their engineers and

managers were a pleasure to work with. Their spirit of cooperation was a major asset to the contract. They not only met the specifics of their work orders but also were anxious to meet any reasonable desires of the Government representatives. This was especially noteworthy in maintaining milestone dates when government-furnished data was not available when specified and by beating several of their submission dates. Neel-Schaffer, Inc. is highly recommended for future work..."

In addition, NSI has been selected repeatedly by LADOTD for on-going retainer contracts over the past 12 years. We think this is an excellent indication of our performance ability on public contracts and our reputation as a consultant of choice by public agencies. We are currently working under three active retainer contracts with LADOTD. We also hold a retainer contract with the City of New Orleans Department of Public Works, The Sewerage and Water Board of New Orleans, the CPRA to provide Engineering Services for Coastal Restoration Projects, the Lafayette MPO to provide Roundabout Feasibility Studies, and Ascension Parish in support of their MOVE Ascension transportation program.

To continue improving our services, Neel-Schaffer recently surveyed our clients. We received over 100 responses to our survey involving mostly public clients and were pleased to find that the vast majority are satisfied with our commitment and performance and will more than likely retain our company again. Below is a summary:

- 92% are "likely" or "very likely" to recommend Neel-Schaffer
- 94% rated Neel-Schaffer as "easy" or "very easy" to do business with
- 95% are "satisfied" or "very satisfied" that Neel-Schaffer's deliverables meet your needs
- 96% are "satisfied" or "very satisfied" with Neel-Schaffer's project management capabilities
- 91% rated the overall value you receive from Neel-Schaffer as "good" or "very good"

1. **To the best of my knowledge, the foregoing is an accurate statement of facts.**

Signature:  **Print Name:** Don Lancaster, PE

Title: Vice President / Engineer Manager **Date:** June 21, 2024

BFM Corporation, LLC

Surveying

TEC Professional Services Questionnaire

A. Project Name and Advertisement Resolution Number:

Provision of Routine Engineering Services for

Water Projects in Jefferson Parish

SOQ **24-013** | Resolution No. **144203**

B. Firm Name & Address:

BFM Corporation, LLC
15 Veterans Memorial Boulevard | Kenner LA 70062

C. Name, title, and contact information of Principal, as defined in Section 2-926 of the Jefferson Parish Code of Ordinances, who is a registered, licensed architect, professional engineer, or surveyor in the State of Louisiana:

Ralph P. Fontcuberta, Jr., PLS, Executive Vice President
504-468-8800 | 504-468-8800 cell | ralph@bfmcorporation.com
Registered Professional Land Surveyor (**Louisiana No. 4329; since 1974**)

D. Name and contact information of employee who is a registered and licensed architect, professional engineer, or surveyor in the State of Louisiana in the applicable discipline. A subcontractor may be substituted here only if the advertised Project requires more than one discipline:

Ralph P. Fontcuberta, Jr., PLS, Executive Vice President
504-468-8800 | 504-468-8800 cell | ralph@bfmcorporation.com
Registered Professional Land Surveyor (**Louisiana No. 4329; since 1974**)

E. Please provide the number of employees whose primary function corresponds with each category:

4	Administrative		Estimators		Specification Writers
	Architects (Licensed)		Geologists		Structural Engineers
	Chemical Engineers	1	Geotechnical Engineers		Graduate Engineers
	Civil Engineers		Interior Designers	2	Project Managers
	Construction Inspectors		Landscape Architects		Clerical (*see Administrative*)
	Ecologists	1	Land Surveyor (*Apprentice*)		Grant/Funding Specialist
	Electrical Engineers		Mechanical Engineers		Sanitary Engineers
	Engineer Intern		Environmental Engineers	1	*Researcher/Archivist*
2	Professional Land Surveyors			3	*CADD Technicians*
				6	*Survey Crew Chief*
				6	*Survey Crew Instrumentman*
				26	**TOTAL**

F. Is this submittal by a JOINT-VENTURE? Please check: YES _____ NO X

If marked "no", skip to Section I. If marked "yes", complete Sections G-H.

TEC Professional Services Questionnaire

G. If submittal is by JOINT-VENTURE, list the firms participating and outline specific areas of responsibility (including administrative, technical, and financial) for each firm. Please attach additional pages if necessary.

1. N/A

2.

H. Has this JOINT-VENTURE previously worked together? Please check:

YES_____ **NO**_____ N/A

I. List all subcontractors anticipated for this Project. Please note that all subcontractors must submit a fully completed copy of this questionnaire, applicable licenses, and any other information required by the advertisement. See Jefferson Parish Code of Ordinances, Sec. 2-928(a)(3). Please attach additional pages if necessary.

Name & Address:	Specialty:	Worked with Firm Before (Yes or No):
1. N/A		
2.		
3.		

J. Please specify the total number of support personnel that may assist in the completion of the Project:

26 *(all personnel will be available for assignment to the project)*

TEC Professional Services Questionnaire

K. List the professional in charge, key persons, specialists, and individual consultants anticipated for this Project and provide their relevant information below. If necessary, please attach additional documentation (i.e., résumé) that demonstrates the employment history and experience of the Firm's key persons that may assist in the completion of this Project. Please attach additional pages if necessary.

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Ralph P. Fontcuberta, Jr., PLS
Executive Vice President / Registered Professional Land Surveyor

Project Assignment:

Registered Professional Land Surveyor

Name of Firm with which associated:

BFM CORPORATION, LLC
Professional Land & Hydrographic Surveying

Years' experience with this Firm:

42 years (Founding Principal of BFM in 1982);
57 years total (1967)

Gulf South Engineering and Testing, Inc. | 2017 to present
BFM Corporation, LLC | 1982 to present
Surveys, Inc. | 1967 to 1982
The Boeing Company | 1964 to 1967

Education: Degree(s)/Year/Specialization:

2 yr, Building Trade Curriculum, Delgado, New Orleans
2 yr, Mathematics Curriculum, University of New Orleans

Active Registration: Year first registered/discipline:

1974 / Professional Land Surveyor (Louisiana No. 4329)
1974 / Professional Land Surveyor (Mississippi No. 1633)

Other experience and qualifications relevant to the proposed Project:

Ralph P. Fontcuberta, Jr., PLS has provided services on an almost incalculable number of surveying projects throughout southeastern Louisiana in the past half century and has been a registered Professional Land Surveyor (PLS) since 1974. He is thoroughly knowledgeable in all aspects of surveying: topographic, hydrographic, boundary, right-of-way surveying, and all facets thereof. He has provided surveying services for residential, plant, and industrial layout projects, ranging from small private lots & buildings to multi-million-dollar programs, including the New Orleans FEMA Streets/Recovery Roads Program. Since the beginning of his career, his work has entailed computations, drafting, and field work for various industrial, commercial, municipal, and private clients.

Project work has included topographic surveying needed for a wide variety of engineering, architectural, construction, and other related endeavors. This has included projects for numerous branches of virtually every regional city/parish/town government, multiple State agencies (LA Dept. of Natural Resources (LADNR), Coastal Protection & Restoration Administration (CPRA), LA

TEC Professional Services Questionnaire

Other experience and qualifications: **Ralph P. Fontcuberta, Jr., PLS (continued)**

Dept. of Transportation & Development (LADOTD), MS Dept. of Transportation (MDOT), and others), Federal agencies (U.S. Army Corps of Engineers (USACE), Dept. of the Navy, etc.), private/ public companies (Entergy, BellSouth, Cox Cable, etc.), and numerous other public/private entities.

Mr. Fontcuberta's surveying experience with Jefferson Parish can be traced back to BFM's inception in 1982, and to 1967 then while working as a surveyor with another firm. He has over half a century of experience with surveying throughout the region and specifically with Jefferson Parish. He has served as the PLS for projects throughout every corner of Jefferson Parish. Relevant project history includes, but is certainly not limited to, the following:

- Waterline Improvements, Metairie Terrace Neighborhood South (Shrewsbury Road, Amoult Road, Katlan Street, Lausat Street, Hullen Street, Claiborne Avenue & Jimco Road), JPPW No. 2023-040-WRB, Jefferson Parish, LA
- East Bank Water Treatment Plant Improvements Project (including Laser Scanning), Jefferson Parish, LA
- Waterline Improvements on North 1-10 Service Road, South I-10 Service Road, Walbash Street, and Hearst Street, JPPW No. 2023-010B-WRB, Jefferson Parish, LA
- Route Topographic Survey for the Jefferson Parish Waterline Project (2023-032-WRB), Shrewsbury Neighborhood, Jefferson Parish, LA
- Central Avenue Roadway Drainage & Water Main Improvements, Jefferson Parish, LA
- Waterline Improvements on Elizabeth Avenue, Ruth Street, Kathleen Avenue, and Parkaire Drive, JPPW No. 2023-012B-WRB, Jefferson Parish, LA
- Locate 16-inch Water Line between Valve Station 18 and Valve Station 24, Grand Isle, Jefferson Parish, LA
- River Road Water Line Replacement (Phase II), Jefferson Parish, LA
- Route Topographic Survey for Jefferson Parish Waterline No. 2023-022-WRB (Estalote Avenue), Jefferson Parish, LA
- East Bank Water Treatment Plant Project - Water and Utility Line Survey, Jefferson Parish, LA
- Route Topographic Survey for Jefferson Parish Waterline Project 2023-010A-WRB, Jefferson Parish, LA
- Waterline Improvements on Colony Place, Elizabeth Avenue, Concord Avenue, Stanford Avenue, and Flagler Street, JPPW 2023-012A-WRB, Jefferson Parish, LA
- Route Topographic Survey for Jefferson Parish Waterline Replacement Project, Central Avenue, Karen Avenue, and Newman Avenue, JPPW 2023-007-WRB, Jefferson Parish, LA
- Waterline Replacement at Shrewsbury Neighborhood (2023-013B-WRB), Jefferson Parish, LA
- Route Topographic Survey for the Williams Boulevard Waterline Replacement Project (between Airline Highway and West Metairie), Jefferson Parish, LA
- Route Topographic Survey for Jefferson Parish Waterline Project 2023-030-WRB, Jefferson Parish, LA
- Route Topographic Survey for Jefferson Parish Waterline Replacement Project, Veterans Boulevard (Crestview Avenue), JPPW 2023-016A-WRB, Jefferson Parish, LA

TEC Professional Services Questionnaire

Other experience and qualifications: **Ralph P. Fontcuberta, Jr., PLS (continued)**

- Route Topographic Survey for the Jefferson Heights Water System Improvements Project, Jefferson Parish, LA
- Route Topographic Survey for Jefferson Parish Waterline Project 2023-041-WRB, Jefferson Parish, LA
- Location Survey for the 16-inch Water Line between Lafitte and Grand Isle, Jefferson Parish, LA
- River Road Water Line, Waggaman, Jefferson Parish, LA
- Lower Lafitte Waterline Stakeout, Jefferson Parish, LA
- Route Topographic & Right-of-Way Survey for Sonia Place (S. Labarre Road to Santa Ana Avenue), Jefferson Parish, LA
- Belle Chasse Water Plant Intake, Belle Chasse, Jefferson Parish, LA
- East Jefferson Water Works - River Road, Jefferson Parish, LA
- Iris Avenue Water Line Replacement, Jefferson Parish, LA
- Grand Isle Water Tower Site Project, Town of Grand Isle, Jefferson Parish, LA
- Emergency Generator Replacement at the East Bank Treatment Plant, Jefferson Parish, LA
- West Bank Water Intake Basin Hydrographic Survey, Jefferson Parish, LA
- Evans Road Waterline Repair - Mississippi River Levee Cross Section, Jefferson Parish, LA
- Water Line Location Surveying, Grand Isle, Jefferson Parish, LA
- Grand Isle Water Main Location, Jefferson Parish, LA
- Water Main Installation, Live Oak Boulevard, West Bank, Jefferson Parish, LA
- East Bank Water Plant Intake Basin Hydrographic Survey, Jefferson Parish, LA
- Fifi Island/Bayou Rigaurd Water Line Location, Grand Isle, Jefferson Parish, LA
- Gretna Water Tower, Jefferson Parish, LA
- Canal No. 17 Bank Stabilization Phase II, Jefferson Parish, LA
- Channel Repair, Phase II, Construction Unit No. 3 (West Bank), Jefferson Parish, LA
- Channel Repair, Phase II, Construction Unit No. 2 (East Bank), Jefferson Parish, LA
- Central Avenue Project (including Utilities), Metairie, Jefferson Parish, LA
- Lapalco Blvd. Improvements (Segnette to Tanglewood); 96-019B-RBI, Jefferson Parish, LA
- Oakwood/Terrytown Drainage Improvements, Jefferson Parish, LA
- Upper Kraak Pump Station, Jefferson Parish, LA
- Clearview Parkway & Airline Boulevard Intersection, Jefferson Parish, LA
- Severn Corridor (Subsurface Utility Engineering (SUE)), Metairie, Jefferson Parish, LA
- Lasalle Rest Room Building, Jefferson Parish, LA
- Citrus Boulevard Improvements, Jefferson Parish, LA

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Chad M. Poché, P.E.
Executive Vice President / Registered Professional Geotechnical Engineer

Project Assignment:

Engineering Liaison

Name of Firm with which associated:

BFM CORPORATION, LLC
Professional Land & Hydrographic Surveying

Years' experience with this Firm:

7 years (became partial owner of BFM in 2017);
31 years total (1993)

BFM Corporation, LLC | 2017 to present
Gulf South Engineering and Testing, Inc. | 2011 to present
Ardaman and Associates, Inc. | 2007 to 2011
Eustis Engineering | 1996 to 2001
Soil Testing Engineers, Inc. | 1993 to 1996

Education: Degree(s)/Year/Specialization:

M.S., 1998, Civil Engineering, University of New Orleans
B.S., 1993, Civil Engineering, Louisiana State University

Active Registration: Year first registered/discipline:

1998, Civil Engineer (Louisiana No. 27667)
2002, Civil Engineer (Mississippi No. 15405)

Other experience and qualifications relevant to the proposed Project:

Chad M. Poché, P.E. is an Executive Vice President with (and partial owner of) BFM Corporation, LLC, and a co-founder of BFM's sister company, Gulf South Engineering and Testing, Inc. He has been a consulting geotechnical engineer for nearly 30 years in South Louisiana, working on traditional and unique geotechnical engineering projects (shallow and deep foundation design, slope stability, pavement design, etc.). Mr. Poché has also provided construction oversight for waste facilities and virtually every type of earthwork related project. He has been the geotechnical engineer of record for thousands of projects throughout his career.

Mr. Poché's experience includes the development of appropriate scopes of work and proposals for a broad range of projects; planning and coordinating analyses; preparing technical reports; foundation and geotechnical engineering design; construction recommendations; Miss. River facility permitting; managing personnel and office operations, and; serving as an Expert Witness. Mr. Poché has logged soil borings; overseen the installation of ground water monitoring wells, piezometers, and inclinometers; overseen and evaluated pile load tests; overseen, performed, and evaluated dynamic pile testing (PDA and PIT); performed CMT field testing and inspection; and performed laboratory testing.

