March 25, 2022

Qualification Statement
for
Routine Engineering Services
for
Sewer Projects

SOQ No. 22-010

Resolution No. 138812

SUBMITTED BY:

Design Engineering, Inc.
Eustis Engineering, LLC

DESIGN ENGINEERING, INC.

2021 Reader Rankings C&P Business

BEST ENGINEERING FIRM
WINNER 2021

EUSTIS
ENGINEERING L.L.C.
SINCE 1946

March 25, 2022

Jefferson Parish Council
c/o Sidney Duffy, Buyer II
Purchasing Department
General Government Building
200 Derbigny Street, Suite 4400
Gretna, Louisiana 70053

Re: Qualification Statement
Providing Routine Engineering Services
for Sewerage Projects in Jefferson Parish
SOQ No. 22-010
Resolution No. 138812

Dear Ms. Duffy:

In response to your Public Notice requesting qualification statements from engineering firms interested in providing routine engineering services for **Sewer Projects** in Jefferson Parish for an annual period, Design Engineering, Inc. is pleased to submit the enclosed TEC Professional Services Questionnaire for your consideration.

The principals and technical staff members of Design Engineering, Inc. (DEI) have years of experience in the design of major sewer system projects for Jefferson and Orleans Parishes.

Design Engineering, Inc. is a local firm with its office in Jefferson Parish. Accordingly, all civil engineering work will be designed and supervised by a firm whose staff has years of experience designing projects for Jefferson Parish and is familiar with their procedures and criteria. We would appreciate the opportunity to demonstrate these capabilities on these projects.

As you will observe from the resumes, the staff members of the firm are experienced in local and state design procedures. Through many local engineering projects, this firm has established an excellent working relationship with the Jefferson

Parish Department of Public Works and all private utility companies in the area and will coordinate all work with these agencies.

With respect to our current workload, our firm has the staff and capabilities presently available to complete this project in the most expeditious manner possible.

Design Engineering, Inc. is a Louisiana firm, domiciled in Jefferson Parish for over 38 years and is in close proximity to the project sites.

We look forward to being of service to Jefferson Parish and respectfully submit this qualification statement for your review and hope you will seriously consider our firm for this work.

With best regards, I remain

Sincerely,
Design Engineering, Inc.

Jim Martin, Ph.D., P.E.
President

TEC Professional Services Questionnaire

A. Project Name and Advertisement Resolution Number:

Routine Engineering Services for Sewer Projects in Jefferson Parish – Resolution No. 138812

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

Design Engineering, Inc.
3330 W. Esplanade Avenue, Suite 205
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:

Jim Martin, Ph.D., P.E., President
(504) 836-2155
jmartin@dei-engr.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.

Jim Martin, Ph.D., P.E., President
(504) 836-2155
jmartin@dei-engr.com

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

2 Administrative	___ Estimators	___ Specification Writers
___ Architects (Licensed)	___ Geologists	3 Structural Engineers
___ Chemical Engineers	___ Geotechnical Engineers	___ Graduate Engineers
4 Civil Engineers	___ Interior Designers	2 Project Managers
10 Construction Inspectors	___ Landscape Architects	2 Clerical
___ Ecologists	___ Land Surveyor	___ Grant/Funding Specialist
___ Electrical Engineers	___ Mechanical Engineers	___ Sanitary Engineers
4 Engineer Interns	___ Environmental Engineers	
___ Professional Land Surveyors		27 **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. N/A

2. N/A

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

YES ____ NO _X_

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. Eustis Engineering, L.L.C. 3011 28th St. Metairie, LA 70002	Geotechnical Services	Yes
2.		
3.		

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

1 personnel not listed in Section E (drafter) will also work on 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. 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:

Jim Martin, Ph.D., P.E.
President

Project Assignment:

Principal

Name of Firm with which associated:

Design Engineering, Inc.

Years' experience with this Firm:

8

Education: Degree(s)/Year/Specialization:

Old Dominion University – Coastal Engineering Certificate, 2010
Tulane University – Doctor of Philosophy, 2003
Tulane University – Masters of Science in Environmental Engineering, 2000
University of Alabama – Bachelor of Science, Civil Engineering, 1998

Active registration: Year first registered/discipline:

2004, Civil Engineering, Louisiana License #31281

Other experience and qualifications relevant to the proposed Project:

SEWERAGE AND WATER BOARD OF NEW ORLEANS, REPLACEMENT OF 8 EXISTING SEWAGE PUMPING STATIONS: Principal for the complete replacement of 8 sewer lift stations that were damaged during Hurricane Katrina (Lawrence, Bullard, Lake Forest, Dodt, Plum Orchard, Victoria Sewage Pumping Stations, Sewage Pumping Station No. 6 and Sewage Pumping Station No. 8). Each of these stations was a separate design, bid, and construction and each one presented its own unique challenges.

31ST AND JASPER SEWER LIFT STATION, KENNER: Principal for the design and construction of a 100% new station adjacent to the existing station while keeping the existing station operational nearly 100% of the time. The project was immediately adjacent to a traffic thoroughfare and also required innovative sequencing to limit the road closure to as short a period as possible.

CITY OF KENNER SEWER PROGRAM MANAGEMENT: As Project Manager, Dr. Martin was involved in every aspect of the City of Kenner Sewer Capital Program, including budgeting, approving and selling bonds, prioritizing projects, issuing contracts to consultants, managing consultants during design, reviewing plans during design, advertising for competitive bids, issuing contracts for construction, and managing construction projects through completion and closeout.

CITY OF SLIDELL SEWER MODEL: As Project Manager, Dr. Martin assembled a computational Sewer Model for the City of Slidell to allow them to determine how to best employ their available resources. The model was developed completely within a GIS framework and was calibrated with data available from the City SCADA system as well as with rain data. This involved becoming involved with every aspect of the City sewer system, including water billing, facility operations, department of public works, engineering, and capital project.

REGIONAL PLANNING COMMITTEE JOINT USE STUDY: As Project Manager, Dr. Martin developed a tabulation and mapped all available sewer and water facilities available within Orleans Parish, Plaquemines Parish, and Saint Bernard Parish. Calculations and analysis were performed in order to determine the feasibility of shared resources during times of crisis. The analysis included not only Sewer Treatment Plants and Water Purification Plans, but also all the associated network within proximity of the neighboring Parishes.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

John Holtgreve, P.E.
Executive Vice President

Project Assignment:

Project Manager

Name of Firm with which associated:

Design Engineering, Inc.

Years' experience with this Firm:

38

Education: Degree(s)/Year/Specialization:

BS, 1970, Civil Engineering, Tulane University
MCE, 1975, Civil Engineering, Tulane University

Active registration: Year first registered/discipline:

1976, Civil Engineering, Louisiana License #16383

Other experience and qualifications relevant to the proposed Project:

31ST AND JASPER SEWER LIFT STATION, KENNER: Project Manager for the design and construction of a **100% new lift station** adjacent to the existing station while keeping the existing lift station operational nearly 100% of the time. The project was immediately adjacent to a traffic thoroughfare and also required innovative sequencing to limit the road closure to as short a period as possible.

SEWERAGE AND WATER BOARD OF NEW ORLEANS, HURRICANE KATRINA RELATED 404 HAZARD MITIGATION GRANT PROGRAM REPLACEMENT OF EXISTING SEWAGE PUMPING STATIONS: Project Manager for the completion of Phase 1 of the HMGP project, including site specific topographic surveys, coordinating with utility companies to field verify existing facilities, hydraulic analysis and design, geotechnical engineering reports, preparation of a Preliminary Design Report (PDR) that served as the 30% schematic design for the project and serves as the basis for final design. Final design included preparation of detailed drawings, specifications, including contract and bid documents, and a construction cost estimate. DEI is responsible for the design of 800 linear feet of 24 inch gravity sewer pipe installed 20 feet below grade. 650 linear feet of the gravity sewer pipe will be installed through Micro tunneling and the other 150 linear feet will be installed by open trench. Through the latest hydraulic software and in-house computer programs, DEI was able to computationally model the replacement of the 8 sewer pump stations. (Lawrence, Bullard, Lake Forest, Dodt, Plum Orchard, Victoria Sewage Pumping Stations, Sewage Pumping Station No. 6 and Sewage Pumping Station No. 8)

SEWERAGE AND WATER BOARD OF NEW ORLEANS, HURRICANE KATRINA RELATED SEWER RESTORATION PROJECTS: Project Manager for assessing the damage to eight (8) sewage pumping stations, prepared a Preliminary Design Report and Contract Documents detailing the repairs and assisted the Sewerage and Water Board during the construction of these repairs ranging in size from 500 gpm to 5000 gpm.

UPTOWN AREA SEWER REHABILITATION PROGRAM FOR THE SEWERAGE AND WATER BOARD OF NEW ORLEANS: Project Manager responsible for providing professional services for over 700 line segments for the S&WB of New Orleans to determine the existing surface type and condition. This project included estimation of restoration qualities, and utility and servitude conflict, summation of quantities, preparation of a Preliminary Design Report. The work also contained point repairs, line replacement and repairs to approximately 700 line segments in the Uptown New Orleans Area.

VETERANS BOULEVARD IMPROVEMENTS, KENNER, LA: Project Manager for the widening of Veterans Boulevard from Williams Boulevard to Roosevelt Boulevard including addition of a n outside lane, major drainage, sewer and utility relocations. This project also included a major sewer force main that was constructed while maintaining flow in the existing sewer force main.

NORTHBOUND MANHATTAN BOULEVARD CONTINUOUS RIGHT TURN LANE: Project Manager for the construction of an additional asphaltic concrete northbound lane for Manhattan Boulevard (Gretna Blvd. to Westbank Expressway) with a concrete combination curb and gutter, subsurface drainage, **replacement of existing gravity sewer line**, relocation of existing 2000 LF of water line and 2000 LF of sewer force main, and removal and replacement of existing concrete walks and drives under heavy traffic conditions and electrical services. The project also involved acquisition of substantial properties.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Brett Liuzza, P.E., Engineer
Project Assignment:
Civil Engineer
Name of Firm with which associated:
Design Engineering, Inc.
Years' experience with this Firm:
10
Education: Degree(s)/Year/Specialization:
BS, 2008, Civil Engineering, Louisiana State University
Active registration: Year first registered/discipline:
2012/Civil Engineering, License #37753
Other experience and qualifications relevant to the proposed Project:

MACARTHUR DRIVE INTERCHANGE COMPLETION (ON AND OFF RAMPS FOR PETERS ROAD), JEFFERSON PARISH: (Role: Civil Engineer) Mr. Liuzza assisted with the design of an on and off ramp system for the Westbank Expressway and the relocation of Frontage Road. Responsibilities include geometric layout of roadway, right-of-way layout, drain line relocation up to 72" diameter, relocation of **10" sewer force main with 20" steel casing** horizontally drilled underneath four (4) lane highway, water line relocation, project quantities estimation and preparation of plans.

LAKESHORE DRIVE SHELTER NO. #3 REPLACEMENT PROJECT: Project Engineer responsible for the design a 13,690-square foot pile supported concrete Commercial Development with five (5) cast-in-place reinforced concrete canopy structures totaling 8,544 SF of covered area. Project involved separate men's and women's bathroom facilities, concrete sidewalk, site area lighting, new 3" water line, 6" water line relocation, gas line relocation, and a **3" sewer force main to tie into the existing sewer system** west of Franklin Avenue. The work also included the **installation of a sewer lift station** with electrical control panel, relocation of light standards with new foundations, grading site to drain to exiting drainage structures, and cleaning and flushing existing subsurface drainage lines and structures.

CHEVRON NORTHPARK DEVELOPMENT: Project Engineer responsible for the design of Commercial Development on the 20.0± acre site including **site grading to new retention ponds**, drainage design, water design, utility relocations and **gravity sewer design**. The drainage design included a series of pipes and catch basins that catch runoff from new buildings and green areas and outfall into new retention ponds. The **new gravity sewer** tied into an existing **gravity sewer system that flows into an existing lift station**. Also included was the pavement design and the geometric layout of the guest parking and site entrances for employees, guests, and deliveries.

HOLDEN SEWER PRELIMINARY ENGINEERING REPORT, HOLDEN, LA: Project Engineer responsible for the design of a sewer system in Holden, LA north of Interstate 12. The design included **gravity sewer, sewer force main and lift stations** to connect to an existing sewer treatment plant.

