



STATEMENT OF QUALIFICATIONS

Professional Engineering Services Related to
the Design for the Rehabilitation of the
Transcontinental & Belle Lift Station (E8-1)

Resolution No. 137449



Submitted To:

Jefferson Parish Council
Attn: Eula Lopez, Parish Clerk
General Government Building
200 Derbigny Street, Suite 6700
Gretna, LA 70053

Submitted By:

ECM Consultants, Inc.

1301 Clearview Parkway, Suite 200, Metairie, Louisiana 70001

Telephone: 504-885-4080 • Fax: 504-885-1439

kazem@ecmconsultants.com

In Association with:

Eustis Engineering, LLC.

BFM Corporation, LLC.

May 26, 2021

ECM Consultants, Inc.

Engineers • Architects • Construction Managers

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Metairie, LA 70001
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May 25, 2021

Jefferson Parish Council
Attn: Ms. Eula Lopez, Parish Clerk
General Government Building
200 Derbigny Street, Suite 6700
Gretna, LA 70053

Re: Letter of Interest and Statement of Qualifications
Professional Engineering Services Related to the Design for the
Rehabilitation of the Transcontinental & Belle Lift Station (E8-1)
Resolution No. 137449

Jefferson Parish Council:

ECM Consultants, Inc., a Metairie-based engineering, architectural, and construction management firm, is pleased to submit our Statement of Qualifications in response to your Request for Qualifications for the above referenced project.

ECM Consultants, Inc. has provided professional engineering services including studies, evaluation, engineering design, preparation of plans and specifications, cost estimates (PS&E), construction administration and resident inspection for numerous sewage projects for Jefferson Parish, S&WB of New Orleans and City of Kenner for a number of years. Projects have included lift station rehabilitation and upgrades, gravity lines installation and force mains, as well as wastewater treatment plant upgrades. The TEC professional services questionnaire included herewith will demonstrate that our key personnel have related experience and are qualified to perform the required services. ECM has provided design services for 37th and Purdue Lift Station in Jefferson Parish, LA, professional services for investigations, study, PS&E and construction administration for the rehabilitation of 15th Street and Webster Lift Station and Causeway and W. Esplanade North Lift Station for Jefferson Parish-DPW; 42nd and Erlanger Lift Station for City of Kenner-DPW; services for nine sewer lift stations at Lakefront Airport; and design and preparation of PS&E for several lift stations and force mains for Sewerage & Water Board of New Orleans. ECM is currently providing services to Jefferson Parish for the improvements to the West Napoleon Lift Station (F6-2), Clearview and West Napoleon Lift Station (F6-1), and rehabilitation of the Nursery & Poplar and Metairie Court & Poplar Lift Station.

Our team includes BFM Corporation, LLC for surveying services and Eustis Engineering, LLC for geotechnical services. Both firms are local and have extensive experience in their respective fields.

Thank you for your time in reviewing our qualifications. We hope our interest will receive favorable consideration. Should you have any questions or require any additional information, please contact me.

Sincerely,



Kazem Alikhani, P.E.
Chief Executive Officer

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Section 1

ECM Consultants, Inc.

TEC Professional Services Questionnaire

TEC Professional Services Questionnaire



A. Project Name and Advertisement Resolution Number:

**Professional Engineering Services Related to the Design for the
Rehabilitation of the Transcontinental & Belle Lift Station (E8-1)**
Resolution No. 137449

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

ECM Consultants, Inc.
1301 Clearview Parkway, Suite 200
Metairie, LA 70001



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:

Kazem Alikhani, P.E., Chief Executive Officer
Louisiana Licensed Professional Engineer
P.E. License No. 25073
Tel: (504) 885-4080 Fax: (504) 885-1439
Email: kazem@ecmconsultants.com

D. Name, title and contact information of employee who is 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.

Engineer
Kazem Alikhani, P.E., Chief Executive Officer
Louisiana Licensed Professional Engineer
P.E. License No. 25073
Tel: (504) 885-4080 Fax: (504) 885-1439
Email: kazem@ecmconsultants.com

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

<u>8</u> Administrative	<u>0</u> Estimators	<u>0</u> Specification Writers
<u>2</u> Architects	<u>0</u> Geologists	<u>2</u> Structural Engineers
<u>0</u> Chemical Engineers	<u>0</u> Geotechnical Engineers	<u>0</u> Graduate Engineers
<u>13</u> Civil Engineers	<u>0</u> Interior Designers	<u>4</u> Project Managers
<u>25</u> Construction Inspectors	<u>0</u> Landscape Architects	<u>0</u> Clerical
<u>0</u> Ecologists	<u>0</u> Land Surveyor	<u>1</u> Grant/Fund Specialists
<u>1</u> Electrical Engineers	<u>2</u> Mechanical Engineers	<u>0</u> Sanitary Engineers
<u>3</u> Engineer Intern	<u>0</u> Environmental Engineers	<u>0</u> Graduate Architect
<u>0</u> Professional Land Surveyors	<u>3</u> CAD Technicians	<u>62</u> TOTAL
<u> </u> Civil Engineer (Licensed in another state)		

TEC Professional Services Questionnaire

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.

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
YES NO N/A

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

Name & Address:	Specialty:	Worked with Firm Before (Yes or No):
1. Eustis Engineering, LLC 3011 28 th Street Metairie, LA 70002	Geotechnical Engineering	YES
2. BFM Corporation 534 William Blvd. Kenner, LA 70062	Surveying Services	YES

J. Please specify the total number of support personnel that may assist in the completion of this Project: 5 – 8

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 page if necessary.



**Jefferson Parish
Department of Public Works**

ECM Consultants, Inc.
(Prime)

Principal- in- charge

Ujjal DasGupta, P.E.

Principal/Project Manager

Kazem Alikhani, P.E.

Survey Services
(BFM)

Ralph Fontcuberta, Jr., P.L.S.
Chad Poche, P.E.
J. Philip Thayer

Constructability Reviews /
Resident Inspection

Chad Vosburg, P.E.
Glenn Eggert
Chad Normand

Civil / Structural
Engineering

Sunina Shrestha, P.E.
Chris Capretto, P.E.
Sudhir Mehta, P.E.
Neil Logan, P.E.
John Rasi, P.E.

Geotechnical Services
(Eustis)

Gwendolyn Sanders, P.E.
Benjamin Cody, P.E.

Mechanical / Electrical
Engineering

Harry Hawney, P.E.
Heidi Gremillion, P.E.

CAD
Services

Mario Marengo
Marvin May

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.

PRINCIPAL:

Name & Title:

Ujjal DasGupta, P.E., President

Project Assignment:

Principal

Name of Firm with which Associated:



ECM Consultants, Inc.

Years' experience with this Firm:

26

Education: Degree(s)/Year/Specialization:

B.S./1968/Civil Engineering

Active registration: Year first registered/discipline:

1982/Civil Engineering/LA License No. 19849

Mr. DasGupta has more than 53 years of experience in the fields of civil and structural engineering, project management and construction management. He has been involved in design and construction engineering for several sewer improvement projects involving lift stations, force mains, gravity lines, and sewerage treatment plants for clients including Jefferson Parish, Sewerage and Water Board of New Orleans, Orleans Levee District, St. John the Baptist Parish, and Harrison County Waste Management District (MS).

Employment History:

- ECM Consultants Inc., LA, *President (1995-to date)*
- C&S Consultants, Inc., LA, *Vice President (1983-1995)*
- Pepper & Associates & Kiddie Consultants, LA, *Sr. Engineer (1980-1983)*
- McDermott, Inc., LA, *Sr. Structural Engineer (1980-1982)*
- Dunbar & Dickson, Inc., TX, *Project Engineer (1976-1980)*
- Public Works Department, India, *Assistant Engineer (1968-1976)*

Other experience and qualifications relevant to the proposed Project:

Rehabilitation of the 42nd and Erlanger Sewer Lift Station and the Rehabilitation of the 15th & Webster St. Lift Station, City of Kenner Dept. of Public Works, Kenner, LA: Mr. DasGupta served as Principal in Charge for this sewer rehabilitation project that included design of new pumps and motors with all accessories, piping, and control panels to increase capacity at 42nd & Erlanger lift station from 375 gpm to 625 gpm and at 15th & Webster lift station from 800 gpm to 1,200 gpm. Project also included rehabilitation of existing wet wells on both lift stations.

New Causeway and West Esplanade Pump Stations, Jefferson Parish, LA: Mr. DasGupta served as Project Manager for the evaluation, engineering design and preparation of plans, specifications, and cost estimates (PS&E) for a new sewer pump station to replace the two existing pump stations. The project involved designing the pump station with two submersible pumps at 750 gpm at 30' TDH and installing over 600 L.F. of 12" PVC gravity lines, 20' below grade by directional drilling, new electrical service, controls, and SCADA system.

Capacity Upgrade for Plum Orchard Sewer Pump Station at Plum Orchard Avenue, S&WB of New Orleans: Mr. DasGupta served as project manager for engineering design and preparation of plans and specifications and cost estimates for design of a new 500 gpm, aboveground duplex packaged lift station. Scope of work included design for an 8' diameter,

20' deep concrete wet well; pile foundations; concrete bottom slab and top slab; determination of pump size for increased flow; control system; temporary by-pass sewer system; modification of a section of 8" gravity sewer line for influent to lift station; manifold piping and over 100' of new 6" PVC force main from new lift station including check valve and gate valve with valve vault; and tie in to the 6" existing force main to by-pass existing lift station.

Sewer Lift Stations and Force Main, City of Kenner Dept of Public Works, Kenner, LA: Mr. DasGupta served as Project Manager for this sewer system upgrade project. The project involved study and analysis of several major sewerage lift stations as well as design, preparation of construction documents and construction inspection for rehabilitation and upgrades of lift station no. 4309 involving new pumps, piping, and control for increased capacity of 4800 gpm, rehabilitation of the wet well, and a new 20" sewer force main.

Design of Four Sewer Collection Systems in Lucy and Wallace Area, St. John the Baptist Parish Dept of Public Works, St. John the Baptist Parish, LA: Mr. DasGupta served as project engineer for this project. He was responsible for preparing application for CDBG funding for these four projects and all four projects were approved by the state and received grants. He was responsible for design, preparation of plans and specifications and estimates and resident inspection services for the four collection systems involving gravity lines, lift stations and force mains.

Capacity Upgrades for McCoy Sewer Pump Station, Old Gentilly Road, S&WB of New Orleans, New Orleans, LA: Mr. DasGupta served as project manager for the design of a new 480 gpm duplex, belowground submersible package lift station to replace an existing lift station. The project involved structural design for installation an 8' diameter, over 20' deep polymer wet well supported on a thick concrete bottom slab on timber piles and concrete top slab for LS housing, piping, controls, etc. Design also included a steel sheet pile cofferdam for LS and sheeting, shoring, and bracing for installation of force mains and gravity influent lines; removal and replacement of over 150' of 8" PVC gravity lines with new manholes; new 6" PVC force main with check valve and gate valve to tie-in to existing; new electrical service with transformer tower; new SCADA systems; concrete paving and asphalt roadway paving restorations; fencing and removal of pumps, piping controls, etc.; and abandon existing LS plugging influent and discharge lines in the existing wet well.

New Convention Center and New Medical Center Sewer Pump Stations, S&WB of New Orleans, New Orleans, LA: Mr. DasGupta served as project manager for this contract involving evaluation and preliminary engineering design services for Phase III capacity projects associated with the Sewer System Evaluation and Rehabilitation Program (SSERP). Under this contract, ECM provided engineering design services for the New Convention Center Sewer Pump Station, New Medical Center Pump Station, and New Sewer Force Main from New Convention Center Sewer Pump Station (SPS) to the Clara Street Trunk Sewer. Both pump stations' study/design included capacity upgrade improvements and new Convention Center Force Main involved design of approximately 6,800' of new 8" force main from the New Convention Center Pump Station.

Rehabilitation of Sewer Lift Stations of New Orleans Lakefront Airport, Orleans Levee District, New Orleans, LA: Mr. DasGupta served as overall project manager for this contract. After hurricane Katrina, ECM was awarded a contract to rehabilitate all nine existing lift stations which were severely damaged by flooding during the storm. Project scope included rehabilitation of nine lift stations including replacing pumps, electrical systems, control system and repair to lift station buildings as well as design of a new lift station with small, packaged treatment plant to discharge effluent to Intracoastal Navigational channel.

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:

Kazem Alikhani, P.E., Chief Executive Officer

Project Assignment:

Principal/Project Manager

Name of Firm with which Associated:



ECM Consultants, Inc.

Years' experience with this Firm:

5

Education: Degree(s)/Year/Specialization:

BS /1980 / Mechanical Engineering; MS / 1984 / Engineering with concentration in Civil, Hydraulic & Hydrology

Active registration: Year first registered/discipline:

1992 / Mechanical & Environmental Engineering / LA License No. 25073

Other experience and qualifications relevant to the proposed Project:

Mr. Alikhani has more than 39 years of experience in public works projects including planning, design, and construction management. He spent 34 years of his career working with Jefferson Parish Dept. of Public Works and was the Director of Public Works, prior to retirement. He was responsible for all public works functions and overseeing an annual operating budget of \$200M and a capital budget of over \$100 million for the Parish. His public works oversight consisted of managing nine departments: drainage, sewage, water, streets, parkways, environmental, Floodplain Management, Hazard Mitigation, engineering and Capital projects.

Employment History:

- ECM Consultants, Inc., *Chief Executive Officer (2016-Present)*
- Jefferson Parish DPW, *Director of Public Works (2010-2016)*
- Jefferson Parish DPW, *Director of Drainage (2004-2010)*
- Jefferson Parish DPW, *Asst. Director of Water (1995-2004)*
- Jefferson Parish DPW, *Drainage Dept. Engr. (1982-1994)*
- Guillot & Voght Engineering, *Engineer (1980-1982)*

Other experience and qualifications relevant to the proposed Project:

Causeway and W. Esplanade (North and South) Lift Station Rehabilitations, Jefferson Parish, LA: Mr. Alikhani was the principal in charger for ECM when the firm Prepared detailed design plans, specifications and contract documents for construction of a new sanitary lift station at the intersection of Causeway and W. Esplanade to replace the Causeway South lift station. The new lift station will have a capacity of 750 G.P.M. Work Includes: wet well, valve chamber and piping systems with a redirected force main discharge, new control panel & SCADA system, directionally drilled gravity sewers, driveway and site paving, and abandonment of the Causeway N. & S. lift stations, miscellaneous civil, structural, mechanical, and electrical work. design and CE&I for roadway reconstruction with curbs and gutters. Design work also included subsurface.

Purdue & 37th Street Lift Station Upgrades, Jefferson Parish, LA: As Director of Public Works, Mr. Alikhani managed this project that included designs for a new lift station to replace an existing lift station to resolve overflow issues that were occurring due to repeated equipment failure.

Emergency Pump Out for All Lift Stations in Jefferson Parish, LA: As Director of Public Works, Mr. Alikhani helped secure \$4.7 million in grants from Hurricane Isaac CDBG Disaster Recovery funding, and he oversaw all related design and construction. The projects under this grant included installation of emergency pump outs at all lift stations in Jefferson Parish, to be used during power outages.

Harvey Wastewater Treatment Plant Trickling Filter Rehabilitation, Jefferson Parish, LA: As Director of Public Works, Mr. Alikhani managed this project that included design and construction to remove and replace a center column, distribution systems and media, repair/replace underdrains as needed, and coat concrete tank to resolve LDEQ permit violations.

SSO Program, City of Baton Rouge/East Baton Rouge Parish-DPW, Baton Rouge, LA: Mr. Alikhani is serving as Contract Manager for projects under the SSO Program. The scope of work for these ongoing projects consists of inspection for construction and/or rehabilitation of gravity sewers, force mains, wastewater pump stations, and wastewater treatment plant facilities.

Wastewater/Sewerage Improvement Projects: Under the Sewer Capital Improvement Program, Mr. Alikhani identified, planned, and oversaw 66 projects totaling approximately \$80 million for improvements to sewer systems. Mr. Alikhani helped secure more than \$40 million in low interest loans through LADEQ programs, several hundred thousand dollars' worth of affiliated grants, and more than \$7 million in federal funding. He planned and supervised engineering and construction for projects that included rehabilitation and replacement of numerous sewerage lift stations, pump station, rehabilitation of gravity and force mains, and rehabilitation of primary clarifiers, odor control, belt presses, and trickling filters. Several projects under this LDEQ fund include Terrytown Sewerage Pump Station Improvements, East Bank WWTP Rehabilitation of Belt Presses; Jefferson Hwy. and Midway Sewage Lift Station Rehabilitation and Improvements; and design and installation of Odor Control Systems at various sewage lift stations.

Various Sewerage Projects, Jefferson Parish, LA: As Director of Public Works, Mr. Alikhani oversaw all Jefferson Parish sewerage improvement projects including collection system design and upgrades, point repair and lining, rehabilitation and construction for lift stations, pump stations, gravity and force mains and wastewater treatment plant upgrades. A few projects included: Improvements to Effluent Pump Station at East Bank WWTP, rehabilitation of Marrero Primary Clarifier, Odor control system, new Rosethorne WWTP, rehabilitation of Causeway & W. Esplanade Lift Stations, gravity lines and force mains.

Suave Road Pump Station Improvements, Jefferson Parish, LA: As Director of Public Works, Mr. Alikhani identified, planned, and oversaw engineering and construction for the neighborhood pump station in River Ridge, one of the first two Jefferson Parish owned drainage pump stations that discharge into the Mississippi River. The pump station included two axial flow pumps with capacity of 120 CFS with 100% backup generator and SCADA systems. The discharge pipe was directionally bored from Jefferson Parish Highway to the Mississippi River.

Potable Water Improvement Projects: As Assistant Director of the Department of Water for Jefferson Parish, Mr. Alikhani's prime responsibility was operations and maintenance of Water Infrastructure that included water distribution system and water treatment plants. During his tenure in the Water Department, he planned, budgeted and managed the expansion of the west bank water treatment plan. The project involved increasing the water treatment capacity by 25 MGD, that also included chemical feed and electrical system upgrade, replacement of filter media with multimedia, air scour and SCADA system. Additionally, under his supervision, numerous new water lines were planned, designed, and constructed to replace the old water lines with extensive repair history or install new water lines to eliminate dead end lines or loop the water lines to improve water quality.

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.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Sunina Shrestha, P.E., Engineering Manager

Project Assignment:

Civil Engineer

Name of Firm with which Associated:



ECM Consultants, Inc.

Years' experience with this Firm:

15

Education: Degree(s)/Year/Specialization:

M.S. / 2008 / Civil Engineering, Water Resources, and Environmental Engineering

Active registration: Year first registered/discipline:

2013/Civil Engineering/LA License No. 37901

Other experience and qualifications relevant to the proposed Project:

Ms. Shrestha has more than 16 years of experience in analysis and design of projects involving sewerage, drainage, water, and pump stations. Her experience also includes preparation of hydrologic models of various river basins, water surface profiles, retention pond feasibility study, hydraulic analysis, and reservoir analysis.

Employment History:

- ECM Consultants Inc, LA, Civil Engineer (2009-to date)
- UAH, Graduate Research Assistant in Civil Engineering (2007)
- RITI Consultancy Pvt. Ltd., Nepal, Field Engineer (2005)

Other experience and qualifications relevant to the proposed Project:

Rehabilitation of Sewer Lift Station D8-3 (Purdue Drive & 37th Street), Jefferson Parish, LA: Ms. Shrestha is currently providing engineering design services for new 8' dia about 20' deep sewerage fiber glass wet wall, lift station which will include NEMA premium submersible pumps, electrical system, emergency pump out and level controls for the new 37th Street and Purdue Lift Station. This project also includes 6" diameter force main, restoration of roadways, sidewalks, and landscaping.

Rehabilitation of the 15th & Webster Sewer Lift Station, City of Kenner Dept. of Public Works, Kenner, LA: Ms. Shrestha provided engineering design for removal and replacement of existing pumps and motors with all accessories, piping, and control panels to increase capacity 15th & Webster lift station from 800 gpm to 1,200 gpm. Project also included rehabilitation of existing wet wells on the lift station.

Causeway and W. Esplanade Sewer Lift Station Rehabilitations, Jefferson Parish-DPW, Jefferson Parish, LA: Ms. Shrestha is currently providing engineering design services for a new sanitary lift station at the intersection of Causeway and West Esplanade to replace the Causeway South Lift Station. The new lift station will have a capacity of 750 gpm at 30 ft. TDH. Scope of work includes designing wet well, valve chamber and piping systems with a redirected force main discharge, new control panel and SCADA system, directionally drilled gravity sewers, driveway and site paving, and abandonment of the existing Causeway North and South lift stations.

Rehabilitation of the 42nd and Erlanger Sewer Lift Station, City of Kenner Dept. of Public Works, Kenner, LA: Ms. Shrestha provided engineering design for removal and replacement of existing pumps and motors with all accessories, piping, and control panels to increase capacity at 42nd & Erlanger lift station from 375 gpm to 625 gpm. Project also included rehabilitation of existing wet wells on the lift station.

Mid-City Area Sewer Collection System Rehabilitation, Sewerage and Water Board of New Orleans, New Orleans, LA: Ms. Shrestha provided design support for the rehabilitation of sewer lines in the Mid-City area for Sewerage and Water Board of New Orleans. Work included review evaluation reports, design sewer lines to ensure adequate capacity of the sewer lines after reviewing S&WB database, and preparation of construction plans using GIS (ArcView).

Estelle No. 1 Pump Station, USACE-New Orleans District, Jefferson Parish, LA: Ms. Shrestha was responsible for preparation of contract documents and civil specifications; collecting all structural, mechanical, and electrical specifications to assemble documents in accordance with the latest Corp of Engineer's standards; and coordination between the USACE-Hurricane Protection Office and non-Federal Sponsors. This project involved storm proofing design for pump station that included new screen cleaner with debris removal system, level sensing controls, fiber optic connectivity, etc.

Harvey Pump Station, US Army Corps of Engineers-New Orleans District, Jefferson Parish, LA: Ms. Shrestha was responsible for preparation of contract documents and civil specifications; collecting all structural, mechanical, and electrical specifications to assemble documents in accordance with the latest Corp of Engineer's standards; and coordination between the USACE-Hurricane Protection Office and non-Federal Sponsors. This project involved design of pump station improvements including the safe house, generators, debris removal system, wet well missile barrier protection, fuel purification system, etc.

Westwego No. 1 Pump Station, US Army Corps of Engineers-New Orleans District, Jefferson Parish, LA: Ms. Shrestha was responsible for preparation of general and civil plans and specifications; collecting all structural, mechanical, and electrical specifications to assemble documents in accordance with the latest Corp of Engineer's standards; and coordination between the USACE-HPO and non-Federal Sponsors. This project involved design of a 375 cfs pump station using three 125 cfs pumps.

Veterans Blvd. Drainage Pump Stations, Jefferson Parish-DPW, Jefferson Parish, LA: Ms. Shrestha provided civil engineering design for three new pump stations, two stations at Veterans Blvd. with capacities of 27,000 gpm and 38,000 gpm discharging into the 17th Street Canal, and one station at W. Esplanade with capacity of 54,000 gpm. Work included: new concrete intake structures, 30" and 36" dia discharge piping systems spanning over the 17th Street Canal levee and floodwall. Work also included miscellaneous civil, structural, mechanical, electrical, and control system.

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.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Christopher Capretto, P.E., Civil Engineer

Project Assignment:

Civil Engineer

Name of Firm with which Associated:

 **ECM Consultants, Inc.**

Years' experience with this Firm:

6

Education: Degree(s)/Year/Specialization:

B.S. / 2009 / Civil Engineering

Active registration: Year first registered/discipline:

2014 / Civil Engineering / LA License No. 38641

Other experience and qualifications relevant to the proposed Project:

Mr. Capretto has more than 12 years of experience design of transportation projects including pavement design, traffic analysis, design of horizontal and vertical alignments, and stormwater drainage systems. He also has experience in design and preparation of plans and details and technical specifications for sewer lift stations, force main, drainage pump station, roadway, and bridge projects. Mr. Capretto's experience also includes participation in project management, AutoCAD drafting of roadways and drainage projects and design of steel structures and concrete foundations as well as coordination with various clients.

Employment History:

- ECM Consultants Inc, LA, Civil Engineer (2014-to date)
- Atlas Engineering, Inc./S&B Infrastructure, Ltd., Civil Engineer (2008-2014)

Other experience and qualifications relevant to the proposed Project:

Causeway and W. Esplanade Lift Station Rehabilitations, Jefferson Parish-DPW, Jefferson Parish, LA: Mr. Capretto provided engineering design for a new sanitary lift station at the intersection of Causeway and West Esplanade to replace the Causeway South Lift Station. The new lift station will have a capacity of 750 gpm. Scope of work includes fiberglass wet well, valve chamber and piping systems with a redirected force main discharge, new control panel and SCADA system, 600 L.F. of 8" diameter directionally drilled gravity sewers, driveway and site paving, and abandonment of the Causeway North and South lift stations.

Veterans Blvd. Drainage Pump Stations, Jefferson Parish-DPW, Jefferson Parish, LA: Mr. Capretto is providing civil engineering services for design of three new drainage pump stations that discharge into the 17th Street Canal. Included in the design of this project are two 28,000 GPM and one 38,000 GPM drainage pump stations with concrete wet well and two submersible pumps at each station. The design includes two 30" and 36" discharge piping system that discharges into the Canal. The power system includes utility and emergency diesel generators with automatic transfer switches.