TEC Professional Services Questionnaire

Other experience and qualifications: **Chad M. Poché, P.E. (continued)**

Waterline Improvements, Metairie Terrace Neighborhood South, JPPW Project No. 2023-040-WRB, Jefferson Parish, LA. BFM Corporation was selected to provide a Route Topographic Survey for the Jefferson Parish Waterline Project 2023-016A-WRB, which involves a total of approximately 9,100 linear feet. The scope of work involves establishment of a baseline along each route, establishing TBMs, spot elevations, location of improvements, utilities, pipes, and natural elements. BFM is providing additional surveying on additional projects as part of a larger overall Waterline Improvements Program for Jefferson Parish. ($88,400 (fee); 2023)

Waterline Improvements on North I-10 Service Road, South I-10 Service Road, Walbash Street, and Hearst Street, JPPW Project No. 2023-010B-WRB, Jefferson Parish, LA. BFM Corporation was selected to provide a Route Topographic Survey for the project, which involves a total of approximately 8,100 linear feet. The scope of work involves establishment of a baseline along each route, establishing TBMs, spot elevations, location of improvements, utilities, pipes, and natural elements. BFM is providing additional surveying on additional projects as part of a larger overall Waterline Improvements Program for Jefferson Parish. ($88,400 (fee); 2023)

Route Topographic Survey for Jefferson Parish Waterline Project (2023-032-WRB), Shrewsbury Neighborhood, Jefferson Parish, LA. BFM prepared a Route Topographic Survey for the project, which involved Shrewsbury Neighborhood: L&A Road, Access Road, K&B Road, McDermott Road, and Earhart Expressway; a total of approximately 8,600 lf. Scope includes establishing a baseline, setting a CBM and establishing TBMs. Existing improvements & utilities were located. BFM determined depth, size, and type of pipes and locate and identified trees. (BFM provided surveying services on multiple projects as part of a larger overall Waterline Improvements Program for Jefferson Parish.) ($88,140 (fee); 2023)

Route Topographic Survey for Jefferson Parish Waterline Project No. 2023-022-WRB (Estalote Avenue), Jefferson Parish, LA. BFM Corporation was selected to prepare a Route Topographic Survey for the project (2023-022-WRB) in Jefferson Parish. The limits of survey involved the area along Estalote Avenue, a total of approximately 8,500 linear feet, including intersecting streets. The survey includes establishing a baseline and establishing Temporary Benchmarks (TBMs). Existing improvements and utilities were located. BFM determined the depth, size, and type of pipes and locate and identified trees. Spot elevations were also taken. ($84,280 (fee); 2023)

Route Topographic Survey for Jefferson Parish Waterline Project 2023-010A-WRB, Jefferson Parish, LA. BFM Corporation was selected to provide a Route Topographic Survey for the project, which involves a total of approximately 7,000 linear feet. The scope of work involves establishment of a baseline along each route, establishing TBMs, spot elevations, location of improvements, utilities, pipes, and natural elements. ($78,100 (fee); 2023)

Waterline Improvements on Colony Place, Elizabeth Avenue, Concord Avenue, Stanford Avenue, and Flagler Street, JPPW 2023-012A-WRB, Jefferson Parish, LA. BFM Corporation was selected to provide a Route Topographic Survey for the project, which involves a total of approximately 7,900 linear feet. The scope of work involves establishment of a baseline along each route, establishing TBMs, spot elevations, location of improvements, utilities, pipes, and natural elements. BFM is providing additional surveying on additional projects as part of a larger overall Waterline Improvements Program for Jefferson Parish. ($77,840 (fee); 2023)

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Gary J. Lambert, Jr., PLS
Vice President / Registered Professional Land Surveyor

Project Assignment:

Project Manager/Drafting Supervisor

Name of Firm with which associated:

BFM CORPORATION, LLC
Professional Land & Hydrographic Surveying

Years' experience with this Firm:

6 years (joined BFM in 2018);
13 years total (2011)

BFM Corporation, LLC | 2018 to present
Riverlands Surveying | 2016 to 2018
Bertucci Contracting | 2011 to 2016

Education: Degree(s)/Year/Specialization:

B.S., 2018, Geomatics, Nicholls State University
B.S., 2014, Construction Management, Louisiana State University

Active Registration: Year first registered/discipline:

2021, Professional Land Surveyor (Louisiana No. 5929)

Other experience and qualifications relevant to the proposed Project:

Gary J. Lambert, Jr., is a registered Professional Land Surveyor in Louisiana and provides Project Management and Drafting Oversight for BFM Corporation. He is the first point of contact for clients on technical matters, scheduling, and deliverables for project work, and conducts meetings with engineering, architectural, and government officials to discuss various project needs. His project work has encompassed all manner of surveying services, from basic home lots to 100+ acre tract boundary surveys.

In the field, Mr. Lambert has provided services as a Survey Crew Chief, using both traditional and robotic surveying methods, since the start of his professional career, and has experience with Leica, Hypack, AutoCAD, AutoCAD 3D, Trimble, and RTK surveying technologies. He further trains employees in the use of an aerial drone, laser scanner, and remote-controlled hydrographic survey boat. This survey experience includes topographic, boundary, ALTA/NSPS, FEMA, and various construction surveying. Mr. Lambert has also conducted hydrographic surveys in the Mississippi River and various other bodies of water throughout the Gulf Coast area.

Mr. Lambert has completed Basic OSHA Training and holds license with the Gulf Coast Safety Council (08SSV, ID429523).

TEC Professional Services Questionnaire

Other experience and qualifications: **Gary J. Lambert, Jr., PLS (continued)**

East Bank Water Treatment Plant Improvements, Jefferson Parish, LA. BFM's surveying services, as part of Task Order No. 3 of the project, involved BFM's location of exposed water or utility lines after said lines were excavated by another firm. Horizontal location and vertical elevation, at top of pipe, was recorded along with the pipe size and type. Field data was processed to add to the existing topographic survey, previously executed by BFM. ($19,703 (fee); 2018)

Waterline Improvements on Elizabeth Avenue, Ruth Street, Kathleen Avenue, and Parkaire Drive, JPPW Project No. 2023-012B-WRB, Jefferson Parish, LA. BFM Corporation was selected to prepare a Route Topographic Survey for the project, which involved multiple street locations (Elizabeth Avenue, Ruth Street, Linwood Avenue, Loraine Street, Kathleen Avenue, and Parkaire Drive) in Jefferson Parish. The limits of survey involve the noted routes and are to be within the entire street rights-of-way of all limits indicated as well as 10 feet beyond the apparent right-of-way on each side, totaling approximately 5,900 linear feet. The scope of work involves establishment of a baseline along each route, establishing TBMs, spot elevations, location of improvements, utilities, pipes, and natural elements. BFM is providing surveying services on multiple projects as part of a larger overall Waterline Improvements Program for Jefferson Parish. ($55,300 (fee); 2023)

Route Topographic Survey for Jefferson Parish Waterline Replacement Project, Central Avenue, Karen Avenue, and Newman Avenue, JPPW 2023-007-WRB, Jefferson Parish, LA. BFM Corporation was selected to prepare a Route Topographic Survey for the project (approximately 5,650 linear feet). The project will establish a baseline throughout the project, a Construction Benchmark (CBM), and set Temporary Benchmarks (TBMs) along each route. Existing improvements and utilities will be located. BFM will determine depth, size, and type of pipes and locate and identify trees. BFM will also locate property corners to establish the rights-of-way. BFM is providing additional surveying on additional projects as part of a larger overall Waterline Improvements Program for Jefferson Parish. ($67,740 (fee); 2023)

Route Topographic Survey for Jefferson Parish Waterline Project 2023-030-WRB, Jefferson Parish, LA. BFM Corporation was selected to provide a Route Topographic Survey for the project, which involves a total of approximately 4,600 linear feet. The scope of work involves establishment of a baseline along each route, establishing TBMs, spot elevations, location of improvements, utilities, pipes, and natural elements. ($59,300 (fee); 2023)

Route Topographic & Right-of-Way Survey for Sonia Place, Jefferson Parish, LA. BFM Corporation was selected to provide a Route Topographic Survey for the project, which involves a total of approximately 1400 linear feet. The scope of work involves establishment of a baseline along each route, establishing TBMs, spot elevations, location of improvements, utilities, pipes, and natural elements. ($15,120 (fee); 2023)

Central Avenue Roadway Drainage & Water Main Improvements, Jefferson Parish, LA. BFM Corporation provided surveying services for the project; the scope of which consisted of verifying pipe sizes and inverts for drainage structures along the west side (only) of Central Avenue, which was located during a previous BFM project. BFM located any new drainage structures within the previous survey limits and determined the depth, size, and type of pipes within each drainage structure which were shown on the previous survey. This included catch basins, drop inlets, and ditch culvert pipes. Alterations/updates were noted on an updated version of the previous survey. ($2,850 (fee); 2022)

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Christopher Lemley
Field Operations Manager/Survey Crew Chief

Project Assignment:

Field Operations Manager/Survey Crew Chief

Name of Firm with which associated:

BFM CORPORATION, LLC
Professional Land & Hydrographic Surveying

Years' experience with this Firm:

10 years (joined BFM in 2014);
18 years total (2006)

BFM Corporation, LLC | 2014 to present
G.E.C., Inc. | 2010 to 2014
Krebs, LaSalle, LeMieux Consultants, Inc. | 2006 to 2010

Education: Degree(s)/Year/Specialization:

High School Diploma

Active Registration: Year first registered/discipline:

American Traffic Safety Service Assn. – Traffic Flagger
Louisiana Boater Education - Boating Safety Certificate
Norfolk Southern Roadway Worker Protection Contractor Safety Certificate

Other experience and qualifications relevant to the proposed Project:

Chris Lemley's services as BFM's Field Operations Manager includes overseeing all field work and activity by company personnel. His surveying experience includes over 8 years as a Survey Crew Chief. His survey software experience includes projects involving Trimble, Topcon, Leica, and Hypack, and has maintained and operated GPS, Auto-Level, and Total Station. Notable past project work has included the New Orleans Museum of Art, Jackson Barracks Restoration, US Highway 11, NASA Michoud Cells 3 & 4, the St. Bernard Lot Next Door Program, and multiple Orleans Parish School Recovery projects (including L.B. Landry, George Washington Carver, and Alice M. Harte schools).

Route Topographic Survey for Jefferson Parish Waterline Replacement Project, Central Avenue, Karen Avenue, and Newman Avenue, JPPW 2023-007-WRB, Jefferson Parish, LA. BFM Corporation was selected to prepare a Route Topographic Survey for the project (approximately 5,650 linear feet). The project will establish a baseline throughout the project, a Construction Benchmark (CBM), and set Temporary Benchmarks (TBMs) along each route. Existing improvements and utilities will be located. BFM will determine depth, size, and type of pipes and locate and identify trees. BFM will also locate property corners to establish the rights-of-way. BFM is providing additional surveying on additional projects as part of a larger overall Waterline Improvements Program for Jefferson Parish. ($67,740 (fee); 2023)

TEC Professional Services Questionnaire

Other experience and qualifications: **Christopher Lemley (continued)**

Route Topographic Survey for Jefferson Parish Waterline Project No. 2023-022-WRB (Estalote Avenue), Jefferson Parish, LA. BFM Corporation was selected to prepare a Route Topographic Survey for the project (2023-022-WRB) in Jefferson Parish. The limits of survey involved the area along Estalote Avenue, a total of approximately 8,500 linear feet, including intersecting streets. The survey includes establishing a baseline and establishing Temporary Benchmarks (TBMs). Existing improvements and utilities were located. BFM determined the depth, size, and type of pipes and locate and identified trees. Spot elevations were also taken. ($84,280 (fee); 2023)

Route Topographic Survey for Jefferson Parish Waterline Project 2023-030-WRB, Jefferson Parish, LA. BFM Corporation was selected to provide a Route Topographic Survey for the project, which involves a total of approximately 4,600 linear feet. The scope of work involves establishment of a baseline along each route, establishing TBMs, spot elevations, location of improvements, utilities, pipes, and natural elements. ($59,300 (fee); 2023)

Route Topographic & Right-of-Way Survey for Sonia Place, Jefferson Parish, LA. BFM Corporation was selected to provide a Route Topographic Survey for the project, which involves a total of approximately 1400 linear feet. The scope of work involves establishment of a baseline along each route, establishing TBMs, spot elevations, location of improvements, utilities, pipes, and natural elements. ($15,120 (fee); 2023)

Route Topographic Survey for Jefferson Parish Waterline Project 2023-010A-WRB, Jefferson Parish, LA. BFM Corporation was selected to provide a Route Topographic Survey for the project, which involves a total of approximately 7,000 linear feet. The scope of work involves establishment of a baseline along each route, establishing TBMs, spot elevations, location of improvements, utilities, pipes, and natural elements. ($78,100 (fee); 2023)

Route Topographic Survey for Jefferson Parish Waterline Project 2023-016A-WRB, Jefferson Parish, LA. BFM Corporation was selected to provide a Route Topographic Survey for the Jefferson Parish Waterline Project 2023-016A-WRB, which involves a total of approximately 5,000 linear feet. The scope of work involves establishment of a baseline along each route, establishing TBMs, spot elevations, location of improvements, utilities, pipes, and natural elements. ($55,740 (fee); 2023)

Route Topographic Survey for Jefferson Parish Waterline Project 2023-041-WRB, Jefferson Parish, LA. BFM Corporation was selected to provide a Route Topographic Survey for the project, which involves a total of approximately 4,000 linear feet. The scope of work involves establishment of a baseline along each route, establishing TBMs, spot elevations, location of improvements, utilities, pipes, and natural elements. ($44,200 (fee); 2023)

Waterline Replacement at Shrewsbury Neighborhood (2023-013B-WRB), Jefferson Parish, LA. BFM Corporation was selected to provide a Route Topographic Survey for the project, which involves Shrewsbury Road and associated side streets, a total of approximately 6,650 lf. The scope of work involves establishment of a baseline along each route, establishing Temporary Benchmarks (TBM) at 500 ft. intervals. Existing improvements and utilities will be located. BFM will determine depth, size, and type of pipes and locate and identify trees. ($66,170 (fee); 2023)

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

John Philip Thayer
Procurement Director (Proposals & Project Management Support)

Project Assignment:

Project Management Support

Name of Firm with which associated:

BFM CORPORATION, LLC
Professional Land & Hydrographic Surveying

Years' experience with this Firm:

16 years (joined BFM in 2008);
17 years total (2007)

BFM Corporation, LLC | 2008 to present
Delle Land Surveying | 2007 to 2008

Education: Degree(s)/Year/Specialization:

Certificate, 2015, Land Surveying Services
B.S., 2007, Physical Education, Trevecca Nazarene University

Active Registration: Year first registered/discipline:

N/A

Other experience and qualifications relevant to the proposed Project:

Phil Thayer serves as BFM's Procurement Director, providing proposal preparation and Project Management Support, having considerable experience in field surveying services, including ALTA/ as-built surveying, construction layout, boundary, topographic, cross-sections, GPS use, and numerous other surveying types.

Route Topographic Survey for Jefferson Parish Waterline Replacement Project, Central Avenue, Karen Avenue, and Newman Avenue, JPPW 2023-007-WRB, Jefferson Parish, LA. BFM Corporation was selected to prepare a Route Topographic Survey for the project (approximately 5,650 linear feet). The project will establish a baseline throughout the project, a Construction Benchmark (CBM), and set Temporary Benchmarks (TBMs) along each route. Existing improvements and utilities will be located. BFM will determine depth, size, and type of pipes and locate and identify trees. BFM will also locate property corners to establish the rights-of-way. BFM is providing additional surveying on additional projects as part of a larger overall Waterline Improvements Program for Jefferson Parish. ($67,740 (fee); 2023)

Waterline Improvements on Elizabeth Avenue, Ruth Street, Kathleen Avenue, and Parkaire Drive, JPPW Project No. 2023-012B-WRB, Jefferson Parish, LA. BFM Corporation was selected to prepare a Route Topographic Survey for the project, which involved multiple street locations (Elizabeth Avenue, Ruth Street, Linwood Avenue, Loraine Street, Kathleen Avenue, and Parkaire Drive) in Jefferson Parish. The limits of survey involve the noted routes and are to be within the entire street rights-of-way of all limits indicated as well as 10 feet beyond the apparent right-of-

TEC Professional Services Questionnaire

Other experience and qualifications: **John Philip Thayer (continued)**

way on each side, totaling approximately 5,900 linear feet. The scope of work involves establishment of a baseline along each route, establishing TBMs, spot elevations, location of improvements, utilities, pipes, and natural elements. BFM is providing surveying services on multiple projects as part of a larger overall Waterline Improvements Program for Jefferson Parish. ($55,300 (fee); 2023)

East Bank Water Treatment Plant Improvements, Jefferson Parish, LA. BFM's surveying services, as part of Task Order No. 3 of the project, involved BFM's location of exposed water or utility lines after said lines were excavated by another firm. Horizontal location and vertical elevation, at top of pipe, was recorded along with the pipe size and type. Field data was processed to add to the existing topographic survey, previously executed by BFM. ($19,703 (fee); 2018)

Lower Lafitte Waterline, Jefferson Parish, LA. BFM provided surveying services associated with the location of a 16 inch plastic waterline in the Barataria Waterway as part of the Lower Lafitte Shoreline Stabilization project. BFM provided stakeout surveying for the project, staking the water line every 50 feet (with 4 ft. wooden stakes). Certain areas were very deep and the line was not accurately located in this area. BFM set markers where approximate locations were based on the areas where the line was found. ($38,205 (fee); 2017)

Belle Chasse Water Plant Intake, Belle Chasse, Jefferson Parish, LA. BFM provided bathymetric, boundary and topographic surveying services for the project. Improvements on the site were located, as well as visible above-ground utilities & underground utilities with visible surface evidence. Existing storm sewer and sanitary sewers were located using top of casing; invert elevations were provided on the survey. Bathymetric surveys were tied to the U.S. Army Corps of Engineers baseline. Deliverables included indelible prints and AutoCAD DWG format drawing files. ($14,804 (fee); 2016)

Emergency Generator Replacement at the East Bank Treatment Plant, Jefferson Parish, LA. BFM prepared a topographic survey of the area surrounding the proposed site for the emergency generators. ($5,888 (fee); 2012)

Iris Avenue Water Line Replacement, Jefferson Parish, LA. BFM provided topographic surveying services for the Iris Avenue Water Line Replacement. This included the area of Iris Avenue from River Road to Jefferson Highway, on Lance Street and Jeanette Streets from Iris A venue to Brooklyn A venue. As executed, the surveys extended from right of way to right of way. ($18,493 (fee); 2011)

East Bank Water Plant Intake Basin Hydrographic Survey, Jefferson Parish, LA. BFM Corporation provided hydrographic surveying for the project. Our scope of services included soundings into the Mississippi River (to a -50 elevation); this element included location of the intake structure and elevations inside the structure as well as on the intake pipes. BFM further located the discharge ditch on the down river side of the structure. Deliverables included an indelible print and AutoCAD DWG files. ($4,975 (fee); 2010)

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Dawn Hoffman
Researcher/Archivist

Project Assignment:

Researcher/Archivist

Name of Firm with which associated:

BFM CORPORATION, LLC
Professional Land & Hydrographic Surveying

Years' experience with this Firm:

15 years (joined BFM in 2009);
27 years total (1997)

BFM Corporation, LLC | 2009 to present
Fluor Corporation | 2007 to 2009
Geographic Computer Technologies, LLC | 2000 to 2007

Education: Degree(s)/Year/Specialization:

A.D., 1999, Computer-Aided Drafting, Southeast College of Technology
Certificate, 2003, Introduction to ArcGIS, Louisiana State University

Active Registration: Year first registered/discipline:

N/A

Other experience and qualifications relevant to the proposed Project:

Dawn Hoffman serves as BFM's primary researcher and has more than 25 years of experience in this field. She is extremely knowledgeable with researching in various parishes and cities.