DENHAM SPRINGS SEWER PROJECT, DENHAM SPRINGS, LA: Project Engineer responsible for the design of a sewer system along LA Highway 1032. The design included **gravity sewer, sewer force main and lift stations** to connect to an existing city gravity sewer system.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Ben Bartlett, P.E., PTOE
Engineer

Project Assignment:

Project Engineer

Name of Firm with which associated:

Design Engineering, Inc.

Years' experience with this Firm:

7

Education: Degree(s)/Year/Specialization:

Auburn University – Masters of Civil Engineering, 2010
The Citadel – Bachelor of Science, Civil and Environmental Engineering, 2008

Active registration: Year first registered/discipline:

2014, Civil Engineering, Louisiana License No. 38980
2016, Professional Traffics Operations Engineer Certification No. 4020

Other experience and qualifications relevant to the proposed Project:

LAKESHORE DRIVE SHELTER NO. #3 REPLACEMENT PROJECT: Civil Engineer responsible for the design of a Commercial Development including site design, water design, gravity and **force main sewer design including a lift station**, permitting and approvals.

CITY OF KENNER SEWER PROGRAM MANAGEMENT: As Project Engineer, Mr. Bartlett was involved in every aspect of the City of Kenner Sewer Capital Program, including budgeting, approving and selling bonds, prioritizing projects, issuing contracts to consultants, managing consultants during design, reviewing plans during design, advertising for competitive bids, issuing contracts for construction, and managing construction projects through completion and closeout.

CITY OF KENNER SEWER LIFT STATION ASSESSMENT: As Project Engineer, Mr. Bartlett evaluated an existing **sewer lift station** and the area it serviced in the City of Kenner to determine the current capacity and future capacity requirements. The analysis provided suggested improvements to address existing lift stations deficiencies as well as provided suggestions to meet future service requirements. The report was utilized as the basis for implementing improvements to the lift station.

JEFFERSON PARISH UTILITY RELOCATION AT CAUSEWAY SOUTH SHORE: As Project Engineer, Mr. Bartlett was part of the design team (contracted by Jefferson Parish) responsible for the relocation of all Parish utilities between the South shore and 6th Street in order to facilitate the construction of a major hurricane protection feature. This included large drainage lines, **deep gravity sewer lines**, several HDD water lines, as well as coordination with the privately owned utilities in the area (Entergy, AT&T, Cox, TW Telecom, etc.).

OLD MANDEVILLE SHORELINE PROTECTION STUDY: Project Engineer, in the aftermath of Hurricane Isaac, the City of Mandeville received a grant to assess how best to protect its low lying areas along the North shore of Lake Pontchartrain. The existing drainage system for the City as well as its interaction with the Lake were analyzed and modeled. The analysis encompassed aspects ranging from protection structures and pumping capabilities to drainage, **power, and sewerage utilities**. The information gained from the models was utilized to provide the City with a report which provided a comprehensive overview of the existing system as well as proposed modifications to assist in mitigating issues related to flooding along the Old Mandeville lakefront.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Brent French, P.E., Engineer

Project Assignment:

Civil Engineer

Name of Firm with which associated:

Design Engineering, Inc.

Years' experience with this Firm:

9

Education: Degree(s)/Year/Specialization:

BS, 2011, Civil Engineering, University of Mississippi
MS, 2013, Engineering, University of Mississippi

Active registration: Year first registered/discipline:

2016, Civil Engineering, Louisiana License No. 41139

Other experience and qualifications relevant to the proposed Project:

LAKESHORE DRIVE SHELTER NO. #3 REPLACEMENT PROJECT: Engineer Intern responsible for assisting in the design of a Commercial Development including site design, water design, gravity and **force main sewer design including a lift station**, permitting and approvals.

31ST AND JASPER SEWER LIFT STATION, KENNER: Engineer Intern responsible for assisting in the design and construction of a 100% new lift station adjacent to the existing lift station while keeping the existing lift station operational nearly 100% of the time. The project was immediately adjacent to a traffic thoroughfare and also required innovative sequencing to limit the road closure to as short a period as possible.

SEWERAGE AND WATER BOARD OF NEW ORLEANS, REPLACEMENT OF 8 EXISTING SEWAGE PUMPING STATIONS: Engineer Intern responsible for assisting in the complete replacement of 8 sewer lift stations that were damaged during Hurricane Katrina (Lawrence, Bullard, Lake Forest, Dodt, Plum Orchard, Victoria Sewage Pumping Stations, Sewage Pumping Station No. 6 and Sewage Pumping Station No. 8). Each of these stations was a separate design, bid, and construction and each one presented its own unique challenges.

CHEVRON NORTHPARK DEVELOPMENT: Engineer Intern responsible for assisting in the design of a Commercial Development including site design, drainage design, water design and **gravity sewer design**.

MACARTHUR DRIVE INTERCHANGE COMPLETION – PHASE 1A (AT-GRADE ROADWAY): Engineer Intern responsible assisting with this massive highway and bridge demolition and reconstruction project in Jefferson Parish. The work includes the relocation of existing utilities, including the **relocation of a 10" sewer force main with 20" steel casing horizontally drilled underneath a four (4) lane highway**. This is of course only one of the features of a much larger project.

AIRLINE DRIVE DRAINAGE CROSSING ST. PETER'S DITCH: Engineer Intern responsible for assisting in the preparation of plans and technical specifications for contract bid and construction process. This project consisted of designing 365 feet of **major drainage improvements** adjacent to and across **Airline Drive**. Included in the work was the design of large drainage **junction boxes**, micro-tunneling or hand tunneling large diameter drain line across Airline Drive, **reinforced concrete box culverts** and transition structures. DEI provided hydraulic analysis of the drainage system across Airline Drive.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Max Shukla, P.E.
Senior Engineer

Project Assignment:

Structural Engineer

Name of Firm with which associated:

Design Engineering, Inc.

Years' experience with this Firm:

36

Education: Degree(s)/Year/Specialization:

BS, 1960, Civil Engineering, M.S. University, Baroda, India
MS, 1969, Civil Engineering, M.S. University, Baroda, India

Active registration: Year first registered/discipline:

1978, Civil Engineering, Louisiana License No. 17008

Other experience and qualifications relevant to the proposed Project:

31ST AND JASPER SEWER LIFT STATION, KENNER: Structural Engineer responsible for the design and construction of a **100% new lift station** adjacent to the existing station while keeping the existing lift station operational nearly 100% of the time. The project was immediately adjacent to a traffic thoroughfare and also required innovative sequencing to limit the road closure to as short a period as possible.

SEWERAGE AND WATER BOARD OF NEW ORLEANS, HURRICANE KATRINA RELATED SEWER RESTORATION PROJECTS: Structural Engineer for this project which consisted of assessing the damage to eight (8) sewage pumping stations, prepared a Preliminary Design Report and Contract Documents detailing the repairs and assisted the Sewerage and Water Board during the construction of these repairs ranging in size from 500 gpm to 5000 gpm.

WASTE WATER TREATMENT PLANT AT PARISH LINE (EFFLUENT PUMP STATION), KENNER, LA: Structural Engineer for the design of a new intake structure at the parish line for the City of Kenner. Mr. Shukla's responsibilities for this. project included, engineering during construction which involved revisions to the intake structure, processing shop drawings and providing details due to construction problems

VETERANS BOULEVARD IMPROVEMENTS, KENNER, LA: Structural Engineer for the widening of Veterans Boulevard from Williams Boulevard to Roosevelt Boulevard including addition of a n outside lane, major drainage, sewer and utility relocations. This project also included **a major sewer force main** that was constructed while maintaining flow in the existing sewer force main.

NORTHPARK - PHASES I AND II, COVINGTON, LOUISIANA: Structural Engineer for 150 acre industrial subdivision, including the design of roadways and subsurface drainage, 5000 LF of 8" and 12", water distribution and fire protection system, a 150,000 gallon water storage tank, sewerage lift stations, 5000 LF of 8" ∅ gravity sewer line, and **1800 LF 8" diameter force mains and sewerage treatment plant.**

NORTHBOUND MANHATTAN BOULEVARD CONTINUOUS RIGHT TURN LANE: Structural Engineer for the construction of an additional asphaltic concrete northbound lane for Manhattan Boulevard (Gretna Boulevard to Westbank Expressway) with a concrete combination curb and gutter, subsurface drainage, replacement of existing gravity sewer line, relocation of existing 2000 LF of water line and **2000 LF of sewer force main**, and removal and replacement of existing concrete walks and drives under heavy traffic conditions and electrical services. The project also involved acquisition of substantial properties.

MACARTHUR DRIVE INTERCHANGE COMPLETION – PHASE 1A (AT-GRADE ROADWAY): Engineer Intern responsible assisting with this massive highway and bridge demolition and reconstruction project in Jefferson Parish. The work includes the relocation of existing utilities, including the **relocation of a 10" sewer force main with 20" steel casing horizontally drilled underneath a four (4) lane highway**. This is of course only one of the features of a much larger project.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Jay Rafferty
Construction Manager

Project Assignment:

Construction Manager

Name of Firm with which associated:

Design Engineering, Inc.

Years' experience with this Firm:

2

Education: Degree(s)/Year/Specialization:

BS, 1997, Industrial Technology, Southeastern University

Active registration: Year first registered/discipline:

N/A

Other experience and qualifications relevant to the proposed Project:

LAKE PONTCHARTRAIN AND VICINITY 106 CITRUS LAKE FLOOD WALL: Mr. Rafferty was the Construction Project Manager/Project Coordinator for this project. Mr. Rafferty's responsibilities consisted of managing, scheduling, and coordinating field activities for fifty (50) plus employees. He was also the QC Manager Representative for the US Army Corp of Engineers for this project. His responsibilities included interviewing, training, drug screening, background checking, hiring, and termination of field personnel.

ST. ANDREW STREET WHARF EROSION MITIGATION PROJECT, PORT OF NEW ORLEANS, LA: Mr. Rafferty was the Construction Inspector for this project. This project encompassed the construction of an approximately 1600-foot-long and 50-foot-deep steel sheet pile wall with a reinforced concrete pile cap along the roadway side of the St. Andrew Street Wharf and associated roadway construction. Mr. Rafferty was responsible for preparing daily reports, inspecting the progress of the work to ensure that the contractor complied with the requirements of the plans and specifications, and attending all project meetings.

USACE NO. LPV 04.2 & 2B LPV 05.2B: ST. CHARLES LEVEE REACH 1A LPV 04.2 & 2B LPV 05.2B: Mr. Rafferty was the Construction Project Manager/Project Coordinator for this project. Mr. Rafferty's responsibilities consisted of managing, scheduling, and coordinating field activities for fifty (50) plus employees. He was also the QC Manager Representative for the US Army Corp of Engineers for this project. Mr. Rafferty's responsibilities included interviewing, training, drug screening, background checking, hiring, and termination of field personnel.

USACE NO. WBV-07: PLANTERS PUMP STATION: Mr. Rafferty was the Construction Project Manager/Project Coordinator for this project. Mr. Rafferty's responsibilities consisted of managing, scheduling, and coordinating field activities for more than fifty (50) field personnel. He was also the QC Manager Representative for the US Army Corp of Engineers for this project. He was responsible for interviewing, training, drug screening, background checking, hiring, and termination of field personnel.

SOUTHBOUND CAUSEWAY SAFETY RAIL IMPROVEMENTS: Mr. Rafferty provides resident inspection for the improvement of the existing bridge railing system to MASH Test Level 4, the repair of damaged concrete railing, replacement of impact attenuators, relocation of signs and supports, modification of call boxes, installation of pavement markings, and installation of access platforms. CE&I: construction administration includes organization of progress meetings, review of submittals (e.g. Construction Schedules, RFIs, Plan Changes, and Materials), and processing partial pay estimates. Resident inspection includes observation of construction activities (e.g. 48 miles of bridge rail fabrication and installation, 138,000 epoxied anchor rods, and repair of damaged concrete rail), production of daily reports, review of TTC installation/removal, and review of on-site safety.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Jeffrey Monfrey
Certified Inspector

Project Assignment:

Resident Inspector

Name of Firm with which associated:

Design Engineering, Inc.