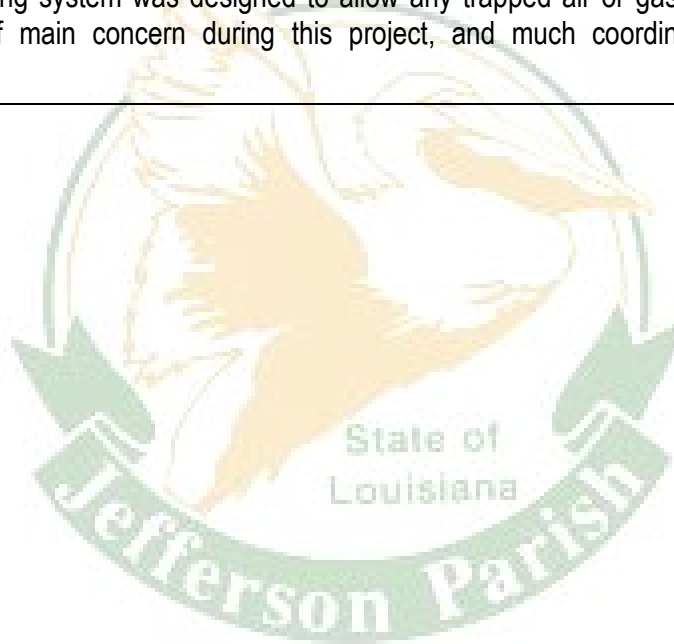
Brine Disposal Pump Replacement at Bryan Mound Site, U.S. Department of Energy (DOE), Strategic Petroleum Reserve (SPR), Freeport, Texas: Served as Project Manager for the replacement of two grossly oversized brine disposal pumps (1500 hp each) with smaller, more appropriately sized ones (350 hp each). These new pumps will reduce energy costs as well as material costs from the wear and tear on the brine disposal piping due to excessive velocity. These

changes will save DOE over \$2.9 million over the life of the new pumps while not sacrificing any functionality of the system. Maintaining the same top of pipe elevations is essential in the scope of the project, which has required design of modifications to the two existing concrete pump/motor platforms to raise the new, physically smaller pumps.

Warehouse Firewater Piping Replacement at Bayou Choctaw Site, U.S. DOE, SPR, Plaquemine, Louisiana: Served as Project Manager for the specification of the demolition, design, and replacement of a leaking firewater sprinkler piping system in a key storage warehouse on site. Project was a design-build with the chosen construction contractor first tasked with providing an original design for a new system per NFPA 13, signed and sealed by a fire protection engineer. Project moved very smoothly, and the design-build contract was able to be advertised for bid several weeks ahead of schedule.

Depressurization Pump Package at West Hackberry Site, U.S. DOE, SPR, Hackberry, Louisiana: Assisted the Civil Project Manager in the design of a depressurization pump skid to support the degasification plant. Preparation of construction specifications.

Anhydrite Pond Liner Replacement at Big Hill Site, U.S. DOE, SPR, Winnie, Texas: Assisted the Civil Engineer in the design of a new liner for the bottom of an anhydrite settlement pond on site. Decision was made to leave existing layer of anhydrite material at bottom of pond rather than remove it, so the design was adjusted to account for new liner being laid upon this material. A vent piping system was designed to allow any trapped air or gases to vent from under the liner. Environmental factors were of main concern during this project, and much coordination with the local permitting department has been required.



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.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Sudhir Mehta, P.E., Senior Structural Engineer

Project Assignment:

Structural Engineer

Name of Firm with which Associated:

 **ECM Consultants, Inc.**

Years' experience with this Firm:

3

Education: Degree(s)/Year/Specialization:

M.S. / 1976 / Civil Engineering; B.S. / 1972 / Civil Engineering

Active registration: Year first registered/discipline:

1980 - 18950 / LA Civil Engineering

Other experience and qualifications relevant to the proposed Project:

Mr. Mehta has more than 43 years of experience in the design, analysis, and construction of major hydraulic structures such as Drainage pumping stations, concrete canals, floodgates, and other flood control structures for multiple USACE districts, states, and municipalities.

Employment History:

- ECM Consultants Inc, LA, Structural Engineer (2018 to date)
- Brown, Cunningham and Gannuch, Senior Structural Engineer/Project Manager (2006-2018)
- URS Corp, Senior Structural Engineer/Project Engineer (2005-2006)
- Pepper & Associates, Senior Structural Engineer/Project Manager (1975-2005)
- S E Huey Co Consulting Engineers, Project Engineer (1973-1975)
- Linfield and Hunter, Inc., Engineer in Training (1971-1973)

Other experience and qualifications relevant to the proposed Project:

Relocation of Water & Sewer Force Main, Sewerage and Water Board of New Orleans, New Orleans, LA: He served as Project Manager for the design for relocation of a 48-inch diameter water main and 54 inch and 72-inch sewer force main between peoples Avenue and France road for the construction of the Florida Avenue Canal widening project. Provided DeZurik gate valves as requested by the Board's engineering staff. Developed plan profiles, designed above ground crossing of these utilities over existing canal and other obstructions.

Drainage Pumping Station No. 1, Sewerage & Water Board of New Orleans, New Orleans, LA: Mr. Mehta served as Structural Engineer for planning, design and construction of this project that consisted of an addition of two horizontal axial flow pumps and equipment to the existing pump station. The project included modifications to existing discharge basin and replacement of an existing suction basin with a new suction basin based on an existing hydraulic model study, and an addition to the existing suction canal and replacement of approximately 2000 LF of existing suction canal with a new two-cell reinforced concrete box culvert. The project also included the addition of a new brick and copper roof building to house the new pumps, and modifications and redesign of roadways to accommodate extension of pump station for the new pumps.

W. Esplanade Ave. Drainage Pump Station, Jefferson Parish, LA: Mr. Mehta is serving as Project Manager/Structural Engineer for design of these three drainage pump station projects. Mr. Mehta is providing structural engineering design for this new 180 CFS drainage pumping station located at the east end of the west esplanade canal. The station will house two (2) 60 CFS each, and two (2) 30 cfs axial flow vertical pumps. The discharge of the station will be in the 17th street

canal located approximately 150 ft east of the pump station. Mr. Mehta performed calculations of the system head loss and the NPSHA; layout of the pump station including geometrics of the suction chambers based on the pump selected and in conformance with Hydraulic Institute standards; layout of the suction and discharge piping; design of temporary earth retaining structures for the excavation based on the geotechnical investigation and analyses (done by others); structural analyses and design of reinforced concrete timber pile supported suction basin including the design of the pump floor; design of the trash screen supports; structural analyses and design of the generator station foundation. Timber piles will be used to support the generator slab; design of the pipe supports for 36-in diameter steel discharge pipes. Concrete saddles supported by piles will be used for the discharge pipe supports; design of general site layout; preparation of project specifications; coordinating with various state. Local and private owners of facilities whose interest may be affected by the construction of the project, coordinating with other engineering disciplines.

Drainage Pumping Station No. 19, Sewerage & Water Board of New Orleans, New Orleans, LA: This pump Station No. 19 was a multi-phase, multi-million dollar project involving a multi-cell box culvert suction canal and structural steel and reinforced masonry pump station building with copper roof to house three 11-foot 1200 cfs horizontal pumps and two 7-foot 250 cfs vertical pumps. Mr. Mehta served as Structural Engineer for design and construction administration of this project that consisted of an addition of a 1000 cfs horizontal axial flow pump and equipment. The project included discharge basin and suction basin a new suction basin pump station structure and pump building. This project included installation of sheet pile self-sustaining and braced cofferdams, installation of flood and sluice gates, installation of timber piles, excavations, dewatering, placement of concrete and installation of the pumps.

Veterans Boulevard Drainage Pump Stations (South & North), Jefferson Parish, Metairie, LA: Mr. Mehta performed Independent Technical Reviews (ITR) and structural engineering design for modifications to the new T-wall with access gates for these two new drainage pump stations. The project includes a concrete wet well structures with intakes for installation of 2-30 cfs vertical axial flow pumps at Veterans South and 2-42.5 cfs vertical axial flow pumps at Veterans North, for a total capacity of 60 cfs for the Veterans South and 85 cfs at Veterans North. Project includes steel discharge pipe manifolds (30" and 36" respectively) crossings through the existing flood wall, replacement of a section of the I-Wall with T-wall with access gate, and new gravity drainage system for diversion of flow from the drainage basins to the new pump stations.

Citrus Drainage Pump Station, Sewerage & Water Board of New Orleans, New Orleans, LA: This project included removal of an existing pump station and construction of a new station at the same site. Mr. Mehta served as Structural Engineer for design and construction administration of this project that consisted of an addition of a 1000 cfs horizontal axial flow pump and equipment. The project included discharge basin and suction basin a new suction basin pump station structure and pump building. This project included installation of sheet pile self-sustaining and braced cofferdams, installation of flood and sluice gates, installation of timber piles, excavations, dewatering, placement of concrete and installation of the pumps.

Fronting Protection at Bonabel and Suburban Pumping Stations, USACE New Orleans District, Jefferson Parish, LA: Mr. Mehta served as Project Manager/Structural Engineer for this project to add new surge protection structures which consisted of gated structures at the discharge end of the water passages of the existing horizontal pumps and T-walls at vertical pump discharge. Existing steel discharge pipes of the vertical pumps were extended through the T-wall structures. Also included were new T-walls tie the fronting protection structures on both sides of the discharge channel to the existing flood protection levees. Cost: \$8.5 million.

Broad Street Drainage Pump Station, Sewerage & Water Board of New Orleans, New Orleans, LA : This project involved the addition of two horizontal pumps and equipment to existing station including equipment, suction basin, and new two-cell concrete box canal. Mr. Mehta served as Structural Engineer for design and construction administration of this project that consisted of an addition of 2-1250 cfs, 11-foot horizontal pump and equipment. The project included pump station structure and addition to existing pump building. This project included installation of sheet pile self-sustaining and braced cofferdams, installation of flood and sluice gates, installation of timber piles, excavations, dewatering, placement of concrete and installation of the pumps.

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KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Neil Logan, P.E., Senior Structural Engineer

Project Assignment:

Structural Engineer

Name of Firm with which Associated:

 **ECM Consultants, Inc.**

Years' experience with this Firm:

20

Education: Degree(s)/Year/Specialization:

B.S. / 1961 / Civil Engineering

Active registration: Year first registered/discipline:

1974 - 14607 / LA Civil Engineering

Other experience and qualifications relevant to the proposed Project:

Mr. Logan has more than 47 years of experience as a structural engineer, with project experience including sewerage treatment plant structures, sewer lift stations, drainage pumping stations, floodwalls, breakwaters, bridges, buildings etc. He has extensive experience in design and preparation of plans and specifications for pump station projects in southeast Louisiana.

Employment History:

- ECM Consultants Inc, LA, Sr. Structural Engineer (2001-to date)
- N-Y Associates, Structural Engineer (Contract) (1994-to date)
- N-Y Associates, Structural Engineer (1976-1991)

Other experience and qualifications relevant to the proposed Project:

Causeway and W. Esplanade Sewer Lift Station Rehabilitation, Jefferson Parish-DPW, Jefferson Parish, LA: Mr. Logan provided structural engineering design services for a new sanitary lift station at the intersection of Causeway and West Esplanade to replace the Causeway South Lift Station. The new lift station will be 8' dia. 23' deep wet well with bottom concrete slab supported on piles. Scope of structural work also included an 8' dia. valve chamber with concrete bottom slab supported on piles and piping systems. Project includes steel sheet piling for installation of wet well.

Sewerage Projects in Franklinton, LA: Mr. Logan designed the sewer collection system and eight (8) pumping stations and force mains for areas of Franklinton, LA. The pumping stations ranged in capacity from 100 gpm to 1,500 gpm.

Veterans Blvd. Drainage Pump Stations, Jefferson Parish-DPW, Jefferson Parish, LA: Mr. Logan provided structural engineering services for design of three new drainage pump stations that discharge into the 17th Street Canal. Included in the design of this project are two 28,000 GPM and one 38,000 GPM drainage pump stations with concrete wet well and two submersible pumps at each station. The design includes two 30" and 36" discharge piping system that discharges into the Canal. The power system includes utility and emergency diesel generators with automatic transfer switches.

Marrero Wastewater Treatment Plant Expansion, Jefferson Parish Department of Sewerage, Marrero, LA: Mr. Logan provided structural engineering services for this \$18 million project involving expansion of WWTP upgrades. The project involved structural engineering designs and preparation of plans and specifications for the new clarifier, headworks,

and pumping station structure.

Bridge City Sewerage Treatment Plan, Bridge City, LA: Mr. Logan served as Senior Structural Engineer for the expansion of this treatment plant. Work included formulation of structural design criteria including materials for the three-person structural design crew. In addition, he designed the structure for the chlorine building, filter press building, effluent pumping station, clarifiers, trickling filter, and many miscellaneous structures.

Laplace Sewerage Treatment Plant, Laplace, LA: Mr. Logan served as Senior Structural Engineer for the expansion of this sewerage treatment plant. He provided structural designs for the clarifier, effluent pumping station, and other miscellaneous structures.

Munster Sewerage Treatment Plan Expansion, Chalmette, LA: Mr. Logan served as Senior Structural Engineer for the expansion of this sewerage treatment plant. He provided engineering design for clarifiers, settling basins, and a new effluent pump station. He also provided construction phase services.

Bridge Design for Drainage Pump Station #11 for S&WB of New Orleans and New Bayou Segnette Drainage Pump Station, Jefferson Parish, LA: Mr. Logan served as structural engineer for these projects and designed cast-in-place concrete bridges over the intake channel of the pumping stations for HS20 loading for dump trucks. This project was a 1200 cfs drainage pump station for Jefferson Parish under the SELA Program. The project included a 1200 cfs pump, intake and discharge structures, retaining walls, intake and discharge tubes, screen cleaners, etc.

Drainage Pumping Station #11, Sewerage and Water Board of New Orleans, LA: This project involved a 1000 cfs expansion of the existing drainage pump station. Mr. Logan served as Senior Structural Engineer. The project included a pump station structure attaching the existing structure, widening of intake and discharge structures, concrete intake and discharge tubes, automatic screen cleaners, etc.

Contract No. W912P8-07-D-0031 T.O.0029, Storm Proofing Jefferson Parish Pump Stations, Jefferson Parish, LA USACE-New Orleans District: Mr. Logan provided structural engineering services for the following pump stations in Jefferson Parish: Cousins, Canal Street, Estelle Nos. 1 and 2, Westminster, Harvey, Westwego Nos. 1 and 2, Parish Line, Bayou Segnette Nos. 1 and 2, Whitney Barataria, Elmwood, Ames, Duncan, Bonnabel, Mt. Kennedy, Hero, Planters, Lake Cataouatche, and Highway 90. The purpose of the project was to provide storm proofing design for the building envelopes as well as the ancillary systems to achieve reliable and redundant systems and insure sustained operation during storm events. These projects were issued as Task Orders under a five year, \$90 million (fees) IDIQ contract for multi-million-dollar civil projects. ECM also provided construction management and resident inspection services for these pump stations.

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KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

John Rasi, P.E., Senior Civil Engineer

Project Assignment:

Hydraulic Design Review

Name of Firm with which Associated:

 **ECM Consultants, Inc.**

Years' experience with this Firm:

9

Education: Degree(s)/Year/Specialization:

B.S. / 1978 / Civil Engineering; B.S. / 1975 / Construction

Active registration: Year first registered/discipline:

1983 - 20841 / LA Civil Engineering, Environmental Engineering

Other experience and qualifications relevant to the proposed Project:

Mr. Rasi has more than 36 years of hydraulic and hydrologic evaluation and modeling experience that includes a 25-year career with LADOTD and a 4-year career with Louisiana Department of Natural Resources (Coastal Restoration Division). He is highly experienced in the use of HEC-RAS, HEC-HMS, SWMM, DAMBREAK, and FLOODWAVE computer models for hydrologic and hydraulic analyses.

Employment History:

- ECM Consultants, Inc., LA, Hydraulic Engineer (2012-to date)
- LADOTD, Hydraulic Manager (2002-2011)
- Louisiana Department of Natural Resources (Coastal Restoration Division), Hydraulic Engineer (1990-1994)

Other experience and qualifications relevant to the proposed Project:

Hydraulic Manager & Senior Hydraulic Engineer, LADOTD (Office of Public Works), Statewide, LA: Mr. Rasi served as Hydraulic Manager and was responsible for managing groups of engineers and engineering technicians in the review and design of projects from the Port Priority Program, the Statewide Flood Program, the Dam Safety Program, and Federal projects funded in part by the State of Louisiana. He conducted and supervised engineers in hydraulic design, drainage studies, dam breach analysis, pump station design, and design of spillways and outlet structures for several dams. He was also responsible for review and approval of levee board permits within Louisiana. Additionally, he supervised flood plain specialists who were responsible for enforcing FEMA Flood Plain Laws and Regulations. Prior to his position as Hydraulic Manager, Mr. Rasi served as Senior Hydraulic Engineer for a year and was responsible for approving hydraulic designs of projects in the Louisiana Statewide Flood Control Program as well as the approval of dam designs that fall under Louisiana Dam Safety Program. He also generated flood studies, rainfall analysis, stream flow analysis, dam yield studies, and dam break analyses.

Hydraulic Engineer, Louisiana Department of Natural Resources, (Coastal Restoration Division), Statewide, LA:

Mr. Rasi provided hydraulic modeling of coastal estuaries of southern Louisiana to study the effects of freshwater diversions from the Mississippi River. The modeling consisted of investigations of salinity, temperature, stage changes, tidal effects, and sediment transport. The results of modeling were used to control the diversion of water through gated structures along the Mississippi River levee as well as diverted water through siphons over the Mississippi River to affect

stabilizing changes through Louisiana's deteriorating wetlands.

Construction Grant and Permit Engineer, LADOTD (Office of Public Works), Baton Rouge, LA: Mr. Rasi reviewed applications and construction administration of the Louisiana Statewide Flood Control Program and the Louisiana Port Priority Program as well as the approval of permits near Louisiana levees. He was responsible for application review, compliance to public bid laws, partial payments during construction, and project closeout.

Hydraulic Engineer, LADOTD (Office of Public Works), Statewide, LA: Mr. Rasi provided hydraulic design for pump stations, channels, dams, and bridges as well as watershed flood studies, flood forecasting along streams, and the review and correction of Federal Emergency Management Agency flood maps. His duties also included hydraulic design of dams and spillway structures. One of such structures was the state-owned dam at Chicot State Park.

Safety Inspections of State Regulated Dams, LADOTD, Louisiana Statewide: Mr. Rasi served as a Senior Hydraulic Engineer for conducting safety inspections for several state- and privately-owned dams under the State Dam Safety Program. This included hydrologic and hydraulic modeling of watersheds using LIDAR survey data and preparation of EAP reports for 22 dams throughout Louisiana. Mr. Rasi is currently reviewing the models and the reports. Preparation of these reports also involve field reconnaissance, dam breach analysis, and preparation of inundation maps.

Flood Mitigation Study & Design for Drainage Improvements of Sims Creek and Haven Subdivision, Tangipahoa Parish, LA: Mr. Rasi is serving as the Senior Hydraulic Engineer for this flood mitigation study. The subdivision experiences both head water issues within the subdivision caused by the swales, and it experiences serious backwater flooding from Sims Creek which causes significant flooding of homes and streets especially those near Sims Creek. ECM performed H&H modeling and alternative analysis to mitigate flooding in the subdivision.



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KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Chad Vosburg, P.E., Vice President

Project Assignment:

Civil Engineer/Construction Management

Name of Firm with which Associated:

 **ECM Consultants, Inc.**

Years' experience with this Firm:

2

Education: Degree(s)/Year/Specialization:

BS/1993/Civil Engineering

Active registration: Year first registered/discipline:

1998/Civil Engineering/No. 27677

Other experience and qualifications relevant to the proposed Project:

Mr. Vosburg has over 27 years of professional engineering experience in construction and contract administration including a 25-year career with LADOTD. His projects have included pump station design and rehabilitation, highway and bridge construction, debris removal operations and emergency reconstruction. As District 61 Administrator for LADOTD he provided leadership and directed all Baton Rouge operations including construction, maintenance, engineering, public works, traffic services, business, ports, pumping stations and other DOTD facilities throughout the 9 parish District 61 Area centered in Baton Rouge, LA. He was responsible for staffing Construction projects, maintenance, operation of moveable bridges, and miscellaneous incidents 24/7 for the entire 9 parish area.

Employment History:

- ECM Consultants Inc, LA, *Civil Engineer (2018 to date)*
- LADOTD, District 61, *District Administrator (2013-2018)*
- LADOTD, District 61, *Area Engineer (2007-2013)*
- LADOTD, District 61, *Maintenance Engineer (2003-2007)*
- LADOTD, District 61, *Project Engineer (1998-2003)*
- LADOTD, District 08/61, *Engineer Intern (1993-1998)*

Other experience and qualifications relevant to the proposed Project:

15th Street Pump Station Rehabilitation, I-110 LADOTD, Baton Rouge, LA S.P. No. H.010254.6: Mr. Vosburg's work included project scoping and design coordination along with broad supervision over the construction contract administration for project that included the replacement of controls, pumps and electrical. In addition, the entire facility was upgraded to meet current safety standards including accessibility and ventilation to meet confined space requirements.

US 190 Pipe Repair @ Old Bridge Pump Station-CNN/RR, Route US 190/61 LADOTD, Baton Rouge, LA: Mr. Vosburg's work included Project Development and Broad Construction Project Management. The project involved re-piping from pumping station to discharge point, jack and bore, slope stabilization, installation of valves, etc. to repair a leaking discharge pipe and improve the overall reliability of the station. The station is located on a major route that crosses the Mississippi River in Baton Rouge, US 190/US 61.

SPN 007-90-0023 Pump Station modifications, US 190, LADOTD, Baton Rouge, LA: Mr. Vosburg served as the Project Engineer directly over scoping and Construction Contract Administration for work involving the rehabilitation of the Old Bridge Pumping station. The work included the replacement of pumps, piping, controls and electrical components to improve the overall reliability of the station. The station is located on a major route that crosses the Mississippi River in Baton Rouge, US 190.

Boyd St. & 21st St. Pumping Station Improvements, I-110, LADOTD, Baton Rouge, LA S.P. No. H.010439.6: Mr. Vosburg was responsible for coordination with design consultants and DOTD staff to budget and scope a project to improve the reliability of 2 major pumping stations along I-110 in E. Baton Rouge Parish, including determination of components of the station to be replaced to achieve improved reliability, conform with safety standards, along with instrumentation to notify maintenance staff of issues. Mr. Vosburg used his maintenance experience to determine which items needed to be addressed to make operation of the facility more efficient.

Bluebonnet Boulevard Pump Repairs, La. 1248, LADOTD, Baton Rouge, LA S.P. No. H.972086.1: Mr. Vosburg performed an initial inspection after maintenance issues with pumps and check valves were encountered during operation of the system. Other work included the coordination of the design scope along with broad supervision over the Construction Contract Administration. The work included the replacement/rehabilitation of pumps and check valves.

LA 959 Emergency Drainage Repair, LADOTD, East Feliciana Parish, LA: Mr. Vosburg served as District Administrator for this construction project, overseeing replacement of three 84ft corrugated metal pipe arch structures with two 8'X8' Reinforced Concrete Box Culverts. Work included removal of the existing pipe, installation of new reinforced concrete box culverts that met applicable hydraulic standards and asphaltic pavement overlay. Mr. Vosburg's role included development of Project Scope, Attendance of site meetings and was responsible for the Construction Contract Administration for the project.

LA. 3034: Sullivan Rd., Wax -Hooper Clearing and Grubbing, Utility Relocation and Sewer Line Installation: Mr. Vosburg served as DOTD District Administrator for this project in conjunction with the City of Baton Rouge. In addition to reviewing widening project plans, Mr. Vosburg was also involved in Project Design and Development, Public Outreach, working with City officials, Public Meetings, and Design and utility relocation plans and constructability reviews. This project involved Clearing the R/W, Relocation of utilities including electrical, **water**, telecommunications, and sewer line to prepare for a construction project to widen the roadway corridor and has been completed. This project is currently under construction.

Program Management for Various District 61 Programs; LADOTD: Mr. Vosburg served in various positions throughout the District 61 career including management of the following programs for DOTD and District 61: Interstate and local road rehabilitation, Bridge Inspection & Maintenance, Contract Maintenance, In-house maintenance, Permits, Utilities and Moveable Bridges. including. He was responsible for budgeting for yearly amounts of funding to be dedicated to various programs as well as prioritizing work in budget. These funding streams were utilized by District 61 to apply to DOTD assets, keeping them in operation, while also making improvements to roadways and other DOTD assets.

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KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Harry Hawney, P.E., MBA, Electrical Engineer

Project Assignment:

Electrical Engineer

Name of Firm with which Associated:

 **ECM Consultants, Inc.**

Years' experience with this Firm:

2

Education: Degree(s)/Year/Specialization:

BS / 1970 / Electrical Engineering; MS / 1971 / Master of Business Administration

Active registration: Year first registered/discipline:

Electrical Engineer / LA / #19229

Other experience and qualifications relevant to the proposed Project:

Mr. Hawney has more than 48 years of experience in electrical engineering responsible for electrical engineering design and project management for a variety of projects including commercial and industrial buildings, pumps stations, water plants, water purifications plants, sewerage treatment plants and lift stations.

Employment History:

- ECM Consultants Inc., LA, *Electrical Engineer* (2019-to date)
- Techbox, LLC., *Founder* (2000 -2018)
- CTI Celtek Electronics, *Partner, Engineer* (1988-1999)
- Electrical Engineering, *Self-employed* (1981-1987)
- Tri-State Coastal Company, *Engineer* (1978-1980)
- Techtrol Ltd, Montreal, Quebec, Canada (1972 – 1977)

Other experience and qualifications relevant to the proposed Project:

FY12 Sewer Pump Station Rehabilitation, Slidell, LA: Electrical Engineer for design and construction of rehab measures to six (6) sewer stations. Five (5) of the stations are being totally replaced, and one (1) is being rehabilitated by replacing mechanical and electrical systems. Electrical and control equipment is being raised for hazard mitigation.

Munster Sewerage Treatment Plant, St Bernard Parish, LA: Mr. Hawney provided electrical design and project construction management for the existing Parish sewerage treatment plants which were consolidated into a new 50MGD treatment facility at the Munster WWTP. Scope of work included electrical service at 13.8kv with 480V in plant distribution; two – 2MW emergency backup diesel generators; in plant distributed SCADA system; in plant security video system.