Route Topographic Survey for Jefferson Parish Waterline Project 2023-030-WRB, Jefferson Parish, LA. BFM Corporation was selected to provide a Route Topographic Survey for the project, which involves a total of approximately 4,600 linear feet. The scope of work involves establishment of a baseline along each route, establishing TBMs, spot elevations, location of improvements, utilities, pipes, and natural elements. ($59,300 (fee); 2023)

East Bank Water Treatment Plant Improvements Project (including Laser Scanning), Jefferson Parish, LA. BFM provided surveying services for Tasks 1 (topographic) and 2 (boundary) of the project, part of a major improvements project for the East Bank Water Treatment Plant located at 3600 Jefferson Highway in Jefferson Parish. This included executing a 3D Laser Scan for an As-Built Utilities survey. Draft surveying (in conjunction with the Prime Firm) as well as provision of final survey were prepared as directed. ($166,230 (fee); 2017)

Grand Isle Water Tower Site Project (DPW Proj. 2008-018-WR), Town of Grand Isle, Jefferson Parish, LA. BFM Corporation provided a topographic survey; scope included establishing a TBM, preparing a boundary survey, taking elevations (at 25 ft. intervals) with spot elevations on paving or other hard surfaces. Location of improvements were plotted within the designated limits of survey. Utilities and piping were located, as was existing storm sewer and sanitary sewer structures.

Other experience and qualifications: **Dawn Hoffman (continued)**

Specimen trees were all also located. BFM provided follow-up surveying services for the project, an extension of DPW Project 2008-018-WR. Deliverables included indelible prints and in AutoCAD DWG format. ($15,612 (fee); 2012)

East Jefferson Water Works – River Road, Jefferson Parish, LA. BFM's surveying services for the project involved the location of existing water lines/pipes for the East Jefferson Water Works located on River Road in Jefferson Parish. ($2,070 (fee); 2017)

Waterline Improvements on Colony Place, Elizabeth Avenue, Concord Avenue, Stanford Avenue, and Flagler Street, JPPW 2023-012A-WRB, Jefferson Parish, LA. BFM Corporation was selected to provide a Route Topographic Survey for the project, which involves a total of approximately 7,900 linear feet. The scope of work involves establishment of a baseline along each route, establishing TBMs, spot elevations, location of improvements, utilities, pipes, and natural elements. BFM is providing additional surveying on additional projects as part of a larger overall Waterline Improvements Program for Jefferson Parish. ($77,840 (fee); 2023)

Waterline Improvements on North 1-10 Service Road, South I-10 Service Road, Walbash Street, and Hearst Street, JPPW Project No. 2023-010B-WRB, Jefferson Parish, LA. BFM Corporation was selected to provide a Route Topographic Survey for the project, which involves a total of approximately 8,100 linear feet. The scope of work involves establishment of a baseline along each route, establishing TBMs, spot elevations, location of improvements, utilities, pipes, and natural elements. BFM is providing additional surveying on additional projects as part of a larger overall Waterline Improvements Program for Jefferson Parish. ($88,400 (fee); 2023)

Route Topographic Survey for Jefferson Parish Waterline Project 2023-010A-WRB, Jefferson Parish, LA. BFM Corporation was selected to provide a Route Topographic Survey for the project, which involves a total of approximately 7,000 linear feet. The scope of work involves establishment of a baseline along each route, establishing TBMs, spot elevations, location of improvements, utilities, pipes, and natural elements. ($78,100 (fee); 2023)

Location Survey for the 16-inch Water Line between Lafitte and Grand Isle, Jefferson Parish, LA. BFM located the 16-inch water line in the exposed areas from Sta. 0+00 on the north bank of Bayou Rigolettes to the south bank of Bayou Rigaud in Grand Isle, Louisiana. In a previous project for the Parish (BFM Proj 7317; Fifi Island/Bayou Rigaurd Water Line Location in 2010), BFM located both the upper & lower portions of the 16-inch water line. This left the approximate location of the area previously located on Fifi Island; 138,776 feet or 25.79 miles. For the survey, probing was done utilizing a jet probe system developed by BFM Corporation and the locations were made with RTN (Real Time Network) GPS. The Real Time Network is maintained by Louisiana State University and allowed for sub-centimeter level accuracy with GPS. This data was included with deliverables in AutoCAD DWG format and in ASCII text format for integration into the Parish GIS system. ($363,080 (fee); 2013)

Iris Avenue Water Line Replacement, Jefferson Parish, LA. BFM provided topographic surveying services for the Iris Avenue Water Line Replacement. This included the area of Iris Avenue from River Road to Jefferson Highway, on Lance Street and Jeanette Streets from Iris A venue to Brooklyn A venue. As executed, the surveys extended from right of way to right of way. ($18,493 (fee); 2011)

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Anthony Watson
CADD Technician (AutoCADD Drafting Services)

Project Assignment:

CADD Technician (AutoCADD Drafting Services)

Name of Firm with which associated:

BFM CORPORATION, LLC
Professional Land & Hydrographic Surveying

Years' experience with this Firm:

13 years (joined BFM in 2011);
33 years total (1991)

BFM Corporation, LLC | 2011 to present
Krebs LaSalle Lemieux / GEC | 2008 to 2011
Doug Connally and Associates Land Surveying (Dallas, TX) | 1995-2008
Electrician | 1991 to 1995
City of Plano TX (Part-Time Drafting Services) | 1991

Education: Degree(s)/Year/Specialization:

Coursework - CAD, Avatech Solutions, Los Colinas, TX

Active Registration: Year first registered/discipline:

N/A

Other experience and qualifications relevant to the proposed Project:

Anthony Watson has experience as a draftsman/survey technician, having started his career as an intern with the Surveying Department of the City of Plano, Texas. His experience through the years includes manual and computer-aided drafting for a wide range of projects, ranging from small lot surveys to subdivisions to municipal treatment and private industrial plants. He has experience in all facets of surveying (boundary, topographic, ALTA/ACSM, plan & profile, etc.) in both drafting and field environments.

Route Topographic Survey for Jefferson Parish Waterline Project 2023-030-WRB, Jefferson Parish, LA. BFM Corporation was selected to provide a Route Topographic Survey for the project, which involves a total of approximately 4,600 linear feet. The scope of work involves establishment of a baseline along each route, establishing TBMs, spot elevations, location of improvements, utilities, pipes, and natural elements. ($59,300 (fee); 2023)

Route Topographic & Right-of-Way Survey for Sonia Place, Jefferson Parish, LA. BFM Corporation was selected to provide a Route Topographic Survey for the project, which involves a total of approximately 1400 linear feet. The scope of work involves establishment of a baseline along each route, establishing TBMs, spot elevations, location of improvements, utilities, pipes, and natural elements. ($15,120 (fee); 2023)

TEC Professional Services Questionnaire

Other experience and qualifications: **Anthony Watson (continued)**

Route Topographic Survey for Jefferson Parish Waterline Project 2023-010A-WRB, Jefferson Parish, LA. BFM Corporation was selected to provide a Route Topographic Survey for the project, which involves a total of approximately 7,000 linear feet. The scope of work involves establishment of a baseline along each route, establishing TBMs, spot elevations, location of improvements, utilities, pipes, and natural elements. ($78,100 (fee); 2023)

Central Avenue Roadway Drainage & Water Main Improvements, Jefferson Parish, LA. BFM Corporation provided surveying services for the project; the scope of which consisted of verifying pipe sizes and inverts for drainage structures along the west side (only) of Central Avenue, which was located during a previous BFM project. BFM located any new drainage structures within the previous survey limits and determined the depth, size, and type of pipes within each drainage structure which were shown on the previous survey. This included catch basins, drop inlets, and ditch culvert pipes. Alterations/updates were noted on an updated version of the previous survey. ($2,850 (fee); 2022)

Route Topographic Survey for Jefferson Parish Waterline Project 2023-016A-WRB, Jefferson Parish, LA. BFM Corporation was selected to provide a Route Topographic Survey for the Jefferson Parish Waterline Project 2023-016A-WRB, which involves a total of approximately 5,000 linear feet. The scope of work involves establishment of a baseline along each route, establishing TBMs, spot elevations, location of improvements, utilities, pipes, and natural elements. ($55,740 (fee); 2023)

Route Topographic Survey for Jefferson Parish Waterline Project 2023-041-WRB, Jefferson Parish, LA. BFM Corporation was selected to provide a Route Topographic Survey for the project, which involves a total of approximately 4,000 linear feet. The scope of work involves establishment of a baseline along each route, establishing TBMs, spot elevations, location of improvements, utilities, pipes, and natural elements. ($44,200 (fee); 2023)

Waterline Improvements on North I-10 Service Road, South I-10 Service Road, Walbash Street, and Hearst Street, JPPW Project No. 2023-010B-WRB, Jefferson Parish, LA. BFM Corporation was selected to provide a Route Topographic Survey for the project, which involves a total of approximately 8,100 linear feet. The scope of work involves establishment of a baseline along each route, establishing TBMs, spot elevations, location of improvements, utilities, pipes, and natural elements. BFM is providing additional surveying on additional projects as part of a larger overall Waterline Improvements Program for Jefferson Parish. ($88,400 (fee); 2023)

Route Topographic Survey for Jefferson Parish Waterline Project No. 2023-022-WRB (Estalote Avenue), Jefferson Parish, LA. BFM Corporation was selected to prepare a Route Topographic Survey for the project (2023-022-WRB) in Jefferson Parish. The limits of survey involved the area along Estalote Avenue, a total of approximately 8,500 linear feet, including intersecting streets. The survey includes establishing a baseline and establishing Temporary Benchmarks (TBMs). Existing improvements and utilities were located. BFM determined the depth, size, and type of pipes and locate and identified trees. Spot elevations were also taken. ($84,280 (fee); 2023)

Review and Update Survey Plats for the Lafitte Area Hurricane Protection Levee, Lafitte, Jefferson Parish, LA. BFM provided surveying services to review and update survey plats for the Lafitte Area Hurricane Protection Levee. BFM has provided survey updates for the site as needed for over a decade. ($2,600 (fee); 2016)

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Curtis "Jay" Barrios
Survey Crew Chief

Project Assignment:

Survey Crew Chief

Name of Firm with which associated:

BFM CORPORATION, LLC
Professional Land & Hydrographic Surveying

Years' experience with this Firm:

34 years (joined BFM in 1990);
39 years total (1985)

BFM Corporation, LLC | 1990 to present
Benson Mercedes Benz | 1989 to 1990
SECO Electric | 1987
Frishhertz Electric | 1986 to 1987
Plain Construction | 1985 to 1986

Education: Degree(s)/Year/Specialization:

High School Diploma

Active Registration: Year first registered/discipline:

American Traffic Safety Service Assn. – Traffic Flagger
Basic OSHA Training Class Completion
Transportation Work Identification Card (TWIC)

Other experience and qualifications relevant to the proposed Project:

Jay Barrios' surveying experience includes boundary, hydrographic, and topographic. He has been the Survey Crew Chief for thousands of projects and is one of the more experienced surveyors in the area. Further, Mr. Barrios has been involved on major transmission projects for Entergy and South Central Bell (AT&T).

Route Topographic Survey for Jefferson Parish Waterline Project (2023-032-WRB), Shrewsbury Neighborhood, Jefferson Parish, LA. BFM prepared a Route Topographic Survey for the project, which involved Shrewsbury Neighborhood: L&A Road, Access Road, K&B Road, McDermott Road, and Earhart Expressway; a total of approximately 8,600 lf. Scope includes establishing a baseline, setting a CBM and establishing TBMs. Existing improvements & utilities were located. BFM determined depth, size, and type of pipes and locate and identified trees. (BFM provided surveying services on multiple projects as part of a larger overall Waterline Improvements Program for Jefferson Parish.) ($88,140 (fee); 2023)

River Road Water Line Replacement, Jefferson Parish, LA. As directed by the Project Engineer, BFM provided topographic surveying services for the project, which extended from Rivet Boulevard to Willswood Drive (approximately 14,000 linear feet plus 50-foot intersections). This project was part of the Louisiana Department of Health and Hospitals (LDHH) Clean Drinking Water loan

Other experience and qualifications: **Curtis "Jay" Barrios (continued)**

program. The scope of work executed by BFM included establishing a baseline parallel with the right of way, setting TBMs, and plotting spot elevations. Improvements and utilities were located and plotted within the designated limits of survey. Boundary corners were located along the route in order to assist in determining widths of any existing rights of way. Trees on site (over 4-inches in diameter) were also located. ($84,700 (fee); 2015)

Route Topographic Survey for Jefferson Parish Waterline Project No. 2023-022-WRB (Estalote Avenue), Jefferson Parish, LA. BFM Corporation was selected to prepare a Route Topographic Survey for the project (2023-022-WRB) in Jefferson Parish. The limits of survey involved the area along Estalote Avenue, a total of approximately 8,500 linear feet, including intersecting streets. The survey will include establishing a baseline and establishing Temporary Benchmarks (TBMs). Existing improvements and utilities will be located. BFM will determine depth, size, and type of pipes and locate and identify trees. Spot elevations will also be taken. ($84,280 (fee); 2023)

Route Topographic Survey for Jefferson Parish Waterline Project 2023-010A-WRB, Jefferson Parish, LA. BFM Corporation was selected to provide a Route Topographic Survey for the project, which involves a total of approximately 7,000 linear feet. The scope of work involves establishment of a baseline along each route, establishing TBMs, spot elevations, location of improvements, utilities, pipes, and natural elements. ($78,100 (fee); 2023)

Waterline Improvements on Colony Place, Elizabeth Avenue, Concord Avenue, Stanford Avenue, and Flagler Street, JPPW 2023-012A-WRB, Jefferson Parish, LA. BFM Corporation was selected to provide a Route Topographic Survey for the project, which involves a total of approximately 7,900 linear feet. The scope of work involves establishment of a baseline along each route, establishing TBMs, spot elevations, location of improvements, utilities, pipes, and natural elements. BFM is providing additional surveying on additional projects as part of a larger overall Waterline Improvements Program for Jefferson Parish. ($77,840 (fee); 2023)

Waterline Improvements on North I-10 Service Road, South I-10 Service Road, Walbash Street, and Hearst Street, JPPW Project No. 2023-010B-WRB, Jefferson Parish, LA. BFM Corporation was selected to provide a Route Topographic Survey for the project, which involves a total of approximately 8,100 linear feet. The scope of work involves establishment of a baseline along each route, establishing TBMs, spot elevations, location of improvements, utilities, pipes, and natural elements. BFM is providing additional surveying on additional projects as part of a larger overall Waterline Improvements Program for Jefferson Parish. ($88,400 (fee); 2023)

Location Survey for the 16-inch Water Line between Lafitte and Grand Isle, Jefferson Parish, LA. BFM located the 16-inch water line in the exposed areas from Sta. 0+00 on the north bank of Bayou Rigolettes to the south bank of Bayou Rigaud in Grand Isle, Louisiana. In a previous project for the Parish (BFM Proj 7317; Fifi Island/Bayou Rigaurd Water Line Location in 2010), BFM located both the upper & lower portions of the 16-inch water line. This left the approximate location of the area previously located on Fifi Island; 138,776 feet or 25.79 miles. For the survey, probing was done utilizing a jet probe system developed by BFM Corporation and the locations were made with RTN (Real Time Network) GPS. The Real Time Network is maintained by Louisiana State University and allowed for sub-centimeter level accuracy with GPS. This data was included with deliverables in AutoCAD DWG format and in ASCII text format for integration into the Parish GIS system. ($363,080 (fee); 2013)

TEC Professional Services Questionnaire

L. Work by Firm or Joint-Venture members which best illustrates current qualifications relevant to this project. Please include and and all work performed for Jefferson Parish. Please attach additional pages if necessary.