Years' experience with this Firm:

3

Education: Degree(s)/Year/Specialization:

Certifications: LADOTD Structural Concrete Inspector, LADOTD Embankment and Base Course Inspector, LADOTD PCC Paving Inspector, LADOTD Asphalt Paving Inspector/Technician, ATSSA Flagger, ATSSA Traffic Control Supervisor

Active registration: Year first registered/discipline:

N/A

Other experience and qualifications relevant to the proposed Project:

SOUTHBOUND CAUSEWAY SAFETY RAILS: Mr. Monfrey provided resident inspection for the improvement of the existing bridge railing system to MASH Test Level 4, the repair of damaged concrete railing, replacement of impact attenuators, relocation of signs and supports, modification of call boxes, installation of pavement markings, and installation of access platforms. Construction Administration included organization of progress meetings, review of submittals (e.g., Construction Schedules, RFIs, Plan Changes, and Materials), and processing of partial pay estimates. Resident Inspection included observation of construction activities (e.g., 48 miles of bridge rail fabrication and installation, 138,000 epoxied anchor rods, and repair of damaged concrete rail), production of daily reports, review of TTC installation/removal, and review of on-site safety.

WEST LAROSE VERTICAL LIFT BRIDGE REHABILITATION, ROUTE LA 1, LAFOURCHE PARISH, LA.: Inspector – Mr. Monfrey as the lead inspector for the traffic control, structural repairs and Site Manager for this project. He coordinated the painting and environmental operations as the lead inspector.

SUBMERGED ROAD PROGRAM, JEFFERSON PARISH, LA.: Mr. Monfrey served as the Construction Inspector for the Submerged Road Program in Jefferson Parish, Louisiana. This project consisted of design, construction administration and resident inspection of the Streets Improvement Program for specific projects located throughout Council Districts 1, 2, and 5 in Jefferson Parish.

HUEY P. LONG BRIDGE WIDENING, JEFFERSON PARISH, LA.: Mr. Monfrey was a Senior Bridge Inspector assigned to the Huey P. Long Bridge widening projects. He supervised the inspection of structural steel erection and bolting, structural concrete construction, embankment and base course construction, concrete paving, and asphaltic concrete paving. This project involved the widening of the current bridge to include three 11-foot travel lanes in each direction, with the addition of inside and outside shoulders. The construction plans called for no additional pier foundations for the main river bridge, but rather widening of pier shafts above the existing caisson foundations and the addition of two new parallel trusses to accommodate the widened roadway along the main bridge. For the approaches, new parallel structures were built to accommodate the new roadways. Cost: $5.2B (construction).

WESTWOOD DRIVE (WB EXPRESSWAY TO LAPALCO): Mr. Monfrey provides construction inspection for the construction of 0.648 miles of roadway which includes 20,516 SY of Portland Cement Concrete Pavement with barrier curb, mountable curb and gutter, including Class II base course, drainage pipes and structures, sanitary sewer and related work, and tie-in to the existing Westbank Expressway on the north end and Lapalco Blvd. on the south end. Mr. Monfrey's responsibilities include maintaining all construction field records; make daily entries in the project diary to indicate the contractor's personnel and equipment being utilized on the project, the work being accepted, the acceptability of traffic control, and the charging of contract time.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Jeff Puissegur
Inspector

Project Assignment:

Resident Inspector

Name of Firm with which associated:

Design Engineering, Inc.

Years' experience with this Firm:

10

Education: Degree(s)/Year/Specialization:

Associates of Arts, Business Management, Tulane University
Bachelor of Arts, Major in Business Management, Minor in Arts & Business, Tulane University Completed ATSSA Work Zone Traffic Control Technician and ATSSA Traffic Control Supervisor and Flagger Course

Active registration: Year first registered/discipline:

N/A

Other experience and qualifications relevant to the proposed Project:

AIRLINE PARK BOULEVARD (CAMPHOR TO WEST NAPOLEON): Mr. Puissegur is the Resident Inspector for the construction of 0.390 miles of roadway which includes grading, drainage structures, milling asphalt pavement, pavement patching, class ii base course, scarifying and compacting roadbed, asphalt concrete pavement, Portland Cement Concrete Pavement, cofferdams, storm water pumping station, and related work on Airline Park Boulevard from north of its intersection with Camphor St. to its junction with W. Napoleon Ave. Mr. Puissegur prepares daily reports which are recorded through LADOTD Site Manager, inspect the progress of the work to ensure that the Contractor complies with the requirements of the plans and specifications and attends all the progress meetings. Further, Mr. Puissegur writes in his daily diary items of work performed for the day and the comparison of quantities installed with the Contractor.

LAKE FOREST BOULEVARD: Resident Inspector for the construction of approximately 638 LF of Portland Cement Concrete Pavement with barrier curb, barrier rails and retaining wall, furnishing, installing, and cleaning pipe, pipe arch, storm drains and **sewers**. including drainage pipes and structures and tie-in to the existing Westbound concrete pavement at Lake Forest Boulevard. Also, approximately 624 LF of the existing Eastbound asphaltic concrete pavement on Lake Forest Boulevard was removed by milling and overlayed with 2" asphaltic concrete wearing course, to develop a 2.5% cross slope. Pavement striping, sign and legends and symbols are included. Mr. Puissegur prepares daily reports which are recorded through LADOTD Site Manager, inspect the progress of the work to ensure that the Contractor complies with the requirements of the plans and specifications and attends all the progress meetings. Further, Mr. Puissegur writes in his daily diary items of work performed for the day and the comparison of quantities installed with the Contractor.

AIRLINE DRIVE DRAINAGE CROSSING ST. PETER'S DITCH: Resident Inspector responsible for the quality assurance in the construction of 365 feet of drainage improvements adjacent to and across Airline Drive, including the construction of large drainage junction boxes, micro-tunneling or hand tunneling large diameter drain line across Airline Drive, reinforced concrete box culverts and transition structures. Mr. Puissegur prepared daily reports through LADOTD Site Manager, inspected the progress of the work to ensure that the contractor complied with the requirements of the plans and specifications and attend all project meetings.

JEFFERSON PARISH SUBMERGED ROADWAYS PROGRAM: Resident Inspector for damage evaluation due to Hurricane Katrina and roadway reconstruction of eighty-five (85) concrete streets and eight (8) miles of asphalt roadway repair within Council District 3. Design Engineering's responsibilities include Site Evaluations, Preliminary Plans, Final Plans, Construction Administration and Resident Inspection. During site evaluations DEI noted settlement, and surface condition and verified the degree and severity of damage described in FEMA Project Work Sheets. Considerations during the design phase was tree root impacts on the existing roadway, addition and/or repair of sidewalks, driveways and handicap ramps and adjustment of all drainage structures within the roadway limits. Mr. Puissegur prepared daily reports through LADOTD Site Manager, inspected the progress of the work to ensure that the contractor complied with the requirements of the plans and specifications and attend all project meetings.

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:
31st & Jasper Sewer Lift Station **Kenner, LA** Ms. Laney Rivera (504) 838-6009 3445 N Causeway Blvd., Suite 401 Metairie, LA 70002  	Design Engineering, Inc. (DEI) was contracted by the City of Kenner Department of Public Works to provide engineering services during the design and bidding of 31st and Jasper Sewer Lift Station. Included in this project was the replacement of the existing 31st and Jasper (4220) sewer lift station with a new submersible pump type lift station and connection to the existing 8" diameter sewer force main. The work included demolition of the existing lift station and approximately 46 linear feet of 10" diameter gravity sewer pipe, construction of a pile supported wet well including new submersible pumps, construction of a pile supported collection sewer manhole and 47 linear feet of gravity sewer main, motors and pumps, the construction of a pile supported valve pit, and the installation of a new control panel, fence, and hatch covers. **The sewer force main work included the construction of 38 linear feet of 8" ductile iron force main and provided an Emergency Pump Out manhole as called out in the plans. The gravity sewer work also included raising the invert in an existing sewer manhole approximately four (4) feet.** DEI was responsible for the preparation of a memorandum to summarize the results of the following specific tasks: ✓ Evaluate the existing lift station tributary area ✓ Review existing information and related projects. ✓ Establish a basis of design ✓ Estimate design flows ✓ Compare upgrading existing station with constructing new station ✓ Develop a conceptual design of the station and related piping ✓ Select a location for the station ✓ Develop preliminary design concept and drawings ✓ Develop a preliminary cost estimate ✓ Identify permitting and other constructability requirements DEI prepared all the required plans and specifications for the project which completed construction in April of 2015.

Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2015	$1,100,000.00	$1,100,000.00

PROJECT NO. 2	
Project Name, Location and Owner's contact information:	**Nature of Firm's Responsibility:**
Sewerage and Water Board of New Orleans, Hurricane Katrina Related 404 Hazard Mitigation Grant Program Replacement of Eight (8) Existing Sewage Pumping Stations Chris Bergeron Sewerage and Water Board of New Orleans 625 St. Joseph Street New Orleans, LA (504) 865-0630	The Sewerage and Water Board of New Orleans contracted with Design Engineering, Inc. to provide professional engineering services to complete Phase 1 of the HMGP project, including site specific topographic surveys, coordinating with utility companies to field verify existing facilities, hydraulic analysis and design, geotechnical engineering reports, preparation of a Preliminary Design Report (PDR) to serve as the 30% schematic design for the project and serve as the basis for final design. Final design includes preparation of detailed drawings, specifications, including contract and bid documents, and a construction cost estimate. DEI is responsible for the design of 800 linear feet of 24-inch gravity sewer pipe installed 20 feet below grade. **650 linear feet of the gravity sewer pipe will be installed through Micro tunneling and the other 150 linear feet will be installed by open trench.** The Phase I Preliminary Design Report (PDR) specifically addresses constructing new elevated facilities at the following sewage pumping stations located in the City of New Orleans: 1) Lawrence Sewage Pumping Station, 7900 Morrison Road; 2) Bullard Sewage Pumping Station, 5501 Bullard Road; 3) Lake Forest Sewage Pumping Station, 10451 Lake Forest Boulevard; 4) Dodt Sewage Pumping Station, 8188 Chef Menteur Highway; 5) Plum Orchard Sewage Pumping Station, 7300 Chef Menteur Highway; 6) Victoria Sewage Pumping Station, 3620 Victoria Street; 7) Sewage Pumping Station No. 6, 242 South Solomon Street; 8) Sewage Pumping Station No. 8, Broad Street at Toulouse Street. The new sewage pump station buildings are intended to be simply designed and durable. The above ground buildings will protect pump equipment, electrical and electronic equipment, piping, and valves; while providing safe maintenance access.
 	

Completion Date (Actual or estimated):	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
2016	$14,860,000.00	$14,860,000.00

PROJECT NO. 3	
Project Name, Location and Owner's contact information:	**Nature of Firm's Responsibility:**
Lakeshore Drive Shelter No. 3 Replacement Project **New Orleans, LA** Orleans Levee District - Non-Flood Protection Asset Management Authority 6514 Spanish Fort Blvd. New Orleans, LA (504)	Design Engineering was responsible for the documentation of existing conditions and program development; site investigations, research plans of previous facility, code research, permit agencies, meeting with levee board personnel and others to define program; develop concept and plan, develop schematic plans, develop three (3) design concepts, develop site utilities (water electrical drainage & sewer), civil/site and access improvements (sidewalk, handicap ramps, parking, excavation and embankment), develop landscape plan, develop preliminary foundation plan, coordinate with architect, landscape architect and electrical engineer, and prepare preliminary construction cost estimate. The work included a 13,690 square foot pile supported concrete slab and five (5) cast-in-place reinforced concrete canopy structures totaling 8,544 SF of covered area. Project involved separate men's and women's bathroom facilities, concrete sidewalk, site area lighting, new 3" water line, 6" water line relocation, gas line relocation, and a **3" sewer force main to tie into the existing sewer system** west of Franklin Avenue. The work also included the **installation of a sewer lift station** with electrical control panel, relocation of light standards with new foundations, grading site to drain to exiting drainage structures, and cleaning and flushing existing subsurface drainage lines and structures.
 	