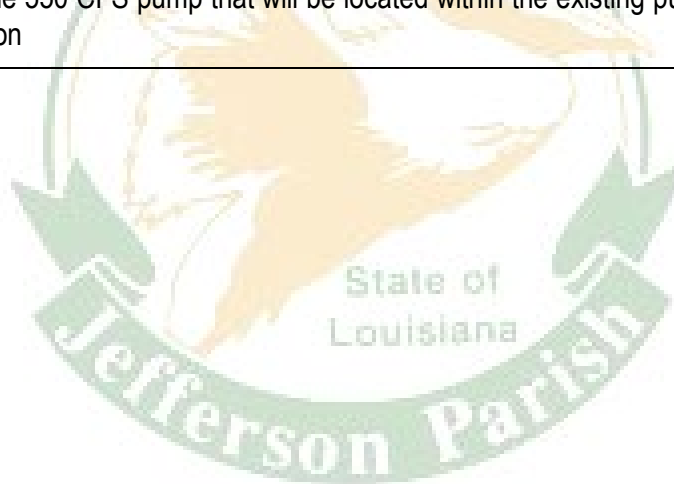
East Jefferson Water Works, Jefferson, LA: Mr. Hawney provided electrical design that included a 13.8kV substation with 3 incoming Utility sources and automatic 13.8kv switchover between sources; a 4.5MW diesel standby power plant with 4 generators and paralleling switchgear. An alternate emergency power distribution network within the plant to insure the highest level of power delivery reliability. Construction schemes were developed to allow all plant equipment to stay in service during construction for plant Operator interface, all power system components communicate on a fiber optic network, to a server-based Power Management and Control System (PMCS).

Carrollton Water Purification Plant, S&WBNO, New Orleans, LA: Mr. Hawney provided electrical design and project construction management for this Sodium Hypochlorite facility. Work included 480V power, power distribution, lighting, PLC controls, upgrade plant HMI, and plant instrumentation for the plant operating systems.

Repairs to Water Treatment Plant, St. Bernard Parish, LA: Mr. Hawney provided electrical design and project management for this projects that included rehabilitation and upgrading the two Parish water treatment plants after Hurricane Katrina. Scope also included redesign and flood proofing the entire electrical power system including 400HP variable speed high service pumps, entire plant PLC based control systems for raw water pumps, clarifiers, filters, etc.

East Bank Water Treatment Plant Improvements Phase II (P4) and Bacteriological and Wet Chemistry Laboratory - Jefferson Parish, LA: Electrical Engineer. Design analysis of the Consultants' design for the new P4 Water Treatment Plant and Bacteriological and Wet Chemistry Laboratory. Our responsibilities included reviewing the structural, mechanical, architectural, civil, and electrical plans to ensure conformance and constructability within the established project budget. ECM also performed a Value Engineering evaluation on the P4 Water Treatment Plant to determine cost saving measures where recommendations would produce a \$20M cost savings.

East Levee Pump Station, Freeport, TX: Mr. Hawney provided electrical design for the expansion of pumping capacity at the existing East Levee Pump Station. The pump station is part of Contract FV02, is on the East Storm Levee reach of the project. The feasibility study proposed plan shall be used as a basis for design purposes prior to updated interior drainage analysis being completed by the Government. ECM shall proceed with the addition of one pump unless the USACE provides additional information or requirements. The SOW would then be adjusted if the level of effort is changed. The expansion will consist of one 550 CFS pump that will be located within the existing pump station. All work associated with the East Levee Pump Station



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KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Heidi Gremillion, P.E., Mechanical Engineer

Project Assignment:

Mechanical Engineer

Name of Firm with which Associated:

 ECM Consultants, Inc.

Years' experience with this Firm:

3

Education: Degree(s)/Year/Specialization:

MS / Mechanical Engineering; B.S. Mechanical Engineering

Active registration: Year first registered/discipline:

Mechanical Engineer: FL 61506; LA 27958 ; MS 16427; AL 36504-E; TX 122502

Other experience and qualifications relevant to the proposed Project:

Ms. Gremillion has over 26 years of experience in mechanical engineering design including field investigations, coordination for air conditioning, heating and ventilation systems, heat load analysis, plumbing, gas pipelines etc. She is highly proficient in cost analysis, building evaluation troubleshooting, design of fire protection system and preparation of plans, specifications and estimates (PS&E). She is the Past President New Orleans Chapter of the American Society of Heating Refrigerating and Air Conditioning Engineers (ASHRAE) and member of American Society of Plumbing Engineers (ASPE).

Employment History:

- ECM Consultants, Inc., *Mechanical Engineer (2018-Present)*

Other experience and qualifications relevant to the proposed Project:

Eastbank Water Treatment Plant Improvements Phase II (P4) and Bacteriological and Wet Chemistry Laboratory, Jefferson Parish, LA: Ms. Gremillion is the Mechanical Engineer performing the review of the Consultants' design and mechanical, plans for the new P4 Water Treatment Plant and Bacteriological and Wet Chemistry Laboratory. Her responsibilities include reviewing the plans to ensure conformance with code and standards.

First Energy Bruce Mansfield Dewatering Facility, Shippingport, PA: Ms. Gremillion provided mechanical engineering design for this new dewatering facility at the coal combustion site that included heating and ventilation of the main facility, climate control for the Control Room, plumbing for the Control Room area and emergency stations.

St. Bernard Parish Government Complex, West Judge Perez Drive, Chalmette, LA: Ms. Gremillion provided mechanical engineering for this project that involved renovation of the 24,000 SF first floor of building that was severely damaged from hurricane Katrina. She performed mechanical engineering design of new air conditioning system for the building which included chilled water air handling units, variable air volume boxes, and ductwork, new plumbing system and modification of existing sprinkler system.

Belle Chasse Vertical Lift Bridge and Tunnel Baseline Inspection, Plaquemines Parish, LA: Ms. Gremillion served as Mechanical Engineer for the baseline inspection for the tunnel and moveable bridge. The baseline visual inspection of the equipment was performed for a generalized condition assessment of the mechanical system including the pumping

system, exhaust systems, vaults and value assemblies, discharge piping, wells, tanks, fire and flushing systems.

Interior and Exterior Repairs at Guste High Rise, Housing Authority of New Orleans, LA: Ms. Gremillion provided mechanical engineering services for \$7.3 million ARRA-funded interior and exterior renovations at Guste High Rise in support of HANO's initiatives for the modernization and redevelopment of housing units and support facilities in New Orleans. Guste High Rise is a 12-story senior living facility in downtown New Orleans.

Multi-family Residential Building Renovation, Chef Menteur Highway, New Orleans, LA: Ms. Gremillion provided mechanical for this project included renovation for conversion of an existing 31,000 SF, 8-story building into 48 housing units, office, community spaces, gym, etc. Ms. Gremillion is currently designing the air conditioning and plumbing systems for all the housing units and community spaces, pressurizing the stairwells and elevator shafts as part of life safety requirements, and coordinating with sprinkler contractor on sizing, location and routing of sprinkler system and fire pumps. All HVAC and plumbing design met the Enterprise Green Communities requirements

DOE Strategic Petroleum Reserve, Bryan Mound Site, TX: Ms. Gremillion was the Mechanical Engineer for this project that consisted of upgrades for the Control Building, Administration Building, Welding Shop, Laboratory building and Safety Building. She performed mechanical design and prepared plans, specifications and estimates for the new air conditioning systems and modification of existing HVAC systems in the buildings. Work also included Plumbing design for upgrades and the addition of a new restroom in one of the buildings.

Folger's – various Facilities, New Orleans, LA: This Ms. Gremillion was the Mechanical Engineer for projects that included compressed air system, central vacuum system, ventilation for various areas, Galileo Roaster Building ventilation and fire protection, Plastics emergency air conditioning system.

2228 Gravier Street Apartments and Office Space, New Orleans, LA: Ms. Gremillion served as Mechanical Engineer for this renovation project that included converting an existing 4 level historical school building into rental spaces. Approximately 22,000 square feet of space was converted into office areas, a gym, common spaces and 14 high-end apartments. She provided design for HVAC, Plumbing and Fire Protection.

234 Loyola Drive Apts., New Orleans, LA: Ms. Gremillion served as Mechanical Engineer for renovation of two 10 story buildings on Loyola and Gravier St. A total of 135,000 square feet. Both buildings were completely stripped to the structure and all new systems were provided. We were responsible for the Plumbing design and coordination with all disciplines. This was a design build project. Another project included renovation of the mezzanine, second and third floors. The mezzanine is a music venue and bar, the second floor is the Pythian Ball Room and common areas, the third floor is Green Coast Enterprises and Magnolia Therapy.

214 Decatur Street Apartments Apts., New Orleans, LA: Ms. Gremillion served as Mechanical Engineer for this total demo project of a 3-story building, approximately 26,845 square feet and included all new HVAC and Plumbing systems.

Burgundy – Elysian Fields Apartments, New Orleans, LA: Ms. Gremillion served as Mechanical Engineer for this 20,000 square foot, new construction, apartment complex. She provided design for HVAC, Plumbing and Fire Protection.

1508 and 1601 Orleans Avenue Apartments, New Orleans, LA: Ms. Gremillion served as Mechanical Engineer for this project that included renovation of historical buildings and new 3-story buildings to provide 70 apartments and community spaces. Total of all buildings are approximately 66,000 square feet. Scope for this design- build project included complete HVAC, Plumbing and Fire Protection systems design.

801 Magazine Street, New Orleans, LA: Ms. Gremillion served as Mechanical Engineer for renovation of an existing 2-story building is located on Julia Street and Magazine. The first floor houses the Auction House Market with a commissary kitchen and event space. The second floor of the building provides 8 high-end apartments. We provided design for HVAC, Plumbing and Fire Protection.

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.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Glenn Eggert, Senior Construction Inspector

Project Assignment:

Resident Inspector

Name of Firm with which Associated:

 **ECM Consultants, Inc.**

Years' experience with this Firm:

10

Education: Degree(s)/Year/Specialization:

High School

Active registration: Year first registered/discipline:

LADOTD Asphalt Concrete Paving, Structural Concrete, PCC Paving; ATSSA Flagger, Supervisor; OSHA-10; Confined Space Entry, NHI Mechanically Stabilized Earth Walls

Other experience and qualifications relevant to the proposed Project:

Mr. Eggert has more than 25 years of experience as a quality assurance construction inspector for pumping stations, force mains, lift stations, bridges, roadways, and utilities, including nine years in rehabilitation of sewer projects. He is also highly experienced in construction materials testing as a lab manager and extremely proficient in interpretation of engineering plans and specifications. Mr. Eggert is serving as a grade field inspector for the Sanitary Sewer Overflow Program (SSOP) for the City of Baton Rouge/Parish of East Baton Rouge.

Employment History:

- ECM Consultants Inc., LA, *Senior Construction Inspector (2010-to date)*
- Linfield, Hunter and Junius, *Quality Assurance Representative (2010-2011)*
- Meyer Engineers, *Quality Assurance Representative, (2006-2009)*
- Alpha Testing and Inspection, *Quality Assurance Manager, (1996-2005)*

Other experience and qualifications relevant to the proposed Project:

Sewer Rehabilitation Projects, New Orleans, LA: Mr. Eggert worked on several point repair projects for the Sewerage and Water Board of New Orleans. These projects included Gentilly, French Quarter, Lakefront, and the New Orleans East sewer rehabilitation projects. Work included demolition of existing roadway, excavation, repair of sewer lines, backfilling of the excavations, and the placing of new concrete or asphalt roadway. He also conducted compaction tests on the backfill material, concrete testing, and asphalt inspection.

Central Consolidated Pump Stations, SSO Program, Baton Rouge, LA: Mr. Eggert serves as a field inspector for this project that involves the design and construction of nine pump stations, three of which will be interconnected and will discharge to the SWWTP via large new force main following completion of construction of the SWWTP.

Highland Road – Burbank Drive Sewer Area Upgrades, Baton Rouge, LA: Mr. Eggert served as a field inspector for this project that includes the upsizing of force mains in an area that extends north to the intersection of Jefferson Highway and Tiger Bend Road and continues south to the Staring Lane extension and Burbank Drive intersection. The upgrades were designed to alleviate overflow problems at the pump station and to increase capacity.

Sewer Pump Station 58 Replacement, SSO Program, Baton Rouge, LA: Mr. Eggert provided services for this project that included the construction of a new pump station (PS58) which pumps dry weather flow to the existing gravity system and wet weather flows directly to the SWWTP. The purpose of this project is to relieve SSOs at PS58 as well as in the respective upstream and downstream basins. This project was related to the Staring Lane Force Main project that involved the construction of the force main from PS58A to the SWWTP.

Choctaw Storage and Sewer Pump Station Facilities, Baton Rouge, LA: Mr. Eggert served as a field inspector for this project that involves the design and construction of a 26-MG facility, an overflow pump station, gravity trunk line overflow pump station, and force mains.

Sewer Pump Station 42 Improvements, Baton Rouge, LA: Mr. Eggert is providing inspection services for this project that includes the design and construction of 40,000 gpm pump station facility, vapor phase biotower-type odor control, and associated yard piping and valves to pump the flow from PS1, PS59, and the LSU pump station to the SWWTP.

Highland Road – Burbank Drive Sewer Area Upgrades , Baton Rouge, LA: Mr. Eggert is currently serving as a field inspector for this project that includes the upsizing of force mains in an area that extends north to the intersection of Jefferson Highway and Tiger Bend Road and continues south to the Staring Lane extension and Burbank Drive intersection. The upgrades were designed to alleviate overflow problems at the pump station and to increase capacity.

Metro Airport Sewer Area Force Main Upgrades-Group Project 1B, Baton Rouge, LA: Mr. Eggert is serving as a field inspector for the replacement of seven pump stations, installation of one new pump station, and upgrading 35,330 lf, 8"-30" in diameter. This project will work in conjunction with the Group Project 1A to alleviate sewer overflow problems.

Roadway Restoration for Sewer Rehabilitation Projects, New Orleans, LA: Mr. Eggert worked on several point repair projects for S&WBNO. These projects included Gentilly, French Quarter, Lakefront, and the New Orleans East sewer rehabilitation projects. Work included demolition of existing roadway, excavation, repair of sewer lines, backfilling of the excavations, and the placing of new concrete or asphalt roadway. He also conducted compaction tests on the backfill material, concrete testing, and asphalt inspection.

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.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Chad Normand, Construction Inspector

Project Assignment:

Resident Inspector

Name of Firm with which Associated:

 **ECM Consultants, Inc.**

Years' experience with this Firm:

8

Education: Degree(s)/Year/Specialization:

High School

Active registration: Year first registered/discipline:

OSHA 10, Equipment Operation and Safety Training, Confined Space Entry Certification, Fall Protection, Hazard Recognition and Assessment Training, CPR First Aid, Electrical Safety #11953211

Other experience and qualifications relevant to the proposed Project:

Mr. Normand is an accomplished master electrician and construction supervisor. He has 22 years of related professional experience, and his background encompasses knowledge of residential, commercial, and industrial site and structure development. He is capable of working independently as well as with a team. He is very experienced in reading and comprehending engineering drawings and specifications as well as using that knowledge to ensure that the inspection is in compliance with the drawings and specifications.

Employment History:

- ECM Consultants Inc., LA, *Senior Construction Inspector (2013-to date)*
- City of Baton Rouge, LA, *Electric Foreman (to 2013)*

Other experience and qualifications relevant to the proposed Project:

Sanitary Sewer Overflow Program, City of Baton Rouge/East Baton Rouge Parish-DPW; Baton Rouge, LA:

Mr. Normand is serving as a Senior Inspector for the Sanitary Sewer Overflow Program (SSOP) for the City of Baton Rouge/Parish of East Baton Rouge, where he provides training and coaching as needed, and reviews daily inspection reports. Mr. Normand is currently providing inspection services for projects under the SSO Program, \$800 million in construction. The scope of work for these projects consists of construction and/or rehabilitation of gravity sewers, force mains, wastewater pump stations, and wastewater treatment plant facilities.

City of Baton Rouge Sanitary Sewer Overflow Program experience includes:

1. Sewer Pump Station No. 42 Improvements

Mr. Normand serves as a senior inspector for this project that includes the design and construction of a 40,000-gpm pump station facility, vapor phase biotower-type odor control and associated yard piping, and valves to pump the flow from PS1, PS59, and the LSU pump station to the SWWTP.

2. Standby Generators

Mr. Normand is serving as a senior inspector for this project which includes the design and installation of standby generators at over 400 pump stations across the City/Parish. The design includes the installation of automatic transfer switches that monitor the incoming electrical voltage at each pump station and notifies the standby

generator to start up when voltage is lost due to power outage. The purpose is to keep the pump station operational during any event that causes an electrical outage.

3. Central Consolidated Pump Stations Project

Mr. Normand is serving as a senior inspector for this project that involves the design and construction of nine sewer pump stations, three of which will be interconnected and will discharge to the SWWTP via a large new force main following completion of construction of the SWWTP.

4. SCADA Project

Mr. Normand served as a senior inspector for this project that involved the design and installation of a central SCADA system to monitor and control the wastewater infrastructure. The SCADA system includes interfacing between over 450 pump stations, SWWTP control room, Choctaw Maintenance Facility Control Room, Advanced Traffic Management-Emergency Operations Center (ATM-EOC), and Central Control Room. The SCADA system consists of process SCADA servers, business servers, network supporting services servers, network attached storage devices, client workstations, software, network equipment, and network infrastructure.

5. Annual Parishwide Physical Inspections

Mr. Normand supervised CCTV inspections for sewer line cleanings. He also watches for damages to sewer lines, smoke testing, and manhole locating.

Construction Superintendent, Frederic, MD: Mr. Normand served as Construction Superintendent for nine years where he was responsible for overseeing the installation of electrical and fire alarm systems, security, and audio-visual systems. He communicated and coordinated with other mechanical, carpentry, masonry, roofing, site work, utilities, general contractors, and construction management team to complete tasks. Mr. Normand supervised the following projects: Lakeland Middle School, great Seneca Creek Elementary School, Walter Johnson High School, North wood High School, Wayside Elementary School, Cashell Elementary School, and Cannon Road Elementary School.

Electric Foreman, City of Baton Rouge, LA: Mr. Normand supervised the installation of electrical conduits, equipment, and cables. He coordinated with wastewater treatment plant personnel for the installation of electrical systems. He was also responsible for scheduling and repairs/installation of electrical equipment at various locations.

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.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Mario Marenco- CAD Technician

Project Assignment:

CAD Services

Name of Firm with which Associated:

 **ECM Consultants, Inc.**

Years' experience with this Firm:

6

Education: Degree(s)/Year/Specialization:

1994 / A.S. / Drafting

Active registration: Year first registered/discipline:

N/A

Other experience and qualifications relevant to the proposed Project:

Mr. Marenco has over 17 years of experience in CAD drafting. His experience includes preparation of plans and profiles, cross-sections for roadway reconstruction and roadway rehabilitation projects including subsurface drainage, water & sewer systems using CADD 2014, Eagle Point 2007 and Civil 3D CAD 2014.

Employment History:

- ECM Consultants Inc, LA, CAD Technician (2015-to date)
- Pivotal Engineering, LA, Drafter (2002-2014)
- Nelson Engineering, Civil/Structural Drafter (2006)
- R.W. KREBS, Surveyors, CAD Tech (1999-2001)

Other experience and qualifications relevant to the proposed Project:

New Causeway and West Esplanade Pump Stations, Jefferson Parish, LA: Mr. Marenco provided CAD services for the evaluation, engineering design and preparation of plans, specifications, and cost estimates (PS&E) for a new sewer pump station to replace the two existing pump stations. The project involved designing the pump station with two submersible pumps at 750 gpm at 30' TDH and installing over 600 L.F. of 12" PVC gravity lines, 20' below grade by directional drilling, new electrical service, controls, and SCADA system.

Rehabilitation of Sewer Lift Station D8-3 (Purdue Drive & 37th Street), Jefferson Parish, LA: Mr. Marenco provided CAD support for engineering design services for new 8' dia about 20' deep sewerage fiber glass wet wall, lift station which will include NEMA premium submersible pumps, electrical system, emergency pump out and level controls. The project also includes 6" dia force mains, PVC wall sleeve, ARV manhole detail, restoration of roadways, sidewalks, and landscaping.

Broadmoor Sewer Lift Station, City of Shreveport, Shreveport, LA: Mr. Marenco provided CAD services for the Broadmoor Lift Station Improvements project which required modifications to the existing lift station building, the existing wet well, and replacement of existing dry pit centrifugal pumps with new pumps. Few of the modifications at the existing pump station building include replacement of doors, windows and ceilings, and the existing roof structure, installation of new walls for the Controls Room, replacement of the existing hoist, vents, and access hatches. Main construction items included the replacement of existing pumps, piping, and screenings basket along with associated electrical and controls systems. Landscaping, access drives, fencing, and other surface features were part of the rehabilitation process.

37th and Purdue Sewer Lift Station, Jefferson, LA: Mr. Marengo provided CAD services for the project that includes the construction of a new lift station at the intersection of 37th street and Purdue drive including electrical equipment, controls and appurtenances. The new lift station will increase the existing capacity by 50 GPM. The existing lift station have 2-10 Hp, 250 GPM, pumps. The new lift will have 2- 300 GPM pumps. This project includes the construction of lift station on roadway section. The lift station includes pumps, control panel, emergency pump out and electrical services. The project also includes the installation a new 650-foot HDPE force mains via horizontal directional drilling and tie- in to existing lift station D8-4. The design was for a new NEMA premium submersible pumps, electrical system, emergency pump out, level controls, odor control and force main.

Wallace Loop Water Main, City of Shreveport, LA: Mr. Marengo provided CAD services for the installation of approximately 13,600 linear ft. of new water mains of various sizes from Southern Loop Road to Flournoy-Lucas Road, new water services, new fire hydrants and release valves. The new main sizes range from 8" to 16" in diameter. Installations of the new mains were design by horizontal directional drilling and open trench methods. Driveways and Pavement were prepared for installation of a new water main and services. Water Main design required performs a system tie-in to an existing water main, closes tie-in valve. To assure tightness at pipe joints and fittings, the design required performs hydrostatic pressure tests on the new water main.

Napoleon Avenue Box Culvert, USACE New Orleans, LA: Mr. Marengo provided CAD services for this project. The project included canal improvements along Napoleon Avenue between Carondelet and Constance streets. Increased drainage for the Uptown area and reduce the risk of damages from a 10-year rainfall event. 3,000 linear feet of a concrete covered box culvert under the neutral ground along Napoleon Avenue from Carondelet Street to Constance Street

Rehabilitation of the 42nd and Erlanger Sewer Lift Station and the Rehabilitation of the 15th & Webster Lift Station, City of Kenner Dept. of Public Works, Kenner, LA: Mr. Marengo provided CAD support for this sewer rehabilitation project that included design for removal and replacement of existing pumps and motors with all accessories, piping, and control panels to increase capacity at 42nd & Erlanger lift station from 375 gpm to 625 gpm and at 15th & Webster lift station from 800 gpm to 1,200 gpm. Project also included rehabilitation of existing wet wells on both lift stations.

Harvey Pump Station, USACE, Jefferson Parish, LA: Mr. Marengo provided CAD services for preparation of plans and details for storm proofing of Harvey Pump Station. The project consisted of replacing catenary screen cleaners with new automatic screen cleaners with a debris collection system (conveyor).

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:	
<p>Causeway and W. Esplanade (North and South) Sewer Lift Station Rehabilitations Metairie, LA</p> <p>Neil Schneider Jefferson Parish-DPW 1221 Elmwood Park Blvd., Suite 802 Jefferson, LA 70123</p>   <div style="background-color: #003366; color: white; padding: 10px;"> <p>KEY PERSONNEL Ujjal Dasgupta, P.E. Sunina Shrestha, P.E. Neil Logan, P.E. Chris Capretto, P.E. Marvin May</p> </div>	<p>Original scope of this project included the rehabilitation of the Lift Stations at Causeway and W. Esplanade North and South. Causeway South is a flooded suction type station with a 4' diameter wet well with two 6" flooded suction pumps driven by two 15hp electric motors, with a total station capacity of 750 GPM. Causeway North is also a flooded suction type station with a 4' diameter wet well, with two 6" flooded suction pumps driven by two 10hp electric motors, with a total station capacity of 719 GPM.</p> <p>Original design concept was to replace Causeway South with a new submersible lift station including an Emergency Pump Out (EPO) manhole, fiberglass valve pit and wet well as well as a new control panel installed above the 100-year flood Base Flood Elevation (BFE) and SCADA System, with a new capacity to match the existing at 750 GPM. Design improvements were to anticipate the re-direction of flow from Causeway North via gravity flow in the future. Only rehabilitation work to be performed on Causeway North to elevate the control panel and replace mechanical systems and line the station for corrosion repair.</p> <p>Preliminary design alternatives determined that elimination of the north station was possible by gravity flow. The cost of upgrading the north station would be offset by installing gravity sewers at this time eliminating future maintenance costs for Causeway North. It was recommended that the design of the new Causeway South station include gravity flow sewers with the elimination and abandonment of the Causeway North Station. Parish engineers concurred with recommendation for moving forward and requested that additional consideration be given to installing the gravity sewers with Directional Drilling Technique. Research into the directional drilling technique was investigated and found feasible for the project; the design was based on one new Causeway South lift station with a capacity of 750 GPM and gravity sewers installed by directional drilling to eliminate the Causeway North lift station.</p> <p>Preparation of detailed design plans, specifications and contract documents for construction of a new sanitary lift station included: an 8' diameter fiberglass wet well, 23' deep supported by a 2'-6" thick concrete base slab supported by timber piles with a concrete top slab and aluminum hatch cover designed to support HS20 loading; an 8' diameter fiberglass valve chamber, 5' deep supported by a 1'-6" thick concrete base slab supported by timber piles with a concrete top slab with aluminum hatch cover designed for HS20 loading, 6" gate & check valves, 6" quick connect coupler for EPO, 6" and 8" piping systems with an 8" diameter force main; redirected force main discharge, new control panel & SCADA system, 600 L.F. of 8" dia. directionally drilled gravity sewers, driveway and site paving, and abandonment of the Causeway N. & S. lift stations, miscellaneous civil, structural, mechanical, and electrical work.</p> <p>Design of the new station was per the 10 State standards requiring all electrical and mechanical systems to be protected from the 100 yr. flood and the facility should remain operational and accessible during the 25 yr. flood event.</p>	
Completion Date: (Actual or Estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2016 (Design)	\$2 Million	\$1.8 Million

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. 2

Project Name, Location and Owner's contact information:

37th and Purdue Sewer Lift Station - Jefferson, LA

**Neil Schneider
Jefferson Parish-DPW
1221 Elmwood Park Blvd.,
Suite 802
Jefferson, LA 70123**

KEY PERSONNEL

Ujjal Dasgupta, P.E.
Sunina Shrestha, P.E.
Neil Logan, P.E.