PROJECT NO. 1		
Project Name, Location, and Owner's contact information:	**Nature of Firm's Responsibility:**	
Waterline Improvements, Metairie Terrace Neighborhood South (Shrewsbury Road, Amoult Road, Katlan Street, Lausat Street, Hullen Street, Claiborne Avenue & Jimco Road), JPPW No. 2023-040-WRB, Jefferson Parish, Louisiana **GIS Engineering** 935 Gravier Street Suite 600 New Orleans LA 70112 **Kyle Galloway, P.E.**, 504-264-3504 kgalloway@gisy.com	BFM Corporation was selected to provide a Route Topographic Survey for the Jefferson Parish Waterline Project 2023-016A-WRB, which involves a total of approximately 9,100 linear feet. The scope of work involves establishment of a baseline along each route, establishing TBMs, spot elevations, location of improvements, utilities, pipes, and natural elements. BFM is providing additional surveying on additional projects as part of a larger overall Waterline Improvements Program for Jefferson Parish.	
Completion Date (Actual or estimated:)	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
September 2023	N/A	$88,400 (fee)

PROJECT NO. 2		
Project Name, Location, and Owner's contact information:	**Nature of Firm's Responsibility:**	
East Bank Water Treatment Plant Improvements Project (including Laser Scanning), Jefferson Parish, Louisiana **Stantec** 1340 Poydras Street, Suite 1420 New Orleans LA 70112 **Jeffrey Sapia, P.E.**, 225-926-3991 jeffrey.sapia@stantec.com	BFM Corporation provided surveying services for Tasks 1 (topographic) and 2 (boundary) of the project, part of a major improvements project for the East Bank Water Treatment Plant located at 3600 Jefferson Highway in Jefferson Parish. This included executing a 3D Laser Scan for an As-Built Utilities survey. Draft surveying (in conjunction with the Prime Firm) as well as provision of final survey were prepared as directed.	
Completion Date (Actual or estimated:)	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
June 2017	N/A	$166,230 (fee)

TEC Professional Services Questionnaire

PROJECT NO. 3		
Project Name, Location, and Owner's contact information:	**Nature of Firm's Responsibility:**	
Waterline Improvements on North I-10 Service Road, South I-10 Service Road, Walbash Street, and Hearst Street, JPPW No. 2023-010B-WRB, Jefferson Parish, Louisiana **Pivotal Engineering** 1515 Poydras Street Suite 1150 New Orleans LA 70112 **Yoseph Shifare, P.E.,** 504-939-2693 yshifare@pivotaleng.com	BFM Corporation was selected to provide a Route Topographic Survey for the project, which involves a total of approximately 8,100 linear feet. The scope of work involves establishment of a baseline along each route, establishing TBMs, spot elevations, location of improvements, utilities, pipes, and natural elements. BFM is providing additional surveying on additional projects as part of a larger overall Waterline Improvements Program for Jefferson Parish.	
Completion Date (Actual or estimated:)	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
2023	N/A	$88,400 (fee)

PROJECT NO. 4		
Project Name, Location, and Owner's contact information:	**Nature of Firm's Responsibility:**	
Route Topographic Survey for the Jefferson Parish Waterline Project (2023-032-WRB), Shrewsbury Neighborhood, Jefferson Parish, Louisiana **Burk-Kleinpeter, Inc.** 4176 Canal Street New Orleans LA 70119 **Henry M. Picard, III, P.E.,** 504-486-5901 hpicard@bkiusa.com	BFM Corporation prepared a Route Topographic Survey for the project, which involved Shrewsbury Neighborhood: L&A Road, Access Road, K&B Road, McDermott Road, and Earhart Expressway; a total of approximately 8,600 lf. Scope includes establishing a baseline, setting a CBM and establishing TBMs. Existing improvements & utilities were located. BFM determined depth, size, and type of pipes and locate and identified trees. (BFM provided surveying services on multiple projects as part of a larger overall Waterline Improvements Program for Jefferson Parish.)	
Completion Date (Actual or estimated:)	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
2023	N/A	$88,140 (fee)

TEC Professional Services Questionnaire

PROJECT NO. 5		
Project Name, Location, and Owner's contact information:	**Nature of Firm's Responsibility:**	
Central Avenue Roadway Water Main & Drainage Improvements, Jefferson Parish, Louisiana **Jefferson Parish** **Department of Capital Projects** 1221 Elmwood Park Blvd Ste 906 Jefferson LA 70123 **Neil Schneider,** 504-736-6833 nschneider@jeffparish.net	BFM Corporation provided surveying services for the project; the scope of which consisted of verifying pipe sizes and inverts for drainage structures along the west side (only) of Central Avenue, which was located during a previous BFM project. BFM located any new drainage structures within the previous survey limits and determined the depth, size, and type of pipes within each drainage structure which were shown on the previous survey. This included catch basins, drop inlets, and ditch culvert pipes. Alterations/updates were noted on an updated version of the previous survey.	
Completion Date (Actual or estimated:)	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
April 2023	N/A	$2,850 (fee)

PROJECT NO. 6		
Project Name, Location, and Owner's contact information:	**Nature of Firm's Responsibility:**	
Waterline Improvements on Elizabeth Avenue, Ruth Street, Kathleen Avenue, and Parkaire Drive, JPPW No. 2023-012B-WRB, Jefferson Parish, Louisiana **Kyle Associates, LLC** 638 Village Lane North Mandeville LA 70471 **Kevin M. Drane, P.E.,** 985-727-9377 kdrane@kyleassociates.net	BFM Corporation was selected to prepare a Route Topographic Survey for the project, which involved multiple street locations (Elizabeth Avenue, Ruth Street, Linwood Avenue, Loraine Street, Kathleen Avenue, and Parkaire Drive) in Jefferson Parish. The limits of survey involve the noted routes and are to be within the entire street rights-of-way of all limits indicated as well as 10 feet beyond the apparent right-of-way on each side, totaling approximately 5,900 linear feet. The scope of work involves establishment of a baseline along each route, establishing TBMs, spot elevations, location of improvements, utilities, pipes, and natural elements. BFM is providing surveying services on multiple projects as part of a larger overall Waterline Improvements Program for Jefferson Parish.	
Completion Date (Actual or estimated:)	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
2023	N/A	$55,300 (fee)

TEC Professional Services Questionnaire

PROJECT NO. 7		
Project Name, Location, and Owner's contact information:	**Nature of Firm's Responsibility:**	
Locate 16-inch Water Line between Valve Station 18 & Valve Station 24, Grand Isle, Jefferson Parish, Louisiana **Jefferson Parish** **Water Department** 1221 Elmwood Park Blvd Ste 909 Jefferson LA 70123 **R. Douglas Vincent, P.E.,** 504-838-4363 JPWater@jeffparish.net	The purpose of the survey was to locate the 16-inch water line between Valve Station 18 and Valve Station 24. The length of this segment was approximately 57,400 feet. Survey probing was done utilizing a jet probe system developed by BFM Corporation and the locations were made with RTN (Real Time Network) GPS. The Real Time Network is maintained by Louisiana State University and allowed for sub-centimeter level accuracy with GPS. This data was included with deliverables in AutoCAD DWG format and in ASCII text format for integration into the Parish GIS system. BFM further prepared an estimate for the Parish to provide a location survey for the water line after it was lowered.	
Completion Date (Actual or estimated:)	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
November 2014	N/A	$133,444 (fee)

PROJECT NO. 8		
Project Name, Location, and Owner's contact information:	**Nature of Firm's Responsibility:**	
River Road Water Line Replacement (Phase II), Jefferson Parish, Louisiana **Digital Engineering** 527 W Esplanade Ave Ste 200 Kenner LA 70065 **Frank T. Liang, P.E.,** 504-468-7515 fliang@deii.net	As directed by the Project Engineer, BFM provided topographic surveying services for the project, which extended from Rivet Boulevard to Willswood Drive (approximately 14,000 linear feet plus 50-foot intersections). This project was part of the Louisiana Department of Health and Hospitals (LDHH) Clean Drinking Water loan program. The scope of work executed by BFM included establishing a baseline parallel with the right of way, setting TBMs, and plotting spot elevations. Improvements and utilities were located and plotted within the designated limits of survey. Boundary corners were located along the route in order to assist in determining widths of any existing rights of way. Trees on site (over 4-inches in diameter) were also located.	
Completion Date (Actual or estimated:)	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
June 2015	N/A	$84,700 (fee)

TEC Professional Services Questionnaire

PROJECT NO. 9		
Project Name, Location, and Owner's contact information:	**Nature of Firm's Responsibility:**	
Route Topographic Survey for Jefferson Parish Waterline Project No. 2023-022-WRB (Estalote Avenue), Jefferson Parish, Louisiana **H. Davis Cole & Associates, Inc.** 1340 Poydras Street Suite 1850 New Orleans LA 70112 **Mike D'Angelo,** 504-836-2020 mike@hdaviscole.com	BFM Corporation was selected to prepare a Route Topographic Survey for the project (2023-022-WRB) in Jefferson Parish. The limits of survey involved the area along Estalote Avenue, a total of approximately 8,500 linear feet, including intersecting streets. The survey includes establishing a baseline and establishing Temporary Benchmarks (TBMs). Existing improvements and utilities were located. BFM determined the depth, size, and type of pipes and locate and identified trees. Spot elevations were also taken.	
Completion Date (Actual or estimated:)	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
August 2023	N/A	$84,280 (fee)

PROJECT NO. 10		
Project Name, Location, and Owner's contact information:	**Nature of Firm's Responsibility:**	
East Bank Water Treatment Plant Project – Water and Utility Line Survey, Jefferson Parish, Louisiana **Stantec Consulting Services, Inc.** 1340 Poydras Street, Suite 1420 New Orleans LA 70112 **Jeffrey Sapia, P.E.,** 225-926-3991 jeffrey.sapia@stantec.com	BFM's surveying services, as part of Task Order No. 3 of the project, involved BFM's location of exposed water or utility lines after said lines were excavated by another firm. Horizontal location and vertical elevation, at top of pipe, was recorded along with the pipe size and type. Field data was processed to add to the existing topographic survey, previously executed by BFM.	
Completion Date (Actual or estimated:)	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
October 2018	N/A	$19,703 (fee)

TEC Professional Services Questionnaire

M. List all prior and/or on-going litigation between Firm and Jefferson Parish. Please attach additional pages if necessary.

Parties:		Status/Result of Case:
Plaintiff:	Defendant:	
1. *BFM Corporation is not currently, nor has it previously been involved, in litigation with Jefferson Parish.*		
2.		
3.		
4.		

N. Use this space to provide any additional information or description of resources supporting Firm's qualifications for the proposed project.

BFM CORPORATION, LLC
Professional Land & Hydrographic Surveying

CRITERIA 1 | PROFESSIONAL TRAINING AND EXPERIENCE

Established in 1982, **BFM Corporation, LLC, Professional Land & Hydrographic Surveying,** provides services to public & private concerns throughout Louisiana and the Gulf South. For over 40 years, BFM has provided surveying services covering all facets of engineering, construction, and forensics; topographic, and hydrographic, as well as drone-based surveying and high-definition laser scanning.

BFM Corporation is a majority Woman-Owned Business Enterprise (WBE) as well as a Hudson Initiative certified Small & Emerging Business and Small Entrepreneurship in Louisiana.

Our capabilities include the following and more:

- Topographic Surveying
- Drone Surveying
- Photogrammic & LiDAR and 3D Laser Scanning
- Bathymetric / Hydrographic Surveys
- Property, Boundary, and Right-of-Way Surveys
- Maps, Cross-Sections, & Data Sets; Benchmarks

TEC Professional Services Questionnaire

N. continued.

- Construction-Related Surveying and Builder's Package Surveys
- American Land Title Association (ALTA) Surveys

BFM's project work routinely involves **extensive records and related research** as an element of successful completion, as well as coordination with the client, agency or department. BFM has the personnel to make sure this is done correctly and expeditiously.

Our **Survey Field Crews** are equipped with Leica Viva and Leica Captivate Data Collectors, as well as Leica GPS Smart Antennas. Each GPS unit is linked to the Leica SmartNet Network, giving each crew the ability for Real Time Kinematic Positioning (RTK), derived from the Global Navigation Satellite System (GNSS). Furthermore, each crew is outfitted with Leica TS series robotic total stations, simplifying and expediting projects. BFM can also use in-house drones and 3D scanners to further analyze sites and projects. BFM's crews are trained to use this equipment to its full potential to maximize accuracy and efficiency in the field.

BFM offers **Drone Surveying Services**, featuring a DJI Matrice 600 Pro drone outfitted with a Sony A7R3 42-megapixel camera, Pixhawk Triggering System, VMAP PPK system, and an A3 Pro Flight Controller. It can capture 50 acres of land allowing BFM to quickly & accurately capture data and facilitates quicker field work to produce highly accurate and precise surveying information. Deliverables feature Clean Point Cloud, 3D Mesh, Orthomosaic, and AutoCAD DWG Topographic.

BFM's **3D modeling capabilities** allow us to process & model for any design purpose. High-definition scanner data is processed using software from Leica and Autodesk. BFM is working on non-traditional survey deliverables, including virtual tours, live walkthroughs, detailed pipe rack modeling, and modeling for use with Autodesk Revit Architecture.

When needed, BFM provides **bathymetric surveying** to handle **any hydrographic surveying tasks.** For large rivers and bodies of water, we are equipped with Teledyne Odom Hydro Solutions' Hydro Trac Single Beam Echo Sounder. For smaller bodies of water, BFM uses an SL20 Remote Controlled Boat equipped with CEE Scope Dual Channel Echo Sounder. We use Hypack Software to process collected data. Further, BFM can execute multi-beam scans, side scans and magnetometer surveys upon request.

CRITERIA 2 | SIZE OF FIRM

As noted, BFM has the manpower and equipment to execute any surveying task within the reasonable time set forth by the contract or project engineer. BFM has no issue with meeting the project deadlines set forth by our clients, both municipal and private. It is our continual goal to keep this reputation solid. Further, we establish base costs and fees for our services, and work with our clients to meet all project budgets.

As noted in **item E** of this form, BFM currently has a **full-time staff of two dozen people**, including **two Registered Professional Land Surveyors, Survey Field Crew Personnel**, and **AutoCAD drafting personnel**, as well as **complete administrative and support staff.**

TEC Professional Services Questionnaire

N. continued.

CRITERIA 3 | CAPACITY FOR TIMELY COMPLETION

BFM has the manpower and equipment to execute any surveying task within the reasonable time set forth by a contract or project engineer. It is our goal to keep this reputation solid. We establish base costs and fees for our services, and work with our clients to meet all project budgets. Our workload and scheduling, and proximity to the project site, will allow for quick assignment of personnel to any directed project.

BFM Corporation's **Ralph P. Fontcuberta, Jr., PLS**, Executive Vice President, is a **Louisiana-Registered Professional Land Surveyor (since 1974)** and meets or exceeds any minimum requirements for any surveying project. He has been **providing surveying services in Louisiana for over 50 years** and brings an almost incalculable wealth of experience in the region to any project, especially in Southeast Louisiana.

Chad M. Poché, P.E., Executive Vice President, brings **more than 25 years of experience** to assist in completing projects on time and within budget. He has been a consulting geotechnical engineer for more than 20 years in South Louisiana and has been the geotechnical engineer of record for thousands of projects.

Gary J. Lambert, Jr., PLS, Vice President is a **registered Professional Land Surveyor** and provides Project Management & Drafting Oversight and is the first point of contact for clients on technical matters. He meets with engineering, architectural, and government officials to discuss various project needs.

Our personnel included **multiple survey crews** and a **fully-staffed drafting department** to handle any project needs; they are thoroughly trained and extensively familiar with the region and needs of various types of surveying projects.

CRITERIA 4 | PAST PERFORMANCE ON PARISH CONTRACTS

BFM Corporation has provided **surveying services in Jefferson Parish since 1982,** both **directly to Parish agencies and as a consultant to firms serving the Parish.** The firm has executed many hundreds of projects in the Parish, including both direct Parish projects and State agency projects (CPRA, Louisiana DOTD, etc.), not to mention the scores of surveying projects for private individuals and industry.