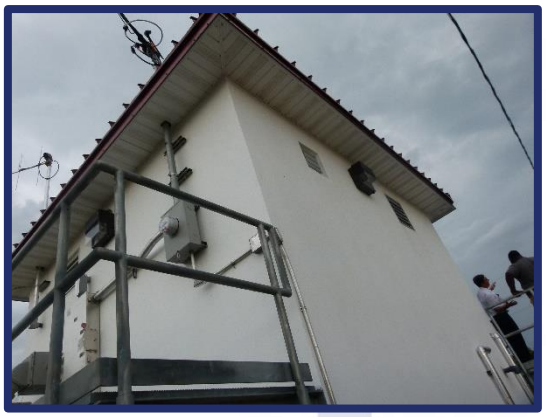
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	**Work for which Firm was Responsible:**
2016	$1,400,000.00	$1,400,000.00

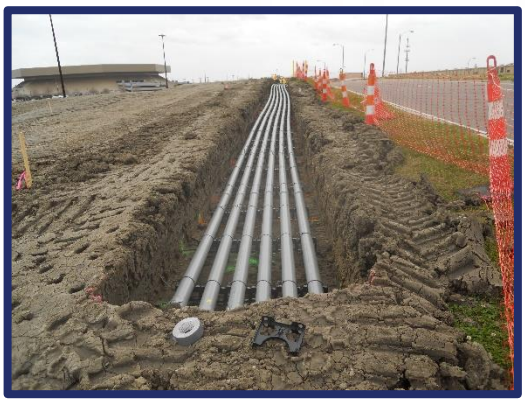
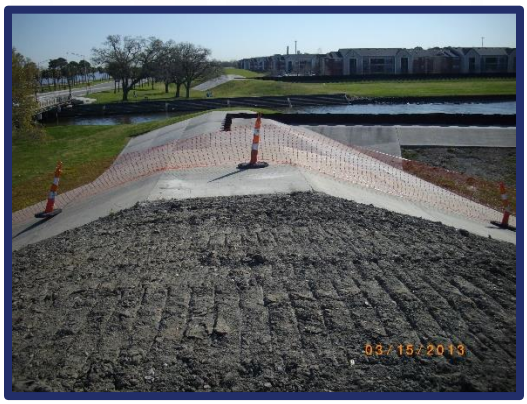
PROJECT NO. 4		
Project Name, Location and Owner's contact information:	**Nature of Firm's Responsibility:**	
Uptown Area Sewer Rehabilitation Project New Orleans, Louisiana (Pumping Stations and Force Mains) Sewerage and Water Board of New Orleans 625 St. Joseph Street New Orleans, LA (504) 865-0630  	Design Engineering, Inc. provided professional services for over **700 line segments** for the Sewerage and Water Board of New Orleans to determine the existing surface type and condition. This project included estimation of restoration qualities, and utility and servitude conflict, summation of quantities, preparation of a Preliminary Design Report. The work also contained point repairs, line replacement and repairs to approximately 700 line segments in the Uptown New Orleans Area. DEI was responsible for: • Tabulating the Summary of Quantities Sheet and preparing cost estimate for the entire Uptown Basin. • Listing the line segments that will potentially require servitudes or easements. • The preparation of a summary of quantities for the surface items and pipe replacement and repair items. • Updating the unit prices that were approved by the Sewerage and Water Board of New Orleans. And, Design Engineering, Inc. (DEI) provided services to the Sewerage and Water Board of New Orleans for plans and specifications for the following Sewer System Rehabilitation projects: • **Upgrade of Sewage Pumping Station No. 20.** This project consisted of developing design criteria, design flows, total dynamic head, and wet well capacity for PS No. 20. Also, the firm designed pumps and motors to handle the computed flows and replace exiting pumping station piping. This project included hydraulic analysis for multiple pump stations using a common force main. 3,000 gpm minimum flow; 4,250 gpm maximum flow. • **18" Sewer Force Main from Sewage Pump Station No. 20 to Sewage Pump Station No. 21.** This project included preparation of preliminary and final design for 5,150 L.F of 18-inch diameter sewer force main in a residential area (Lakeview) in the City of New Orleans. The project consisted of design as well as necessary permits to the state and agencies and the City of New Orleans. • **Contract 3813 Phase 3 Capacity Projects: New Sewer Force Main from SPS 3 to South Carrollton Avenue; Carrollton Avenue to Audubon Street.** This project consisted of preparation of preliminary design report and final construction documents for and **18-inch Sewer Force Main** approximately 4,550 feet in length. The firm developed the size of Sewer Force Main from the hydraulic analysis, calculation flows, and the preparation of plans and specifications for construction. Also, included in this project was directional drill across 200 wide R-O-W of heavily traveled Carrollton Avenue.	
Completion Date (Actual or estimated):	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
2003	$10,000,000.00	$2,500,000.00

PROJECT NO. 5	
Project Name, Location and Owner's contact information:	**Nature of Firm's Responsibility:**
Sewage Pumping Station No. 8 **New Orleans, Louisiana** Chris Bergeron Sewerage and Water Board of New Orleans 625 St. Joseph Street New Orleans, LA (504) 865-0630   	The Sewerage and Water Board of New Orleans contracted As part of Phase 1 of the Hazard Mitigation Grant Program, the Sewerage and Water Board of New Orleans contracted with Design Engineering, Inc. to provide professional engineering services to prepare contract and bid documents necessary to construct a new elevated sewage pumping station on a parcel of land approximately 800 feet from the site of the existing below ground pumping station. The project included a site specific topographic survey, geotechnical engineering report, and the preparation of a preliminary design to serve as the 30% schematic design for the project and the basis for final design. Final design included: • Providing hydraulic, structural, and electrical design • Preparing detailed drawings and specifications • Preparing contract and bid documents • Preparing construction cost estimates DEI provided hydraulic design that included: calculation of flow rates; determination of static and dynamic head losses; selection of pump and motor sizes; sizing of intake and discharge piping; review of flow distribution to multiple intake pumps; sizing of air release valves and backflow preventer valves; and sizing of the wet well for required flow capacities. Structural design of the building encompassed pile foundation design, uplift design, reinforced concrete wall design, and roof design. The new bi-level sewage pump station building was designed to protect the pump equipment within a dry-proofed reinforced concrete vault, with the top of the vault set to the current 500-year flood elevation. The building was designed to withstand a 130-mph wind load. The control and electrical equipment can be found on the upper level of the station, with the floor elevation of this level also set to the current 500-year flood elevation. The pumping capacity for this station is 5,000 GPM. The contract includes the design of 800 linear feet of 24-inch diameter gravity sewer pipe installed 20 feet below grade. Due to the physical constraints and depth of the pipe, a majority of this pipe will be installed using trenchless technology that can control the location of the tunneling to within one (1) inch vertically and horizontally of its intended elevation. The construction cost for this project is $4,032,176.00
Completion Date (Actual or estimated):	**Estimated Cost:**
	Entire Project: / **Work for which Firm was Responsible:**
2019	$4,032,176.00 / $4,032,176.00

PROJECT NO. 6	
Project Name, Location and Owner's contact information:	**Nature of Firm's Responsibility:**
Northbound Manhattan Blvd. **Continuous Right Turn Lane** **Jefferson Parish, LA** Juan Gutierrez Jefferson Parish Engineering 1221 Elmwood Park Blvd. Jefferson, LA (504) 736-6505	DEI was responsible for the Feasibility Study, Preliminary Plans, Final Plans, Construction Engineering, and Resident Inspection for this project which included construction of an additional asphalt concrete northbound lane for Manhattan Boulevard (Gretna Boulevard to West Bank Expressway) with a concrete combination curb and gutter, subsurface drainage, **replacement of existing gravity sewer line**, relocate 2000 LF of water line and **2000 LF of sewer force main**, and removal and replacement of existing concrete walks and drives under heavy traffic conditions and electrical services. The project also involved acquisition of substantial properties. Design Phase: The design phase included the design of an additional lane of vehicular traffic to the Northbound Manhattan Boulevard from Gretna Boulevard to US Highway 90 Business (South Side). This lane (roughly 1 mile long) was added to the property side of the existing roadway. The added lane begins at Gretna Boulevard and ends as a right turn lane at US Hwy 90 B Eastbound (West Bank Expressway). The project has dramatically reduced congestion on Manhattan Boulevard. Construction Phase: During this phase, DEI performed construction contract administration, construction engineering and resident inspection services. Work included the replacement and/or relocation of underground utilities beneath the additional lane, while having the existing two (2) traffic lanes open at all times (other than night work between 10:00pm to 6:00am). Construction continued 7 days a week for approximately 8 months. Also included in this project was the placement of new 12" sub-base, 12" base course and 12" asphaltic concrete and new driveways. DEI coordinated with the contractor to minimize interruptions while working on driveways, traffic signalization, asphalt placement (at night) and pavement striping (at night). Manhattan is a heavy traffic main corridor for the West Bank of Jefferson Parish. We provided services to assist the contractor in working weekends, nights and as necessary to accommodate up to six (6) crews working 24 hour schedules. We understood the need to be flexible with the work schedule at locations like these. The project was completed over 1 month ahead of the substantial completion date and it was on budget.
  	

Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	**Work for which Firm was Responsible:**
2012	$3,783,450.00	$3,783,450.00

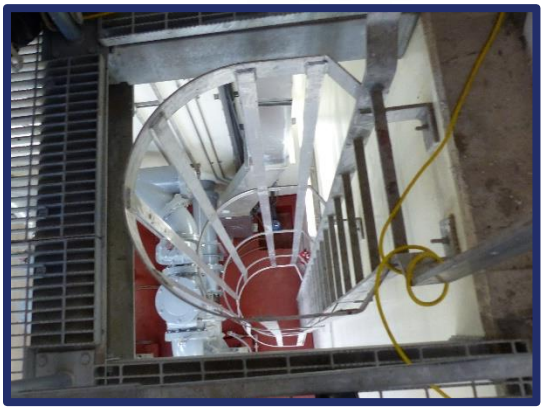
PROJECT NO. 7		
Project Name, Location and Owner's contact information:	**Nature of Firm's Responsibility:**	
Plum Orchard Sewage Pumping Station New Orleans, LA Chris Bergeron Sewerage and Water Board of New Orleans 625 St. Joseph Street New Orleans, LA (504) 865-0630	Design Engineering, Inc. was responsible for the preparation of contract and bid documents essential to build a new elevated pumping station at the site of the existing below ground pumping station. The project included a site specific topographic survey, geotechnical engineering report, and the preparation of a preliminary design to serve as the 30% schematic design for the project and the basis for final design. Final design included: • Providing hydraulic, structural, and electrical design • Preparing detailed drawings and specifications • Preparing contract and bid documents • Preparing construction cost estimates DEI also provided the hydraulic design that included the calculation of flow rates, determination of static and dynamic head losses, selection of pump and motor sizes, sizing of intake and discharge piping, review of flow distribution to multiple intake pumps, sizing of air release valves and backflow preventer valves, and sizing of the wet well for required flow capacities. Structural design of the building encompassed pile foundation design, uplift design, reinforced concrete wall design, and roof design. The new bi-level sewage pump station building was designed to protect the pump equipment within a dry-proofed reinforced concrete vault, with the top of the vault set to the current 500-year flood elevation. The building was designed to withstand a 130 mph wind load. The control and electrical equipment is located on the upper level of the station, with the floor elevation of this level also set to the current 500-year flood elevation. The pumping capacity for this Pumping Station was 500 GPM.	
 		
Completion Date (Actual or estimated):	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
2016	$1,126,180.00	$1,126,180.00

PROJECT NO. 8	
Project Name, Location and Owner's contact information:	**Nature of Firm's Responsibility:**
Lakefront Utility Completion Project **New Orleans, LA** Orleans Levee District – Non Flood Asset Management Authority 6514 Spanish Fort Blvd. New Orleans, LA	This project included the design, construction administration, and resident inspection services for 14 utility services that provide water, sewerage, and electricity to the shelter houses along Lakeshore Drive. Included in the Utility Completion Project is 1,900 linear feet of 8" HDPE water main, **1,000 linear feet of 3" DHPE sewer force main, 300 linear feet of 6" gravity sewer main,** and three (3) pump stations. Sewage from the shelter houses (floodside) are pumped by the lift stations over the levee to the Sewerage and Water Board system on the protected side. The lakefront levee is the primary flood protection system for New Orleans and is approximately 25 feet in height. The levee crossings were installed in accordance with the requirements of the US Army Corps of Engineers. All buried utilities crossing the levee were installed above the design levee elevations.
	