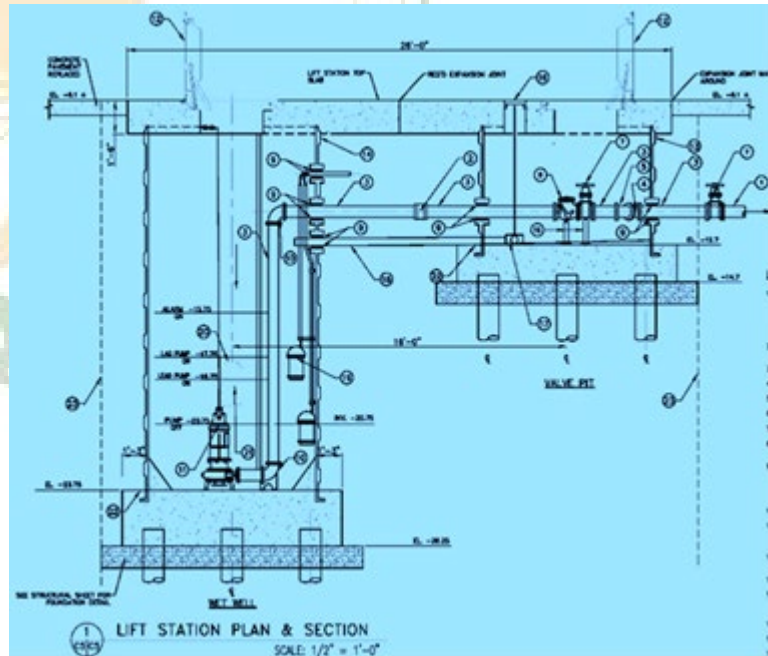
Nature of Firm's Responsibility:

ECM provided engineering design service for this project that includes the construction of a new lift station at the intersection of 37th street and Purdue drive including electrical equipment, controls and appurtenances. The new lift station will increase the existing capacity by 50 GPM. The existing lift station have 2-10 Hp, 250 GPM, pumps. The new lift will have 2- 300 GPM pumps. This project includes the construction of lift station on roadway section. The lift station includes pumps, control panel, emergency pump out and electrical services.

The project also includes the installation a new 650-foot HDPE force mains via horizontal directional drilling and tie- in to existing lift station D8-4.

The design was for a new NEMA premium submersible pumps, electrical system, emergency pump out, level controls, odor control and force main. The work also included replacement of concrete road, sidewalk, and landscaping.

Additionally, ECM will also provide services during bid phase and construction phase.



Completion Date: (Actual or Estimated):

2019

Estimated Cost:

Entire Project:


\$980,000

Work for which Firm was Responsible:

\$900,000

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. 3

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Rehabilitation of 15th Street and Webster Street Sewer Lift Station Kenner, LA</p> <p>City of Kenner DPW 1800 Williams Boulevard Kenner, LA 70065</p> <p>Point of Contact: Jose Gonzalez (Ex-Director) 504-468-7515</p> <div data-bbox="81 840 594 1024" style="background-color: #0056b3; color: white; padding: 10px;"> <p>KEY PERSONNEL Ujjal Dasgupta, P.E. Sunina Shrestha, P.E. Marvin May</p> </div>	<p>ECM provided an engineering study, evaluations, and design for rehabilitation to the lift station at 15th/Webster in Kenner for the DPW-City of Kenner. The upgrade to 15th/Webster lift station involved increasing pumping capacity from 800 gallons per minute to 1,200 gallons per minute. This upgrade was designed for accommodating increased flows during wet weather due to infiltration and inflow within its collection system. Scope of work included review of existing lift station's as-built plans, field investigations, review of flow data for the sewer collection system for this lift station, and verification of required pumping capacity and force main size. Work also included computations for head losses for suction and discharge piping and force mains to determine Total Dynamic Head (TDH) required for the new pumps and selection of the new duplex above ground centrifugal pumps for the design capacity of 1200 gpm. The work also included replacing all piping, valves, control system, and restoration of the lift station wet well.</p> <p>The main objective of this project was to prevent the pump from running continuously during wet weather flow, but to have the capacity to pump out influent without causing overflow. Design considerations included operation of the pumps for both dry weather and wet weather conditions. ECM prepared plans and specifications for the replacement of existing pumps, controls, valves, piping, wet well rehabilitation, etc. including force main extension to the tie-in for the existing 6" force main. Additionally, ECM provided services during bid phase and construction administration and resident inspection services for this project. This project was completed on-time and within budget.</p> <div data-bbox="682 1155 1453 1717">  </div>	
Completion Date: (Actual or Estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2011	\$362,000	\$362,000


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. 4

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Rehabilitation of Sewer Lift Station No. 4309 and a New 20" Force Main Kenner, LA</p> <p>City of Kenner DPW 1800 Williams Boulevard Kenner, LA 70065</p> <p>Point of Contact: Jose Gonzalez (Ex-Director) 504-468-7515</p>   <p>KEY PERSONNEL Ujjal Dasgupta, P.E. Marvin May</p>	<p>This project involved study and analysis of several major sewerage lift stations as well as design, preparation of construction documents, and resident inspection for rehabilitation and upgrades of Lift Station No. 4309. Design included new pumps, piping, and controls for increased capacity of 4800 gpm, and rehabilitation of the wet well. The project also included design for changing an 18" force main to a new 20" force main from Lift Station No. 4309 to Lift Station No. 4330.</p> <p>This involved study for the service area and review of all eight lift stations within the area that discharged to No. 4309. Lift station 4309 was a wet well/dry pit type lift station discharging to the major lift station No. 4330, which in turn discharges most of the flow of the City of Kenner to the Kenner Sewerage Treatment Plant.</p> <p>The study conducted, allowed the city to determine the capacity upgrade required for each lift station. The wet well of lift station No. 4309 was severely deteriorated with all of the interior walls and slabs corroded and rebar exposed as well as corroded in many places. ECM's design included rehabilitation of the wet well by cleaning the wet well and adding reinforced mesh and gunnite concrete over 3" thick on all surfaces. During rehabilitation of the wet well, this flow had to be diverted to the nearest gravity system using pumps.</p> <p>Design also included two (2) new 4,800 gpm pumps, valves, piping, and controls for the pumps in the dry pit, rehabilitation of the dry pit, and installation of a 20" PVC sewer force main from lift station No. 4309 to Lift Station No. 4330. ECM was responsible for preparation of plans, specifications, construction administration, as well as resident inspection for the rehabilitation of the project. This lift station project and force main were bid separately. The bid amount for this \$750,000 lift station rehabilitation was \$90 lower than our engineering estimate and we received Commendation from city officials. Bid amount for the 20" PVC force main was \$350,000.</p> <p>Resident inspection services included monitoring all construction activities to assure that works are performed in strict compliance of contract plans and specifications and in good workmanship manner; preparing daily inspection reports with details of work activities and contractor's personnel and equipment at the site and photographs; track quantities used on daily basis; monitor contractor's safety compliance, monitor progress compared to approved construction schedule; recordation of as-built condition for as-built plans; review monthly and final pay estimates; substantial and final inspections; review of O&M manuals and warranty documents and hand them over to City at project closeout.</p>	
Completion Date: (Actual or Estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2011	\$362,000	\$362,000

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.

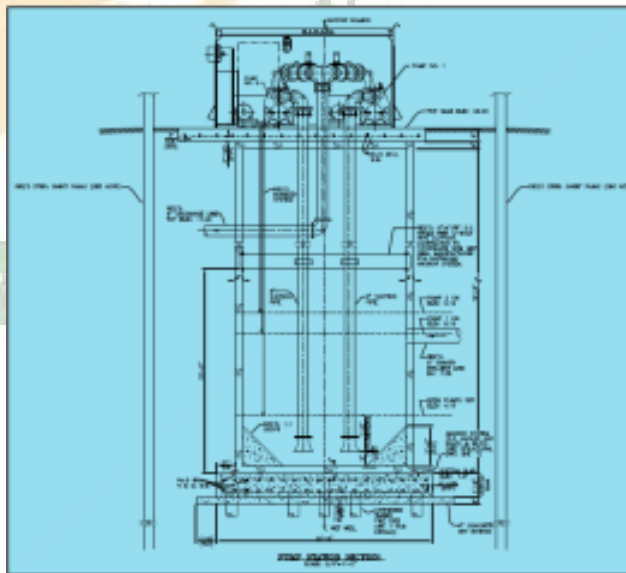
PROJECT NO. 5

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Rehabilitation of 42nd and Erlanger Sewer Lift Station Kenner, LA</p> <p>City of Kenner DPW 1800 Williams Boulevard Kenner, LA 70065</p> <p>Point of Contact: Prat Reddy, P.E (Ex-Director) 504-468-7515</p> <div data-bbox="81 804 586 1062" style="background-color: #0056b3; color: white; padding: 10px;"> <p>KEY PERSONNEL Ujjal Dasgupta, P.E. Sunina Shrestha, P.E. Bob Tate Emilio Rodriguez Marvin May</p> </div>	<p>ECM provided an engineering study, evaluations, and design for rehabilitation to the lift station at 42nd/Erlanger in Kenner for the City of Kenner-DPW. The 42nd/Erlanger lift station was upgraded to pumping capacity of 625 gallons per min., an increase from an existing capacity of 375 gallons per min. This upgrade was for accommodating increased flows during wet weather due to infiltration and inflow within its collection system.</p> <p>Scope of work included review of existing lift stations' as-built plans, field investigations, review of flow data for the sewer collection system from the lift station, and verification of required pumping capacity and force main size, etc. Work included computations for head losses from suction and discharge piping and force mains to determine Total Dynamic Head (TDH) required for the pump and selection of the new duplex above-ground centrifugal pumps for the design capacity of 625 gpm. The work also included replacing all piping, valves, control systems, restoration of the lift station wet well, and pumping room.</p> <p>The main objective of this project was to prevent the pump from running continuously during wet weather flow, but to have the capacity to pump out influent without causing overflow. Design consideration included operation of the pump for both dry weather and wet weather conditions. ECM prepared plans and specifications for the replacement pumps with new pumps, controls, valves, piping, wet well rehabilitation, etc. including force main extension to the tie-in for the existing 6" force main. Additionally, ECM provided services during bid phase and construction administration services for this project. This project was completed within budget and on-time without any change orders.</p> <div data-bbox="760 1205 1369 1717">  </div>	
Completion Date: (Actual or Estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2011	\$162,000	\$162,000

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. 6

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Capacity Upgrades for Plum Orchard Sewer Pump Stations (SPS) Plum Orchard Avenue New Orleans, LA</p> <p>Sewerage & Water Board of New Orleans 625 St. Josephs Street New Orleans, LA 70165</p> <p>KEY PERSONNEL Ujjal Dasgupta, P.E. Marvin May</p>	<p>Plum Orchard Lift Station (LS) and Force Main project involved abandoning an existing belowground LS and design of a new 500 gpm, aboveground duplex packaged LS over 100' away from the existing one. The scope of work included the following: topographic survey and location of underground utilities; geotechnical investigations; coordination with S&WB, DPW, Entergy, Cox Cable, and other utility entities; design and preparation of plans, specifications, and estimates (PS&E) for an 8' diameter, 20' deep concrete wet well; pile foundations; concrete bottom slab and top slab; etc. This also included determination of pump size for increased flow; selection of types of pumps; control system; restoration of concrete pavement; and fencing.</p> <p>The project also involved installation of a temporary by-pass sewer system; modification of a section of 8" gravity sewer line for influent to LS; manifold piping and over 100' of new 6" PVC force main from new LS including check valve and gate valve with manholes; and tie in to the 6" existing FM by-passing existing LS. Scope also included removal of existing pumps, piping, control panel, etc. from dry pit and fill dry and wet pit with sand. The project also included driving steel sheet pile cofferdam, sheeting, shoring, and bracing.</p>	
Completion Date: (Actual or Estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2016 (Design)	\$1.5 Million	\$1.5 Million



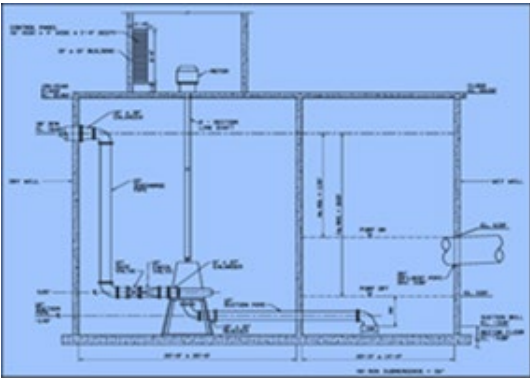
L. Work by Firm or Joint-Venture members which best illustrates current qualifications relevant to this Project. Please include any and all work performed for Jefferson Parish. Please attach additional pages if necessary.

PROJECT NO. 7

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>New Force Main in Michoud Boulevard from SPS Willow brook to Chef Menteur Highway New Orleans, LA</p> <p>Sewerage & Water Board of New Orleans 625 St. Josephs Street New Orleans, LA 70165</p> <div data-bbox="81 716 610 827"> <p>KEY PERSONNEL Ujjal Dasgupta, P.E. Marvion May</p> </div>	<p>This project involved design for a sewer force main from Willowbrook SPS to Chef Menteur Highway. The scope of work included topographic survey, field investigation, coordination with various utility entities, design conforming to S&WB's capacity upgrade criteria and flow. The project included 2,000 L.F. of 8" PVC force main from Willowbrook SPS to a new 12" force main on Michoud Boulevard in New Orleans East. The total length of the 12" PVC was approximately 4,800 L.F. This force main was designed to be installed on the median of the Michoud Boulevard but was rerouted in a new area where existing utilities were in conflict. This also included crossing Bayou Michoud with the 12" ductile in a force main to be installed on a new concrete bridge designed by others. This work required extensive coordination with LADOTD. The project required sequencing for by-passing flows during installation of the force main so that sewer service was not interrupted. This new force main was designed to be connected to an existing 16" force main in Chef Menteur Highway.</p> <div data-bbox="678 1001 1474 1472">  </div>	
Completion Date: (Actual or Estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2005	\$3.8 Million	\$3.8 Million

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. 8

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Upgrade of Sewer Pump Station 01 Located at Cohn Street New Orleans, LA</p> <p>Sewerage & Water Board of New Orleans 625 St. Josephs Street New Orleans, LA 70165</p>  <p>KEY PERSONNEL Ujjal Dasgupta, P.E. Marvin May</p>	<p>This project involved a study for various alternative solutions and preparation of a report with recommendations for the most cost effective solution for this existing major sewer pumping station. The existing SPS 01 is a flooded-suction, multi-level type station located on 7336 Cohn Street and discharges to a gravity main that carries the flow to the wet well of Pump Station 14. Sewer Pump Station 01 has two (16" x 14") vertically aligned pumps. Each pump is powered by single speed Westinghouse motors. This equipment was housed in a 16' dia concrete dry well structure which is below grade. The total depth of the dry well from the access hatch to the bottom is 21'. Sewer Pump Station 01 collects wastewater from the surrounding gravity sewer system into a 20.5' deep concrete wet well (suction chamber). The interior of the wet well has been heavily corroded which is characterized by exposed aggregate and the concrete loss is estimated to be in excess of 1" from the original surface. This deterioration was serious which required evaluation for structural integrity. The capacity of each pump was determined to be 6,800 gpm at 3.5' of head by Doppler flow meter. With both pumps in operation, the capacity of the pump station doubles because SPS 01 discharges through separate discharge piping to a gravity main. The design flow for this pump station was established at approximately 4,350 gpm (2xPeak Dry Weather Flow), and it was determined that this pump station will discharge through an 18" force main approximately 6,400' downstream into a proposed sewer force main on Erato Street. The two options considered for upgrade of the pump station included upgrading existing SPS 01 and building a new pump station.</p> <p>As per field investigation, the interior of the existing wet well was corroded serious enough it could compromise its structural integrity. In addition, the size of the existing wet well was insufficient to handle the design flow of 4,350 gpm. As such, a new wet well will be required. The existing pumps, even though they were in fair condition, were very old and were not capable of handling the design flow at higher heads.</p> <p>A new pump station would be a flooded suction type station that will include a dry well (20'x20') for pumps, piping and valves; a wet well (20'x14') for the sewer inflow; and an above ground building for motors and control panel unit. The new station will include two (2) pumps, each capable of handling 2,175 gpm at both high head and low head conditions and will be discharging the flow directly into a force main network through an 18" force main. It is designed to install motors and control panel above the flood level elevation.</p> <p>Analysis indicated that the Fairbanks Morse Pump Model 5410, with two (2) heavy-duty flooded suction pumps each capable of producing 2175 gpm at 186 ft TDH for high head condition and 82 ft TDH for low head condition while driven by 300 HP heavy duty motors adjustable at varying speeds, would be the most efficient and cost effective option.</p> <p>After reviewing the deficiencies in the existing lift station, it was recommended that construction of a new pump station be preferred compared to upgrading the existing station. The preliminary design was based on this recommendation for a new dry pit/wet well pump station using flooded suction pumps.</p>	
Completion Date: (Actual or Estimated): 2005 (Design)	Estimated Cost:	
	Entire Project: \$8 Million	Work for which Firm was Responsible: \$8 Million

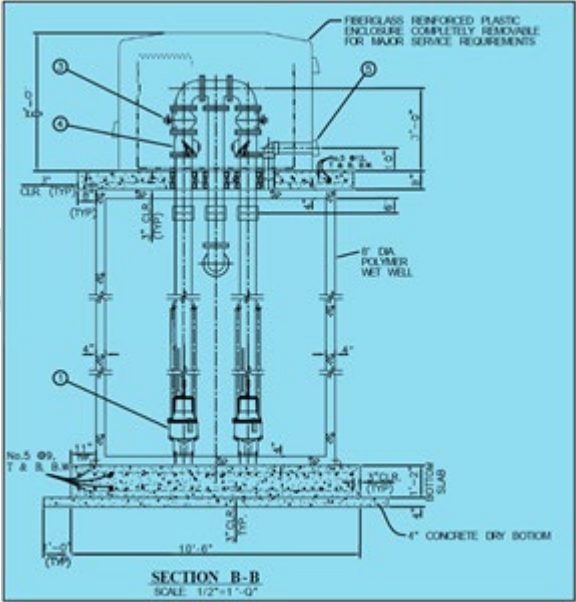
L. Work by Firm or Joint-Venture members which best illustrates current qualifications relevant to this Project. Please include any and all work performed for Jefferson Parish. Please attach additional pages if necessary.

PROJECT NO. 9

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Rehabilitation of Sewer Lift Stations at Lakefront Airport New Orleans, LA</p> <p>Non-Flood Protection Asset Management Authority 6920 Franklin Avenue New Orleans, LA 70122</p>   <div data-bbox="94 1499 621 1682" style="background-color: #0056b3; color: white; padding: 10px;"> <p>KEY PERSONNEL Ujjal Dasgupta, P.E. Marvin May Emilio Rodriguez</p> </div>	<p>In the aftermath of Hurricane Katrina, ECM was awarded a contract to rehabilitate all existing lift stations at Lakefront Airport in New Orleans that were severely damaged by flooding during the storm. The scope of work included initial assessments of Katrina-damage repairs to nine sewer lift stations scattered around the airport and surrounding areas. Through our investigation, ECM identified repairs that were listed in the FEMA inspection report as well as identified additional repairs needed that were determined by our field investigation and incorporated in the PW's after discussion with the FEMA and NFPAMA staff.</p> <p>ECM compiled an inspection report that documented all these repairs as well as offered alternative recommendations for five of the lift stations. After FEMA approval of all reassessments, all project design, construction administration, and resident inspection services were performed by ECM.</p> <p>The project scope included topographic survey; thorough field investigations of all lift stations including electrical, controls, and influent and effluent piping condition assessment; and preparation of field measured plans to identify requirements for each lift station. There were a total of 10 lift stations within the airport. Only one of these ten lift stations was rehabilitated by the owner and has been running by a generator since immediately after Katrina on an emergency basis. ECM's scope included rehabilitation including replacement of pumps/ motors/ controls/ electricals/ etc. for the nine (9) lift stations which were severely damaged. There was a combination of above ground and below ground packaged lift stations, as well as the main lift station which pumped all the sewer collected from the airport area to the S&WB sanitary sewer system. During design phase we made recommendations to eliminate one lift station which required a long force main and was found to be unnecessary for the area being serviced. The small lift station, which was discharging to the removed lift station, was designed to discharge to a small, packaged treatment plant placed on the discharge side with the treated flow being discharged in the Intracoastal waterways.</p> <p>This received permits/approvals from all agencies having jurisdiction, saved substantial amounts of money because of eliminating a lift station as well as several hundred feet of force main. ECM received "Commendations" from the owner for this cost saving concept. ECM's scope included design for new electrical services to all of the lift stations because the entire electrical service was damaged by flooding. ECM performed design and prepared plans, specifications, and estimates (PS&E) for the lift stations (capacities varying from 200 gpm to 1500 gpm) including new pumps, piping, valves, electricals, controls, force mains to tie into the existing, and related items. In addition to design, ECM provided bid phase and construction administration and resident inspection services for this project.</p>	
<p>Completion Date: (Actual or Estimated):</p> <p align="center">2010</p>	<p align="center">Estimated Cost:</p>	
	<p align="center">Entire Project:</p> <p align="center">\$3.2 Million</p>	<p align="center">Work for which Firm was Responsible:</p> <p align="center">\$3.2 Million</p>

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. 10

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Capacity Upgrades for McCoy Sewer Pump Station New Orleans, LA</p> <p>Sewerage & Water Board of New Orleans 625 St. Josephs Street New Orleans, LA 70165</p> <div data-bbox="90 680 610 827" style="background-color: #003366; color: white; padding: 10px;"> <p>KEY PERSONNEL Ujjal Dasgupta, P.E. Marvin May</p> </div>	<p>The McCoy Lift Station (LS) project involved design of a new 480 gpm duplex, belowground submersible package lift station to replace an existing lift station. The project scope included the following: topographic and underground utility survey; geotechnical investigation; coordination with S&WB, DPW, Entergy, and other utility entities; and design of the lift station and related items.</p> <p>The project involved structural designs for installation an 8' diameter, over 20' deep polymer wet well supported on a thick concrete bottom slab on timber piles and concrete top slab for LS housing, piping, controls etc. Design also included a steel sheet pile cofferdam for LS and sheeting, shoring, and bracing for installation of force mains and gravity influent lines; removal and replacement of over 150' of 8" PVC gravity lines with new manholes; new 6" PVC force main with check valve and gate valve to tie-in to existing; new electrical service with transformer tower; new SCADA systems; concrete paving and asphalt roadway paving restorations; fencing and removal of pumps, piping controls, etc.; and abandon existing Lift Station plugging influent and discharge lines in the existing wet well.</p> <div data-bbox="792 1092 1364 1690" style="text-align: center;">  <p>SECTION B-B SCALE: 1/2"=1'-0"</p> </div>	
Completion Date: (Actual or Estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2006 (Design)	\$1.3 Million	\$1.3 Million

M. List all prior and/or on-going litigation between Firm and Jefferson Parish. Please attach additional pages if necessary. **NONE**

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

ECM Consultants, Inc. **has never been involved** in any litigation and/or adversarial legal proceedings with Jefferson Parish.

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

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TEAM PROFILE



ECM Consultants, Inc. is a locally owned engineering, architectural, construction management and resident inspection firm with locations in Metairie and Baton Rouge, Louisiana. The firm was incorporated under the laws of the State of Louisiana in 1995. ECM has extensive experience in A/E design of road and bridges, utilities, water, sewer, drainage, drainage pump stations, lift station rehabilitation and upgrades, gravity lines installation and force mains, as well as wastewater treatment plant upgrades. Within 25 years, the firm has provided professional engineering services and resident inspection for over 880 projects, serving a local, state, and federal clientele which includes:

- City of Kenner Department of Public Works
- **Jefferson Parish Department of Public Works**
- Jefferson Parish Public School System
- Jefferson Parish Juvenile Justice Agency
- Jefferson Parish Department of Community Development
- City of New Orleans Department of Public Works
- Sewerage and Water Board of New Orleans
- Port Authority of New Orleans
- New Orleans Aviation Board
- East Baton Rouge Parish/City of Baton Rouge Department of Public Works
- Louisiana Department of Transportation and Development (LADOTD)
- Louisiana Department of Natural Resources
- Division of Administration, Office of Facility Planning and Control
- Department of Army and Air Force, National Guard Bureau
- Non-Flood Protection Asset Management Authority
- U.S. Army Corps of Engineers, New Orleans District, Mobile District, Charleston District, Louisville District.
- USDA, Natural Resources Conservation Service

- U.S. Customs Service, Indianapolis, IN
- U.S. HUD, Fort Worth, TX
- U.S. Navy, NAS, Joint Reserve Base, New Orleans



Eustis Engineering, LLC, located in Metairie, will provide geotechnical engineering services for this contract. In the past ten years, Eustis has provided professional services on approximately 100 projects for various offices and their consultants, including the City of Kenner. These projects include geotechnical services for building, street, drainage, sewer, and water projects.