As noted, Mr. Fontcuberta has **over half a century of professional land surveying experience,** including over 40 years with BFM. **He has provided professional surveying services for thousands of projects for and throughout Jefferson Parish.**

CRITERIA 5 | LOCATION OF THE PRINCIPAL OFFICE

BFM has called Jefferson Parish home office location since the firm's inception in 1982; our principal office is located in Jefferson Parish at 15 Veterans Memorial Boulevard in Kenner.

TEC Professional Services Questionnaire

N. continued.

CRITERIA 6 | LEGAL STATEMENT

BFM Corporation is **not involved in litigation with Jefferson Parish** nor with any of our clients, as is noted in Item M of this form.

CRITERIA 7 | PRIOR SUCCESSFUL COMPLETION OF PROJECTS

For over 40 years, BFM Corporation has completed thousands of projects throughout Jefferson Parish and Southeast Louisiana, both to municipal and various private clients, similar to the project at hand, not to mention other drainage projects in a wide range of sizes, from small lot to Parish-wide endeavors. **Multiple examples of this work are included throughout this form in both the Personnel Résumés section (Item K) and Representative Project Work (Item L).** Further, BFM has worked with virtually every municipality in the region. We enjoy a high repeat-business rate with all our clients. We offer the following specific references for contact:

Mark R. Drewes, P.E., Director, Jefferson Parish Public Works Department
(504-736-6783 | JPPW@jeffparish.net)

Neil Schneider, CCM, P.E., Director, Capital Projects, Jefferson Parish Public Works Dept.
(504-736-6783 | JPPW@jeffparish.net)

José A. Gonzales, CAO, City of Kenner
(504-468-4090 | jgonzalez@kenner.la.us)

Angela DeSoto, P.E., Director of Engineering, Jefferson Parish
(504-736-6511 | ADeSoto@jeffparish.net)

Sid Trouard, P.E., Program Manager, Jefferson Parish Sewerage Capital Improvement Program
(504-736-6386 | STrouard@jeffparish.net)

Khalid L. Saleh, PhD, Capital Program Administrator, New Orleans Dept. of Public Works
(504-658-8000 | khsaleh@nola.gov)

Ben Lapine, Acting Director, Department of Drainage, Jefferson Parish
(504-736-6661 | JPSewerage@jeffparish.net)

Greg Cromer, Mayor, City of Slidell
(985-646-4333 | gcromer@cityofslidell.org)

Our professional work history is exemplary. We strive to provide on-time and technically thorough project deliverables at the budget set by our clients.

O. To the best of my knowledge, the foregoing is an accurate statement of facts.

Signature: _____ **Print Name:** Chad M. Poché, P.E.

Title: Executive Vice President **Date:** June 6, 2024

Eustis Engineering LLC

Geotechnical

TEC Professional Services Questionnaire

A. Project Name and Advertisement Resolution Number:

SOQ 24-013, Resolution No. 144203
Routine Engineering Services for Water Projects in Jefferson Parish

B. Firm Name & Address:

Eustis Engineering L.L.C.
3011 28th Street, Metairie, Louisiana 70002

C. Name, title and contact information of Principal, as defined in Section 2-926 of the Jefferson Parish Code of Ordinances, who is a registered, licensed architect, professional engineer, or surveyor in the State of Louisiana:

Gwendolyn P. Sanders, P.E. / President / 504-834-0157 / gsanders@eustiseng.com

D. Name and contact information of employee who is a registered and licensed architect, professional engineer, or surveyor in the State of Louisiana in the applicable discipline. A subcontractor may be substituted here only if the advertised Project requires more than one discipline.

Gwendolyn P. Sanders, P.E. / President / 504-834-0157 / gsanders@eustiseng.com

E. Please provide the number of employees whose primary function corresponds with each category:

7	Administrative		Estimators		Specification Writers
	Architects (Licensed)	2	Geologists		Structural Engineers
	Chemical Engineers	17	Geotechnical Engineers	3	Graduate Engineers
	Civil Engineers		Interior Designers		Project Managers
	Construction Inspectors		Landscape Architects	11	Clerical
	Ecologists		Land Surveyor		Grant/Funding Specialist
	Electrical Engineers		Mechanical Engineers		Sanitary Engineers
5	Engineer Intern		Environmental Engineers	47	**Other**
	Professional Land Surveyors				
				92	**TOTAL**

F. Is this submittal is a JOINT-VENTURE? Please check: YES ☐ NO ☒

If marked "No," skip to Section I. If marked "Yes," complete Sections G-H.

TEC Professional Services Questionnaire

G. If submittal is by JOINT-VENTURE, list the firms participating and outline specific areas of responsibility (including administrative, technical, and financial) for each firm. Please attach additional pages if necessary.

1. Not applicable.

2.

H Has this JOINT-VENTURE previously worked together: Please check:

YES ☐ **NO** ☐

I. List all subcontractors anticipated for this Project. Please note that all subcontractors must submit a fully completed copy of this questionnaire, applicable licenses, and any other information required by the advertisement. See Jefferson Parish Code of Ordinances, Sec. 2-928(a)(3). Please attach additional pages if necessary.

Name & Address:	Specialty:	Worked with Firm Before (Yes or No):
1. Not Applicable.		
2.		
3.		

J. Please specify the total number of support personnel that may assist in the completion of this Project:

We estimate 16 individuals will be needed to complete the geotechnical services associated with projects under this advertisement. This includes a three-member drill crew as well as laboratory, clerical, and engineering staff. More employees can be added, as necessary, to complete any project.

TEC Professional Services Questionnaire

K. List the professional in charge, key persons, specialists, and individual consultants anticipated for this Project and provide their relevant information below. If necessary, please attach additional documentation (i.e., resume) that demonstrates the employment history and experience of the Firm's key persons that may assist in the completion of this Project. Please attach additional pages if necessary.

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Gwendolyn P. Sanders, P.E. / President and Project Principal

Project Assignment:

Project Principal / Limited Liability Corporation Member

Name of Firm with which Associated:

Eustis Engineering L.L.C.

Years' Experience with This Firm:

31

Education: Degree(s)/Year/Specialization:

Master of Science / 1992 / Civil Engineering
Bachelor of Science / 1990 / Civil Engineering

Active Registration: Year First Registered/Discipline:

Louisiana: 1997 / Civil Engineering
Mississippi: 2003 / Engineering
Texas: 2020 / Civil Engineering

Other Experience and Qualifications Relevant to the Proposed Project:

Mrs. Sanders began her professional career with Eustis Engineering in 1993. Over the past 31 years, she has worked her way up through the ranks of the engineering department including Associate Engineer, Project Engineer, Project Manager, and Engineering Manager. She has been on Eustis Engineering's Board of Directors since 1997. In 2020, Mrs. Sanders became Eustis Engineering's first woman president after previously serving as a Vice President and Executive Vice President. As President, she is responsible for day-to-day business operations including quality, safety, marketing, and long-term strategic growth. She also actively participates in the engineering design and review processes.

Considering her experience with Eustis Engineering, a leading Gulf Coast geotechnical firm, Mrs. Sanders has extensive experience in soft soils and working on projects in coastal Louisiana. She has been directly and indirectly involved in numerous projects throughout the Gulf Coast area, particularly in the Greater New Orleans area. Mrs. Sanders has been involved in and managed every aspect of a geotechnical engineering project, namely developing appropriate scopes of work for projects, planning and coordinating field investigations, assigning laboratory testing, performing geotechnical engineering analyses, preparing detailed reports with engineering analyses and recommendations, reviewing reports prepared by other professionals, and consulting with clients. Much of her work experience has dealt with identifying soil properties, developing criteria for design of foundations, and determining an appropriate foundation to support the structure under consideration.

In 2017, Mrs. Sanders served as program advisor for the Deep Foundations Institute's 42nd annual conference. She has twice been named one of the 50 Women of the Year by New Orleans CityBusiness, first in 2017 and again in 2021. She is currently serving as an associate member of the ASCE Standards Committee for the Design of Foundations. She has a keen eye for detail and is a stickler for quality. Her work ethic, combined with her communication skills, translates to Mrs. Sanders' ability to deliver successful geotechnical engineering projects to her clients.

Over the years, Mrs. Sanders has been involved with more than 2,800 projects in some capacity, including the following contained within this submittal:

K. List the professional in charge, key persons, specialists, and individual consultants anticipated for this Project and provide their relevant information below. If necessary, please attach additional documentation (i.e., resume) that demonstrates the employment history and experience of the Firm's key persons that may assist in the completion of this Project. Please attach additional pages if necessary.

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Gwendolyn P. Sanders, P.E. / President and Project Principal

- Jefferson Parish – Department of Public Works, Proposed Pump Station, West Esplanade at the 17th Street Canal, Jefferson Parish, Louisiana, Eustis Engineering Project No. 24427
- Jefferson Parish – Veterans Boulevard, Pump Stations, Jefferson Parish, Louisiana, Eustis Engineering Project Nos. 23396.00, .01, & 24426
- Jefferson Parish – Design and Construction of Improvements to Causeway Boulevard and West Esplanade Avenue, North and South Sewer Pump Stations, Metairie, Louisiana, Eustis Engineering Project No. 22448

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Benjamin M. Cody, P.E. / Principal Engineer
Project Assignment:
Project Manager
Name of Firm with which Associated:
Eustis Engineering L.L.C.
Years' Experience with This Firm:
21
Education: Degree(s)/Year/Specialization:
Master of Science / 1999 / Civil Engineering Bachelor of Science / 1996 / Civil Engineering
Active Registration: Year First Registered/Discipline:
Louisiana: 2002 / Civil Engineering Mississippi: 2007 / Engineering Texas: 2014 / Civil Engineering Florida: 2001 / Engineering Alabama: 2003 / Engineering Arkansas: 2014 / Engineering
Other Experience and Qualifications Relevant to the Proposed Project:

From 1993 to 1994, Mr. Benjamin M. Cody first worked with Eustis Engineering as a part-time laboratory soil technician while obtaining his undergraduate degree. After leaving Eustis Engineering in 1994, Mr. Cody worked as an engineering technician with the Sewerage & Water Board of New Orleans and as a student laboratory coordinator at Tulane University's Department of Civil Engineering. Mr. Cody also assisted in teaching the introductory soil mechanics laboratory sessions. For more than a year, he then worked as a graduate research assistant at Tulane University while pursuing his Master's degree. At that time, he was responsible for the design, construction, and implementation of bench scale testing system in contaminated soil remediation.

From 1998 until 2001, Mr. Cody worked for engineering firms in Florida. He performed such duties as soil evaluation and engineering recommendations for projects of varying sizes including multi-story structures, bridges, and roadways. He performed Phase I environmental site assessments as well as geotechnical sensor installation.

In 2001, he returned to the New Orleans area and to Eustis Engineering as a Project Engineer. He now serves as a Principal Engineer with the firm. Since his return, Mr. Cody has performed a wide variety of engineering services including geotechnical project management, engineering design, engineering during construction, and dynamic pile testing. Private sector projects have varied from small private or commercial structures to multi-story high-rise structures, storage tanks, and other industrial facilities. Public projects have included roads and bridges, port facilities, government buildings and facilities, schools, and hurricane protection system improvements.

Some of Mr. Cody's project experience, shown in this submittal, includes the following:

- Jefferson Parish – Department of Public Works, Proposed Pump Station, West Esplanade at the 17th Street Canal, Jefferson Parish, Louisiana, Eustis Engineering Project No. 24427
- Jefferson Parish – Veterans Boulevard, Pump Stations, Jefferson Parish, Louisiana, Eustis Engineering Project Nos. 23396.00, .01, & 24426
- Jefferson Parish – Jung and Falcone Lift Station Upgrades (K-11-3), New Sanitary Sewer Lift Station, Marrero, Louisiana, Eustis Engineering Project No. 23819

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Benjamin M. Cody, P.E. / Principal Engineer
• City of Kenner – Sewer Capital Improvement Program, Sewage Pumping Station Upgrade, 31st Street and Jasper Street Lift Station, Jefferson Parish, Louisiana, Eustis Engineering Project Nos. 21834 & 22559 • Jefferson Parish – Proposed Lift Station, Melody Drive and West Esplanade Avenue, Metairie, Louisiana, Eustis Engineering Project No. 24782

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
James J. Hance, P.E. / Senior Project Manager and Vice President (Finance)
Project Assignment:
Senior Project Manager / Limited Liability Corporation Member
Name of Firm with which Associated:
Eustis Engineering L.L.C.
Years' Experience with This Firm:
20
Education: Degree(s)/Year/Specialization:
Master of Business Administration / 2011 / Business Administration Master of Science / 2003 / Civil Engineering (Geotechnical) Bachelor of Science / 1998 / Civil Engineering
Active Registration: Year First Registered/Discipline:
Louisiana: 2004 / Civil Engineering Mississippi: 2012 / Engineering Texas: 2010 / Civil Engineering
Other Experience and Qualifications Relevant to the Proposed Project:
For 3 years, Mr. Hance was a Staff Engineer and Assistant Project Manager on numerous design and construction phase projects in the Washington D.C. metropolitan area. His duties included management of field technicians who performed concrete, asphalt, and soils testing as well as foundation construction observations of spread footings, mats, drilled shafts, augercast piles, driven steel H-piles, tiebacks, and underpinning piers. After relocating to Austin, Texas, to eventually pursue graduate studies in engineering, Mr. Hance acted as an assistant project engineer for several design phase projects. These projects involved retention and stream bank stabilization applications. The types of systems designed included mechanically stabilized earth (MSE), single and multi-tiered walls and slopes utilizing geogrid reinforcement, and the use of geosynthetic materials in engineering applications such as erosion control solutions for open channel flow conditions. Mr. Hance was a graduate research assistant at the University of Texas at Austin where he published his Master's thesis in association with a Master of Science in Civil Engineering degree: *Assessment of Seafloor Slope Stability Based on a Database of Published Submarine Slope Failures*. Mr. Hance has spent the past 20 years with Eustis Engineering and has worked on many projects for Jefferson Parish. During his tenure at Eustis Engineering, he has earned four promotions: Project Engineer (July 2004), Project Manager (November 2007), Vice President (August 2011), and Chief Financial Officer (August 2012). Mr. Hance manages geotechnical services associated with commercial, industrial, environmental, and civil works projects. His responsibilities include managing a wide variety of design and construction phase projects (public and private sectors), management of staff engineers and development of their skill assets, developing scopes of work and appropriate fees for new projects with clients, participating in business development and marketing ventures, and negotiating contracts. Some of his experience relative to this submittal includes the following: • Jefferson Parish – Jung and Falcone Lift Station Upgrades (K-11-3), New Sanitary Sewer Lift Station, Marrero, Louisiana, Eustis Engineering Project No. 23819 • Jefferson Parish – Proposed Lift Station, Melody Drive and West Esplanade Avenue, Metairie, Louisiana, Eustis Engineering Project No. 24782

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Sean G. Walsh, P.E. / Engineering Manager and Vice President (Engineering)
Project Assignment:
Project Manager
Name of Firm with which Associated:
Eustis Engineering L.L.C.
Years' Experience with This Firm:
11
Education: Degree(s)/Year/Specialization:
Master of Science / 2010 / Civil Engineering Bachelor of Science / 2007 / Civil Engineering
Active Registration: Year First Registered/Discipline:
Louisiana: 2013 / Civil Engineering
Other Experience and Qualifications Relevant to the Proposed Project:

For his first 5 years after graduation, Mr. Sean G. Walsh was a Project Engineer on numerous projects in New York and the New Orleans metropolitan area where he gained experience in civil, geotechnical, and geo-environmental engineering projects for a variety of public and private clients.

Since joining Eustis Engineering in 2012 as a Project Engineer, Mr. Walsh has been responsible for developing and managing engineering package preparations (e.g., engineering design and analysis, reporting, developing construction and permit drawings, contract specifications, cost estimates, and design reporting) for a diverse range of design and analysis projects, including deep foundations, excavation support systems, utility foundations, slope stabilization, solid waste closure systems, levee inspection/safety, and seepage modeling.

Mr. Walsh was promoted to Project Manager in 2017, Engineering Manager in 2019, and Vice President in 2020. Mr. Walsh is also a graduate of the 2017 New Orleans Regional Leadership Institute (NORLI), a 1-year training program designed to help shape community leaders.

During his employment with Eustis Engineering, Mr. Walsh has provided engineering services on more than 650 projects. Mr. Walsh has risen to the level of Vice President and Engineering Manager, in which he is responsible for personnel resource allocation, the overall engineering schedule, and execution of engineering services. Mr. Walsh also functions as a mentor to the engineering staff.