	

Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	**Work for which Firm was Responsible:**
2014	$1,459,000.00	$1,459,000.00

PROJECT NO. 9	
Project Name, Location and Owner's contact information:	**Nature of Firm's Responsibility:**
Sewage Pumping Station No. 6 New Orleans, LA Chris Bergeron Sewerage and Water Board of New Orleans 625 St. Joseph Street New Orleans, LA (504) 865-0630	The Sewerage and Water Board of New Orleans contracted with Design Engineering, Inc. to provide professional engineering services to prepare contract and bid documents necessary to construct a new elevated pumping station at the site of the existing below ground pumping station, as part of Phase I of the Hazard Mitigation Grant Program. Preparation of these documents included a site-specific topographic survey, geotechnical engineering report, and the preparation of a preliminary design to serve as the 30% schematic design for the project and the basis for final design. Final design included hydraulic design, structural design, electrical design, preparation of detailed drawings, specifications, contract and bid documents, and a construction cost estimate. Hydraulic design included calculation of flow rates, determination of static and dynamic head losses, selection of pump and motor sizes, sizing of intake and discharge piping, review of flow distribution to multiple intake pumps, sizing of air release valves and backflow preventer valves, and sizing of the wet well for required flow capacities. Structural design of the building included pile foundation design, uplift design, reinforced concrete wall design, and roof design. The building was designed to withstand a 130-mph wind load. The new bi-level sewage pump station building was designed to protect the pump equipment within a dry-proofed reinforced concrete vault, with the top of the vault set to the current 500-year flood elevation. The control and electrical equipment is located on the upper level of the station, with the floor elevation of this level also set to the current 500-year flood elevation. The pumping capacity for this station was 5,200 GPM.
 	

Completion Date (Actual or estimated):	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
2016	$2,900,900.00	$2,900,900.00

PROJECT NO. 10		
Project Name, Location and Owner's contact information:	**Nature of Firm's Responsibility:**	
Lawrence Sewage Pumping Station New Orleans, LA Chris Bergeron Sewerage and Water Board of New Orleans 625 St. Joseph Street New Orleans, LA (504) 865-0630	As part of Phase 1 of the Hazard Mitigation Grant Program, the Sewerage and Water Board of New Orleans contracted with Design Engineering, Inc. to provide professional engineering services to prepare contract and bid documents necessary to construct a new elevated pumping station at the site of the existing below ground pumping station. The project included a site-specific topographic survey, geotechnical engineering report, and the preparation of a preliminary design to serve as the 30% schematic design for the project and the basis for final design. Final design included hydraulic design, structural design, electrical design, preparation of detailed drawings, specifications, contract and bid documents, and a construction cost estimate. Hydraulic design comprised the calculation of flow rates, determination of static and dynamic head losses, selection of pump and motor sizes, sizing of intake and discharge piping, review of flow distribution to multiple intake pumps, sizing of air release valves and backflow preventer valves, and sizing of the wet well for required flow capacities. Structural design of the building encompassed pile foundation design, uplift design, reinforced concrete wall design, and roof design. The new bi-level sewage pump station building was designed to protect the pump equipment within a dry-proofed reinforced concrete vault, with the top of the vault set to the current 500-year flood elevation. The building was designed to withstand a 130 mph wind load. The control and electrical equipment is located on the upper level of the station, with the floor elevation of this level also set to the current 500-year flood elevation. The pumping capacity for this station was 2,700 GPM.	
 		
Completion Date (Actual or estimated):	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
2016	$1,396,500.00	$1,396,500.00

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		
2.		
3.		
4.		

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

Design Engineering, Inc. (DEI) has been engaged in the engineering business in Jefferson Parish for over 38 years. During these 38 years, DEI has focused much of its efforts in designing and constructing numerous large and complex sewer projects. DEI has worked successfully with Jefferson Parish and other local agencies on a variety of sewer projects. DEI is well-versed in the challenges and complications of the project and has the technical expertise to produce successfully for Jefferson Parish.

MINIMUM REQUIREMENTS FOR SELECTION

1) One principal who is a professional engineer who shall be registered as such in Louisiana.

Design Engineering, Inc. has several personnel that meet this requirement. For the sake of brevity, we have included only Dr. Martin. ***Jim Martin, Ph.D., P.E.*** has over 15 years of design and management experience with Civil Engineering **Sewer** projects and is a Registered Professional Engineer in the State of Louisiana with a doctorate degree in hydraulics (specifically researching open channel flows).

2) A professional in charge of the project who is a professional engineer who shall be registered as such in Louisiana with a minimum of five (5) years experience in the disciplines involved.

Design Engineering, Inc. has several personnel that meet this requirement. For the sake of brevity, we have included only Mr. Holtgreve. ***John Holtgreve, P.E.*** has over 38 years of design and management

experience with Jefferson Parish Sewer projects and is a Registered Professional Engineer in the State of Louisiana with vast experience in roadway design, highway design, drainage improvements, water and **sewer systems**, flood control projects, underground utilities, and bridge design projects.

3) One employee who is a professional engineer registered as such in Louisiana in the field or fields of expertise required for the project (A sub-consultant may meet the requirement only if the advertised project involves more than one discipline.)

Design Engineering, Inc. (DEI) has six (6) full-time professional engineers registered in the State of Louisiana with over 135 years combined experience in sewer design, lift stations design and pump station design. DEI will make available as many as all six (6) professional engineers for this project.

EVALUATION CRITERIA

1) PROFESSIONAL TRAINING AND EXPERIENCE (35 POINTS):

Design Engineering, Inc. (DEI) has extensive local project experience and specialized engineering and design experience for **sewer** projects. DEI presently has on staff the technical, supervisory and administrative personnel to provide professional engineering services related to sewer projects and can assure the expeditious handling of the work.

For many years the DEI staff has executed design and construction administration of key projects throughout Jefferson Parish with success. DEI personnel are prepared to address the challenging issues of cost and time that face the Jefferson Parish Department of Public Works specific to this project.

We have pointed out some of our significant key projects for which we have provided important design. Our engineering and management staff has designed and constructed all of the projects presented. We list some of the personnel below who have been significantly involved in the process.

Jim Martin, Ph.D., P.E., is President of Design Engineering, Inc. and has over 20 years of experience in Design and Construction of Civil Engineering projects throughout the State of Louisiana. From the very beginning of his career, sewer projects have been an emphasis. (Please note the projects in his resume contained herein.) Dr. Martin holds an undergraduate degree in Civil Engineering from the University of Alabama, a Masters from Tulane University in Environmental Engineering, and a Doctorate from Tulane (primarily based on fluids research). Dr. Martin is a registered Professional Engineer in Louisiana, Alabama, and Georgia and is President of the New Orleans Chapter of American Consulting Engineers Council/Louisiana and Past President of the New Orleans Chapter of ASCE. He has served as a sewer design engineer, sewer project manager, and was the Program Manager for a $60M sewer capital improvement program in 2014.

John W. Holtgreve, P.E. is Executive Vice President of Design Engineering, Inc. and will serve as *Project Manager* for DEI and as a *Civil Engineer* for this project. Mr. Holtgreve has over 42 years of professional consulting engineering experience and has worked as Project Manager and Principal-in-Charge for numerous civil and structural engineering projects including drainage improvements, water and **sewer systems,** flood control projects, roadway design, highway design, underground utilities and bridge design projects. (Please note the projects in his resume contained herein.) Mr. Holtgreve holds a BS and a MS in Civil Engineering from Tulane University and is a Registered Professional Engineer in the State of Louisiana. Mr. Holtgreve's past professional experience include: American Society of Civil Engineering (Past State

Board Member), American Consulting Engineers Council/Louisiana (Past President and Board Member), American Consulting Engineers Council (National Director), Society of American Military Engineers, American Concrete Institute, and American Public Works Association. Mr. Holtgreve has been designing lift stations and force mains in the Greater New Orleans Area for over 3 decades.

Max Shukla, P.E., of DEI, will serve as a *Structural Engineer* for this project. Mr. Shukla has over 44 years of experience in the design and construction administration of structural, civil, and bridge engineering projects. Mr. Shukla has years of experience working on numerous civil and structural engineering projects including drainage improvements**,** water and **sewer systems,** flood control projects, roadway design, highway design, underground utilities, and bridge design projects. He holds a BS and a MS in Civil Engineering and is a Registered Professional Engineer in the State of Louisiana. He has overseen the construction of 8 Lift Stations for the New Orleans Sewerage and Water Board.

Brett Liuzza, P.E., has over 10 years' experience on a variety of infrastructure improvement projects including roadway, drainage, **sewer,** and water system improvements. He has recently designed a sewer collection system for a multimillion-dollar private site development as well as a collection system and lift station for a new Shelter currently under construction on the Lakefront. Mr. Liuzza holds a BS in Civil Engineering from Louisiana State University and is a registered professional engineer in the states of Louisiana.

2) CAPACITY FOR TIMELY COMPLETION OF THE WORK (20 POINTS):

The design of several sewer projects has been recently completed or are near completion. Therefore, we have a large engineering team available to jump on this project. This project can be easily absorbed by the firm, as we have substantial reserve production capacity to meet any reasonable project scheduling.

Our current and projected firm capacity shown below indicates a 40% capacity shortfall by July 2022. The 15% capacity anticipated for this project would be very welcome and needed to maintain our current staff levels.

3) LOCATION OF OFFICE (15 POINTS):

Design Engineering, Inc. maintains its office in Jefferson Parish at 3330 West Esplanade Avenue, Suite 205, Metairie, Louisiana and has done so for 38 years.

Our Firm "knows the territory."

- We are headquartered in Jefferson Parish and have outstanding geographic proximity to serve Jefferson Parish under this assignment.
- We have worked with all facets of Federal, state and local governments as well as local communities and private industry in excess of 45 years as individuals and in excess of 38 years as a firm.
- All of our proposed project personnel work in Jefferson Parish (and most of them live here as well).
- We can and will provide responsive services to Jefferson Parish as demanded for this project.

4) ADVERSARIAL LEGAL PROCEEDINGS (15 POINTS):

Design Engineering, Inc. is not now, nor has it ever been, involved in any adversarial legal proceedings between the Parish and any related parties.

5) PRIOR SUCCESSFUL COMPLETION OF PROJECTS OF THE TYPE AND NATURE OF THE ENGINEERING SERVICES (15 POINTS):

Design Engineering, Inc. has completed a number of successful projects in Greater New Orleans requiring new sewer structure and roadway reconstruction and utilities relocation work.

31st & Jasper Sewer Lift Station

- 31St. and Jasper Sewer Lift Station (City of Kenner)
- Bullard Sewage Pumping Station.
- Sewage Pumping Station No. 8.
- Dodt Sewage Pumping Station.
- Lake Forest Sewage Pumping Station.
- Plum Orchard Sewage Pumping Station.
- Victoria Sewage Pumping Station.
- Sewage Pumping Station No. 6.
- Lawrence Sewage Pumping Station.
- Lakeshore Drive Shelter No. 3 Replacement Project.
- Uptown Area Sewer Rehabilitation Project (Pumping Station and Force Mains)
- Northbound Manhattan Blvd. Continuous Right Turn Lane

S&WB of N.O. Replacement of Existing Sewage Pumping Stations

6) SIZE OF FIRM (10 POINTS):

Unlike at larger firms, DEI utilizes its most senior professionals and executives as actual engineers, rather than exclusively as executives or "rainmakers." Engineers with 40 years' experience simply do not perform the engineering work on a hands-on basis at other firms. All of DEI's engineers in this submittal will participate in the intimate details of the engineering required for this project. Conversely, smaller firms simply do not have the depth and breadth of experience, nor the technical resources, that DEI has. Simply put, **DEI combines the experience and technical resources of a large firm with the attention to detail and customer service of a small firm**. DEI presently has on staff sufficient technical, supervisory, and administrative personnel to provide the required services and can assure the successful completion of this project.

7) PAST PERFORMANCE ON PUBLIC CONTRACTS (10 POINTS):

Design Engineering, Inc. has successfully designed and performed construction administration for various types of drainage, roadways, flood control, water, and **sewer projects** for Jefferson Parish.

The Wilker Neal at Airline Drive construction project was completed on time and without a single change order. The Veterans Boulevard Widening, Roosevelt to Williams project was completed on time as well in a difficult traffic situation and with no complaints from adjacent property owners during or after construction.

The Manhattan Blvd. Widening was successfully completed amid some of the highest levels of traffic anywhere in the Parish.

Design Engineering, Inc. has designed and administered the construction contracts for award winning projects. DEI received a Certificate of Exceptional Performance from the USACE for work that included, among others, pump station design. The Lakefront Airport Bridge (East Approach) has won several

awards including Best Project of the Year in the State of Louisiana by the ACI Louisiana Chapter. The project also received awards from the Precast/Prestressed Concrete Institute including Best Project of the Year in Louisiana and second overall for the Southern Region.