BFM Corporation, located in Kenner, will provide surveying services for this contract. Since its inception in 1982, BFM has been providing professional surveying services to its clients including the City of Kenner. The firm has executed hundreds of projects in Jefferson Parish, including Parish projects and agency projects such as LADOTD.

MINIMUM REQUIREMENTS

MINIMUM REQUIREMENTS	PERSONNEL MEETING REQUIREMENT
1. The persons or firms under consideration shall have at least one (1) principal who is a registered professional engineer in the State of Louisiana.	Ujjal Dasgupta, P.E. President LA License No. 19849
2. The persons or firms under consideration shall have a professional in charge of the Project who is a registered professional engineer in the State of Louisiana with a minimum of five (5) years' experience.	Ujjal Dasgupta, P.E. LA License No. 19849 <i>(53 years' experience)</i> Kazem Alikhani, P.E. LA License No. 25073 <i>(38</i> <i>years' experience)</i>
3. The persons or firms under consideration shall have one (1) employee who is a registered professional engineer in the State of Louisiana in the applicable discipline involved. A subcontractor may meet this requirement only if the advertised Project involves more than one discipline.	Sunina Shrestha, P.E. (Civil) LA License No. 37901 <i>(15 years' experience)</i> Christopher Capretto, P.E. (Civil) LA License No. 38641 <i>(15 years' experience)</i> Neil Logan, P.E. (Structural) LA License No. 14607 <i>(55 years' experience)</i> Sudhir Mehta, P.E. (Structural) LA License No. 18950 <i>(45 years' experience)</i> Henry Hawney, P.E. (Electrical) LA License No. 19229 <i>(46 years' experience)</i> Heidi Gremillion, P.E. (Mechanical) LA License No. 27958 <i>(26 years' experience)</i> John Rasi, P.E. (Civil/H&H) LA License No. 20841 <i>(38 years' experience)</i>

Chad Vosburg, P.E. (Civil)
LA License No. 27677
(27 years' experience)

Ralph P. Fontcuberta, Jr., PLS
LA License No. 4329
(53 years' experience)

Gwendolyn Sanders, P.E.
LA License No. 27104
(28 years' experience)

Benjamin Cody, P.E.
LA License No. 30292
(23 years' experience)

EVALUATION CRITERIA

1. Professional Training & Experience

ECM Consultants, Inc. has extensive experience in planning, design, preparation of plans and specifications, bidding services, construction administration, and resident inspection services for sewer lift station and force main projects throughout several parishes in Louisiana. **Examples of relevant projects include the following:**

- Rehabilitation of Stefano & Wanda Lynn and Rockford & Grace King Lift Station, (Metairie, LA.)
- Rehabilitation of Sewer Lift Station No. 4309 and New 20" Force Main (Kenner, LA)
- Design of a Sewer Lift Station at Causeway and West Esplanade Road (Southwest corner) including force mains and gravity lines (Metairie, LA)
- Rehabilitation of 15th Street and Webster Sewer Lift Station (Kenner, LA)
- Rehabilitation of nine Sewer Lift Stations at Lakefront Airport (New Orleans, LA)
- Capacity Upgrades for McCoy Sewer Pump Station at Old Gentilly Road (New Orleans, LA)
- Phase IV Capacity Improvements: Upgrade of Sewer Pump Station I and Force Main from Dorgenois at Erato to Olive at Carrollton (New Orleans, LA)
- New Convention Center Sewer Pump Station and Force Main (New Orleans, LA)
- Capacity Upgrades for Plum Orchard Sewer Pump Station at Plum Orchard Avenue (New Orleans, LA)
- New Medical Center Sewer Pump Station and Force Main (New Orleans, LA)
- Gravity Sewer, Force Mains, and Lift Station at Lucy and Wallace Area (St. John the Baptist Parish, LA)
- Gravity Sewer, Force Mains, and Lift Station for Lake Catherine Sewer Collection System (New Orleans, LA)
- Rehabilitation of 42nd and Erlanger Sewer Lift Station (Kenner, LA)

2. Size of Firm

ECM Consultants, Inc. has 62 professional and support staff. This includes 13- LA registered Civil Engineers, 2- LA registered Mechanical Engineer, 2- LA registered Structural Engineers, 1- LA registered Electrical Engineer, 3- CAD technicians; 3- engineer interns; 24- Inspectors; 2- Architects; 4- Project Managers, and 8- Administrative Support Staff. All our staff have extensive experience in engineering projects involving evaluation, study, designs, preparation of plans and technical specifications and providing construction administration and resident inspection services during construction for various professional engineering related projects. This has been illustrated in resumes and project lists.

3. Capacity for Timely Completion

ECM understands the importance of successfully managing and completing projects on time. We will staff this project with the technical expertise and capabilities to effectively fulfill the needs of the project. Our efficient approach to scheduling our

work allows ECM personnel to provide all required man-hours for each of our ongoing projects. ECM has an excellent track record in completing projects on-time every time.

4. Past Performance

ECM has an excellent record of providing engineering design and construction services to public entities. The following is the list of contracts awarded to ECM by local governments:

- Design for a new Lift Station at Causeway/West Esplanade including gravity mains installation by (directional drilling and force main). Contract amount: Fees \$101,000.
- Rehabilitation of 15th Street and Webster Lift Station. Contract Amount: Fees \$362,000
- Study for Mini Sewer System Zone II, Marrero, LA. Contract amount: Fees \$150,000.
- Rehabilitation of 42nd and Erlanger Lift Station. Contract Amount: Fees \$162,000
- Rehabilitation of Sewer Lift Station No. 4309 and a New 20" Force Main. Contract Amount: Fees \$1,100,000
- Veterans Boulevard and West Esplanade Pump Stations (On-Going) Contract amount: Fees \$1,500,000

5. Location of the Principal Office

ECM Consultants, Inc. is located at 1301 Clearview Parkway, Suite 200, in Metairie, LA. All work will be performed from this Jefferson Parish-based office.

6. Adversarial Legal Proceedings

ECM Consultants, Inc. **has never been involved** in any litigation and/or adversarial proceedings with Jefferson Parish.

7. Prior Successful Completion of Projects of the Type

ECM has received "**Exceptional**" performance ratings from various USACE Districts, an "**Outstanding**" performance rating from the U.S. HUD, and "**Letters of Commendation**" from the U.S. Customs Service, USDA, U.S. HUD, U.S. Army Corps of Engineers-NOD, and various other local government agencies such as the City of Kenner, **Jefferson Parish**, City of New Orleans-DPW, Calcasieu Parish Policy Jury, and many more.

Below are references from some of our projects:

A) Design for Lift Station at Causeway/West Esplanade

Mr. Sid Touard, P.E. Sewer Program, Jefferson Parish
Phone: 504-913-2288

B) Rehabilitation of Sewage Lift Stations at Lakefront Airport

Mr. Gerry Gillen, P.E., Executive Director
Phone # 504-286-3104 ext. 1007

C) SSERP, Lift Stations and Force Mains Designs for S&WB of New Orleans

Mr. Joseph Baker, P.E., Ex .Superintendent
Phone # 504-666-0282

D) Lift Station Upgrades for City of Kenner

Mr. Jose Gonzalez, P.E., Ex. Dir. of DPW-Jefferson Parish
Phone # 504-838-1150

E) Storm Proofing Jefferson Parish Pump Stations

Mr. Daniel Bradley, P.E., Branch Chief, USACE-NOD.
Phone # 504-862-2996

F) Jefferson Parish Roadway Projects

Mr. Mark Drewes, P.E., Director of Public Works
Phone # 504-736-6511

PROJECT APPROACH & MANAGEMENT PLANS

➤ Project Coordination Approach

Having been involved in many similar projects, ECM understands the importance of coordination with Jefferson Parish – Department of Public Works (JP-DPW), other entities, and stakeholders for success of projects. The following is the outline of our project coordination approach.

- **Arrange predesign coordination meeting to be attended by:**
 - ✓ ECM Project Manager, Key Staff, and sub-consultants
 - ✓ JP-DOW Director of Capital Projects
 - ✓ JP-DPW Director of Sewerage
 - ✓ JP-DPW Sewer Capital Improvement Program Manager
 - ✓ JP-DPW Traffic Engineer
 - ✓ JP-DPW Drainage/Water/Sewer Department Representatives
 - ✓ JP-Parkway Department Representatives
 - ✓ Representatives of Entergy, Cox Cable, AT&T, and other private utilities.
- **Arrange preliminary design plans & field reviews to be attended by:**
 - ✓ ECM Project Manager, Key Staff, and sub-consultants' key personnel
 - ✓ JP-DPW Sewer Capital Improvements
 - ✓ Representatives from various JP-DPW Departments, Entergy, Cox Cable, AT&T, and other utilities
- **Arrange coordination meeting for review of 35% and 65% completed plans & specifications to be attended by:**
 - ✓ ECM Project Manager and all key personnel of ECM and sub-consultants
 - ✓ HP-DPW Sewer Capital Improvements Program Manager
- **Arrange Plan-in-Hand meeting after completion of final 95% plans. All parties involved will participate in plan-in-hand office & field meetings and note all items to be addressed prior to finalization of 100% contract documents.**



Rehabilitation of 42nd & Erlanger Sewer Lift Station

➤ Coordination with Sub-Consultants

Our sub-consultants will take an active and important role for implementation of this project. We will establish a communication protocol for the ECM Project Manager and the sub-consultants. All coordination with JP-DPW will be through ECM's Point of Contact only and our sub-consultants will not have any direct communication with JP-DPW except for special needs.

➤ Approach to Work

Design Engineering

Our approach for efficient and cost-effective design engineering services will include the following fundamental steps:

- Attend scoping meeting with representative of various Jefferson Parish Departments
- Review all previous studies and reports
- Perform site visits to validate scope
- Develop design criteria and submit to JP-DPW for approval
- Submit the design cost proposal to JP-DPW for review and approval
- Attend design progress meeting with representative of JP-DPW & other stakeholders, review plans & specifications for constructability and updating as needed
- Attend pre-construction meetings and discuss procedures for coordination, communications, inspection report formats, quantity survey, contractor's pay requests, change orders, and material sampling and testing requirements

- Strictly follow established administrative procedures for communications with the stakeholders
- Assist in coordination with testing laboratories for material samplings and testing
- Monitor contractor's baseline master schedule as well as updated construction schedules
- Prepare and submit plan changes to JP-DPW for approval and monitor/implement all approved construction contract change orders to the project
- Monitor construction activities regularly to ascertain that the construction work is on approved schedule
- Monitor work zone traffic safety and submit incident reports, as needed
- Review contractor's safety plan, monitor contractor's safety program, and notify any observed violations.
- Conduct project site interviews of construction contractors/subcontractors and complete site interview forms (if required by JP-DPW)
- Review and clarify the payroll of the construction contractor and any subcontractor for compliance with applicable laws and regulations.
- Review contractor's application for pay request and submit to JP-DPW if correct.
- Perform weekly site visits and prepare reports to include photos, detailed description of construction activities, materials and equipment used, record of all unusual occurrences, safety violations, testing performed and any deviations and/or non-conforming or substandard work performed by the Contractor. Notify the JP-DPW Project Manager of all suspects, non-conforming or substandard work for immediate discussion with the contractor for resolution.
- Attend progress meetings to discuss/resolve any disputes, non-conforming works, deviations, delays, change order requests, etc.
- Attend substantial completion inspection and assist in preparation of a "punch list"
- Prepare overrun/underrun statements and final payment requests
- Monitor contractor's recordation of work activities for providing owner with an accurate set of "as built" plans
- Attend final inspection before "project close-out" to ensure all punch list items are completed to the satisfaction of DPW



Resident Inspection Services

- Review plans & specifications before starting of construction
- Coordinate with design engineer, contractor and JP-DPW Representative
- Monitor construction activities for compliance with plans and specifications and prepare daily reports describing all activities relative to quality, safety, progress, testing, etc.
- Review and verification of pay quantities, and maintain all field documents

➤ Management Plan

Our project management approach and management plans are based on the commitment to provide excellent engineering services to Jefferson Parish-DPW. Our management plan is driven by the following key concepts:

- A Management Team that is mission-focused
- Flexibility and a change management process as well as innovation by the management team
- A staff of qualified and experienced professionals with clear roles and responsibilities
- Timely flow of information between the project team and DPW management staff
- An effective project delivery process

ECM has assembled a highly qualified team capable of responding to any challenge that is presented. We look beyond our task descriptions for ways to challenge the process and create innovative solutions to complex problems. One of the fundamental objectives of any contract is to effectively manage the constraints of quality, cost, schedule, and safety. This

starts with clearly establishing the objectives and then proactively managing the issues and changes that are inevitable. Our team has effectively delivered on these objectives in the past and will continue to do so for this contract.

Our approach is tailored to establish and maintain best practice performance standards and exceed JP-DPW requirements. Our overall approach for this contract is based on the following commitments:

- A structured, straight-forward approach
- Prudent delegation of authority to each staff level
- Timely and effective deliverable reviews
- Effective budgeting, scheduling, and project control throughout the project.
- Continuous monitoring of quality, schedules, and budgets
- Effective communication and coordination among all project participants
- Timely and transparent electronic reporting procedures
- Efficient and effective document controls

QUALITY CONTROL PLAN

ECM Consultants, Inc. has an excellent quality control program for both the design and construction phases. During the design phase, the Project Manager is responsible for establishing design criteria in consultation with the owner. Before the start of a project, the Project Manager will meet with all staff to explain the project scope, design criteria, drafting standards, coordination requirements with various disciplines completion schedules for various phases, and most importantly, the project goal and owner's expectations of high-quality professional work.

The Project Manager is responsible for coordination with the owner, project engineers, and sub-consultants. All our staff members are conscientious and thorough and have the capability to prepare virtually error-free construction documents. Emphasis is made on the importance of following design procedures and the reliability and accuracy of computer programs. All drafting works are thoroughly checked by the design engineers. All deliverables will be reviewed for accuracy and completeness by our QA/QC Manager.

Regular progress meetings are held to determine progress, coordination, and resolution of problems associated with the project. The Project Engineer checks the design computations and the drawings at every stage for quality assurance. After completion of the construction documents, personnel experienced in construction perform a "constructability review" to avoid any conflicts which may arise during construction.

The final review is performed by the Project Manager and then submitted to an independent third party for peer review. This quality control program has resulted in the production of virtually error-free construction documents and has minimized possible change orders during construction.

The quality control program during construction is also the responsibility of the Project Manager. The Project Manager, accompanied by the design engineer, is required to visit the site at least once a week and during important and critical work activities to ascertain that the project is constructed strictly in accordance with plans and specifications and high standards of workmanship. No deviation from plans and specifications are allowed unless approved by the owner in writing.

CONCLUSION

The ECM Team exceeds the necessary qualifications, experience, and capability to perform the services required under this contract. We are poised for immediate assignment and look forward to providing exceptional services to Jefferson Parish. We thank you for this opportunity to submit our qualifications and hope to receive favorable consideration.

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

Signature: 

Print Name: Kazem Alikhani, P.E.

Title: Chief Executive Officer (CEO)

Date: 05/25/2021

Section 2

Eustis Engineering, LLC.
TEC Professional Services Questionnaire

TEC Professional Services Questionnaire

A. Project Name and Advertisement Resolution Number:		
SOQ 21-008 Provide Professional Engineering Services – Design for Rehab of Transcontinental & Belle Lift Station		
B. Firm Name & Address where Project Work Will be Performed:		
<b style="color: red;">Eustis Engineering L.L.C. 3011 28 th Street, Metairie, Louisiana 70002		
C. Name, title and contact information of Principal, as defined in Section 2-926 of the Jefferson Parish Code of Ordinances, who is a registered, licensed architect, professional engineer, or surveyor in the State of Louisiana:		
Gwendolyn P. Sanders, P.E. / President / 504-834-0157 / gsanders@eustiseng.com		
D. Name and contact information of employee who is a registered and licensed architect, professional engineer, or surveyor in the State of Louisiana in the applicable discipline. A subcontractor may be substituted here only if the advertised Project requires more than one discipline.		
Gwendolyn P. Sanders, P.E. / President / 504-834-0157 / gsanders@eustiseng.com		
E. Please provide the number of employees whose primary function corresponds with each category:		
7 Administrative _____ Architects (Licensed) _____ Chemical Engineers _____ Civil Engineers _____ Construction Inspectors _____ Ecologists _____ Electrical Engineers 4 Engineer Intern _____ Professional Land Surveyors	_____ Estimators 1 Geologists 13 Geotechnical Engineers _____ Interior Designers _____ Landscape Architects _____ Land Surveyor _____ Mechanical Engineers _____ Environmental Engineers	_____ Specification Writers _____ Structural Engineers 1 Graduate Engineers _____ Project Managers 7 Clerical _____ Grant/Funding Specialist _____ Sanitary Engineers 48 Other 81 TOTAL
F. Is this submittal is a JOINT-VENTURE? Please check: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		
If marked "No," skip to Section I. If marked "Yes," complete Sections G-H.		

TEC Professional Services Questionnaire

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

1.

2.

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

YES ☐ NO ☐

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

Name & Address:	Specialty:	Worked with Firm Before (Yes or No):
1. None.		
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, administrative, and engineering staff. More employees can be added, as necessary, to complete any project.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:	
Name & Title:	
Benjamin M. Cody, P.E. / Principal Engineer	
Project Assignment:	
Project Manager	
Name of Firm with which Associated:	
Eustis Engineering L.L.C.	
Years' Experience with This Firm:	
20	
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/Registered Professional Engineer Florida: 2001/Registered Professional Engineer Alabama: 2001/Registered Professional Engineer	Mississippi: 2007/Registered Professional Engineer Texas: 2014/Registered Professional Engineer Arkansas: 2014/Registered Professional Engineer
Other Experience and Qualifications Relevant to the Proposed Project:	
<p>From 1993 to 1994, Mr. Cody worked with Eustis Engineering as a soil technician. Since that time, he has completed his education and achieved the level of professional engineer.</p> <p>After leaving Eustis Engineering in 1994, Mr. Cody worked as an engineering technician with the Sewerage and 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.</p> <p>For more than a year, he worked as a graduate research assistant at Tulane. At that time, he was responsible for the design, construction, and implementation of bench scale testing system in contaminated soil remediation.</p> <p>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.</p> <p>In 2001, he returned to the New Orleans area and to Eustis Engineering as a Project Engineer and now serves as a project manager and 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.</p> <p>Some of Mr. Cody's project experience, shown in this submittal, includes the following.</p> <ul style="list-style-type: none"> • Jefferson Parish, Jung and Falcone Lift Station Upgrades (K-11-3), New Sanitary Lift Station, Marrero, Louisiana, Eustis Engineering Project No. 23819: Engineering analyses included excavation recommendations; 	

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

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

dewatering and pressure relief; lateral earth pressures; allowable soil bearing values; allowable pile load capacities; and settlement estimates.

- **City of Kenner, Lift Station No. 4102, Airline Highway and Minden Avenue, Jefferson Parish, Louisiana, Eustis Engineering Project No. 22317:** The focus of this project was a valve pit planned adjacent to the existing lift station. After performing a geotechnical exploration and associated laboratory testing, engineering analyses and recommendations were provided comprising dewatering and pressure relief; lateral movement and settlement of the adjacent ground surface; bottom preparation of the lift station; allowable pile load capacities; estimates of settlement; and differential settlement estimates.
- **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:** Mr. Cody was Project Engineer for this work. A new below-grade submersible lift station was proposed to replace the existing lift station. After drilling a boring and performing laboratory tests on samples obtained from the boring, the client was provided with estimates of settlement, allowable soil bearing values, and allowable load capacities for timber piles. Recommendations for both rigid and flexible pavements, a temporary restraining system, and foundation construction procedures were also provided.
- **Sewerage & Water Board of New Orleans - Wastewater Rehabilitation Program at Multiple Sewer Pump Station Sites, New Orleans, Louisiana, Eustis Engineering Project Nos. 20701 and 22393:** Geotechnical information was obtained for seven sewer pump stations. Borings were drilled and engineering analyses performed for each location. Later, engineering during construction services were provided for six of the original seven locations. These services included temporary retaining structure review, dynamic pile testing, wave equation analyses of piles (WEAP), vibration monitoring, and observation during the cutting of concrete cores. Mr. Cody served as a project engineer with a particular focus on WEAP analyses.
- **Ascension Parish Government - Hillaryville Wastewater Treatment Plant, Pump Station, and Effluent Force Main, Hillaryville, Louisiana, Eustis Engineering Project Nos. 23149 (.01, .02, .03):** Mr. Cody was project manager for these geotechnical explorations. A proposed pump station and effluent force main required design input. Services included a geotechnical exploration, laboratory testing, engineering analyses, foundation recommendations, and pile load capacities. When the wastewater treatment plant was up for replacement, similar tasks were performed, as well as design services including submittal review and participation in design team meetings.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Gwendolyn P. Sanders, P.E. / President
Project Assignment:
Principal Engineer
Name of Firm with which Associated:
Eustis Engineering L.L.C.
Years' Experience with This Firm:
28
Education: Degree(s)/Year/Specialization:
Bachelor of Science/1990/Civil Engineering Master of Science/1992/Civil Engineering
Active Registration: Year First Registered/Discipline:
Louisiana: 1997/Civil Engineering Mississippi: 2003/Civil Engineering Texas: 2020/Civil Engineering
Other Experience and Qualifications Relevant to the Proposed Project:
<p>Mrs. Sanders began her professional career with Eustis Engineering in 1993. Over the past 28 years, she has worked her way up through the ranks of the engineering department as an Associate Engineer, Project Engineer, Project Manager, and Engineering Manager. In 2020, Mrs. Sanders became Eustis Engineering's first woman president. As president, she is responsible for day-to-day business operations of the corporation. These include quality, safety, marketing, and long-term strategic growth. She also still actively participates in the engineering design and review processes.</p> <p>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. A majority of her work experience has dealt with identifying soil properties, developing criteria for design of foundations, and determining an appropriate foundation to support the structure under consideration.</p> <p>In 2017, Mrs. Sanders served as program advisor for the Deep Foundations Institute's 42nd annual conference. That same year, she was named one of the 50 Women of the Year by New Orleans' City Business. Mrs. Sanders is currently serving as an associate member of the American Society of Civil Engineer's Standards Committee for the Design and Construction of Foundations. She has a keen eye for detail and is a stickler for quality. Her work ethic and quality, combined with her communication skills, translate to Mrs. Sanders' ability to deliver successful geotechnical engineering projects to her clients.</p>

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Gwendolyn P. Sanders, P.E. / President

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

- **Cheval Point Subdivision - Lift Station, LA Highway 327, Baton Rouge, Louisiana, Eustis Engineering Project Nos. 22953 and 23692:** Development of geotechnical design recommendations for a retaining structure at the proposed lift station, a dewatering well point system for construction of the lift station, and a permanent hydrostatic pressure relief system.
- **Bellevue Country Estates - Phases IV, V, and VI, Pavements, Lake, and Sewer Lift Station, Paulina, Louisiana, Principal Engineering Project No. 1511, Eustis Engineering Project No. 23451:** Engineering analyses and recommendations included suitability of excavated soil from the proposed lake site for use in other construction areas; the need for an adequate liner along the bottom and side slopes throughout the lake; the need for erosion control after the lake's construction; general site preparation; allowable soil bearing values for the sewer lift station; allowable pile load capacities for treated ASTM D25 quality timber piles for the lift station; stability of the lift station against bearing capacity failure and hydrostatic uplift; etc.
- **Jefferson Parish, Lift Station G8-2, Tolmas Drive and West Esplanade Avenue, Metairie, Louisiana, Eustis Engineering Project No. 22583:** This project required use of at-rest pressures to determine the structural requirements for any buried structures; stability analyses of the structure against hydrostatic uplift; base preparation recommendations for the valve pit foundation; allowable soil bearing values; allowable pile load capacities; settlement estimates; excavation and dewatering recommendations; etc.
- **Town of Henderson - Sewer Improvements, North of Interstate 10, Pump Station, Henderson, Louisiana, Eustis Engineering Project No. L0462:** Engineering analyses included estimates of allowable soil bearing values, geotextile use, lateral earth pressure, uplift pressure of the wet well, settlement, excavations, dewatering, and pressure relief of the temporary retaining structures.
- **Sewerage & Water Board of New Orleans - Wastewater Rehabilitation Program at Multiple Sewer Pump Station Sites, New Orleans, Louisiana, Eustis Engineering Project Nos. 20701 and 22393:** Geotechnical information was obtained for seven sewer pump stations. Borings were drilled and engineering analyses performed for each location. Later, engineering during construction services were provided for six of the original seven locations. These services included temporary retaining structure review, dynamic pile testing, wave equation analyses of piles, vibration monitoring, and observation during the cutting of concrete cores.
- **Sewerage & Water Board of New Orleans - Modifications to East Bank, Wastewater Treatment Plant, Construction of Monoliths 118-120, Orleans Parish, Louisiana, Eustis Engineering Project No. 22627:** Two important pipelines were unable to be relocated for this project. Therefore, an evaluation was performed to analyze the impacts of pile driving on these pipes, with an emphasis on reducing vibrations at the sewer force mains during driving. Available data and pile installation techniques were evaluated to provide estimates of allowable pile load capacities and estimates of minimum distances between pile driving operations and existing sewer force mains.