A large portion of Mr. Walsh's experience, before and after joining Eustis Engineering, involved development of design and construction recommendations associated with flood protection systems in southeastern Louisiana. Mr. Walsh has served as the project engineer and project manager responsible for the development and implementation of geotechnical exploration programs; development of soil testing laboratory programs; and interpretation of the results to evaluate strength, compressibility, and general soil characterization. Mr. Walsh used these data for geotechnical designs comprising pile capacity curves; bearing capacity analyses; cantilever retaining analyses; anchored retaining wall analyses; temporary retaining structure design; time-settlement projections for earthen levees with lift schedules; soil pressure profiles; structural and earthen levee under seepage analyses; levee and bank stability by Spencer's Method of Slices and Method of Planes; reinforced embankment design; stability analyses of flood protection walls (e.g., T-walls, I-walls, L-walls, and braced 'A-Frame' walls); downdrag and settlement analyses; settlement induced bending moments (SIBM) in foundation piles; piping analyses; uplift analyses; heave analyses; three-dimensional modeling of fill and structural load placements for predictions of time-rate settlements of

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Sean G. Walsh, P.E. / Engineering Manager and Vice President (Engineering)

foundation systems; and numerical modeling of soil-structure interaction (SSI) of flood protection structures by the finite element method (FEM).

Mr. Walsh has also worked on many local government projects in towns and cities including New Orleans, Golden Meadow, and Kentwood; numerous projects in Jefferson, Orleans, St. Bernard, St. Charles, and Plaquemines Parishes; several Port Commissions (e.g., Baton Rouge, New Orleans, South Louisiana); the Sewerage & Water Board of New Orleans; etc.

Regardless of the types of projects engineered for these agencies, his responsibilities have remained the same, namely defining the project philosophy; developing and maintaining the schedule; providing status reports to clients; controlling expenditures; overseeing project personnel; and reviewing the project design for compliance with engineering principles, company standards, and client requirements. He is hands-on in coordinating activities concerned with technical developments and in resolving engineering design/test problems.

Mr. Walsh's skills over the past 16 years in the industry have developed exponentially with the variety of projects that have crossed his desk. Regarding this submittal, Mr. Walsh has been directly involved with the following projects:

- Jefferson Parish – Jung and Falcone Lift Station Upgrades (K-11-3), New Sanitary Sewer Lift Station, Marrero, Louisiana, Eustis Engineering Project No. 23819
- Lafourche Parish Government – Butch Hill Pump Station, Lafourche Parish, Louisiana, Eustis Engineering Project No. 24723

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Lawrence W. Rome, C.E.T. / Operations Manager and Vice President (Operations)
Project Assignment:
Operations Manager / Limited Liability Corporation Member
Name of Firm with which Associated:
Eustis Engineering L.L.C.
Years' Experience with This Firm:
Education: Degree(s)/Year/Specialization:
Associate of Applied Sciences / 1998 / Safety
Active Registration: Year First Registered/Discipline:
N/A
Other Experience and Qualifications Relevant to the Proposed Project:

Accreditations / Affiliations / Certifications

American Society of Certified Engineering Technicians
Confined Space Entry Certification
Greater New Orleans Industrial Education Council Safety Training
Medic First Aid and CPR Course 2015
HAZMAT Certification, 49 CFR 172, Subpart H, Nuclear Gauges

International Code Council: Soils Special Inspector

National Institute for Certification in Engineering Technologies:
- Level I: Construction Materials Testing, Asphalt
- Level II: Construction Materials Testing, Concrete
- Level IV: Construction Materials Testing, Soils
- Level II: Geotechnical Engineering Technology, Construction
- Level III: Geotechnical Engineering Technology, Generalist
- Level IV: Geotechnical Engineering Technology, Exploration
- Level IV: Geotechnical Engineering Technology, Laboratory
- Level III: Transportation Engineering Technology, Highway Materials

10-Hour OSHA Training
Transportation Workers Identification Card (TWIC)
Registered Well Driller for the States of Louisiana and Mississippi

Professional Experience

After joining Eustis Engineering in 1994, Mr. Rome has worked in several departments throughout our firm. He began as a laboratory technician, performing simple testing such as grain size analyses, Atterberg liquid and plastic limits, and unconfined compression shear. Mr. Rome has become involved in more complex testing procedures such as permeability and consolidation tests. His capabilities have expanded to include lime stabilization studies, California Bearing Ratio tests, hysteresis, direct shear tests, swelling pressure and percent swell tests, consolidated undrained triaxial shear tests, relative density tests, and compaction tests.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Lawrence W. Rome, C.E.T. / Operations Manager and Vice President (Operations)

Mr. Rome is thoroughly familiar with the performance of the following types of testing.

- Atterberg limits
- CBR of laboratory compacted soils
- Consolidated drained triaxial shear tests
- Consolidated undrained triaxial shear tests
- Consolidation tests
- Direct shear
- Direct simple shear
- Flexible wall permeability test
- Hydrometer
- Miniature vane shear
- Moisture content of soil and rock
- Organic content
- Particle size analysis of soils and aggregates
- Percent finer than No. 200 sieve
- Pocket penetrometer
- Relative density tests
- Settlement column testing of dredged materials
- Sieve analyses
- Soil constants
- Specific gravity of soils
- Standard and modified compaction
- Swell pressure tests
- Torvane shear tests
- Unconfined compressive strength of soil
- Unconsolidated undrained triaxial shear tests
- Unified Soil Classification System
- Unit weight
- Visual classification of soils
- Moisture density relationships of soil-cement mixtures
- Molded sand triaxial test using Mississippi Department of Transportation specifications
- U.S. Army Corps of Engineers' New Orleans District Classification System

In early 1998, Mr. Rome joined the Drilling Department as a soil technician, while assisting the drilling crew as a wrenchman. In November 1998, Mr. Rome became a driller for Eustis Engineering. In this capacity, he performed sampling operations using 3-in. diameter Shelby tubes and 5-in. diameter Corps of Engineers' fixed piston sampling. He is also quite familiar with splitspoon, pitcher, Osterberg, Denison, and hollow stem auger sampling operations. He is competent in the installation of piezometers, monitoring wells, inclinometers, and pore pressure transducers. Mr. Rome has drilled to depths in excess of 300 feet utilizing 5-in. fixed piston samplers and in excess of 400 feet for 3-in. diameter Shelby tube sampling. Mr. Rome has drilled from various types of equipment including pontoons, cargo buggies, shallow draft elevating boats, barges, and pull boats using CME, Diedrich, and Failing drill rigs. Mr. Rome has also served as a Quality Assurance/Quality Control inspector for drilling operations for FFEB JV. This included ensuring as many as 22 drill crews were performing sampling operations in strict compliance with USACE specifications.

In the early 2000s, Mr. Rome attended the University of Missouri at Rolla for Advanced Soil Mechanics training. In 2005, he began serving as Operations Manager overseeing the laboratory department's daily objectives, reviewing calculations, and developing new skills in laboratory personnel, as well as other duties. In the drilling department, he oversees up to five drilling crews which involves ordering parts, looking at prospective sites, making crew schedules, lining up subcontract equipment, and ensuring the highest quality samples are obtained by drill crews and subcontractors. Mr. Rome also serves as a driller or soil technician when his experience is required or to train new employees.

In 2013, Mr. Rome added the CMT Department under his operational duties in addition to his operational duties within the lab and drilling departments. Mr. Rome works closely with the operations supervisor for CMT, overseeing the department's daily objectives, reviewing reports, reviewing invoices, addressing staffing needs, as well as other duties.

Mr. Rome has direct involvement with the following projects related to this submittal:

- Jefferson Parish – Jung and Falcone Lift Station Upgrades (K-11-3), New Sanitary Sewer Lift Station, Marrero, Louisiana, Eustis Engineering Project No. 23819

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Lawrence W. Rome, C.E.T. / Operations Manager and Vice President (Operations)
• Lafourche Parish Water District No. 1 – Sugar Ridge Wastewater Treatment Facility, Proposed Structures, Dogwood Drive, Lafourche Parish, Louisiana, Eustis Engineering Project No. 24757 • Jefferson Parish – Maplewood Drive and Pailet Street, Drainage Improvements, Jefferson Parish, Louisiana, Eustis Engineering Project No. 22942

PROJECT NO. 01		
Project Name, Location, and Owner's Contact Information:	**Nature of Firm's Responsibility:**	
Jefferson Parish Department of Public Works Proposed Pump Station West Esplanade at the 17th Street Canal Jefferson Parish, Louisiana Eustis Engineering Project No. 24427 Contact Information: Jefferson Parish Through ECM Consultants, Inc. Suite 200 1301 Clearview Parkway Metairie, Louisiana 70001 Sunina Shrestha, P.E. @ 504-885-4080	Jefferson Parish proposed a pump station at the intersection of the 17th Street Canal and West Esplanade Avenue in Metairie, Louisiana. The pump station would be built on the west bank of the canal. The pump station was planned to have approximate dimensions of 50' × 36' with a sump depth of approximately 18 feet. A new 78" × 122" arch-shaped reinforced concrete pipe would feed collected drainage water to the pump station. A new generator pad with approximate plan dimensions of 16' × 37' would be located southwest of the pump station. Discharge pipes, 32 inches in diameter, would be installed from the pump station, extending over the levee and floodwall to discharge stormwater from the pump station into the 17th Street Canal. The discharge pipes were to be pile-supported on the land and flood sides of the levee and floodwall. Eustis Engineering performed engineering analyses based on data obtained from previous subsurface explorations at the site supplemented by those in the project area. The scope of service for this project included compiling and updating geotechnical analyses from previous reports that were still applicable to the pump station plans. These previous analyses included deep-seated global stability analyses, seepage potential evaluation, and estimates of pile load capacities for various types and sizes of piles. We performed supplemental deep-seated global stability analyses to provide an alternative analysis as part of the Safety Assurance Review (SAR) required by the U.S. Army Corps of Engineers for the construction permit application. We also furnished supporting documentation for temporary retaining structure design as well as seepage and heave analyses. Finally, we generated recommendations for general site preparation and foundation construction procedures.	
Completion Date (Actual or Estimated)	**Estimated Cost:**	
	Entire Project:	**Work for Which Firm Was Responsible:**
09/2021 (A)	Unknown	$25,500

PROJECT NO. 02	
Project Name, Location, and Owner's Contact Information:	**Nature of Firm's Responsibility:**
Jefferson Parish Veterans Boulevard Drainage Pump Stations Jefferson Parish, Louisiana Eustis Engineering Project Nos. 22024, 22631, 23396.00-.01, and 24426.00-.01 Contact Information: Jefferson Parish Through ECM Consultants, Inc. Suite 200 1301 Clearview Parkway Metairie, Louisiana 70001 Sunina Shrestha, P.E. @ 504-885-4080	Two new drainage pump stations are proposed on the north and south sides of Veterans Memorial Boulevard at the 17th Street Canal. Each of these pump stations will discharge into the 17th Street Canal. Due to a planned bike path along the hurricane protection floodwall, these discharge pipes will need to penetrate the flood protection. As a result, plans called for the replacement of portions of the existing West 17th Street Canal I-walls (which cannot be penetrated and still comply with the U.S. Army Corps of Engineers' [USACE] guidelines) with T-walls. Both pump stations would require demolition of approximately 20 feet of existing concrete I-wall for installation of the new T-wall in order to accommodate a discharge pipe through each wall. Access gates will also be provided as part of the floodwall modifications. For additional data at the site, Eustis Engineering L.L.C. used soil boring and laboratory test data contained in our own files from prior explorations as well as data obtained through a Freedom of Information of Act request to the USACE. Due to the modifications to the flood protection, a safety assurance review (SAR) was conducted by an independent reviewer. The SAR included a review of the plans and specifications as well as design reports and calculations. Comments from the SAR were incorporated into the permit package submitted to the review agencies. The project plans have civil, structural, mechanical, and electrical components. Engineering analyses for the evaluation of the proposed T-wall to support the construction permit application and the SAR followed the USACE's Hurricane and Storm Damage Risk Reduction System Design Guidelines, dated June 2012. Global and local stability analyses were performed to evaluate the design and construction of the T-wall, including temporary flood protection (TFP) and temporary retaining structures (TRS). Stability analyses were also performed to address construction dewatering requirements for the pump station excavation with respect to the existing and proposed flood protection. Our work to support the design included estimates of allowable axial pile load capacity for piles supporting the T-wall foundations as well as the pump station and discharge pipes. We also performed analyses to evaluate the potential for seepage and heave during and after construction for the proposed features. New generator pads were located adjacent to each pump station to house controls outside the new intake excavation. Eustis Engineering is currently performing Engineering During Construction (EDC) services as required by the SAR. To date, we have responded to contractor requests for information (RFIs) and have performed submittal reviews. The EDC submittal reviews include the test pile program (TPP) plan, TRS and TFP methods, and sequences

PROJECT NO. 02		
Project Name, Location, and Owner's Contact Information:	**Nature of Firm's Responsibility:**	
	proposed by the contractor. We evaluated the results of the TPP to confirm the design pile capacity as well as installation criteria. We will review the results of geotechnical instrumentation to monitor the excavation and dewatering, including piezometers and inclinometers.	
Completion Date (Actual or Estimated)	**Estimated Cost:**	
	Entire Project:	**Work for Which Firm Was Responsible:**
04/2025 (E)	Unknown	$109,826 (to date)

PROJECT NO. 03		
Project Name, Location, and Owner's Contact Information:	**Nature of Firm's Responsibility:**	
Jefferson Parish Maplewood Drive and Pailet Street Drainage Improvements Jefferson Parish, Louisiana Eustis Engineering Project No. 22942 Contact Information: Jefferson Parish Through Burk-Kleinpeter, Inc. 4176 Canal Street New Orleans, Louisiana 70119 Henry M. Picard, III, P.E. @ 504-486-5901	After completing the geotechnical exploration and design for the project in 2011, Eustis Engineering was asked to provide construction materials testing services associated with the Maplewood Drive and Pailet Street drainage improvements project in Harvey, Louisiana. The project's general scope included the installation of subsurface drainage and street resurfacing along Maplewood Drive and the surrounding area. Our services included: • the performance of soil mechanics laboratory tests on various materials to be used for bedding, backfill, and roadway base materials to confirm they comply with project specifications; • in-place density tests on these same materials to determine their compaction complied with the project specifications; • inspection of the placement of concrete for slope paving, junction boxes, roadway paving, and various foundations; • more than 80 sets of concrete cylinders were subjected to compressive strength testing at 7 days and 28 days; • the inspection of more than 1,300 tons of asphalt both at the plant and in the field along with asphalt coring after placement; and • vibration monitoring services during construction. Our technicians recorded more than 8,200 hours for the project. Our engineers reviewed daily reports for compliance with our quality control manual and program.	
Completion Date (Actual or Estimated)	**Estimated Cost:**	
	Entire Project:	**Work for Which Firm Was Responsible:**
11/2017 (A)	Unknown	$363,600

PROJECT NO. 04		
Project Name, Location, and Owner's Contact Information:	**Nature of Firm's Responsibility:**	
Jefferson Parish Jung and Falcone Lift Station Upgrades (K-11-3) New Sanitary Sewer Lift Station Marrero, Louisiana Eustis Engineering Project No. 23819 Contact Information: Jefferson Parish Through Principal Engineering, Inc. Suite 19 1011 North Causeway Boulevard Mandeville, Louisiana 70471 Jeneva Hinojosa, E.I. @ 985-624-5001	The new lift station was to consist of a fiberglass wet well and fiberglass valve pit. The wet well was to be approximately 6 feet in diameter and 18 feet in depth. The valve pit was to be approximately 6 feet in diameter and 8 feet in depth. Site improvements were to include a gravity sewer line installed approximately 12 feet below grade and a force main approximately 4 feet below grade. Our field investigation included the drilling of one soil boring to a depth of 80 feet below the existing ground surface using one of our truck-mounted rigs. Once in our laboratory, samples selected by our engineering staff were subjected to soil mechanics laboratory tests including visual classification, natural water content, unit weight, unconfined compression shear, and one-point unconsolidated undrained triaxial compression shear. Using these data, our staff performed engineering analyses and developed recommendations for the project documented in a report including: • recommendations for site preparation encompassing temporary and permanent drainage, dewatering and pressure relief of excavations, and ways to limit lateral movement; • methods for excavation, base preparation, and bedding associated with the sanitary gravity sewer line, wet well, and valve box; • estimates of lateral earthen pressures; • recommendations for material placement and compaction of backfill for the force main and sanitary sewer line; • allowable soil bearing value recommendations for the wet well and valve box; • allowable pile load capacities, in compression and tension, for treated ASTM D25 quality timber piles; and • settlement estimates for both ground-supported and pile-supported project features.	
Completion Date (Actual or Estimated)	**Estimated Cost:**	
	Entire Project:	**Work for Which Firm Was Responsible:**
06/2018 (A)	Unknown	$4,900