DEI was awarded the ACI Louisiana Award for Best Project of 2012, Best Public Works Project of 2012, and the Award for Sustainability for its work on the Planters Pumping Station Frontal Protection Project (located in Jefferson Parish). Most recently, DEI won the ACI Louisiana Award of Excellence and Best Public Improvement Project for its work on the Lakefront Seawall Area Erosion Control Project in 2014.

Other successful projects that DEI has designed and performed construction administration include the Lakefront Airport Bridge (West Approach), the Lakeshore Drive Bridge at London Avenue Canal and the Lakeshore Drive at Orleans Avenue Canal.

- Our firm has completed each task assigned in a timely manner.
- We have remained within budget.
- We have been singled out on numerous occasions for local and regional awards.

PAST AND PERFORMANCE (10 POINTS):

Design Engineering, Inc. has over 38 years of experience providing engineering design and analysis and construction management of **sewer systems**, water systems, drainage systems and pumping stations, roadways, site facilities, marinas, levees, floodwalls, and floodgates. DEI has served as project coordinator on many complex projects including a major hurricane and flood protection project that involved more than 80 projects totaling over $400 million. DEI maintains the highest quality projects in its portfolio of any firm in the region. Over the years DEI has received many awards and accolades for the professional services it has provided. Below is a list of some of these awards, several of which are for work that was performed in Jefferson Parish.

Considering our current workload, DEI has the manpower and equipment to execute the volume of work anticipated in this solicitation. We are confident that we have the right people and required resources, when and where they are needed, to meet the needs of this project. DEI has established management procedures for coordinating and executing work among in-house staff and subcontractors to ensure the work is performed on schedule and without budgeting overruns.

Closing Statement:

We are extremely interested in this solicitation.

Design Engineering, Inc. has extensive experience in the design of sewer projects in Jefferson Parish and throughout the New Orleans Metropolitan Area.

Design Engineering, Inc. has the capacity to easily absorb this project assignment.

Please give us your serious consideration.

AWARDS

- ***Award of Merit from the ACI, Louisiana Chapter for St. Andrew Street Wharf Erosion Mitigation (2022)***
- ***Award for the Top Engineering Firm from the City Business (2021)***
- ***Award for the Top Engineering Firm from the City Business (2020)***
- ***Award of Excellence from ACI Louisiana Chapter for Replacement of Sewage Pumping Station No. 8 (2019)***
- ***Award of Merit from ACI, Louisiana Chapter for West Esplanade Avenue Crossing Project (2019)***
- ***Award of Excellence in Historic Preservation from The La Landmarks Society for 419 Carondelet Project (2019)***
- ***Award of Excellence in Historic Preservation from The La Landmarks Society for 822 Howard Project (2017)***
- ***Overall Best Concrete Project from ACI Louisiana Chapter for MacArthur Interchange Completion Project –Phase 1B (2016)***
- ***Award of Excellence from ACI Louisiana Chapter for MacArthur Interchange Completion Project – Phase 1B (2016)***
- ***Award of Excellence from the ACI, Louisiana Chapter for Seawall Erosion Control Paving Project – Reach 1B (2014)***
- ***Most Improvement to the Public Award from the ACI, Louisiana Chapter for Seawall Erosion Control Paving Project – Reach 1B (2014)***
- ***Overall Best Project from the ACI, Louisiana Chapter for Planter's Pump Station Frontal Protection (2012)***
- ***Award for Concrete Sustainability from the ACI, Louisiana Chapter for Planter's Pump Station Frontal Protection (2012)***
- ***Award of Excellence from the ACI, Louisiana Chapter for Planter's Pump Station Frontal Protection (2012)***
- ***USACE – New Orleans District Certificate of Appreciation, for Exceptional Achievement in support of the Mississippi Valley Division's New Orleans District and the Execution of the Hurricane and Storm Damage Risk Reduction System (2012)***
- ***Exceptional Project Rate, for LPV 106, US Army Corps of Engineers Hurricane Protection Office (2012)***
- ***Award of Merit from ACI for the Plaza Area Paving at Stepped Seawall on Lakeshore Drive (2005-2006)***
- ***Award of Excellence from ACI for the Lakeshore Drive – London Avenue Canal Bridge Replacement (2003)***
- ***Award of Merit from ACI for the Retaining Wall Restoration at the New Orleans Lakefront Airport (2001)***
- ***Creative Design Utilizing Precast and Prestressed Concrete from PCI for the East Approach to Stars and Stripes Boulevard (1999)***
- ***Concrete Project Award from G.S.P.C.A. for Best Project for Stars and Stripes Boulevard East and West Approach (1997 – 1998)***
- ***Best Project of the Year award from ACI, Louisiana Chapter for East Approach to Stars and Stripes Boulevard (1997)***

BEST OVERALL CONCRETE PROJECT & AWARD OF EXCELLENCE
MacArthur Interchange Completion Project – Phase 1B

OVERALL BEST PROJECT, AWARD OF CONCRETE SUSTAINABILITY & AWARD OF EXCELLENCE
Planter's Pump Station Frontal Protection

AWARD OF EXCELLENCE & MOST IMPROVEMENT TO THE PUBLIC
Lakeshore Dr. Seawall Area Erosion Control Paving

REFERENCES

1) Dr. Shawn Wilson
   Secretary
   LADOTD
   Baton Rouge, LA
   (225) 379-1200

(2) Wilma Heaton
   Chair
   NFPAMA
   New Orleans, LA
   (504) 355-5990

(3) Carlton Dufrechou
   General Manager
   GNOEC
   Metairie, LA
   (504) 835-3118

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

Signature: _____ **Print Name:** Jim Martin, Ph.D., P.E.

Title: President **Date:** March 25, 2022

USACE - New Orleans District

Certificate of Appreciation

is presented to

Design Engineering, Inc.

For exceptional achievement in support of the Mississippi Valley Division's New Orleans District and the execution of the Hurricane and Storm Damage Risk Reduction System (HSDRRS) mission. The Design Engineering, Inc. contractors' professionalism, competence, and initiative were instrumental to the successful execution with multi-disciplinary design support of multiple sites critical to the completion of both design and the construction of the HSDRRS project.

Design Engineering, Inc.'s outstanding achievement is in keeping with the finest traditions of public service and reflects great credit upon the Design Engineering, Inc. team, the U.S. Army Corps of Engineers, and the United States Army.

06 February 2012

Edward R. Fleming
Colonel, US Army
Commander, New Orleans District
US Army Corps of Engineers

US Army Corps
of Engineers ®
New Orleans District

LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Office of the Secretary
PO Box 94245 | Baton Rouge, LA 70804-9245
ph: 225-379-1200 | fx: 225-379-1851

John Bel Edwards, Governor
Shawn D. Wilson, Ph.D., Secretary

July 1, 2016

To Whom It May Concern:

I write this letter as a recommendation for Design Engineering, Inc (DEI).

I have worked with DEI for the past ten (10) years in my capacity as Louisiana Department of Transportation and Development (LADOTD) District Area Engineer in New Orleans and I write with confidence that the staff is responsible, qualified, highly attentive to detail, and have always met or exceeded their contract requirements..

DEI has primarily served us in performing Construction Engineering and Inspection for transportation projects that have been designed by LADOTD staff and/or contracted Consultant firms on behalf of LADOTD, and constructed through contracts with LADOTD and/or Partner Agencies. On these contracts, in part, DEI has been responsible for:

- Conducting preconstruction meetings
- Conducting regular progress meetings
- Coordinating activities between multiple stakeholders, the contractor, the state, and the local sponsors
- Maintaining detailed records and photographs of construction operations
- Providing certified inspectors to monitor work for compliance with plans and specifications
- Reviewing submittals and shop drawings
- Responding to requests for information
- Monitoring quantities and stored materials
- Preparing and quantifying pay applications and certifying them for payment
- Negotiating and recommending change orders
- Conducting final inspections and producing close out documentation

I know DEI's staff and work performance very well from the numerous projects they have performed under my direction. I have been completely satisfied by their performance and have enjoyed a good working relationship with their staff.

We have worked together on many projects in the past and I look forward to working with them again on future projects.

If further information is required, please contact me at (504) 253-6102.

Sincerely,

Frederick L. Wetekamm, III, P.E.
Louisiana Dept. of Transportation and Development
District Area Engineer, New Orleans East
14101 Old Gentilly Road
New Orleans, LA 70129

JEFFERSON PARISH

Office of the President

(via email & US Mail)

Michael S. Yenni
President
March 12, 2019

Mr. Shawn D. Wilson
Secretary
LA Department of Transportation & Development
1201 Capitol Access Road
Baton Rouge, LA 70804

Re: Westwood Drive Improvements
(Westbank Expressway to Lapalco Blvd.)
State Project No. H.011795
Federal Aid Project No. H011795
Jefferson Parish Public Works Project No. 2017-060-RBP

Dear Secretary Wilson:

As a follow-up to our conversation of this morning regarding the selection of Design Engineering Inc. (Local Firm) by the Louisiana Department of Transportation Development (DOTD) for Construction Engineering and Inspection Services associated with reference project, please advise on whether Jefferson Parish at this time can reverse course and select one of the other firms short listed by the DOTD for this work. Informational background on this matter is as follows:

- Project was bid by the DOTD on November 14, 2018. Command Construction Industries, LLC was declared to be the low bidder by the DOTD with a bid of $5,175,201.80. Parish concurred with acceptance of low bidder via Resolution No. 132834 adopted January 16, 2019.

- Parish received a short list from the DOTD regarding firms that had applied for Construction Engineering and Inspection Services through a DOTD process. The short list received was as follows:

    1) Design Engineering, Inc.
    Sub: G.E.C., Inc.
    Sub: APS Design & Testing, LLC

    2) Michael Baker International, Inc.
    Sub: GOTECH, Inc.

3) Providence Engineering & Design, LLC
Sub: The Beta Group Engr. & Constr. Svcs., LLC

Historically the Parish has always selected the number one (1) ranked firm by the DOTD. However, special exceptions may have occurred in the past, whereas the Parish may have selected the second or third ranked firm. This would have required special justification and be subjected to DOTD approval. Parish fully understands that the Parish's original recommendation was a non-binding recommendation.

- Parish has already executed a contract with the Construction Contractor (Command Construction). Such contract was executed on February 8, 2019. Therefore, Construction Contractor will soon be ready to start with the construction of this project.

- Construction Engineering Services have been estimated to be $602,828.

- A Contract for Construction Engineering Services has already been prepared by the DOTD and executed by Design Engineering, Inc. Parish has not executed such contract yet.

- Project has been programmed to receive 80% Federal funds for construction and Construction Engineering Services.

Considering the importance of this project to the Parish and the deadline that we are currently facing, could you please provide us with advice on whether it would be possible/appropriate for the Parish at this time to select the second or third ranked firm by the DOTD for Construction Engineering Services.

Would you kindly advise on this matter as soon as possible, as our deadline for having an item on the upcoming Jefferson Parish Council Agenda scheduled for next Wednesday is this Thursday, March 14 at noon. It should go without saying that the Parish would not want to jeopardize the 80% Federal funding already allocated to this project.

Sincerely,

Michael S. Yenni

MICHAEL S. YENNI
President

MSY/clr

JEFFERSON PARISH

Office of the President

Michael S. Yenni
President

December 12, 2018

Department of Transportation and Development
Dr. Shawn Wilson, Secretary
1201 Capitol Access Road
Baton Rouge, LA 70802

Re: ***Contract No. 4400014973, State Project No. H.011798 (CE&I)***
Airline Park Blvd (Camphor – W Napoleon), Jefferson Parish

Dear Secretary Wilson:

We understand that construction engineering and inspection qualification statements were received by DOTD Consultant Contract Services for the above-referenced project, were recently reviewed, and subsequently scored for ranking purposes. It is our understanding that the top three ranked consultants (in order) are Design Engineering, Inc., Richard C. Lambert Consultants, LLC, and Providence Engineering & Design, LLC.

On behalf of Jefferson Parish Government, I would like to recommend award of the CE&I contract to Design Engineering, Inc., the top ranked firm. Design Engineering, Inc. has capably provided similar services on previous Jefferson Parish Federal Aid Urban System Program roadway construction projects. This firm's current staff is very experienced and highly qualified to perform the required services.

I appreciate your consideration of Design Engineering, Inc. for the Airline Park Blvd project; and if you should like to contact me directly to discuss my recommendation, you may reach me at (504) 736-6400.