PROJECT NO. 1		
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:	
<p>Jefferson Parish Jung and Falcone Lift Station Upgrades (K-11-3) New Sanitary Sewer Lift Station Marrero, Louisiana Eustis Engineering Project No. 23819</p> <p>Jefferson Parish Through Principal Engineering, Inc. Suite 19 1011 North Causeway Boulevard Mandeville, Louisiana 70471 Jeneva Hinojosa, E.I. @ 985-624-5001</p>	<p>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.</p> <p>Our field investigation included the drilling of one soil boring to a depth of 80 feet below the existing ground surface drilled with truck mounted equipment. Once in the laboratory, samples collected in the field 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.</p> <p>Using these data, our staff performed engineering analyses and developed recommendations for the project. Engineering analyses included:</p> <ul style="list-style-type: none"> • site preparation encompassing temporary and permanent drainage and excavation recommendations; • dewatering and pressure relief, lateral movement, and excavation base preparation associated with the sanitary gravity sewer line, wet well, and valve box; • lateral earth pressures; • base preparation, pipe bedding, and 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:
June 2018 (Actual)	Unknown	\$4,900

PROJECT NO. 2	
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:
<p>Cheval Point Subdivision Lift Station LA Highway 327 Baton Rouge, Louisiana Eustis Engineering Project Nos. 22953 and 23692</p> <p>Cheval Point Development, LLC Suite 3B 9191 Siegen Lane Baton Rouge, Louisiana 70810 Wesley Daniel @ 225-279-5410</p>	<p>Cheval Point Subdivision was a 57-acre site on LA Highway 327 approximately 175 feet landward of the left descending bank of the Mississippi River levee. Because of the site's location, several government agencies were included in the permitting process.</p> <p>Eustis Engineering was requested by the owner to perform a technical review of the latest permit plans. Eustis Engineering was also asked to provide geotechnical design recommendations for a retaining structure at the proposed lift station, a dewatering well point system for construction of the lift station, and a permanent hydrostatic pressure relief system.</p> <p>Our scope of services included cone penetration tests (CPTs) at the proposed location of a new sanitary sewer lift station to evaluate the subsoil conditions at the site. Two static CPTs were made by Eustis Engineering, one to 21 feet and one to 76 feet below the existing ground surface. During the CPTs, pore pressure dissipation tests were conducted at various depths by halting the penetration and measuring the decay of pore water pressure with time. Measurements of pore pressure decay were taken for a minimum of 1,000 seconds at each test depth. The rate of excess pore pressure dissipation was measured and plotted versus time to estimate the horizontal coefficient of consolidation.</p> <p>Based on our interpretation of the CPT results as well as soil borings and CPT results from past projects performed by our firm and the U.S. Army Corps of Engineers for this project, we developed recommendations for construction of a retaining structure, recommendations for a permanent pressure relief system, and estimates for a temporary pressure relief system.</p> <p>Following our technical review of the general civil engineer's recent permit plans, Eustis Engineering's recommendations and estimates were to be incorporated into the engineer's project plans for a formal resubmission to the Pontchartrain Levee District.</p> <p>Eustis Engineering presented a conceptual plan for construction of the proposed lift station. This plan was based on lift station construction using a sheetpile retaining structure and providing hydrostatic pressure relief both during construction and for the design life of the completed lift station. Our conceptual plan was based on providing one of two methods of hydrostatic pressure relief by using either (1) a conventional active system of pressure relief wells or (2) a soil improvement solution by jet grouting. These conceptual solutions were based on design criteria to resist hydrostatic heave and seepage during and after construction.</p>

PROJECT NO. 2		
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:	
	<p>As part of the project, Eustis Engineering also installed two temporary "Casagrande" type, open standpipe piezometers, one within and one outside the retaining structure. The purpose of the piezometers was to monitor excess hydrostatic pressure of the transition and aquifer strata at the retaining structure.</p> <p>Eustis Engineering remained on site during construction providing construction oversight associated with the lift station.</p>	
Completion Date (Actual or Estimated)	Estimated Cost:	
	Entire Project:	Work for Which Firm Was Responsible:
April 2018 (Actual)	Unknown	\$63,400



PROJECT NO. 3		
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:	
<p>Bellevue Country Estates Phases IV, V, and VI Pavements, Lake, and Sewer Lift Station Paulina, Louisiana Principal Engineering Project No. 1511 Eustis Engineering Project No. 23451</p> <p>Landcraft Homes, L.L.C. Post Office Box 2470 LaPlace, Louisiana 70069 Joseph M. Scontrino III @ 985-651-3007</p>	<p>Bellevue Country Estates in Paulina, Louisiana, was built in phases in a relatively level sugarcane field that included drainage ditches and an access road. Phases IV, V, and VI of the 81-lot development included the construction of nearly 4,000 feet of roadway pavements, a 7-ft deep lake, and a 16-ft deep sewer lift station. The lift station was to consist of a 6-ft diameter wet well with an invert located approximately 15 feet below the ground surface and the bottom slab at 16 feet. The lift station would be constructed using 6-ft diameter reinforced concrete pipe (weighing approximately 1,850 lb/lf).</p> <p>When our personnel arrived on site, they discovered standing water and soft ground conditions. After performing seven auger borings, we received authorization from the owner to use a track mounted rig instead of the planned truck mounted rig. We drilled three undisturbed soil test borings and the eighth auger boring. One soil boring was drilled to a depth of 60 feet near the location of the proposed sewer lift station, and the other two borings were drilled to depths of 15 feet each near the proposed lake. Auger borings were drilled to depths of 8 feet along the proposed roadway alignment.</p> <p>Soil mechanics laboratory tests were performed on samples collected in the field. In conjunction with the soil borings and laboratory test results, engineering analyses were made to determine recommendations regarding the suitability of excavated soil from the proposed lake site for use in other construction areas; the need for an adequate liner along the bottom and side slopes of the lake; the need for erosion control after the lake's construction; general site preparation including drainage during and after construction; subgrade preparation and stabilization for proposed roadways; select backfill and structural fill and its compaction; pavement recommendations for flexible and rigid pavements; allowable soil bearing values for the sewer lift station; allowable pile load capacities, in compression and tension, for various sizes and embedments of treated ASTM D25 quality timber piles for the lift station; stability of the lift station against a bearing capacity failure and hydrostatic uplift; estimates of settlement and differential settlement due to fill placement and between pile/grade supported features; and the use of temporary retaining structures as well as dewatering and pressure relief during construction of the sewer lift station.</p>	
Completion Date (Actual or Estimated)	Estimated Cost:	
	Entire Project:	Work for Which Firm Was Responsible:
March 2017 (Actual)	Unknown	\$9,000

PROJECT NO. 4		
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:	
<p>Jefferson Parish Lift Station G8-2 Tolmas Drive and West Esplanade Avenue Metairie, Louisiana Eustis Engineering Project No. 22583</p> <p>Barowka & Bonura Engineers & Consultants, LLC 209 Canal Street Metairie, Louisiana 70005 Jeffrey Bonura @ 504-828-0030</p>	<p>Jefferson Parish planned to improve Lift Station G8-2 by installing a 12' x 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 bore hole, 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.</p> <p>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.</p> <p>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.</p> <p>More specifically, engineering analyses included:</p> <ul style="list-style-type: none"> • use of at-rest pressures to determine the structural requirements for any buried structures; • 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. 	
Completion Date (Actual or Estimated)	Estimated Cost:	
	Entire Project:	Work for Which Firm Was Responsible:
August 2014 (Actual)	Unknown	\$4,100

PROJECT NO. 5		
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:	
<p>City of Kenner Lift Station No. 4102 Airline Highway and Minden Avenue Jefferson Parish, Louisiana Eustis Engineering Project No. 22317</p> <p>Hartman Engineering, Inc. Suite 300 527 West Esplanade Avenue Kenner, Louisiana 70065 Priyo Majumdar @ 504-466-5667</p>	<p>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.</p> <p>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 ground water 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 moisture proof containers to preserve their natural water content prior to laboratory testing.</p> <p>Our laboratory technicians performed soil mechanics laboratory tests on these samples to evaluate the physical properties of the various substrata.</p> <p>Engineering analyses, based on the undisturbed soil boring and soil mechanics laboratory test results, were used to develop recommendations regarding:</p> <ul style="list-style-type: none"> • 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:
October 2013 (Actual)	Unknown	\$3,200

PROJECT NO. 6

Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:
<p data-bbox="142 846 633 1087">City of Kenner Sewer Capital Improvement Program Sewage Pumping Station Upgrade 31st Street and Jasper Street Lift Station Jefferson Parish, Louisiana Eustis Engineering Project Nos. 21834 and 22559</p> <p data-bbox="167 1125 610 1367">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</p>	<p data-bbox="695 279 1515 520">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 located at the ground surface. The wet well and valve pit would each have a 12' x 12' pad. The electrical panel would have a 2' x 5' pad. Both shallow foundation systems and treated timber piles were being considered for support of the project features.</p> <p data-bbox="695 562 1515 762">One undisturbed soil test boring was made at the site. The boring was drilled to a depth of 80 feet below the existing ground surface. Upon completion of the drilling operations, the boring was backfilled in accordance with current regulatory requirements and the pavement patched. GPS coordinates of the boring were obtained using a handheld device.</p> <p data-bbox="695 804 1515 909">Soil mechanics laboratory tests, performed on samples obtained from the boring, were used to evaluate the physical properties of the various substrata.</p> <p data-bbox="695 951 1515 1192">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.</p> <p data-bbox="695 1234 1515 1297">Eustis Engineering also provided construction materials testing services for this project. Those services included:</p> <ul data-bbox="743 1339 1515 1875" style="list-style-type: none">• 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;

PROJECT NO. 6		
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:	
	<ul style="list-style-type: none"> compressive strength tests on concrete cylinders made during the above inspection; and the coring and inspection of asphalt. 	
Completion Date (Actual or Estimated)	Estimated Cost:	
	Entire Project:	Work for Which Firm Was Responsible:
April 2015 (Actual)	Unknown	\$19,300



PROJECT NO. 7		
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:	
<p>Town of Henderson Sewer Improvements North of Interstate 10 Pump Station Henderson, Louisiana Eustis Engineering Project No. L0462</p> <p>Town of Henderson, Louisiana Post Office Box 595 Henderson, Louisiana 70517 Sherbin Collette @ 337-228-7109</p>	<p>Sewer improvements were planned for the Town of Henderson, Louisiana. A new pump station, comprising a wet well and valve pit, would be constructed on North Barn Road.</p> <p>Plans called for the wet well to be supported by an 18-in. thick concrete mat underlain by 12 inches of limestone bedding. It would be constructed of precast, reinforced concrete pipe sections having outside diameter dimensions of 72 inches with a square mat foundation having plan dimensions of 9.3' x 9.3'. The excavation for the wet well would be made to a depth of 21.5 feet below the existing ground surface.</p> <p>The adjacent valve pit would be constructed of precast, reinforced concrete pipe sections having outside diameter dimensions of 60 inches. Drawings indicated the valve pit would be supported by a 12-in. thick concrete mat underlain by 12 inches of limestone bedding. The valve pit would require excavation to an approximate depth of 6 feet below the existing ground surface. Plans also indicated the valve pit mat foundation would have plan dimensions of 7' x 7'.</p> <p>One soil boring was made to a depth of 60 feet using a truck mounted rotary type drill rig for the purpose of evaluating subsoil conditions and stratification, and to obtain samples of the various substrata. Soil mechanics laboratory tests consisted of natural water content, unit weight, unconfined compression shear, and unconsolidated undrained triaxial compression shear. In addition, Atterberg liquid and plastic limits tests were performed on selected soil samples.</p> <p>Engineering analyses, based on the soil boring and laboratory tests, were made to determine recommendations regarding site preparation; estimates of allowable soil bearing values; geotextile use, lateral earth pressure, and uplift pressure of the wet well; settlement, excavations, dewatering, and pressure relief of the temporary retaining structures (for cost estimating purposes only); and construction monitoring.</p>	
Completion Date (Actual or Estimated)	Estimated Cost:	
	Entire Project:	Work for Which Firm Was Responsible:
August 2016 (Actual)	Unknown	\$7,200

PROJECT NO. 8		
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:	
<p>Sewerage & Water Board of New Orleans Wastewater Rehabilitation Program at Multiple Sewer Pump Station Sites New Orleans, Louisiana Eustis Engineering Project Nos. 20701 and 22393</p> <p>Sewerage & Water Board of New Orleans Through Design Engineering, Inc. Suite 205 3330 West Esplanade Avenue Metairie, Louisiana 70002 John Holtgreve @ 504-836-2155</p>	<p>This project required geotechnical information for seven sewer pump stations with plan dimensions of approximately 18' x 22'. The structures would be located approximately 7 feet below existing grade and would be supported on driven pile foundations. Piling under consideration included treated timber and square, prestressed, precast concrete piles.</p> <p>An elevated 8' X 15' electrical platform would be supported at grade on a 10' x 15' foundation slab. The total weight of the platform with roof and live loads was 68 kips. Roof uplift would create a net tension load of 17 kips on the platform. The distributed uniform loading on the 10' x 15' foundation slab was estimated to be 453 psf (not including the weight of the foundation slab).</p> <p>The existing pump stations were pile supported. At five of the seven pump station sites, specific information was provided by Design Engineering, Inc., for influent and discharge pipe depths, and for new and existing foundation depths below existing grade. We estimated pipe and foundation depths at the remaining two pump stations. New pipe diameters were estimated to range from 12 to 18 inches.</p> <p>Seven undisturbed soil test borings were drilled for the project. Six borings were made to depths of 100 feet, and one terminated at a depth of 85 feet below the existing ground surface. The undisturbed borings were made with a truck mounted Failing 3600 wet rotary type drill rig. Upon completion of the drilling operations, the borings were backfilled with cement-bentonite grout in accordance with current regulatory requirements. Soil mechanics laboratory tests, performed on samples obtained from the borings, were used to evaluate the physical properties of the subsoils.</p> <p>Engineering analyses, based on the soil borings and laboratory tests, were performed to develop recommendations regarding site preparation, placement and compaction of fill, allowable soil bearing values, allowable pile load capacities, and estimated settlement. Construction recommendations were also provided for excavations and dewatering.</p> <p>Eustis Engineering provided professional geotechnical engineering services during construction for six of the pump stations previously analyzed for the design phase of the project. Our services included a review of temporary retaining structures (sheetpile walls), dynamic pile testing, wave equation analyses of pile driving methods, vibration monitoring, and observation services during the cutting of concrete cores.</p>	
Completion Date (Actual or Estimated)	Estimated Cost:	
	Entire Project:	Work for Which Firm Was Responsible:
November 2015 (Actual)	Unknown	\$62,800

PROJECT NO. 9	
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:
<p>Ascension Parish Government Hillaryville Wastewater Treatment Plant Pump Station, and Effluent Force Main Hillaryville, Louisiana Eustis Engineering Project Nos. 23149 (.01, .02, .03)</p> <p>Ascension Parish Government Through MSMM Engineering, LLC Suite 220 4640 South Carrollton Avenue New Orleans, Louisiana 70119 Mardia Manish @ 504-570-6098</p>	<p>Improvements, specifically an 8-ft diameter wet well and valve pit, were proposed to the existing pump station at the Hillaryville Wastewater Treatment Plant in Hillaryville, Louisiana. The top of the slab for the proposed wet well would be installed to approximate el -3.5 and the top of the slab for the valve pit would be installed to approximate el 5. The net bearing intensity of the wet well would be 250 psf; the bearing intensity of the valve pit would be less than the soil excavated for the pit.</p> <p>One 5-in. diameter undisturbed soil boring was made at the pump station location within the existing Hillaryville Wastewater Treatment Plant. One 3-in. diameter undisturbed soil boring was made near the intersection of Marchand School Road and River Road (LA Highway 942). Both were drilled with truck mounted wet rotary equipment to depths of 75 feet and 80 feet, respectively, below the existing ground surface. Upon completion of drilling, the holes were grouted in accordance with current regulatory requirements. Additional data were obtained from the U.S. Army Corps of Engineers, New Orleans District, using the Freedom of Information Act request. This information contained pertinent USACE slope stability plates and levee cross-sections for the left descending bank near Mississippi River Mile 171.4 AHP. Soil mechanics laboratory tests, primarily consisting of natural water content, unit weight, and unconfined compression shear, or unconsolidated undrained triaxial compression shear, were used to evaluate the physical properties of the various substrata.</p> <p>Based on the available soil boring and laboratory test data, engineering analyses and foundation recommendations included estimated allowable soil bearing values to sustain the structural loads of the mat-supported wet well and valve pit; sheetpile and bracing recommendations to maintain stability of the excavations; dewatering and pressure relief; lateral movement and settlement of the adjacent ground surface; analysis of temporary retaining structures; lateral earth pressures; recommended bedding and structural fill associated with the construction of the wet well and valve pit foundations; estimates of settlement and differential settlement associated with the project; allowable soil bearing values for the proposed pipe rack footings and access bridge abutment; and global and local stability analyses associated with these same structures.</p> <p>After completing the initial investigation, Eustis Engineering was requested to evaluate preliminary allowable single pile load capacities to aid in project construction budget estimates. Using available data, our engineers completed preliminary estimates of single pile load capacities, in compression and tension, for treated ASTM D25 quality timber piles.</p> <p>Shortly thereafter, Eustis Engineering was asked to provide additional geotechnical services, this time for the replacement of the wastewater treatment plant. The project was to consist of buildings proposed on</p>

PROJECT NO. 9		
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:	
	<p>grade; reinforced and partially buried concrete tanks; a pump station with an approximate 20-ft depth; asphalt roadways within the site; and buried piping. New features would include an influent pump station and effluent pump station, an effluent force main, headworks, aeration basins, a sludge area controller, a chlorine disinfection unit, an aerobic digester, a filter press building, administrative building, and a maintenance building.</p> <p>The field exploration included three undisturbed borings between 80 and 100 feet below the existing ground surface; ten auger borings to depths of 8 feet; and 11 cone penetration tests to 80 feet. The field investigation was followed by the performance of soil mechanics laboratory tests to classify the subsoils and determine their relative compressibility.</p> <p>Engineering analyses and recommendations for this portion of the project included:</p> <ul style="list-style-type: none"> • ground water management; • site preparation including subgrade preparation, recommended structural fill and its compaction, and estimated fill settlement; • excavation and dewatering recommendations as well as recommendations with regard to lateral movement and settlement of the adjacent ground surface; • earth and water pressures (at-rest, active, passive, uplift); • site preparation associated with below grade structures including base preparation, material separation, and bedding recommendations; • pipeline recommendations including material separation, recommended bedding/backfill materials and their compaction, and settlement estimates; • shallow foundation recommendations including allowable soil bearing values for footings and settlement estimates; • mat foundation recommendations including allowable soil bearing values, net applied pressure intensity, and settlement estimates; • allowable pile load capacities for treated timber, timber composite, and precast concrete piles; • pile settlement estimates due to structural loads and fill placement; • pile installation recommendations; and • recommendations for flexible and rigid pavements. <p>Finally, Eustis Engineering participated in design team meetings and performed requested submittal reviews.</p>	
Completion Date (Actual or Estimated)	Estimated Cost:	
	Entire Project:	Work for Which Firm Was Responsible:
August 2020 (Actual)	Unknown	\$45,200

PROJECT NO. 10		
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:	
<p>Sewerage & Water Board of New Orleans</p> <p>Modifications to East Bank Wastewater Treatment Plant</p> <p>Construction of Monoliths 118-120</p> <p>Orleans Parish, Louisiana</p> <p>Eustis Engineering Project No. 22627</p> <p>Sewerage & Water Board of New Orleans Through Integrated Management Services 126 East Amite Street Jackson, Mississippi 39201 Tommy Avant @ 901-968-9194</p>	<p>Eustis Engineering was contracted to provide geotechnical engineering analyses for the construction of three monoliths at the East Bank Wastewater Treatment Plant in New Orleans. The construction of these monoliths had been postponed due to their close proximity to two pipelines. Initial plans had called for the relocation of these pipelines. However, due to the condition of the lines, relocation proved to be unfeasible. Leaks in these lines had been repaired by the installation of a pipe liner within each pipe.</p> <p>The proximity of construction activities and the condition and importance of these pipelines meant alternative methods of installing piles had to be explored to reduce vibrations at the sewer force mains during pile driving operations. The options being evaluated for this project included:</p> <ul style="list-style-type: none"> • using steel H-piles in lieu of concrete piles, • installing piles vertically rather than on a batter, • installing piles with the aid of predrilling, and • determining how far the piles would need to be spaced from the existing sewer force main to reduce vibrations. <p>Recommendations were based on review of available data from previous exploration and construction, estimates of allowable pile load capacities for steel H-piles, evaluation of pile installation techniques (such as predrilling), and estimates of minimum distances between pile driving operations and existing sewer force mains.</p>	
Completion Date (Actual or Estimated)	Estimated Cost:	
	Entire Project:	Work for Which Firm Was Responsible:
August 2014 (Actual)	Unknown	\$6,000

TEC Professional Services Questionnaire

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

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



TEC Professional Services Questionnaire

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

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-five 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, less than five miles from the project location at the intersection of Transcontinental Drive and Belle Drive. 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:

- exploration (drilling of soil borings and cone penetration testing),
- soil mechanics laboratory tests,
- field instrumentation and monitoring,
- dynamic pile testing and non-destructive testing of piles/shafts,
- geotechnical engineering design, and
- construction quality control and materials testing services.

Eustis Engineering has worked on more than 25,000 projects since its inception. Over 4,000 of these projects were located in Jefferson Parish, and more than 1,000 have involved sewer systems in some capacity. This work history gives our engineering staff unparalleled familiarity with the foundation conditions in the Greater New Orleans area. Our engineers have provided geotechnical services at various levels in 22 states and one dozen foreign countries throughout the years.

ENGINEERING

Eustis Engineering has engineering capabilities to fulfill the requirements of nearly any project. We have developed pile capacity and bearing capacity analyses for projects throughout the coastal areas of the United States. We consider net and gross allowable bearing pressures in the design of below grade features. Eustis Engineering's evaluation of piles includes estimates of vertical capacity for groups. We also perform lateral analyses of individual piles and pile groups using LPILE and GROUP.

We perform settlement studies including estimates of settlement and time-rate of settlement, including the effects of drawdown on adjacent features. We evaluate appropriate backfills and bedding, and provide recommendations for their placement and compaction.

Our capabilities extend to performance of deep-seated global stability analyses for structures 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. Our staff

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

evaluates local and global stability of temporary and permanent retaining structures. We provide recommendations for dewatering and pressure relief during construction and operation of below grade structures.

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 for earthen embankments and levees. 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.

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 in technical conferences. We encourage and fund our staff for these activities and programs.

Employee	Education	Experience	
		Years with Eustis Engineering	Total Years
Professional Engineers (P.E.)			
Benjamin M. Cody	M.S. / Civil Engineering	20	24
Brian A. Deschamp	B.S. / Civil & Environmental Engineering	9	9
	B.A. / Business Administration		
James J. Hance	M.S. / Civil Engineering	18	22
	M.B.A. / Business Administration		
Chad L. Held	M.S. / Civil Engineering	30	30
David J. Indest	M.S. / Civil Engineering	20	20
Matthew K. Morales	B.S. / Civil Engineering	12	12
Travis R. Richards	M.S. / Engineering	15	22
	M.S. / Engineering Management		
	Coastal Engineering Certificate		
Gwendolyn P. Sanders	M.S. / Engineering	28	28
Shaun R. Simon	M.S. / Civil Engineering	21	21
Patrick A. Thurmond	M.S. Engineering Management	6	6
	M.S. / Civil Engineering		
	Coastal Engineering Certificate		
Sean G. Walsh	M.S. / Civil Engineering	9	14
Benjamin G. Weinberg ⁽¹⁾	B.S. / Civil & Environmental Engineering	1	8
	M.B.A. / Business Administration		

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

Employee	Education	Experience	
		Years with Eustis Engineering	Total Years
Henry C. Worley	B.S. / Civil Engineering	3	5
	Coastal Engineering Certificate		
Engineering Interns (E.I.)			
Patrick T. Duckworth	M.S. / Civil Engineering	1	1
Lars A. Erickson	B.S. / Civil & Environmental Engineering	5	5
	Coastal Engineering Certificate		
Tomas K. Morales ⁽³⁾	B.S. / Civil Engineering	8	8
Joel R. Smith	B.S. / Civil Engineering	1	5
James M. Williams ⁽²⁾	M.S. / Civil Engineering	3	3
Engineering Graduates			
Lesley L. Reitmeyer	B.S. / Civil Engineering	12	12
Sean T. Smith ⁽³⁾	B.S. / Civil Engineering	5	5
Geologists			
Matthew J. Blasini	B.S. / Geology	1	2
Total Years of Experience		228	262

(1) P.E. outside Louisiana.

(2) Passed P.E. Exam, licensure pending one more year of experience.

(3) Long Term Subcontractor

Cone Penetration Testing Capabilities

Eustis Engineering owns two dedicated track mounted 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 CPT rigs can be placed on a cargo buggy, shallow draft barge, or airboat to access coastal marsh or open water.

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 and closed end steel pipe piles, and steel H-piles.

We recently upgraded our data collectors and now operate four Pile Driving Analyzers® (PDAs) - two PAX units and two 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.

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

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 crosshole/single-hole sonic logging (CSL or SSL), low strain pile integrity testing (PIT), and thermal integrity profiling (TIP). We also perform parallel seismic testing to evaluate existing foundation depths.

INSTRUMENTATION

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

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.

Personnel

We can provide up to eight drillers and drill rigs capable of obtaining standard 3-in. diameter Shelby tube samples and 5-in. diameter fixed piston samples on land, and in water and marsh environments as indicated in the following table.

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

Capabilities of Eustis Engineering's Drill Staff	Scott Bombard	Jordon Brightwell	James Cordes	Rene Davidson	Eric Held	Julius Ivery	James Lubben	George Reitmeyer	Lawrence Rome
Hand Auger Borings	X	X	X	X	X	X	X		X
General Type (3-in. Diameter Borings)	X	X	X	X	X	X	X		X
General Type (3-in. Diameter Borings) in Hard Access Locations (Marsh, Swamp, Heavily Forested)	X	X	X	X	X	X	X		X
Undisturbed Type (5-in. Diameter Borings)	X	X	X	X	X	X	X		X
Undisturbed Type (5-in. Diameter Borings) in Hard Access Locations (Marsh, Swamp, Heavily Forested)		X	X	X	X	X	X		X
Boring Location Information (Elevation, Latitude, Longitude, Station, Offset)		X	X	X	X	X	X		X
Set Permanent Benchmarks		X	X	X	X	X	X		X
Install Instrumentation		X	X	X	X	X	X		X
Cone Penetration Tests					X			X	
Geoprobe® Sampling	X		X		X		X		X

Equipment

Eustis Engineering owns and operates six wet rotary drill rigs, both truck 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.