PROJECT NO. 05	
Project Name, Location, and Owner's Contact Information:	**Nature of Firm's Responsibility:**
Jefferson Parish Westbank Projects Instrumentation Installation and Monitoring Lapalco Boulevard Overpass at Bayou Segnette Westwego, Louisiana Eustis Engineering Project No. 23937 Contact Information: Jefferson Parish Office of Public Works Suite 904 1221 Elmwood Boulevard Jefferson, Louisiana 70123 Miles Bingham @ 504-736-8753	Eustis Engineering performed a site visit and developed a plan for instrumentation installation and monitoring of relative movements of the Lapalco Boulevard Overpass bridge structures at Bayou Segnette in Westwego, Louisiana. We were contracted to install six crackmeters, three tiltmeters, and three temperature sensors on the Lapalco Boulevard Overpass. These instrumentation installations occurred on Bents 4, 24, and 34. The crackmeters were installed at the determined bents. They measured displacements to the nearest 0.0375 millimeter. A set of crackmeters were installed at each bent, one to measure displacement in the direction of traffic and one to measure displacement perpendicular to traffic. Tiltmeters were installed on the faces of the supporting pedestals with inclination measured to the .001 of a degree and oriented to measure uniaxially in the vertical direction perpendicular to traffic. Eustis Engineering measured inclination of the bridge pedestals utilizing a digital level with a precision to the .01 of a degree. These measurements were taken to establish the initial orientation of the tiltmeters. Measurements were taken of inclination in the transverse and longitudinal directions to relate to the structure at the end of the monitoring period. In addition, we conducted a survey to measure relative elevation differences between the tops of pile caps for comparison to the as-built plans. Finally, we conducted traditional survey readings to estimate the movement of the bridge abutments. In an attempt to isolate temperature-related movements of the bridge from traffic-related movements, Eustis Engineering also installed a temperature sensor at each bent in the area exposed to the greatest amount of sunlight. This approach showed variation in temperature as compared to the bridge structure. Finally, Eustis Engineering conducted a level survey of pile caps relative to each other, where available. Some pile caps were inaccessible due to excessive vegetation or water above the pile caps. These measurements were related to two independent temporary benchmarks taken on each side of the bridge structure (east and west) and on the south side of the bridge. Review of existing and gathered data revealed approximately 3 feet of ground subsidence occurred since the bridge was completed. Survey data from Eustis Engineering showed the pile caps towards the center of the bridge span were between 2 and 3 feet higher in elevation than the pile caps near the approaches. Instrumentation data showed that movements with respect to time were very slight (less than 1.5 millimeters) over the six-month

PROJECT NO. 05		
Project Name, Location, and Owner's Contact Information:	**Nature of Firm's Responsibility:**	
	monitoring period. The movements also appeared to be strongly correlated with fluctuations in temperature. While there were some minor fluctuations, the crackmeters and tiltmeters generally moved with respect to temperature and to less extent, the height of Bayou Segnette.	
Completion Date (Actual or Estimated)	**Estimated Cost:**	
	Entire Project:	**Work for Which Firm Was Responsible:**
10/2019 (A)	Unknown	$22,900

PROJECT NO. 06		
Project Name, Location, and Owner's Contact Information:	**Nature of Firm's Responsibility:**	
Jefferson Parish Design and Construction of Improvements to Causeway Boulevard and West Esplanade Avenue North and South Sewer Pump Stations Metairie, Louisiana Eustis Engineering Project No. 22448 Contact Information: Jefferson Parish Through ECM Consultants, Inc. 4409 Utica Street Suite 200 Metairie, Louisiana 70006 Chris Maniscalco @ 504-885-4080	Jefferson Parish planned to make improvements to the existing north and south sewer pump stations near the intersection of Causeway Boulevard and West Esplanade Avenue. Horizontal directional drilling technology would be used to install the proposed 8- and 12-in. diameter sewer pipes. The ground surface at the site was at approximate el -5. Soil bearing values were requested for the lift station planned at approximate el -22, a valve box at el -10, and manholes at approximate el -20. Recommendations for a sheetpile cofferdam were requested where the directional drilling would terminate at the Causeway Boulevard/West Esplanade intersection. One of Eustis Engineering's in-house drill crews traversed the short distance to the site to perform the field exploration developed by our engineering team. Three soil borings were made for the project to depths of 25, 50, and 75 feet below the existing ground surface considering the component feature depths and locations. Boring location coordinates were obtained using a handheld GPS unit. Samples of the subsoils retained from our drilling operations were transported to our accredited Metairie laboratory for testing. Once in our laboratory, classification, index, and strength tests were performed on the undisturbed samples to inform the soil design parameter selection. We developed geotechnical engineering recommendations for lateral earth pressures; bedding material and compaction requirements including the use of geotextiles as a material separator; and structural fill (material, placement and compaction recommendations) when used as backfill between the side walls of the buried structure and the temporary sheetpile cofferdam. Our design analyses resulted in estimates of allowable soil bearing values for the lift station and valve box mat foundations as well as estimates of settlement and differential settlement for these features. We also addressed the use of a temporary retaining structure; excavation, dewatering, and groundwater control operations; and ways to minimize lateral movement and settlement of the adjacent ground surface.	
Completion Date (Actual or Estimated)	**Estimated Cost:**	
	Entire Project:	**Work for Which Firm Was Responsible:**
02/2015 (A)	Unknown	$7,200

PROJECT NO. 07		
Project Name, Location, and Owner's Contact Information:	**Nature of Firm's Responsibility:**	
Jefferson Parish Proposed Lift Station Melody Drive and West Esplanade Avenue Metairie, Louisiana Eustis Engineering Project No. 24782 Contact Information: Jefferson Parish Through ECM Consultants, Inc. 1301 Clearview Parkway Suite 200 Metairie, Louisiana 70006 Sunina Shrestha P.E. @ 504-885-4080	A new lift station was proposed to be constructed at the intersection of Melody Drive and West Esplanade Avenue in Metairie, Louisiana, just east of the existing lift stations. The structure's wet well and valve pit would have a 2-ft (thick) base slab extending 2 feet beyond all sides. Two options regarding the wet well size and dimensions were being considered. A new pile-supported sewer force main aerial canal crossing was also proposed. Eustis Engineering's subsurface exploration comprised one undisturbed sample type soil test boring to a depth of 70 feet below the existing ground surface using a truck-mounted rotary-type drill rig. Due to the existing site features and overhead and underground utilities, our crew coordinated closely with the designer and representatives of Jefferson Parish to select the boring location. After completion of the field work, the samples were transported to our certified Metairie laboratory for testing. Soil mechanics laboratory tests consisted of visual classification, natural water content, unit weight, unconfined compression shear, unconsolidated undrained triaxial compression shear, and Atterberg liquid and plastic limits tests. These test results were utilized to develop soil design parameters for the geotechnical analyses. We made recommendations for both shallow (mat/slab) and deep (driven pile) foundation design, installation, and materials. Engineering analyses included settlement and lateral earthen pressures (at-rest, active, and passive). For mat foundations, we calculated allowable soil bearing values, net applied pressure intensity, estimated settlement, and uplift pressure. For pile foundations, we calculated allowable pile load capacities in compression and tension and estimated settlement. We also provided recommendations for pile materials, size, and installation methods.	
Completion Date (Actual or Estimated)	**Estimated Cost:**	
	Entire Project:	**Work for Which Firm Was Responsible:**
05/2022 (A)	Unknown	$6,160

PROJECT NO. 08		
Project Name, Location, and Owner's Contact Information:	**Nature of Firm's Responsibility:**	
City of Kenner Sewer Capital Improvement Program Sewage Pumping Station Upgrade 31st Street and Jasper Street Lift Station Kenner, Louisiana Eustis Engineering Project Nos. 21834 and 22559 Contact Information: City of Kenner Department of Public Works Through Design Engineering, Inc. Suite 205 3330 West Esplanade Avenue Metairie, Louisiana 70002 John Holtgreve @ 504-836-2155	Construction was to consist of a new wet well 20 to 25 feet below the existing ground surface, a valve pit 6 to 8 feet below the existing ground surface, and an electrical panel at the ground surface. The wet well and valve pit would each have a 12' × 12' pad. The electrical panel would have a 2' × 5' pad. Both shallow foundation systems and treated timber piles were being considered for support of the project features. Eustis Engineering conducted one undisturbed soil test boring at the site. The boring was drilled to a depth of 80 feet below the existing ground surface to provide sufficient information for the evaluation of piles and sheetpiles. Our laboratory technicians performed tests on samples obtained from the boring at the direction of our engineers in order to evaluate the physical properties of the various substrata. Engineering analyses, based on the soil boring and laboratory test results, were made to determine recommendations regarding site preparation and drainage, pipe bedding, estimates of allowable soil bearing values, estimates of allowable load capacities for timber piles, estimates of settlement, a temporary restraining system, and foundation construction procedures as well as recommendations for rigid and flexible pavements. Eustis Engineering also provided construction materials testing services for this project. Those services included: • soil mechanics laboratory tests including moisture content, Atterberg limits, mechanical analysis, and standard Proctor; • inplace density tests on sand, limestone, and crushed concrete for use as structural backfill, bedding, and base course; • visual and physical inspection of more than 1,620 feet of timber piles; • pile logging during installation; • performance of vibration monitoring during pile installation; • review of asphalt and concrete mix designs intended for use on the project; • visual and physical inspection of concrete placed for the lift station slab, seal slab, foundation slab, skid foundation, tank bottom, manhole, electrical pad, sidewalk, and roadway; • compressive strength tests on concrete cylinders made during the above inspection; and • the coring and inspection of asphalt. Our engineers performed quality reviews of these inspection reports prior to issuing the results.	
Completion Date (Actual or Estimated)	**Estimated Cost:**	
	Entire Project:	**Work for Which Firm Was Responsible:**
04/2015 (A)	Unknown	$19,300

PROJECT NO. 09		
Project Name, Location, and Owner's Contact Information:	**Nature of Firm's Responsibility:**	
Lafourche Parish Water District No. 1 Sugar Ridge Wastewater Treatment Facility Proposed Structures Dogwood Drive Lafourche Parish, Louisiana Eustis Engineering Project No. 24757 Contact Information: Lafourche Parish Water District No. 1 Through 21 Design Group, Inc. Suite 301 1351 Jefferson Street Washington, Missouri 63090 Jeremy Lay @ 636-432-5029	A Moving Bed Biofilm Reactor (MBBR) and Clarifier are proposed for construction at the Sugar Ridge Wastewater Treatment Facility in Lafourche Parish, Louisiana. Shallow and deep foundations are currently under consideration. Eustis Engineering conducted a geotechnical exploration to assess the subsoil suitability to the intended project features. Based on review of the furnished information and knowledge of the area geology, Eustis Engineering recommended drilling two soil borings for this project. One boring was drilled to a depth of 70 feet and the other extended to a depth of 50 feet. Borings were drilled at the approximate center of each proposed structure's footprint using a truck mounted drill rig; undisturbed samples of cohesive or semi-cohesive subsoils were obtained at close intervals or changes in stratum using a 3-in. diameter thinwall Shelby tube sampler. Laboratory tests were performed to evaluate the subsoil characteristics, shear strength, and relative compressibility of the subsoils encountered. The geotechnical engineering design report of our findings and recommendations included: • a boring location plan; • individual logs of the borings; • a summary of the laboratory test data; • a discussion of the subsoil and groundwater conditions; • recommendations for site preparation and drainage; • recommendations for placement and compaction of fill material; • estimates of allowable soil bearing values for mat foundations constructed at grade and at a depth of 9 feet below grade; • an evaluation of uplift pressures on the below grade features; • estimates of allowable vertical load capacities for various embedments of driven timber piles installed at grade or below grade; • recommendations for pile installation and testing methods; • estimates of settlement due to fill placement and structural loads; and • general construction recommendations.	
Completion Date (Actual or Estimated)	**Estimated Cost:**	
	Entire Project:	**Work for Which Firm Was Responsible:**
04/2022 (A)	Unknown	$7,975

PROJECT NO. 10			
Project Name, Location, and Owner's Contact Information:	**Nature of Firm's Responsibility:**		
Lafourche Parish Government Butch Hill Pump Station Lafourche Parish, Louisiana Eustis Engineering Project No. 24723 Contact Information: Lafourche Parish Government Through GIS Engineering, L.L.C. Suite 600 935 Gravier Street New Orleans, Louisiana 70112 Augustin Rega, P.E. @ 504-364-4784	The Lafourche Parish Government wishes to increase capacity at the existing Butch Hill Pump Station. This involves the removal of the existing station to introduce the new station. An existing vehicular bridge spanning the existing discharge pipes will be replaced during the construction of the new station. The intake canal may also be increased in width to provide greater flow into the new station. The new pump station may be located east of the existing pump station to allow for continued use of the old pump station during construction. This will require excavation and realignment of the intake drainage canal to support the updated design layout. Eustis Engineering L.L.C. performed a geotechnical exploration to support our engineering design recommendations associated with this project. We performed one soil boring to a depth of 150 feet and three cone penetration tests (CPTs) to depths of 150 feet. Soils mechanics laboratory tests performed on samples from the boring included natural water content, unconfined compression shear, unconsolidated undrained triaxial compression shear, and Atterberg liquid limits and plastic limits determinations. The test assignments were directed by our engineers to aid in the development of the soil design parameters. Eustis Engineering developed comprehensive draft and final geotechnical design reports for the project. Engineering analyses included estimates of lateral earthen pressure coefficients, local stability analyses of the pump station headwall and intake walls, and deep-seated stability analyses of the pump station and intake walls. For support of the pump station components, bridge, and other ancillary features, we provided estimates of allowable pile load capacity for various types and sizes of timber piles; square, precast concrete piles; and steel pipe piles for average grades at el 0 beyond the limits of the pump station and at el -21 beneath the structure. We evaluated seepage and heave beneath and around the pump station. Our geotechnical design report included estimates of allowable soil bearing values for the future equipment pad; estimates of settlement for foundation piles for both the pump station and the future discharge pipe foundations; estimates of subgrade moduli; and estimates of p-y, t-z, and Q-z soil values. We performed deep seated stability analyses of the drainage canal side slopes and slope stabilization needed to reroute the conveyance channels as part of the new pump station location.		
Completion Date (Actual or Estimated)	**Estimated Cost:**		
	Entire Project:	**Work for Which Firm Was Responsible:**	
06/2022 (A)	Unknown	$48,500	

TEC Professional Services Questionnaire

M. List all prior and/or on-going litigation between Firm and Jefferson Parish. Please attach additional pages if necessary.

Parties:		Status/Result of Case:
Plaintiff:	**Defendant:**	
1. None at this time.		
2.		
3.		
4.		

N. Use this space to provide any additional information or description of resources supporting Firm's qualifications for the proposed project.

When Eustis Engineering L.L.C. opened its first office in Vicksburg, Mississippi, in 1946, it housed its entire operation in less than 500 square feet of space. *Seventy-eight years later,* our personnel and equipment occupy 40,000+ square feet of space in five locations.

Eustis Engineering is the third oldest, continually operating geotechnical firm in the United States. From a single two-man office to approximately 115 individuals in five offices, the firm has grown to house accounting, administrative, quality control, safety, drilling, engineering, laboratory, and construction materials testing departments. These departments work together to provide our clients with the quality work desired in a cost efficient and timely manner.

Eustis Engineering is headquartered in Metairie, Louisiana, in the heart of Jefferson Parish's East Bank. We also operate branch offices in Baton Rouge and Lafayette, Louisiana, Gulfport, Mississippi, and Houston, Texas. Our offices and staff collaborate seamlessly using Microsoft Teams and other virtual platforms.

Eustis Engineering's services encompass many disciplines including the performance of:

- subsurface exploration (drilling of soil borings, cone penetration testing, downhole vane, and Geoprobe®);
- soil mechanics laboratory tests;
- field instrumentation and monitoring;
- non-destructive testing of piles and shafts including dynamic pile testing, crosshole sonic logging, single-hole sonic logging, low strain pile integrity testing, and thermal integrity profiling;
- geotechnical engineering design;
- special inspections; and
- construction quality control and materials testing services.

Eustis Engineering L.L.C. Important Numbers	
Item	**Number**
Unique Entity Identifier (UEI)	R83MG9NLTMS4
CAGE Code	4MOP2
Firm License - Louisiana	EF.0003558
Firm License - Mississippi	2078
Firm Registration – Texas	13895

Eustis Engineering has worked on over 850 geotechnical and construction materials testing projects for Jefferson Parish Government entities, many of which focused on water facilities and infrastructure. We have also worked on over 4,000 projects of all types throughout the east and west banks of Jefferson Parish alone, not considering similar projects in the surrounding parishes. This work history gives our engineering staff

unparalleled familiarity with the foundation conditions in the Gulf Coast and the challenges that may arise for projects associated with this contract.