Sincerely,

Michael S. Yenni

MICHAEL S. YENNI
President

Joseph S. Yenni Building – 1221 Elmwood Park Blvd – Suite 1002 – Jefferson, LA 70123 – PO Box 10242 – Jefferson, LA 70181-0242
Office 504.736.6400 – Fax 504.736.6638
General Government Building – 200 Derbigny St – Suite 6100 - Gretna, LA 70053 – PO Box 9 – Gretna, LA 70054
Office 504.364.2700 – Fax 504.364.2828
Email: MYenni@jeffparish.net Website: www.jeffparish.net

TEC Professional Services Questionnaire

A. Project Name and Advertisement Resolution Number:

SOQ 22-010, Resolution No. 138812
Routine Engineering Services for Sewer Projects

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:

10	Administrative		Estimators		Specification Writers
	Architects (Licensed)	2	Geologists		Structural Engineers
	Chemical Engineers	15	Geotechnical Engineers	1	Graduate Engineers
	Civil Engineers		Interior Designers		Project Managers
	Construction Inspectors		Landscape Architects	6	Clerical
	Ecologists		Land Surveyor		Grant/Funding Specialist
	Electrical Engineers		Mechanical Engineers		Sanitary Engineers
3	Engineer Intern		Environmental Engineers	41	**Other**
	Professional Land Surveyors				
				78	**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 <u>all subcontractors must submit a fully completed copy of this questionnaire</u>, 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.

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 south and west 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 storm water 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 of 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 alternate analysis. We also furnished supporting documentation for temporary retaining structure design and 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 (E)	Unknown	$25,500

PROJECT NO. 02	
Project Name, Location, and Owner's Contact Information:	**Nature of Firm's Responsibility:**
Jefferson Parish **Veterans Boulevard** **North and South Pump Stations** **Jefferson Parish, Louisiana** **Eustis Engineering Project Nos. 23396, 23396.01, and 24426** **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 northern and southern sides of Veterans Memorial Boulevard at the 17th Street Canal. Each of these pump stations will discharge into the 17th Street Canal. Because of 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 to accommodate a discharge pipe through each wall. Access gates will also be provided as part of the floodwall modifications. Because of these 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, and 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. For additional data at the site, Eustis Engineering 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. Engineering analyses for the evaluation of the proposed T-wall 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 and temporary retaining structures. 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 included estimates of allowable axial pile load capacities 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.

Completion Date (Actual or Estimated)	**Estimated Cost:**	
	Entire Project:	**Work for Which Firm Was Responsible:**
11/2021 (A)	Unknown	$53,400

PROJECT NO. 03		
Project Name, Location, and Owner's Contact Information:	**Nature of Firm's Responsibility:**	
Jefferson Parish **Concrete Testing for Pump Station** **Transcontinental Drive and** **West Metairie Road** **Metairie, Louisiana** **Eustis Engineering Project No. 24164** **Contact Information:** Jefferson Parish Through BLD Services, LLC 2424 Tyler Street Kenner, Louisiana 70062 Brent Albert @ 504-466-1344	This project was performed under Eustis Engineering's contract with Jefferson Parish to provide laboratory services for inspection of materials and equipment on an as-needed basis. When our services were requested at the pump station at Transcontinental Drive and West Metairie Road, we had someone on site the very next day. As part of our quality control and testing services, Eustis Engineering's ACI certified technicians recorded each mix design used at the project site, recorded the amount of water or additives added to the mixes, performed slump testing for each batch of concrete, determined the air content for each sample, sampled the concrete at intervals stated in the plans, and performed compression testing on collected specimens at intervals of 7 and 28 days. Due to the site's close proximity to our Metairie office, we logged fewer than 25 hours to complete these services. After our quality control review of reports by an engineer, the results were submitted through the MetaField system.	
Completion Date (Actual or Estimated)	**Estimated Cost:**	
	Entire Project:	**Work for Which Firm Was Responsible:**
08/2019 (A)	Unknown	$920

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 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 earth 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; 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

<table>
<tr><th colspan="3">PROJECT NO. 05</th></tr>
<tr><th>Project Name, Location, and Owner's Contact Information:</th><th colspan="2">Nature of Firm's Responsibility:</th></tr>
<tr><td>Jefferson Parish
Lift Station G8-2
Tolmas Drive and West Esplanade Avenue
Metairie, Louisiana
Eustis Engineering Project No. 22583

Contact Information:
Barowka & Bonura
Engineers & Consultants, LLC
209 Canal Street
Metairie, Louisiana 70005
Jeffrey Bonura @ 504-828-0030</td><td colspan="2">Jefferson Parish planned to improve Lift Station G8-2 by installing a 12' × 12' valve pit 10 feet below the existing ground surface. To determine subsoil conditions and stratifications at the site, Eustis Engineering drilled one undisturbed soil boring to a depth of 80 feet below the existing ground surface using a truck-mounted, rotary-type drill rig. Cohesive or semi-cohesive subsoils were sampled at close intervals or changes in stratum using a 3-in. thinwall Shelby tube sampling barrel. Once the samples were extracted from the borehole, pocket penetrometer tests were performed on the trimmed ends of the extruded samples to provide a general indication of the soil's shear strength or consistency.

Our laboratory technicians performed soil mechanics laboratory tests consisting of natural water content, unit weight, and unconfined compression shear on undisturbed samples obtained from the boring.

Based on the soil boring and soil mechanics laboratory tests, Eustis Engineering developed recommendations for site preparation, excavation and dewatering, lateral earthen pressures, bedding and backfill, estimated allowable soil bearing values for mat foundations, estimates of allowable pile load capacities, estimates of settlement, and general foundation construction procedures.

More specifically, engineering analyses included:
• recommendations regarding stability of the structure against hydrostatic uplift;
• base preparation recommendations for the valve pit foundation including the use of geotextiles, bedding requirements, and structural fill requirements;
• allowable soil bearing values for the valve pit's mat foundation;
• allowable load capacities, in compression and tension, for various sizes of treated ASTM D25 quality timber piles to support the proposed valve pit;
• estimates of settlement and differential settlement for both mat and timber pile foundations;
• excavation and dewatering recommendations associated with construction; and
• effects of areal subsidence on the project.</td></tr>
<tr><th rowspan="2">Completion Date (Actual or Estimated)</th><th colspan="2">Estimated Cost:</th></tr>
<tr><th>Entire Project:</th><th>Work for Which Firm Was Responsible:</th></tr>
<tr><td>08/2014 (A)</td><td>Unknown</td><td>$4,100</td></tr>
</table>

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:**	
City of Kenner **Lift Station No. 4102** **Airline Highway and Minden Avenue** **Jefferson Parish, Louisiana** **Eustis Engineering Project No. 22317** **Contact Information:** City of Kenner Through Hartman Engineering, Inc. Suite 300 527 West Esplanade Avenue Kenner, Louisiana 70065 Priyo Majumdar @ 504-466-5667	The City of Kenner planned to renovate the existing Sewer Lift Station No. 4102. The renovation involved adding a buried valve pit adjacent to the existing lift station. The valve pit was to be 8 to 10 feet in diameter and placed 6 feet below the existing ground surface. A small cofferdam was considered for construction. Eustis Engineering was retained to perform professional geotechnical services consisting of field, laboratory, and engineering services. In the field, Eustis Engineering drilled one undisturbed soil boring to a depth of 60 feet to determine subsoil conditions and stratification at the project site. The drill crew also made one auger boring to a depth of 12 feet below the existing grade to measure groundwater conditions at the time of the exploration. For the undisturbed boring only, team members obtained samples of cohesive or semi-cohesive subsoils at close intervals or changes in stratum using a 3-in. diameter thinwall Shelby tube sampling barrel. The samples were extruded, inspected, and visually classified in the field. Our soil technician performed pocket penetrometer tests on the samples to give a general indication of the soil's shear strength and consistency. Samples were placed in moistureproof containers to preserve their natural water content prior to laboratory testing. Our laboratory technicians performed soil mechanics laboratory tests on these samples to evaluate the physical properties of the various substrata. Engineering analyses, based on the undisturbed soil boring and soil mechanics laboratory test results, were used to develop recommendations regarding: • site preparation including drainage, trenching and excavations, dewatering and pressure relief, and lateral movement and settlement of the adjacent ground surface; • bottom preparation including bedding, the use of geotextile fabric, and the effects of uplift pressure during/after construction; • estimated gross and net allowable soil bearing values for the valve pit's mat foundation; • allowable pile load capacities, in compression and tension, for treated timber piles; • estimates of settlement; and • general construction recommendations.	
Completion Date (Actual or Estimated)	**Estimated Cost:**	
	Entire Project:	**Work for Which Firm Was Responsible:**
10/2013 (A)	Unknown	$3,200

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 and acoustical 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:**	
Jefferson Parish **Bonnabel Canal** **Pamona Street to Nero Street** **Metairie, Louisiana** **Eustis Engineering Project No. 23387** **Contact Information:** Jefferson Parish Through BCG Engineering & Consulting, Inc. 3012 26th Street Metairie, Louisiana 70002 Ann Springston, P.E. @ 504-454-3866	BCG Engineering & Consulting, Inc. (BCG) requested Eustis Engineering's consultation in finalizing the plans and providing support during construction of the proposed Bonnabel Canal east bank stabilization features. The construction planned for an approximate 1,600-ft stretch of the project that would extend from Pomona Street to Nero Street in Metairie, Louisiana. The furnished plans showed a 35-ft AZ26 sheetpile with a top at el 8 and a tip at el -27. Prior to these final design/construction phase services, Eustis Engineering had performed several geotechnical explorations for the project that were used as the basis of our updated design services. The most recent study was published in our report entitled "Geotechnical Investigation, Jefferson Parish, Bonnabel Canal, South of Veterans Boulevard to West Esplanade Avenue, Metairie, Louisiana, Eustis Engineering Project No. 20438," dated 20 November 2009. Using the available data, Eustis Engineering performed local stability analyses of the new sheetpile wall configuration using CWALSHT to confirm that the proposed sheetpile tip embedment was sufficient. Additionally, we evaluated deep-seated global stability for the cantilever sheetpile wall using the Spencer's Method of Slices for non-circular and circular failures (with optimization search routines) with the software SLOPE/W, Version 8.16, GEOSLOPE International Ltd. These analyses also confirmed the proposed configuration was stable. Thus, the plans being developed could be finalized to provide for improved drainage within the tight construction corridor.	
Completion Date (Actual or Estimated)	**Estimated Cost:**	
	Entire Project:	**Work for Which Firm Was Responsible:**
11/2017 (A)	Unknown	$3,700

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 × 350	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 channel 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 is slated to perform explorations and geotechnical engineering recommendations associated with this project. We anticipate performing one soil boring to a depth of 150 feet and three cone penetration tests (CPTs) to depths of 150 feet. Soils mechanics laboratory tests to be performed on samples from the boring include natural water content, unconfined compression shear, unconsolidated undrained triaxial compression shear, and Atterberg liquid and plastic limits. The test assignments will be directed by our engineers to aid in the development of the soil design parameters. Engineering analyses will include; estimates of lateral earth pressure coefficients, estimates of allowable soil bearing values for the future equipment pad; estimates of allowable load capacity for various types and sizes of timber piles, square precast concrete piles, and steep pipe piles; estimates of settlement for foundation piles for both the pump station and the future discharge pipe foundations; estimates of subgrade moduli; estimates of p-y, t-z, and Q-t soil values; deep-seated stability analyses of the drainage canal side slopes; seepage/heave analyses; settlement analyses; slope stability analyses of the side slope including the design of slope stabilization; local stability analyses of the pump station headwall and intake walls; and deep-seated stability analyses of the pump station and intake walls.	
Completion Date (Actual or Estimated)	**Estimated Cost:**	
	Entire Project:	**Work for Which Firm Was Responsible:**
04/2022 (E)	Unknown	$48,500

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:

29

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 29 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 still 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 region, 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 the field investigation, 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 consists of 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, translate to Mrs. Sanders' ability to deliver successful geotechnical engineering projects to her clients.