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

LABORATORY

Eustis Engineering's laboratories are constantly evolving with the purchase of new equipment on a yearly basis. Our gINT® data management software 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 U.S. Army Corps of Engineers. Our laboratories hold accreditations from AASHTO, LaDOTD, and the U.S. Army Corps of Engineers.

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 U.S. Army Corps of Engineers. 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's laboratory is accredited with the AASHTO Materials Reference Laboratory (AMRL) in the areas of soil, aggregate, and Portland Cement Concrete.

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 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.

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

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

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: 10 May 2021



Section 3

BFM Corporation, LLC.

TEC Professional Services Questionnaire

TEC Professional Services Questionnaire

A. Project Name and Advertisement Resolution Number:

Professional Engineering Services related to the Design of the
Rehabilitation of the Transcontinental & Belle Lift Station (E8-1)
 SOQ 21-008 | Resolution No. 137449

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



BFM
 CORPORATION, LLC
Professional Land & Hydrographic Surveying

BFM Corporation, LLC
 15 Veterans Memorial Boulevard
 Kenner LA 70062

C. Name, title, & 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:

Chad M. Poché, P.E., Executive Vice President
 504-468-8800 • 504-460-5239 cell • cpoche@bfmcorporation.com
 Registered Professional Civil Engineer, Louisiana No. 27667 (since 1998)

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

Ralph P. Fontcuberta, Jr., Executive Vice President • LA License No. 4329 (1974)
 504-468-8800 • 504-451-7500 cell • ralph@bfmcorporation.com
 Registered Professional Land Surveyor, Louisiana No. 4329 (since 1974)

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

1	Administrative	-	Estimators	-	Specification Writers
-	Architects (Licensed)	-	Geologists	-	Structural Engineers
-	Chemical Engineers	1	Geotechnical Engineers	-	Graduate Engineers
-	Civil Engineers	-	Interior Designers	3	Project Managers
-	Construction Inspectors	-	Landscape Architects	3	Clerical
-	Ecologists	-	Mechanical Engineers	-	Grant/Funding Specialist
-	Electrical Engineers	*	Land Surveyor (*see PLS)	-	Sanitary Engineers
-	Engineer Intern	-	Mechanical Engineers	2	Principals
1	Professional Land Surveyors	-	Environmental Engineers	1	Technician
				3	Drafting/AutoCADD
				4	Survey Crew Chiefs
				5	Instrument Men
				24	TOTAL

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

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

TEC Professional Services Questionnaire

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

1. **N/A**

2.

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

YES _____ NO _____

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 Prime Before (Yes or No):
1. N/A		
2.		
3.		

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

24 (all personnel, primary and support, will be available on all assigned projects)

TEC Professional Services Questionnaire

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

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Ralph P. Fontcuberta, Jr., PLS
Executive Vice President

Project Assignment:

Registered Professional Land Surveyor

Name of Firm with which associated:

BFM CORPORATION, LLC
Professional Land & Hydrographic Surveying

Years experience with this Firm:

39 years (Founding Principal of BFM in 1982); 54 years total (1967)

Education: Degree(s)/Year/Specialization:

Coursework, Building, Delgado College, New Orleans
Coursework, Math, University of New Orleans

Active registration: Year first registered/discipline:

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

Other experience and qualifications relevant to the proposed Project:

Ralph P. Fontcuberta, Jr., PLS has better than half a century of experience in the field of surveying and has been a registered Professional Land Surveyor (PLS) since 1974. He is thoroughly knowledgeable in all aspects of surveying: topographic, hydrographic, boundary, right-of-way surveying, and all facets thereof. He has provided surveying services for residential, plant, and industrial layout projects, ranging from small private lots & buildings to multi-million dollar programs, including the New Orleans FEMA Streets/Recovery Roads Program.

Since the beginning of his career, his work has entailed computations, drafting, and field work for various industrial, commercial, municipal, and private clients. Project work has included topographic surveying needed for a wide variety of engineering, architectural, and related endeavors.

TEC Professional Services Questionnaire

Other experience and qualifications relevant to the proposed Project:

Ralph P. Fontcuberta, Jr., PLS (continued)

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

- Sewer Lift Station L-11-1, Saddler Road at Westbank Expressway, Marrero, Jefferson Parish, LA
- Sewer Lift Station F8-3, Metairie, Jefferson Parish, LA
- Destrehan Lift Station Upgrades, Jefferson Parish, LA
- Destrehan Lift Station Upgrades, Jefferson Parish, LA
- Sewer Lift Station L-13-6, Ehret Road, Marrero, Jefferson Parish, LA
- 5th & 9th Sewer Lift Station Upgrades, Harvey, Jefferson Parish, LA
- Lift Station E3-2 (Elmwood & Citrus), Metairie, Jefferson Parish, LA
- Saddler Street Sewer Lift Station, Marrero, Jefferson Parish, LA
- Lift Station No. 6 Improvements, City of Harahan, Jefferson Parish, LA
- Lift Station F7-12 (Grace King and Rockford), Metairie, Jefferson Parish, LA
- Lift Station K-11-3, Marrero, Jefferson Parish, LA
- Lift Station F7-13B (SCIP Project No. D55102), Jefferson Parish, LA
- Lift Station E5-4, Jefferson Parish, LA
- Lift Station F1-1, Elmwood Industrial Park Subdivision, Jefferson Parish, LA
- Causeway and Scott Sewer Lift Station Rehabilitation, Jefferson Parish, LA
- Lift Station C4-1A (N. Sibley and Boone), Metairie, Jefferson Parish, LA
- Lift Station F1-1, Elmwood Industrial Park Subdivision, Jefferson Parish, LA
- Kennedy Heights Sewer Lift Station, Jefferson Parish, LA
- N-12-1 (41st & Gardere Canal) Lift Station, Jefferson Parish, LA
- Cleary Avenue & West Napoleon Lift Station & Force Main, Jefferson Parish, LA
- Rehabilitation of D8-3 Lift Station (Purdue Drive & 37th Street), Metairie, Jefferson Parish, LA
- N-12-1 (41st & Gardere Canal) Lift Station, Jefferson Parish, LA
- Route Topographic (including Lift Station/Force Main) Surveying Services, Jefferson Parish, LA
- Lift Station D4-2 and Proposed D4-2B Surveying Services, Metairie, Jefferson Parish, LA
- Lakeside Mall Lift Station Servitude, Jefferson Parish, LA
- Emergency Generators for Sewer Lift Stations and Helios and West Napoleon Pump Stations, Jefferson Parish, LA
- Elizabeth & Utica Sewerage Lift Station, Jefferson Parish, LA
- Lapalco Boulevard Bridge at Harvey Canal, Jefferson Parish, LA
- DOTD H.010570, LA 49, Williams Boulevard, Kenner, Jefferson Parish, LA
- Latigue Road Extension, Jefferson Parish, LA
- Destrehan Avenue Bike Path (Patriot Street to Chadwood Drive), Harvey, Jefferson Parish, LA
- Metairie Road Smart Growth: Causeway Boulevard and Metairie Road, Metairie, Jefferson Parish, LA
- Avenue D Drainage Improvements (Phase VIII: Allo Street), Metairie, Jefferson Parish, LA
- Power Boulevard at Vintage Drive, Kenner, Jefferson Parish, LA
- Ames Boulevard Rehabilitation, Jefferson Parish, LA
- Green Acres Road, Metairie, Jefferson Parish, LA
- Veterans Memorial Boulevard - Westbound, Jefferson Parish, LA
- Hector Avenue Route Topographic Survey, Gretna, Jefferson Parish, LA
- Cousins Boulevard Extension (Phase I), Harvey, Jefferson Parish, LA
- Little Farms Avenue, Jefferson Parish, LA
- Lift Station No. 6 Improvements, City of Harahan, Jefferson Parish, LA
- Lapalco Boulevard Turn Lane (Lapalco Boulevard at Baratavia Boulevard), Jefferson Parish, LA
- Baratavia Boulevard Turn Lane Project, Marrero, Jefferson Parish, LA

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Chad M. Poché, P.E.
Executive Vice President

Project Assignment:

Engineering Liaison

Name of Firm with which associated:

BFM CORPORATION, LLC
Professional Land & Hydrographic Surveying

Years experience with this Firm:

4 years (became partial owner of BFM in 2017); 28 years total (1993)

Education: Degree(s)/Year/Specialization:

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

Active registration: Year first registered/discipline:

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

Other experience and qualifications relevant to the proposed Project:

Mr. Poché is an Executive Vice President with (and partial owner of) BFM Corporation, LLC, and a co-founder of BFM's sister company, Gulf South Engineering and Testing, Inc. He has been a consulting geotechnical engineer for more than 20 years in South Louisiana, working on traditional and unique geotechnical engineering projects (shallow and deep foundation design, slope stability, pavement design, etc.). Mr. Poché has also provided construction oversight for waste facilities and virtually every type of earthwork related project. He has been the geotechnical engineer of record for thousands of projects throughout his career.

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

BFM Corporation projects overseen by Mr. Poché would include:

TEC Professional Services Questionnaire

Other experience and qualifications relevant to the proposed Project:

Chad M. Poché, P.E. (continued)

Sewer Lift Station L-11-1, Saddler Road at Westbank Expressway, Marrero, Jefferson Parish, LA. BFM provided surveying services for Sewer Lift Station L-11-1 (Saddler Road at Westbank Expressway) on the West Bank of Jefferson Parish in Marrero, a continuation of a previous surveying project. The new contract involved a boundary survey with servitude acquisition, updating the boundary and creating servitude, as provided by the client, which was used to create the final survey. (\$4,140 (fee); 2020)

Lift Station F8-3, Metairie, Jefferson Parish, LA. For the project (located at West Esplanade Avenue & Houma Boulevard, in the Dreyfous Tract), BFM executed a topographic survey; scope included two TBMs (Temporary Benchmarks), three point ties, and location of improvements within limits & monuments to establish apparent rights-of-way (ROW). Baseline was set parallel to West Esplanade Avenue. (\$11,890 (fee); 2019)

Lift Station No. 6 Improvements, City of Harahan, Jefferson Parish, LA. BFM prepared a Route Topographic Survey of the project site in Harahan, which included portions of Wilson Street and Grove Avenue. The full scope plan & profile included all services, utilities, properties, elevations and items necessary to perform any and all engineering and construction work. (\$24,190 (fee); 2018)

Destrehan Lift Station Upgrades, Jefferson Parish, LA. BFM provided a full boundary survey update of the 2700 Destrehan Lift Station Upgrade project; the scope included establishing two TBMs (Temporary Benchmarks) on or near the project site and location of existing improvements within the designated Limits of Survey. This also included location of visible above-ground utilities and those underground utilities with visible surface evidence. (SCIP Project Number:D3564) (\$5,750 (fee); 2019)

Sewer Lift Station L-13-6, Ehret Road, Marrero, Jefferson Parish, LA. BFM's surveying scope involved topographic and boundary surveying services. (\$8,790 (fee); 2019)

5th & 9th Sewer Lift Station Upgrades, Harvey, Jefferson Parish, LA. BFM's scope involved a topographic survey of the project site, located at the intersection of 5th Avenue & 9th Street. Cross sections were taken on a 25 ft grid within limits. (\$6,790 (fee); 2019)

Lift Station E3-2 (Elmwood & Citrus), Metairie, Jefferson Parish, LA. BFM prepared a topographic survey of the project site. (\$10,866 (fee); 2018)

Saddler Street Sewer Lift Station, Marrero, Jefferson Parish, LA. BFM provided topographic surveying services for the project, located near the West Bank Expressway Access Road. (\$5,715 (fee); 2018)

Lift Station F7-13B (SCIP Project No. D55102), Jefferson Parish, LA. BFM provided topographic surveying services in relation to improvements at Lift Station F7-13B, located at the intersection of Stefano Street and Wanda Lynn Drive in Garden Subdivision, Metairie. (\$4,770 (fee); 2018)

Lift Station E5-4, Jefferson Parish, LA. BFM provided topographic surveying services for the project site, located at Transcontinental and West Metairie. (\$6,530 (fee); 2018)

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

John Philip Thayer
Field Operations Supervisor

Project Assignment:

Field Operations Supervisor

Name of Firm with which associated:

BFM CORPORATION, LLC
Professional Land & Hydrographic Surveying

Years experience with this Firm:

13 years (joined BFM in 2008); 14 years total (2007)

Education: Degree(s)/Year/Specialization:

B.S., 2007, Physical Education, Trevecca Nazarene University

Active registration: Year first registered/discipline:

Professional Land Surveyor Registration in process, State of Louisiana

Other experience and qualifications relevant to the proposed Project:

Mr. Thayer is a Field Operations Supervisor with considerable experience in field surveying services, including ALTA/as-built surveying, construction layout, boundary, topographic, cross-sections, GPS use, and numerous other surveying types.

Lift Station D4-2 and Proposed D4-2B Surveying Services, Metairie, Jefferson Parish, LA. BFM provided boundary and topographic surveying services for the existing Lift Station, D4-2, and the proposed Lift Station, D4-2B, to be located at the corner of Olga Avenue and Howard Avenue in Metairie. BFM also provided Right-of-Way to Right-of-Way of associated streets and sites of the existing and proposed lift stations. (\$22,860 (fee); 2016)

Sewer Lift Station L-11-1, Saddler Road at Westbank Expressway, Marrero, Jefferson Parish, LA. BFM provided surveying services for Sewer Lift Station L-11-1 (Saddler Road at Westbank Expressway) on the West Bank of Jefferson Parish in Marrero, a continuation of a previous surveying project. The new contract involved a boundary survey with servitude acquisition, updating the boundary and creating servitude, as provided by the client, which was used to create the final survey. (\$4,140 (fee); 2020)

Rehabilitation of D8-3 Lift Station (Purdue Drive & 37th Street), Metairie, Jefferson Parish, LA. BFM provided topographic surveying services for the project. (\$11,216 (fee); 2016)

N-12-1 (41st & Gardere Canal) Lift Station, Jefferson Parish, LA. BFM provided boundary and topographic surveying services for the project. (2016)

TEC Professional Services Questionnaire

Other experience and qualifications relevant to the proposed Project:

John Philip Thayer (continued)

Emergency Generators for Sewer Lift Stations and Helios and West Napoleon Pump Stations, Jefferson Parish, LA. BFM prepared topographic surveys at the Helios PS and at the West Napoleon PS for the placement of emergency generators. (\$5,888 (fee); 2012)

Lakeside Mall Lift Station Servitude, Jefferson Parish, LA. BFM prepared a survey of the area needed for the replacement of a lift station on Severn Avenue. (\$2,540 (fee); 2015)

Route Topographic (including Lift Station/Force Main) Surveying Services, Jefferson Parish, LA. BFM provided boundary and topographic surveys for the project, which involved a force main survey involving Veterans Boulevard, between the Suburban Canal and North Hullen Street (lift station improvements). Both full and partial route surveys were executed. (\$20,000 (fee); 2016)

Lift Station E5-4, Jefferson Parish, LA. BFM provided topographic surveying services for the project site, located at Transcontinental and West Metairie. (\$6,530 (fee); 2018)

Lift Station F1-1, Elmwood Industrial Park Subdivision, Jefferson Parish, LA. BFM's surveying services for the project involved a topographic survey of Lift Station F1-1 located at the intersection of Plantation road and Toler Street. (\$4,880 (fee); 2018)

Lift Station F7-13B (SCIP Project No. D55102), Jefferson Parish, LA. BFM provided topographic surveying services in relation to improvements at Lift Station F7-13B, located at the intersection of Stefano Street and Wanda Lynn Drive in Garden Subdivision, Metairie. (\$4,770 (fee); 2018)

Elizabeth & Utica Sewerage Lift Station, Jefferson Parish, LA. BFM executed a topographic survey for the project. (\$10,500 (fee); 2012)

N-12-1 (41st & Gardere Canal) Lift Station, Jefferson Parish, LA. BFM provided topographic and boundary surveying services for Lift Station N-12-1 (located at 41st Street & the Gardere Canal) in Jefferson Parish. (\$2,724 (fee); 2016)


Cleary Avenue & West Napoleon Lift Station & Force Main, Jefferson Parish, LA. BFM provided topographic surveying services for the project. (\$9,116 (fee); 2016)

Kennedy Heights Sewer Lift Station, Jefferson Parish, LA. BFM provided topographic surveying services for the project. (\$4,520 (fee); 2017)

Lift Station C4-1A (N. Sibley and Boone), Metairie, Jefferson Parish, LA. BFM executed a topographic survey for the project. (\$3,660 (fee); 2017)

Causeway and Scott Sewer Lift Station Rehabilitation, Jefferson Parish, LA. BFM provided topographic surveying services for the project. (\$5,610 (fee); 2017)

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
<p>Gary J. Lambert, Jr., LSI Project Manager/Drafting Supervisor</p>
Project Assignment:
<p>Project Manager/Drafting Supervisor</p>
Name of Firm with which associated:
 <p>BFM CORPORATION, LLC Professional Land & Hydrographic Surveying</p>
Years experience with this Firm:
<p>3 years (joined BFM in 2018); 3 years total</p>
Education: Degree(s)/Year/Specialization:
<p>B.S., 2018, Geomatics, Nicholls State University B.S., 2014, Construction Management, Louisiana State University</p>
Active registration: Year first registered/discipline:
<p>2019, Survey Intern, Louisiana, LSI.0000694</p>
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Lambert provides Project Management and Drafting Oversight for the firm. He has also provided Survey Crew Chief Services since joining BFM and offers a well-rounded experience overview for any project. Mr. Lambert has completed Basic OSHA Training and holds license with the Gulf Coast Safety Council (08SSV, ID429523).</p> <p>5th & 9th Sewer Lift Station Upgrades, Harvey, Jefferson Parish, LA. BFM's scope involved a topographic survey of the project site, located at the intersection of 5th Avenue & 9th Street. Cross sections were taken on a 25 ft grid within limits. (\$6,790 (fee); 2019)</p> <p>Destrehan Lift Station Upgrades, Jefferson Parish, LA. BFM provided a full boundary survey update of the 2700 Destrehan Lift Station Upgrade project; the scope included establishing two TBMs (Temporary Benchmarks) on or near the project site and location of existing improvements within the designated Limits of Survey. This also included location of visible above-ground utilities and those underground utilities with visible surface evidence. (SCIP Project Number:D3564) (\$5,750 (fee); 2019)</p> <p>Lift Station F8-3, Metairie, Jefferson Parish, LA. For the project (located at West Esplanade Avenue & Houma Boulevard, in the Dreyfous Tract), BFM executed a topographic survey; scope included two TBMs (Temporary Benchmarks), three point ties, and location of improvements within limits & monuments to establish apparent rights-of-way (ROW). Baseline was set parallel to West Esplanade Avenue. (\$11,890 (fee); 2019)</p>

TEC Professional Services Questionnaire

Other experience and qualifications relevant to the proposed Project:

Gary J. Lambert, Jr., LSI (continued)

Sewer Lift Station L-11-1, Saddler Road at Westbank Expressway, Marrero, Jefferson Parish, LA.

BFM provided surveying services for Sewer Lift Station L-11-1 (Saddler Road at Westbank Expressway) on the West Bank of Jefferson Parish in Marrero, a continuation of a previous surveying project. The new contract involved a boundary survey with servitude acquisition, updating the boundary and creating servitude, as provided by the client, which was used to create the final survey. (\$4,140 (fee); 2020)

Sewer Lift Station L-13-6, Ehret Road, Marrero, Jefferson Parish, LA. BFM's surveying scope involved topographic and boundary surveying services. (\$8,790 (fee); 2019)

Destrehan Lift Station Upgrades, Jefferson Parish, LA. BFM provided a full boundary survey update of the 2700 Destrehan Lift Station Upgrade project. (\$11,710 (fee); 2019)

Hanson City Task II Force Main, Kenner, LA. BFM provided Subsurface Utility Engineering (SUE) surveying services for the project. The SUE process includes non-destructive surface geophysical methods which determine the presence of subsurface utilities and to mark their horizontal position on the ground surface. Vacuum excavation techniques are used to expose & record the precise horizontal and vertical position of the assets. A conflict matrix is also created to evaluate and compare collected utility information with project plans, identify conflicts and propose solutions. (\$33,500 (fee); 2019)

Chateau Transfer Station Force Main, City of Kenner, LA. BFM's scope involved updating the topographic survey update for portions of Chateau Transfer Station Force Main (an update from a previous BFM surveying project). (\$13,110 (fee); 2019)


North Arnoult Drainage Pump Station Improvements, Jefferson Parish, LA. BFM's project services included both boundary and topographic surveying of the project site. (\$6,870 (fee); 2019)

Avenue D Drainage Improvements (Phase VIII: Allo Street), Metairie, Jefferson Parish, LA. BFM executed a Route Topographic Survey for the project; the full scope plan & profile included all services, utilities, properties, elevations and items necessary to perform any and all engineering and construction work. The project area (Allo Street) extended from 4th Street to 6th Street. (\$12,855 (fee); 2019)

Lapalco Boulevard Bridge at Harvey Canal, Jefferson Parish, LA. BFM provided extensive surveying services for a topographic survey and right-of-way (ROW) determination for the project. Project elements included setting GPS Static Control (5 permanent control points), traversing a proposed survey line, and land topography surveying. Additional phases included hydrographic topography of the project area, the right-of-way determination, and subsurface utility engineering (SUE). A Route Topographic Survey was also included as part of the scope. (\$575,738 (fee); 2019)

Metairie Road Smart Growth: Causeway Boulevard and Metairie Road, Metairie, Jefferson Parish, LA. BFM prepared a topographic survey of the project site for the Metairie Road Smart Growth Program. This included Metairie Road beneath the Causeway Boulevard Overpass. BFM established a baseline parallel to Metairie Road, set up two temporary benchmarks (TBMs), and located all existing improvements. Cross sections for the project area were taken on a 25 ft. grid within established limits. (\$12,660 (fee); 2019)

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Christopher Lemley Quality Control Supervisor
Project Assignment:
Quality Control Supervisor
Name of Firm with which associated:
 Professional Land & Hydrographic Surveying
Years experience with this Firm:
7 years (joined BFM in 2014); 15 years total (2006)
Education: Degree(s)/Year/Specialization:
<i>High School Diploma</i>
Active registration: Year first registered/discipline:
N/A
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Lemley serves as BFM's Quality Control Supervisor, overseeing all work and activity by the firm's personnel to be sure all is kept up to our exacting standards. His surveying experience includes over 8 years as a Survey Crew Chief. His survey software experience includes projects involving Trimble, Topcon, Leica, and Hypack, and has maintained and operated GPS, Auto-Level, and Total Station.</p> <p>Lift Station No. 6 Improvements, City of Harahan, Jefferson Parish, LA. BFM prepared a Route Topographic Survey of the project site in Harahan, which included portions of Wilson Street and Grove Avenue. The full scope plan & profile included all services, utilities, properties, elevations and items necessary to perform any and all engineering and construction work. (\$24,190 (fee); 2018)</p> <p>Lift Station F8-3, Metairie, Jefferson Parish, LA. For the project (located at West Esplanade Avenue & Houma Boulevard, in the Dreyfous Tract), BFM executed a topographic survey; scope included two TBMs (Temporary Benchmarks), three point ties, and location of improvements within limits & monuments to establish apparent rights-of-way (ROW). Baseline was set parallel to West Esplanade Avenue. (\$11,890 (fee); 2019)</p> <p>Sewer Lift Station L-11-1, Saddler Road at Westbank Expressway, Marrero, Jefferson Parish, LA. BFM provided surveying services for Sewer Lift Station L-11-1 (Saddler Road at Westbank Expressway) on the West Bank of Jefferson Parish in Marrero, a continuation of a previous surveying project. The new contract involved a boundary survey with servitude acquisition, updating the boundary and creating servitude, as provided by the client, which was used to create the final survey. (\$4,140 (fee); 2020)</p>

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Thomas O. Wright
Survey Crew Chief

Project Assignment:

Survey Crew Chief

Name of Firm with which associated:

BFM CORPORATION, LLC
Professional Land & Hydrographic Surveying

Years experience with this Firm:

13 years (joined BFM in 2008); 44 years total (1977)

Education: Degree(s)/Year/Specialization:

High School Diploma

Active registration: Year first registered/discipline:

*American Traffic Safety Service Assn. – Traffic Flagger/Control Technician/Control Supervisor
Basic OSHA Training - Completed
Transportation Work Identification Card (TWIC)*

Other experience and qualifications relevant to the proposed Project:

Mr. Wright has over 40 years of experience in surveying services, including a multitude of project types (water, wastewater, stormwater, drainage, roadway, etc.) throughout the region.

Lift Station D4-2 and Proposed D4-2B Surveying Services, Metairie, Jefferson Parish, LA. BFM provided boundary and topographic surveying services for the existing Lift Station, D4-2, and the proposed Lift Station, D4-2B, to be located at the corner of Olga Avenue and Howard Avenue in Metairie. BFM also provided Right-of-Way to Right-of-Way of associated streets and sites of the existing and proposed lift stations. (\$22,860 (fee); 2016)

Lift Station No. 6 Improvements, City of Harahan, Jefferson Parish, LA. BFM prepared a Route Topographic Survey of the project site in Harahan, which included portions of Wilson Street and Grove Avenue. The full scope plan & profile included all services, utilities, properties, elevations and items necessary to perform any and all engineering and construction work. (\$24,190 (fee); 2018)

Lift Station F8-3, Metairie, Jefferson Parish, LA. For the project (located at West Esplanade Avenue & Houma Boulevard, in the Dreyfous Tract), BFM executed a topographic survey; scope included two TBMs (Temporary Benchmarks), three point ties, and location of improvements within limits & monuments to establish apparent rights-of-way (ROW). Baseline was set parallel to West Esplanade Avenue. (\$11,890 (fee); 2019)

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Curtis "Jay" Barrios

Survey Crew Chief

Project Assignment:

Survey Crew Chief

Name of Firm with which associated:

BFM CORPORATION, LLC
Professional Land & Hydrographic Surveying

Years experience with this Firm:

31 years (joined BFM in 1990); 31 years total (1990)

Education: Degree(s)/Year/Specialization:

High School Diploma

Active registration: Year first registered/discipline:

*American Traffic Safety Service Assn. – Traffic Flagger
Transportation Work Identification Card (TWIC)*

Other experience and qualifications relevant to the proposed Project:

Mr. Barrios' surveying experience includes boundary, hydrographic, and topographic. He has worked on location and performed topographic surveys for a number of major projects.