ENGINEERING SERVICES

Eustis Engineering has geotechnical engineering capabilities to fulfill the requirements of nearly any project. As evidenced by the included write-ups in this package, our experience with various water, sewer and drainage infrastructure projects is varied and extensive.

We have developed pile capacity and bearing capacity analyses for projects throughout Jefferson Parish and the coastal areas of the United States. Eustis Engineering's evaluation of piles includes estimates of vertical capacity for groups. We also perform lateral analyses of individual piles and pile groups using LPILE® and GROUP® software. Our evaluation of bearing capacity considers the excavation depth, base preparation and utility diameter.

We evaluate local and deep-seated global stability of canals, waterway slopes and embankments as well as excavation shoring and sheeting. We provide assessments of heave, seepage and erosion control measures. We evaluate floodwalls, including I-walls, L-walls, T-walls and gates.

We perform settlement studies including estimates of settlement and time-rate of settlement with and without wick drains to enhance consolidation. These settlement studies include estimates and recommendations for lift construction affecting a gain-in-strength of foundation soils associated with subsoil consolidation. Preload/surcharge operations are also a component of our settlement evaluations.

In our practice, Eustis Engineering has developed methodologies associated with the estimates of negative skin friction on pile foundations. The methods are the current state of practice. The extension of these methods is an evaluation of settlement induced bending moments. Eustis Engineering is also utilizing a numerical model program, SIGMA/W, in association with the rigorous settlement program Settle3.

Engineering Staffing

Our engineering staff has 20 master's degrees in Civil Engineering, Engineering, Engineering Management, Geology, and Business Administration. Participation in post-Bachelor of Science curricula, as well as continuing education and professional registration that emphasizes engineering management and technical issues, is very important to Eustis Engineering. Our engineers also regularly present at technical conferences. We encourage and fund our staff for these activities and programs.

Employee	Education	Experience	
		Years with Eustis Engineering	Total Years
Professional Engineers (P.E.)			
Benjamin M. Cody	M.S. / Civil Engineering	22	26
Brian A. Deschamp	B.A. / Business Administration	12	12
	M.S. / Civil Engineering – Geotechnical		

P. Tennant Duckworth	M.S. / Civil Engineering	3	3
James J. Hance	M.S. / Civil Engineering	20	24
	M.B.A. / Business Administration		
Chad L. Held	M.S. / Civil Engineering	33	33
Matthew K. Morales	B.S. / Civil Engineering	15	15
Tomas K. Morales	B.S. / Civil Engineering	10	10
Travis R. Richards	M.S. / Engineering	17	24
	M.S. / Engineering Management		
	Coastal Engineering Certificate		
Chad D. Roe	M.S. / Civil Engineering	1	11
Gwendolyn P. Sanders	M.S. / Engineering	31	31
Sanjay S. Shahji	M.S. / Civil Engineering	1	18
Shaun R. Simon	M.S. / Civil Engineering	24	24
Alice E. Stark	M.S. / Civil and Environmental Engineering	<1	8
Patrick A. Thurmond	M.S. / Engineering Management	9	9
	M.S. / Civil Engineering		
	Coastal Engineering Certificate		
Sean G. Walsh	M.S. / Civil Engineering	11	16
James M. Williams	M.S. / Civil Engineering	6	6
Henry C. Worley	M.S. / Engineering	6	7
	Coastal Engineering Certificate		
Engineering Interns (E.I.)			
Adam K. Abdulbagi	B.S. / Civil Engineering	1	1
Naba Almofraji	B.S. / Civil Engineering	<1	6
Alvaro E. Carvajal	B.S. / Civil Engineering	1	1
Joseph P. DiGiovanni	B.S. / Civil Engineering	1	1
Steven B. Tidwell	B.S. / Geological Engineering	<1	13
Engineering Graduates			
Alexander Soriano Doninelli	B.S. / Civil Engineering	<1	4
Lesley L. Reitmeyer	B.S. / Civil Engineering	15	15
Xia (Bruce) Xialong	PhD / Geotechnical Engineering	<1	10
	M.S. / Geotechnical Engineering		
Geologists			
Matthew J. Blasini, G.I.T.	B.S. / Geology	5	6
Nathan A. Quick, P.G.	M.S. / Geology	2	7
Total Years of Experience		**246**	**341**

Reviewing our table, the majority of Eustis Engineering's professional engineers have at least ten years of experience in geotechnical engineering.

Cone Penetration Testing Capabilities

Eustis Engineering owns two dedicated track-mounted cone penetration test (CPT) rigs and operates four other multi-purpose rigs capable of performing CPTs. Operators are either specifically trained engineering technicians or engineers who perform field operations utilizing the CPT equipment. Engineers with specialized knowledge and experience operating the rigs evaluate the sounds and produce the CPT logs. Five of our rigs can be placed on a cargo buggy, shallow draft barge, or airboat to access coastal marsh or open water. We have sounded to depths of 180 feet and have the ability to perform dissipation and seismic testing. Field testing is performed according to ASTM D5778 and common industry practices. Eustis Engineering has been performing CPTs and using CPT technology since the early 2000s.

A CPT can be accomplished rapidly with four or five being performed in the same time frame as a standard geotechnical boring; therefore, CPTs are typically cost-effective in providing enhanced subsurface exploration and better delineation of subsurface conditions at a project site.

Dynamic Pile Testing Capabilities

Eustis Engineering was the first private consulting firm to own and operate dynamic pile testing equipment in the States of Louisiana and Mississippi. The pile types tested include timber piles; small size pipe piles; square, precast concrete piles and large (60 to 72-in. diameter) spun-cast, prestressed concrete piles; open-end and closed-end steel pipe piles; and steel H-piles.

We often upgrade our data collectors and operate four Pile Driving Analyzers® (PDAs): one PAX unit and three PDA-8G units. These units can be battery operated and use wireless gauge transmitters to eliminate the need for a main cable to connect directly to the units. We also stock and use underwater gauges to monitor pile driving in marine environments when the pile head descends below the water surface. To support our four PDA units, Eustis Engineering maintains an extensive inventory of calibrated gauges and accessories. To provide quality assurance and rapid responses to issues in the field, all PDAs have wireless communication, enabling our engineers direct oversight of the dynamic pile testing process in real time.

We also use this PDA equipment to maintain the calibrations of our automatic Standard Penetration Test (SPT) hammers on our drill rigs.

Other Non-Destructive Testing Capabilities

Our engineering staff at Eustis Engineering performs other non-destructive testing services to verify the structural integrity of drilled shafts, augercast piles, and precast concrete piles. Some of these processes include crosshole/single-hole sonic logging (CSL or SSL), low strain pile integrity testing (PIT), and thermal integrity profiling (TIP™). We also perform parallel seismic testing to evaluate existing foundation depths.

INSTRUMENTATION

Eustis Engineering has installed geotechnical instrumentation for decades. Our instrumentation programs have resulted in substantial cost savings to our clients by reducing preload durations, providing refinement of geotechnical design parameters through full-scale testing, and verifying the performance of cutting-edge designs. Our services go beyond the construction phase, as long-term monitoring programs enable owners to maximize utilization of their facilities throughout the design life by verifying if soil behavior is within acceptable limits.

Eustis Engineering provides the following instrumentation services:

- Vibrating wire devices including piezometers, extensometers, settlement gauges, and strain gauges
- Data loggers to enable periodic collection of data for vibrating wire devices
- Data links for remote web access to data loggers in near real time
- Settlement plates
- Conventional slope inclinometers or MEM sensor array inclinometers
- Monitoring services of all instrumentation devices with geotechnical interpretation

Instrumentation is a natural complement to our design services, providing data to verify or modify recommendations based on the observational method. Ongoing monitoring enables us to provide continuing services from project inception to the end of a project's design life.

DRILLING/FIELD EXPLORATION

Eustis Engineering possesses licenses and credentials to perform geotechnical drilling in Louisiana and Mississippi (no license is needed in Texas). With our licenses and credentials, Eustis Engineering drills soil borings and performs sampling operations for our clients' projects in all types of environments including land, marsh, swamp, and marine. Our personnel have the capability and experience to provide these services from trucks, barges, pontoons, and swamp or marsh buggies. We also have portable units that can be used inside structures planned for retrofit/renovations.

Field Exploration Personnel

We can provide up to nine drillers and drill rigs capable of obtaining standard 3-in. diameter Shelby tube samples and 5-in. diameter fixed piston samples, sounding CPT, advancing Geoprobe samplers, and installing geotechnical instrumentation on land, in water, and in marsh environments as indicated in the following table.

Capabilities of Eustis Engineering's Field Exploration Staff	Blair Armant	Scott Bombard	James Cordes	Tevin Crawford	Rene Davidson	Eric Held	James Lubben	George Reitmeyer	Lawrence Rome
Hand Auger Borings	X	X	X	X	X	X	X	X	X
General Type (3-in. Diameter Borings)	X	X	X	X	X	X	X		X
General Type (3-in. Diameter Borings) in Hard Access Locations (Marsh, Swamp, Heavily Forested)	X	X	X	X	X	X	X		X
Undisturbed Type (5-in. Diameter Borings)	X	X	X	X	X	X	X		X
Undisturbed Type (5-in. Diameter Borings) in Hard Access Locations (Marsh, Swamp, Heavily Forested)	X		X	X	X	X	X		X
Location Information (Latitude, Longitude)	X		X	X	X	X	X		X
Set Permanent Benchmarks	X		X	X	X	X	X		X
Install Instrumentation	X		X	X	X	X	X		X
Cone Penetration Tests						X		X	
Geoprobe Sampling		X	X			X	X		X

Field Exploration Equipment

Eustis Engineering owns and operates six wet rotary drill rigs, both truck-mounted and skid-mounted. This equipment includes one Diedrich truck-mounted D-50 turbo drill rig (with an automatic SPT hammer); one Failing skid only rig (with an automatic SPT hammer); one truck-mounted CME-55 rig; one track-mounted CME-850X rig with an automatic hammer; one track-mounted CME-850XR rig with an automatic hammer; and one truck-mounted CME-55 rig with a detachable CME-55 skid unit and automatic hammer. We also own two track-mounted cone penetrometer systems capable of providing up to 15 tons of reaction. Our CME track rigs provide low ground pressure and are designed to traverse soft ground surfaces, steep slopes, and lightly wooded areas. Eustis Engineering also owns four direct push Geoprobe units: two 3230DTs, the 6620DT, and the 540M. Eustis Engineering's 6620DT/3230DT Geoprobe with their 12-in. tracks allow this equipment to be used on pavement as well as off road and in rugged terrain. The 6620DT and 3230DT rigs also can be placed on specialized equipment. This includes a jack-up barge and a cargo buggy for operations over marsh/water. These units can install shallow monitoring wells and other instrumentation. We also have the capability to perform CPTs and downhole vanes using the 3230DT rigs.

Our 540M Geoprobe can fit into confined spaces as narrow as 32 inches. The 540M can also be utilized on an airboat for coastal terrains.

Other Specialized Soil Sampling Equipment

In addition to our drill rigs, Eustis Engineering owns and operates an Acker Vane Shear to perform down hole in-situ testing. We also have hand augers to obtain samples at various depths for use in classification and stratification of soil deposits. This equipment can be used in association with handheld piston samplers to obtain small diameter samples. Finally, we operate a dynamic cone penetration tests (DCPTs) to assess the in-situ strength of undisturbed soils and compacted materials in accordance with ASTM D 6951.

Drone Capabilities

Eustis Engineering utilizes small Unmanned Aerial Systems (sUAS), more commonly known as "drones," to enhance our services. We use drones to perform site inspections, field reconnaissance, pre/post-construction condition surveys, construction inspections, and other forms of visual monitoring. We currently operate a DJI Mavic Air 2S Drone piloted by a Part 107 Certified Remote Pilot.

LABORATORY SERVICES

Eustis Engineering's laboratories are constantly evolving with the purchase of new equipment on a yearly basis. Our gINT® data management software from Bentley allows for maximum efficiency in the production of boring logs and data entry.

Eustis Engineering has also acquired OpenGround®, Bentley's Cloud platform, which interfaces with a collection of geotechnical applications. OpenGround provides a comprehensive solution for collecting, reporting, managing, visualizing, analyzing, and accessing data. Its advanced digital workflows combine both subsurface and surface data into one cohesive design. This software provides Eustis Engineering's team members access to a data source via connected applications or a web portal, increasing both collaboration and efficiency. Improved access and reliability will save time and money in the planning, design, analysis, construction, and operation of infrastructure projects.

Eustis Engineering has also acquired KeyLAB® from Bentley. KeyLAB is the leading laboratory management system built specifically for geotechnical and construction materials testing laboratories. It improves our laboratory efficiency at every stage of the geotechnical and construction testing process, including sample and storeroom management, as well as electronic scheduling, testing, and reporting. It integrates with Microsoft Excel®, allowing for the efficient development of customized worksheets and reports.

Technical testing common to our laboratories includes ASTM; American Concrete Institute (ACI); State of Louisiana, Department of Transportation and Development (LaDOTD); AASHTO; FAA; and the U.S. Army Corps of Engineers (USACE). Our laboratories hold accreditations from AASHTO, LaDOTD, and the USACE.

Laboratory Staffing

Eustis Engineering currently has qualified technicians to sample construction materials and perform soil mechanics laboratory testing. These technicians are versed in the latest standards from ASTM, LaDOTD, MDOT, AASHTO, FAA, and the USACE. Many of our technicians have earned certifications with the National Institute for Certification in Engineering Technologies (NICET) in the area of geotechnical engineering technology and in the subfields of construction, exploration, generalist, and laboratory.

Laboratory Quality Control

In our effort to ensure the quality of our laboratory and materials testing, our programs are regularly inspected by outside agencies such as the USACE, the AMRL Group of the American Association of State Highway and Transportation Officials, and the CCRL Group of AASHTO. Eustis Engineering is also accredited by the Mississippi Department of Transportation.

Eustis Engineering has three soil mechanics laboratories where our laboratory practices and quality management system meet the requirements of AASHTO R 18 and ASTM E329. These offices are located in Metairie, Baton Rouge, and Gulfport. Individual offices may comply with ASTM quality system specifications including ASTM C1077, ASTM D366, and ASTM D3740. Accreditations in the various areas are shown below.

Metairie	Baton Rouge	Gulfport
Aggregate Concrete Masonry Soil	Aggregate Soil Concrete Spray Fire-Resistive Material	Aggregate Asphalt Concrete Soil Spray Fire-Resistive Material

To further show quality is paramount to Eustis Engineering, we have two individuals in charge of maintaining quality in our testing. Travis R. Richards, P.E., is the Engineer-In-Charge. Timmy Holleman, dedicated Quality Control Manager, oversees the calibration of our equipment and maintenance of our quality system. The biggest reward of our quality system is knowing our clients are confident our testing laboratories produce the highest quality results and conform to state and national standards.

CONSTRUCTION MATERIALS TESTING

Eustis Engineering has been involved in construction materials testing (CMT) and inspection on a regular basis since the mid-1980s. Over the past 30+ years, Eustis Engineering has accumulated a wealth of experienced technicians in these areas. Whether 20 feet down in an excavation or 20 stories up in a high rise, our CMT technicians are there providing the inspection services needed on individual projects.

Staffing

Eustis Engineering currently has nearly 30 technicians on staff to provide construction inspection services on a daily basis. These services encompass the areas of soils, piling, asphalt, concrete, steel, and others.

Services

Soils testing in the field is performed by means of density tests, fill placement inspection, and depth checks. These services are performed by technicians who have attended courses by Troxler or Humboldt in the use of nuclear density devices.

Piling services include the inspection of various types of piles, logging these piles, and performance of pile load tests with calibrated equipment. Load test results are, in turn, interpreted and reported by a registered engineer on our staff.

Our realm of concrete inspection includes the formulation and review of mix designs, quality control at the plant and in the field, materials testing and sampling, precast piling inspection, post tension inspection, floor flatness, and mortar and grout inspection. These services are performed by our ACI and NICET certified technicians.

Steel inspection may include the visual inspection of structural steel at the site or in the shop, steel and pipe coating sampling, post tension and welder certification witnessing, and the performance of ultrasonic and x-ray testing. These services are performed by members of our staff currently certified with AWS, ASNT, and/or ASME.

Other CMT services provided by Eustis Engineering personnel include fireproofing inspection, vibration and acoustical monitoring, paint inspection, and more.

O. To the best of my knowledge, the foregoing is an accurate statement of facts.

Signature: _____ **Print Name:** Gwendolyn P. Sanders, P.E.

Title: President **Date:** 12 June 2024