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

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

- Jefferson Parish Department of Public Works - Proposed Pump Station, West Esplanade at the 17th Street Canal, Jefferson Parish, Louisiana
- Jefferson Parish - Veterans Boulevard, North and South Pump Stations, Jefferson Parish, Louisiana
- Jefferson Parish - Lift Station G8-2, Tolmas Drive and West Esplanade Avenue, Metairie, Louisiana
- Jefferson Parish - Design and Construction of Improvements to Jefferson Parish, Causeway Boulevard and West Esplanade Avenue, North and South Sewer Pump Stations, Metairie, Louisiana
- Jefferson Parish - Bonnabel Canal, Pomona Street to Nero Street, Metairie, Louisiana

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:
Engineering Manager / Limited Liability Corporation Member
Name of Firm with which Associated:
Eustis Engineering L.L.C.
Years' Experience with This Firm:
19
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 three 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; and 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 19 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

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
James J. Hance, P.E. / Senior Project Manager and Vice President (Finance)
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

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Benjamin M. Cody, P.E. / Principal Engineer

Project Assignment:

Project Manager / Limited Liability Corporation Member

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. 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 and 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
- Jefferson Parish - Veterans Boulevard, North and South Pump Stations, Jefferson Parish, Louisiana

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Benjamin M. Cody, P.E. / Principal Engineer
• Jefferson Parish - Jung and Falcone Lift Station Upgrades (K-11-3), New Sanitary Sewer Lift Station, Marrero, Louisiana • City of Kenner - Lift Station No. 4102, Airline Highway and Minden Avenue, Jefferson Parish, Louisiana • City of Kenner - Sewer Capital Improvement Program, Sewage Pumping Station Upgrade, 31st Street and Jasper Street Lift Station, Jefferson Parish, Louisiana

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

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

Project Assignment:

Principal Engineer / Limited Liability Corporation Member

Name of Firm with which Associated:

Eustis Engineering L.L.C.

Years' Experience with This Firm:

10

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 five years after graduation, Sean G. Walsh, P.E., was a Project Engineer on numerous projects in the New York and New Orleans metropolitan areas 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, development of 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. Mr. Walsh is also a graduate of the 2017 New Orleans Regional Leadership Institute (NORLI), a one-year training program designed to help shape community leaders.

During his employment with Eustis Engineering, Mr. Walsh has provided engineering services on more than 400 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 the Spencer's Method and the Method of Planes; reinforced embankment design; stability analyses of flood protection walls (e.g., T-wall, I-wall, L-wall, and braced 'A-Frame' walls); downdrag and settlement analyses; settlement induced bending

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Sean G. Walsh, P.E. / Engineering Manager and Vice President (Engineering)

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 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 customer 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 nine years have developed exponentially with the variety of projects that have crossed his desk. With regard to 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
- Lafourche Parish Government - Butch Hill Pump Station, Lafourche Parish, Louisiana
- Jefferson Parish - Bonnabel Canal, Pomona Street to Nero Street, Metairie, Louisiana

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:
28
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)

Project Assignment:

Operations Manager / Limited Liability Corporation Member

Name of Firm with which Associated:

Eustis Engineering L.L.C.

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

Atterberg limits
Consolidated drained triaxial shear tests
Consolidation tests
Direct simple shear
Hydrometer
Moisture content of soil and rock
Particle size analysis of soils and aggregates
Pocket penetrometer
Settlement column testing of dredged materials
Soil constants
Standard and modified compaction
Torvane shear tests
Unconsolidated undrained triaxial shear tests
Unit weight
CBR of laboratory compacted soils
Consolidated undrained triaxial shear tests
Direct shear
Flexible wall permeability test
Miniature vane shear
Organic content
Percent finer than No. 200 sieve
Relative density tests
Sieve analyses
Specific gravity of soils
Swell pressure tests
Unconfined compressive strength of soil
Unified Soil Classification System
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.

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.

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 worked on the following projects within this submittal:

- Jefferson Parish - Jung and Falcone Lift Station Upgrades (K-11-3), New Sanitary Sewer Lift Station, Marrero, Louisiana
- Jefferson Parish - Lift Station G8-2, Tolmas Drive and West Esplanade Avenue, Metairie, Louisiana
- Jefferson Parish - Veterans Boulevard, North and South Pump Stations, Jefferson Parish, Louisiana
- City of Kenner - Lift Station No. 4102, Airline Highway and Minden Avenue, Kenner, Louisiana
- City of Kenner - Sewer Capital Improvement Program, Sewage Pumping Station Upgrade, 31st Street and Jasper Street Lift Station, Kenner, Louisiana
- Lafourche Parish Government - Butch Hill Pump Station, Lafourche Parish, Louisiana

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 opened its first office in Vicksburg, Mississippi, in 1946, it housed its entire operation in less than 500 square feet of space. ***Seventy-six 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 two-man office to approximately 100 individuals, 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 Lafayette and Baton Rouge, Louisiana; in Gulfport, Mississippi; and in 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, and Geoprobe®);
- soil mechanics laboratory tests;
- field instrumentation and monitoring;
- non-destructive testing of piles and shafts including dynamic pile testing, cross-hole sonic logging, single-hole sonic logging, low strain pile integrity testing, and thermal integrity profiling;
- geotechnical engineering design; and
- construction quality control and materials testing services.

Eustis Engineering L.L.C. Important Numbers	
Item	**Number**
DUNS	78-481-0959
CAGE Code	4MOP2
Firm License - Louisiana	EF.0003558
Firm License - Mississippi	2078
Firm Registration – Texas	13895

Eustis Engineering has worked on over 800 geotechnical and construction materials testing projects for Jefferson Parish Government entities, many of which focused on sewers. 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 engineering capabilities to fulfill the requirements of nearly any project. Our clients include local, state and federal entities as well as industrial and commercial facility owners. Thus, we understand multiple stakeholder demands and design approaches. We can also assist with coordination with partner agencies.

We have developed pile capacity and bearing capacity analyses for projects throughout the coastal areas of the United States. Eustis Engineering's evaluation of piles and shafts includes estimates of vertical capacity for groups. We also perform lateral analyses of individual piles and pile groups using LPILE and GROUP. We provide guidance for the assessment of uplift on shallow and deep foundations as a result of hydrostatic pressures.

We perform settlement studies including estimates of total and differential settlement and time-rate of settlement (with and without wick drains to enhance consolidation) for shallow and deep foundations for all types of structures and features. 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.

Our capabilities extend to performance of deep-seated global stability analyses for structures (T-walls and I-walls) according to the standards of the Hurricane and Storm Damage Risk Reduction System Design Guidelines, Louisiana Flood Protection Design Guidelines, and the CPRA's Marsh Creation Design Guidelines, using Spencer's Method as coded in SLOPE/W and the LMVD Method of Planes as coded in UPLIFT. These programs are also used for the design and verification of levees, reinforced embankments, revetments, channel slopes, and open excavations. We also evaluate local and global stability of temporary or permanent retaining systems using these same programs. We assess the potential for basal heave and the need for dewatering and pressure relief measures.

We routinely provide geotechnical recommendations for development of plans and specifications, including material properties for bedding and backfill, placement and compaction efforts appropriate to these fill materials, and other construction considerations. Our engineering staff's involvement with construction materials testing projects of all types helps to inform design decisions and recommendations.

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 moment (SIBM). Eustis Engineering is also utilizing a numerical model program SIGMA/W in association with the rigorous settlement program Settle3. Finally, Eustis Engineering has performed seepage analyses for evaluation of heave, uplift, and piping. We use EM 1110-2-1913, EM 1110-2-1901, and DNR 1110-1-400 for manual calculations that consider blanket theory. We also use SEEP/W for a computer model and typically compare the results of manual calculations to the SEEP/W model as a quality assurance procedure.

Engineering Staffing

Our engineering staff has 15 Master's degrees in Civil Engineering, Engineering, Engineering Management, 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, are very important to Eustis Engineering. Our engineers also regularly present at technical conferences. We encourage and fund our staff for these activities and programs.

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

Employee	Education	Experience	
		Years with Eustis Engineering	Total Years
Professional Engineers (P.E.)			
Benjamin M. Cody	M.S. / Civil Engineering	21	25
Brian A. Deschamp	B.S. / Civil & Environmental Engineering	10	10
	B.A. / Business Administration		
Lars A. Erickson	B.S. / Civil & Environmental Engineering	6	6
	Coastal Engineering Certificate		
James J. Hance	M.S. / Civil Engineering	19	23
	M.B.A. / Business Administration		
Chad L. Held	M.S. / Civil Engineering	31	31
David J. Indest	M.S. / Civil Engineering	21	21
Matthew K. Morales	B.S. / Civil Engineering	13	13
Travis R. Richards	M.S. / Engineering	17	24
	M.S. / Engineering Management		
	Coastal Engineering Certificate		
Gwendolyn P. Sanders	M.S. / Engineering	29	29
Shaun R. Simon	M.S. / Civil Engineering	22	22
Patrick A. Thurmond	M.S. Engineering Management	7	7
	M.S. / Civil Engineering		
	Coastal Engineering Certificate		
Sean G. Walsh	M.S. / Civil Engineering	10	15
James M. Williams	M.S. / Civil Engineering	4	4
Henry C. Worley	B.S. / Civil Engineering	5	6.5
	Coastal Engineering Certificate		
Engineering Interns (E.I.)			
Scot J. Breaux, Jr.	B.S. / Civil and Environmental Engineering	1	2
Patrick T. Duckworth	M.S. / Civil Engineering	2	2
Grant Collongues	B.S. / Civil Engineering	0	0
Tomas K. Morales[(1)]	B.S. / Civil Engineering	9	9
Engineering Graduates			
Lesley L. Reitmeyer	B.S. / Civil Engineering	13	13
Sean T. Smith	B.S. / Civil Engineering	6	6
Geologists			
Matthew J. Blasini, G.I.T.	B.S. / Geology	3	4
Nathan A. Quick, P.G.	M.S. / Geology	1	6
Total Years of Experience		**250**	**278.5**

(1) Long-term Subcontractor

Cone Penetration Testing Capabilities

Eustis Engineering owns two dedicated track-mounted Cone Penetration Testing (CPT) rigs and operates four other multi-purpose rigs that can perform CPTs. Operators are either specifically trained engineering technicians or engineers who perform the 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 and using CPT technology since the early 2000s.

A CPT can be accomplished rapidly with four or five being made in the same time frame as a standard geotechnical boring. Therefore, the CPT is 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 have used 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 response 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 SPT hammers on our drill rigs.

Other Non-Destructive Testing Capabilities

Our engineering staff at Eustis Engineering also 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 cross-hole/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 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 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.

Field Exploration Personnel

We can provide up to ten (10) 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	Scott Bombard	Jordon Brightwell	James Cordes	Rene Davidson	Robert Dupuy	Eric Held	James Lubben	George Reitmeyer	Lawrence Rome	Michael Whipkey
Hand Auger Borings	X	X	X	X	X	X	X	X	X	X
General Type (3-in. Diameter Borings)	X	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	
Undisturbed Type (5-in. Diameter Borings)	X	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	
Location Information (Latitude, Longitude)		X	X	X	X	X	X		X	X
Set Permanent Benchmarks		X	X	X		X	X		X	
Install Instrumentation		X	X	X		X	X		X	
Cone Penetration Tests						X		X		
Geoprobe® Sampling	X		X		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 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

We 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 penetrometer (DCPT) to assess the in situ strength of undisturbed soils and compacted materials in accordance with ASTM D6951.

Drone Capabilities

Eustis Engineering utilizes small Unmanned Aerial Systems (sUAS), more commonly known as "drones" to enhance our services. We use the 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 production of boring logs and data entry.

Eustis Engineering has also recently 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 will provide Eustis Engineering's team members access to a data source via connected applications or a web portal, increasing collaboration and efficiency. The 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 easily customized worksheets and reports.

Technical testing common to our laboratories includes ASTM, ACI, LaDOTD, AASHTO, FAA, and USACE. Our laboratories hold accreditations from AASHTO, LaDOTD, and the USACE.

Laboratory Staffing

Eustis Engineering currently has more than a dozen technicians to 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 U.S. Army Corps of Engineers, 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		Aggregate
Asphalt	Aggregate	Asphalt
Concrete	Soil	Concrete
Masonry	Spray Fire-Resistive Material	Soil
Soil		Spray Fire-Resistive Material

Our laboratory in Houston, Texas has capabilities in the areas of Aggregate, Concrete, Masonry, and Soil. Applications for CCRL and AMRL accreditation are in process with the intent of achieving these accreditations later this year.

To show further that 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, and we also have a Quality Control Manager who oversees the calibration of our equipment. The biggest reward of our quality measures is knowing that our clients are confident that our testing laboratory produces the highest quality results and conforms to national and international standards.

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:** 18 March 2022