Emergency Generators for Sewer Lift Stations and Helios and West Napoleon Pump Stations, Jefferson Parish, LA. BFM prepared topographic surveys at the Helios PS and at the West Napoleon PS for the placement of emergency generators. (\$5,888 (fee); 2012)

Lift Station D4-2 and Proposed D4-2B Surveying Services, Metairie, Jefferson Parish, LA. BFM provided boundary and topographic surveying services for the existing Lift Station, D4-2, and the proposed Lift Station, D4-2B, to be located at the corner of Olga Avenue and Howard Avenue in Metairie. BFM also provided Right-of-Way to Right-of-Way of associated streets and sites of the existing and proposed lift stations. (\$22,860 (fee); 2016)


N-12-1 (41st & Gardere Canal) Lift Station, Jefferson Parish, LA. BFM provided boundary and topographic surveying services for the project. (\$7,048 (fee); 2016)

Elizabeth & Utica Sewerage Lift Station, Jefferson Parish, LA. BFM executed a topographic survey for the project. (\$10,500 (fee); 2012)


TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Eric Gladney Survey Crew Chief
Project Assignment:
Survey Crew Chief
Name of Firm with which associated:
 Professional Land & Hydrographic Surveying
Years experience with this Firm:
7 years (joined BFM in 2014); 20 years total (2001)
Education: Degree(s)/Year/Specialization:
High School Diploma
Active registration: Year first registered/discipline:
American Traffic Safety Service Assn. – Traffic Flagger Norfolk Southern Roadway Worker Protection Contractor Safety Cert. Transportation Work Identification Card (TWIC)
Other experience and qualifications relevant to the proposed Project:
<p>Lift Station C4-1A (N. Sibley and Boone), Metairie, Jefferson Parish, LA. BFM executed a topographic survey for the project. (\$3,660 (fee); 2017)</p> <p>Lasalle Rest Room Building, Jefferson Parish, LA. BFM prepared a boundary survey (with topographic services) for the project, elements of which included TBM (Temporary Benchmarks), location of visible/ below ground surface (BGS) utilities, research of record drawings, pipe location & determination of sizes/types, trees and other natural elements, etc. BFM further provided a construction benchmark (CBM) and all drawings (AutoCAD) as outlined. Later services included location of sewer manholes and lift station. (\$9,420 (fee); 2017)</p> <p>Causeway and Scott Sewer Lift Station Rehabilitation, Jefferson Parish, LA. BFM provided topographic surveying services for the project. (\$5,610 (fee); 2017)</p> <p>Lift Station F1-1, Elmwood Industrial Park Subdivision, Jefferson Parish, LA. BFM's surveying services for the project involved a topographic survey of Lift Station F1-1 located at the intersection of Plantation road and Toler Street. (\$4,880 (fee); 2018)</p> <p>Kennedy Heights Sewer Lift Station, Jefferson Parish, LA. BFM provided topographic surveying services for the project. (\$4,520 (fee); 2017)</p>

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
<p>Jeff Patin Survey Crew Chief</p>
Project Assignment:
<p>Survey Crew Chief</p>
Name of Firm with which associated:
 <p>BFM CORPORATION, LLC Professional Land & Hydrographic Surveying</p>
Years experience with this Firm:
<p>2 years (joined BFM in 2019); 22 years total (1999)</p>
Education: Degree(s)/Year/Specialization:
<p><i>High School Diploma</i></p>
Active registration: Year first registered/discipline:
<p><i>Transportation Work Identification Card (TWIC)</i></p>
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Patin has worked as a Survey Crew Chief and Instrumentman for 20 years for a number of southeastern Louisiana surveying firms on projects throughout the region. His work history includes supervision of field crew personnel, operation of various survey equipment (Topcon GPT, Leica GPS, Total Station, etc.), calculations, information collection, and any & all work required to execute the survey and obtain the information needed. Mr. Patin has worked on projects for various public & private clients, and has performed field work under the direction of the Corps of Engineers.</p> <p>Sewer Lift Station L-11-1, Saddler Road at Westbank Expressway, Marrero, Jefferson Parish, LA. BFM provided surveying services for Sewer Lift Station L-11-1 (Saddler Road at Westbank Expressway) on the West Bank of Jefferson Parish in Marrero, a continuation of a previous surveying project. The new contract involved a boundary survey with servitude acquisition, updating the boundary and creating servitude, as provided by the client, which was used to create the final survey. (\$4,140 (fee); 2020)</p> <p>Sewer Lift Station F8-3, W. Esplanade Avenue at Houma Boulevard, Metairie, Jefferson Parish, LA. BFM's services involved a boundary survey with servitude acquisition (updating boundary and creating servitude, which was provided by the client and utilized to create the final survey). The project was located on the East Bank of Jefferson Parish in the Dreyfous Tract region. (\$2,970 (fee); 2021)</p> <p>River to Lake Bike Path, Monticello Canal & Dankin Street, Jefferson and Orleans Parish Line, LA. BFM executed a topographic survey of the Bike Path along Jefferson/Orleans Parish Line, north of Airline Drive to River Road at the Monticello Canal and Dakin Streets. (\$108,000 (fee); 2019)</p>

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
<p>Anthony Watson CADD Technician</p>
Project Assignment:
<p>CADD Technician</p>
Name of Firm with which associated:
 <p>BFM CORPORATION, LLC Professional Land & Hydrographic Surveying</p>
Years experience with this Firm:
<p>10 years (joined BFM in 2011); 30 years total (1992)</p>
Education: Degree(s)/Year/Specialization:
<p><i>Coursework - CAD, Avatech Solutions, Los Colinas, TX</i></p>
Active registration: Year first registered/discipline:
<p>NA</p>
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Watson has experience as a draftsman/CADD technician, having started his career as an intern with the Surveying Department of the City of Plano, TX. His experience through the years includes manual and computer-aided drafting for a wide range of projects, ranging from small lot surveys to subdivisions to municipal treatment and private industrial plants. He has experience in all facets of surveying (boundary, topographic, ALTA/ACSM, plan & profile, etc.) in both drafting and field environments.</p> <p>Sewer Lift Station F8-3, W. Esplanade Avenue at Houma Boulevard, Metairie, Jefferson Parish, LA. BFM's services involved a boundary survey with servitude acquisition (updating boundary and creating servitude, which was provided by the client and utilized to create the final survey). The project was located on the East Bank of Jefferson Parish in the Dreyfous Tract region. (\$2,970 (fee); 2021)</p> <p>Rehabilitation of D8-3 Lift Station (Purdue Drive & 37th Street), Metairie, Jefferson Parish, LA. BFM provided topographic surveying services for the project. (\$11,216 (fee); 2016)</p> <p>N-12-1 (41st & Gardere Canal) Lift Station, Jefferson Parish, LA. BFM provided topographic and boundary surveying services for Lift Station N-12-1 (located at 41st Street & the Gardere Canal) in Jefferson Parish. (\$2,724 (fee); 2016)</p> <p>Causeway and Scott Sewer Lift Station Rehabilitation, Jefferson Parish, LA. BFM provided topographic surveying services for the project. (\$5,610 (fee); 2017)</p>

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Shaun Clements
CADD Technician

Project Assignment:

CADD Technician

Name of Firm with which associated:

BFM CORPORATION, LLC
Professional Land & Hydrographic Surveying

Years experience with this Firm:

3 years (joined BFM in 2018); 6 years total (2015)

Education: Degree(s)/Year/Specialization:

Associates of Applied Sciences, 2015, Computer Drafting and Design (ITT)

Active registration: Year first registered/discipline:

NA

Other experience and qualifications relevant to the proposed Project:

Ms. Clements college work resulted in a GPA of 4.0, earning her Valedictorian status. She also was the recipient of the Highest Honors and Perfect Attendance Awards.


Lift Station F8-3, Metairie, Jefferson Parish, LA. For the project (located at West Esplanade Avenue & Houma Boulevard, in the Dreyfous Tract), BFM executed a topographic survey; scope included two TBMs (Temporary Benchmarks), three point ties, and location of improvements within limits & monuments to establish apparent rights-of-way (ROW). Baseline was set parallel to West Esplanade Avenue. (\$11,890 (fee); 2019)

Sewer Lift Station L-13-6, Ehret Road, Marrero, Jefferson Parish, LA. BFM's surveying scope involved topographic and boundary surveying services. (\$8,790 (fee); 2019)


Destrehan Lift Station Upgrades, Jefferson Parish, LA. BFM provided a full boundary survey update of the 2700 Destrehan Lift Station Upgrade project; the scope included establishing two TBMs (Temporary Benchmarks) on or near the project site and location of existing improvements within the designated Limits of Survey. This also included location of visible above-ground utilities and those underground utilities with visible surface evidence. (SCIP Project Number:D3564) (\$5,750 (fee); 2019)

5th & 9th Sewer Lift Station Upgrades, Harvey, Jefferson Parish, LA. BFM's scope involved a topographic survey of the project site, located at the intersection of 5th Avenue & 9th Street. Cross sections were taken on a 25 ft grid within limits. (\$6,790 (fee); 2019)

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
<p>Kevin A. Roberts CADD Technician</p>
Project Assignment:
<p>CADD Technician</p>
Name of Firm with which associated:
 <p>BFM CORPORATION, LLC Professional Land & Hydrographic Surveying</p>
Years experience with this Firm:
<p>3 years (joined BFM in 2018); 36 years total (1985)</p>
Education: Degree(s)/Year/Specialization:
<p>A.D., 1999, Drafting & Design, Louisiana Technical College <i>Coursework, 1994-1997, Nunez Community College</i> <i>Coursework, 1984-1988, Delgado Community College</i> <i>Coursework, 1982-1983, University of New Orleans</i></p>
Active registration: Year first registered/discipline:
<p>NA</p>
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Roberts has experience with civil engineering, offshore engineering, water purification systems, and general architectural and construction design & terminology. He obtained his A.D. in Drafting in 1999, and has taken additional coursework throughout his career.</p> <p>Lift Station F8-3, Metairie, Jefferson Parish, LA. For the project (located at West Esplanade Avenue & Houma Boulevard, in the Dreyfous Tract), BFM executed a topographic survey; scope included two TBMs (Temporary Benchmarks), three point ties, and location of improvements within limits & monuments to establish apparent rights-of-way (ROW). Baseline was set parallel to West Esplanade Avenue. (\$11,890 (fee); 2019)</p> <p>Destrehan Lift Station Upgrades, Jefferson Parish, LA. BFM provided a full boundary survey update of the 2700 Destrehan Lift Station Upgrade project; the scope included establishing two TBMs (Temporary Benchmarks) on or near the project site and location of existing improvements within the designated Limits of Survey. This also included location of visible above-ground utilities and those underground utilities with visible surface evidence. (SCIP Project Number:D3564) (\$5,750 (fee); 2019)</p>

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
<p>Dawn Hoffman Researcher/Archivist</p>
Project Assignment:
<p>Researcher/Archivist</p>
Name of Firm with which associated:

Years experience with this Firm:
<p>12 years (joined BFM in 2009); 24 years total (1997)</p>
Education: Degree(s)/Year/Specialization:
<p>A.D., 1999, Computer-Aided Drafting, Southeast College of Technology Certificate, 2003, Introduction to ArcGIS, Louisiana State University</p>
Active registration: Year first registered/discipline:
<p>NA</p>
Other experience and qualifications relevant to the proposed Project:
<p>Lift Station F8-3, Metairie, Jefferson Parish, LA. For the project (located at West Esplanade Avenue & Houma Boulevard, in the Dreyfous Tract), BFM executed a topographic survey; scope included two TBMs (Temporary Benchmarks), three point ties, and location of improvements within limits & monuments to establish apparent rights-of-way (ROW). Baseline was set parallel to West Esplanade Avenue. (\$11,890 (fee); 2019)</p> <p>Lift Station No. 6 Improvements, City of Harahan, Jefferson Parish, LA. BFM prepared a Route Topographic Survey of the project site in Harahan, which included portions of Wilson Street and Grove Avenue. The full scope plan & profile included all services, utilities, properties, elevations and items necessary to perform any and all engineering and construction work. (\$24,190 (fee); 2018)</p> <p>Destrehan Lift Station Upgrades, Jefferson Parish, LA. BFM provided a full boundary survey update of the 2700 Destrehan Lift Station Upgrade project; the scope included establishing two TBMs (Temporary Benchmarks) on or near the project site and location of existing improvements within the designated Limits of Survey. This also included location of visible above-ground utilities and those underground utilities with visible surface evidence. (SCIP Project Number:D3564) (\$5,750 (fee); 2019)</p> <p>Sewer Lift Station L-13-6, Ehret Road, Marrero, Jefferson Parish, LA. BFM's surveying scope involved topographic and boundary surveying services. (\$8,790 (fee); 2019)</p>

TEC Professional Services Questionnaire

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

PROJECT NO. 1

Project Name, Location, and Owner's Contact Information:		Nature of Firm's Responsibility:	
Sewer Lift Station L-11-1, Saddler Road at Westbank Expressway, Marrero, Jefferson Parish, Louisiana Richard C Lambert, Consulting Engineers 900 W Causeway Approach Mandeville LA 70471 Franz J. Zemmer, P.E., 985-727-4440 fzemmer@rclconsultants.com		BFM provided surveying services for Sewer Lift Station L-11-1 (Saddler Road at Westbank Expressway) on the West Bank of Jefferson Parish in Marrero, a continuation of a previous surveying project. The new contract involved a boundary survey with servitude acquisition, updating the boundary and creating servitude, as provided by the client, which was used to create the final survey.	
Completion Date (Actual or estimated):		Estimated Cost:	
		Entire Project:	Work for which Firm was Responsible:
2021 02 (FEB)		N/A	\$4,140 (fee)

PROJECT NO. 2

Project Name, Location, and Owner's Contact Information:		Nature of Firm's Responsibility:	
Lift Station No. 6 Improvements, City of Harahan, Jefferson Parish, Louisiana AIMS Group, Inc. 4421 Zenith Street Metairie LA 70001 Harold J. DeLeo, 504-887-7045		BFM prepared a Route Topographic Survey of the project site in Harahan, which included portions of Wilson Street and Grove Avenue. The full scope plan & profile included all services, utilities, properties, elevations and items necessary to perform any and all engineering and construction work.	
Completion Date (Actual or estimated):		Estimated Cost:	
		Entire Project:	Work for which Firm was Responsible:
2018 04 (APR)		N/A	\$24,190 (fee)

TEC Professional Services Questionnaire

PROJECT NO. 3		
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:	
<p>Sewer Lift Station F8-3, W. Esplanade Avenue at Houma Blvd., Metairie, Jefferson Parish, Louisiana</p> <p>Richard C Lambert, Consulting Engineers 900 W Causeway Approach Mandeville LA 70471</p> <p>Franz J. Zemmer, P.E., 985-727-4440 fzemmer@rclconsultants.com</p>	<p>BFM's services involved a boundary survey with servitude acquisition (updating boundary and creating servitude, which was provided by the client and utilized to create the final survey). The project was located on the East Bank of Jefferson Parish in the Dreyfous Tract region.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2021 01 (JAN)	N/A	\$2,970 (fee)

PROJECT NO. 4		
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:	
<p>Destrehan Lift Station Upgrades, Jefferson Parish, Louisiana</p> <p>Principal Engineering 1011 N Causeway Blvd Suite 19 Mandeville LA 70471</p> <p>Henry I. DiFranco Jr. P.E., 985-624-5001 henry@pi-aec.com</p>	<p>BFM provided a full boundary survey update of the 2700 Destrehan Lift Station Upgrade project; the scope included establishing two TBMs (Temporary Benchmarks) on or near the project site and location of existing improvements within the designated Limits of Survey. This also included location of visible above-ground utilities and those underground utilities with visible surface evidence.</p> <p>(Lot S-2; Harvey Canal Property, portion of T-14-S, R-23 & 24-E, Plan of a Resubdivision of Parcel S-1 Into Lots S-2, S-3, and S-4 from 1982). (SCIP Project Number:D3564)</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2019 08 (AUG)	N/A	\$5,750 (fee)

TEC Professional Services Questionnaire

PROJECT NO. 5		
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:	
<p>Destrehan Lift Station Upgrades, Jefferson Parish, Louisiana</p> <p>Principal Engineering 1011 N Causeway Blvd Suite 19 Mandeville LA 70471</p> <p>Henry DiFranco, 985-624-5001 henry@pi-aec.com</p>	<p>BFM provided a full boundary survey update of the 2700 Destrehan Lift Station Upgrade project.</p> <p>(Lot S-2; Harvey Canal Property, portion of T-14-S, R-23 & 24-E, Plan of a Resubdivision of Parcel S-1 Into Lots S-2, S-3, and S-4 from 1982). (SCIP Project Number:D3564)</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2019 08 (AUG)	N/A	\$11,710 (fee)

PROJECT NO. 6		
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:	
<p>Sewer Lift Station L-13-6, Ehret Road, Marrero, Jefferson Parish, Louisiana</p> <p>H. Davis Cole & Associates, Inc. 1340 Poydras Street Suite 1850 New Orleans LA 70112</p> <p>David Martin, P.E., 504-836-2020</p>	<p>BFM's surveying scope involved topographic and boundary surveying services.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2019 02 (FEB)	N/A	\$8,790 (fee)

TEC Professional Services Questionnaire

PROJECT NO. 7		
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:	
Lift Station F8-3, Metairie, Jefferson Parish, Louisiana Richard C Lambert, Consulting Engineers 900 W Causeway Approach Mandeville LA 70471 Franz J. Zemmer, P.E., 985-727-4440 fzemmer@rclconsultants.com	For the project (located at West Esplanade Avenue & Houma Boulevard, in the Dreyfous Tract), BFM executed a topographic survey; scope included two TBMs (Temporary Benchmarks), three point ties, and location of improvements within limits & monuments to establish apparent rights-of-way (ROW). Baseline was set parallel to West Esplanade Avenue.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2019 10 (OCT)	N/A	\$11,890 (fee)

PROJECT NO. 8		
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:	
5th & 9th Sewer Lift Station Upgrades, Harvey, Jefferson Parish, Louisiana Professional Engineering & Environmental Consultants (PEEC), Inc. 1065 Muller Parkway, Suite B Westwego LA 70094 Jeff Meyers, 504-347-1900	BFM's scope involved a topographic survey of the project site, located at the intersection of 5th Avenue & 9th Street. Cross sections were taken on a 25 ft grid within limits.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2019 01 (JAN)	N/A	\$6,790 (fee)

TEC Professional Services Questionnaire

PROJECT NO. 9		
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:	
<p>Lift Station D4-2 and Proposed D4-2B Surveying Services, Metairie, Jefferson Parish, Louisiana</p> <p>Principal Engineering 1011 N. Causeway Blvd Suite 19 Mandeville LA 70471</p> <p>Courtney I. Dickerson, P.E., 985-624-5001 courtney@pi-aec.com</p>	<p>BFM provided boundary and topographic surveying services for the existing Lift Station, D4-2, and the proposed Lift Station, D4-2B, to be located at the corner of Olga Avenue and Howard Avenue in Metairie. BFM also provided Right-of-Way to Right-of-Way of associated streets and sites of the existing and proposed lift stations.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2016 10 (OCT)	N/A	\$22,860 (fee)

PROJECT NO. 10		
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:	
<p>Route Topographic (including Lift Station/Force Main) Surveying Services, Jefferson Parish, Louisiana</p> <p>Linfield, Hunter & Junius, Inc. 3608 18th Street, Suite 200 Metairie LA 70002</p> <p>Sergio Girau, 504-833-5300 lhj@lhjunius.com</p>	<p>BFM provided boundary and topographic surveys for the project, which included a force main survey involving Veterans Boulevard, between the Suburban Canal and North Hullen Street (lift station improvements). Both full and partial route surveys were executed.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2016 12 (DEC)	N/A	\$20,000 (fee)

TEC Professional Services Questionnaire

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

Parties:		Status/Result of Case:
Plaintiff:	Defendant:	
1.	<div style="border: 1px solid black; padding: 5px; margin: 5px;"> <i>BFM Corporation is not currently, nor has it previously been involved, in litigation with Jefferson Parish.</i> </div>	
2.		
3.		
4.		

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

BFM CORPORATION, LLC

Professional Land & Hydrographic Surveying

PROFESSIONAL TRAINING AND EXPERIENCE

Established in 1982, **BFM Corporation, LLC, Professional Land & Hydrographic Surveying**, has provided services to public & private concerns throughout Louisiana and the Gulf South. The firm provides surveying services covering all facets of engineering, construction, and forensics; topographic, hydrographic, and high definition laser scanning.

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

Our capabilities include the following and more:

- **Topographic Surveys** (*determine relative positions & elevations of natural & man-made features*)
- **Drone Surveying** (*detailed multi-acre data-capturing surveying*)
- **Bathymetric / Hydrographic Surveys** (*determine shoreline and depths of bodies of water*)

TEC Professional Services Questionnaire

N. continued.

- **Property, Boundary, and Right-of-Way Surveys** (*preparation of Legal Descriptions, property, and ROW maps to define project boundaries and for acquisition of property*)
- **Maps, Cross-Sections, and Data Sets** (*plan drawings, maps, diagrams, and data sets*)
- **3D Laser Scanning** (*unify raw data & model*)
- **Benchmarks** (*establishment of permanent, temporary, and construction benchmarks*)
- **Construction-Related Surveying** (*all types*)
- **Builder's Package** (*Boundary Survey & Construction Benchmark, Certificates including Form Board, Top of Slab, & Final FEMA Elevation*)
- **ALTA Surveys** (*American Land Title Association-compliant surveys*)

Project work (property, utilities, rights-of-way, etc.) routinely involves **extensive records & related research** as an element of successful completion, as well as coordination with the client, agency or department. BFM has personnel in place to make sure this is done correctly and expeditiously.

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

BFM offers **Drone Surveying Services**, featuring a DJI Matrice 600 Pro drone outfitted with a Sony A7R3 42 megapixel camera, Pixhawk Triggering System, VMAP PPK system, and an A3 Pro Flight Controller. It can fly with payload for 20 minutes and can capture 50 acres of land in that time (with a flight ceiling of 165 feet, pixel quality is 0.71 CM). This allows BFM to quickly & accurately capture data and facilitates quicker field work to produce highly accurate and precise surveying information. Deliverables feature Clean Point Cloud, 3D Mesh, Orthomosaic, and AutoCAD DWG Topographic.

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

When needed, BFM has the ability to perform **automated bathymetry** to handle any **hydrographic surveying** task. For large rivers and bodies of water, BFM is equipped with Teledyne Odom Hydro Solutions' Hydro Trac Single Beam Echo Sounder. For smaller bodies of water, BFM uses SL20 Remote Controlled Boat equipped with CEE Scope Dual Channel Echo Sounder. The firm uses Hypack Software to process collected data. Further, BFM has the ability to execute multi-beam scans, side scans and magnetometer upon request.

TEC Professional Services Questionnaire

N. continued.

PERSONNEL

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

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

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

WORKLOAD & ABILITY TO MEET PROJECT DEADLINES

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

EXPERIENCE WITH JEFFERSON PARISH

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

As noted, Mr. Fontcuberta has **over half a century of professional land surveying experience**, including nearly 40 years with BFM. He has provided professional surveying services for **thousands of projects for and throughout Jefferson Parish**. Additional information beyond the scope of this RFQ response is available upon request.

LOCATION OF PRINCIPAL OFFICE

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

LITIGATION STATEMENT

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

TEC Professional Services Questionnaire

N. continued.

PAST PERFORMANCE ON PUBLIC CONTRACTS / REFERENCES

Since 1982, BFM has worked with virtually every municipality in the region. We enjoy a high repeat-business rate with all our municipal & private clients. Further, we offer the following specific references for contact:

- **Mark R. Drewes, P.E.**, Director, Jefferson Parish Public Works Department (504-736-6783 | JPPW@jeffparish.net)
- **Neil Schneider, CCM, P.E.**, Director, Capital Projects, Jefferson Parish Public Works Department (504-736-6783 | JPPW@jeffparish.net)
- **Tom Schreiner**, Deputy CAO, Public Works & Capital Projects, City of Kenner (504-468-7515 | tschreiner@kenner.la.us)
- **Angela DeSoto, P.E.**, Director of Engineering, Jefferson Parish (504-736-6511 | ADeSoto@jeffparish.net)
- **Sid Trouard, P.E.**, Program Manager, Jefferson Parish Sewerage Capital Improvement Program (504-736-6386 | STrouard@jeffparish.net)
- **Greg Cromer**, Mayor, City of Slidell (985-646-4333 | gcromer@cityofslidell.org)

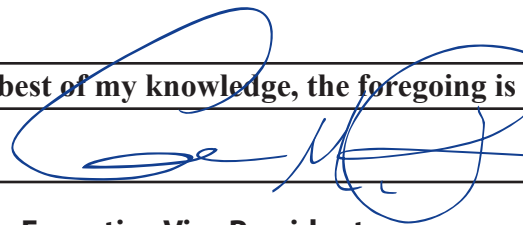
Our professional work history is exemplary. We strive to provide on-time and technically thorough project deliverables at the budget set by our clients.

OWNERSHIP

BFM Corporation, LLC is majority woman-owned by Cassandra Poché (51%). Chad M. Poché, P.E., Executive Vice President holds 40% and Ralph P. Fontcuberta, Jr., PLS, Executive Vice President and company co-founder, has 9%.

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

Signature:



Print Name:

Chad M. Poché, P.E.

Title:

Executive Vice President

Date:

May 5, 2021

ECM Consultants, Inc.

1301 Clearview Parkway, Suite 200, Metairie, Louisiana 70001