

March 25, 2022
ELECTRONIC SUBMISSION

Submitted to Jefferson Parish
Government
Submitted by AECOM



SOQ 22-010

Routine Engineering Services for Sewer Projects

Jefferson Parish Government
Res No. 138812

Delivering a better world



Technical Evaluation Committee (TEC) Questionnaire

Instructions

- The Technical Evaluation Committee (TEC) Questionnaire shall be used for professional services related to architecture, engineering, or survey projects.
- **The TEC Questionnaire should be completely filled out. Complete and attach ALL sections. Insert “N/A” or “None” if a section does not apply or if there is no information to provide.**
- Questionnaire must be signed by an authorized representative of the Firm. Failure to sign the questionnaire shall result in disqualification of proposer pursuant to J.P. Code of Ordinances Sec. 2-928.
- All subcontractors must be listed in the appropriate section of the Questionnaire. Each subcontractor must provide a complete copy of the TEC Questionnaire, applicable licenses, and any other information required by the advertisement. Failure to provide the subcontractors' complete questionnaire(s), applicable licenses, and any other information required by the advertisement shall result in disqualification of proposer pursuant to J.P. Code of Ordinances Sec. 2-928.
- If additional pages are needed, attach them to the questionnaire and include all applicable information that is required by the questionnaire.

TEC Professional Services Questionnaire

A. Project Name and Advertisement Resolution Number:

B. Firm Name & Address:

AECOM

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:

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.

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

<input type="checkbox"/> Administrative	<input type="checkbox"/> Estimators	<input type="checkbox"/> Specification Writers
<input type="checkbox"/> Architects (Licensed)	<input type="checkbox"/> Geologists	<input type="checkbox"/> Structural Engineers
<input type="checkbox"/> Chemical Engineers	<input type="checkbox"/> Geotechnical Engineers	<input type="checkbox"/> Graduate Engineers
<input type="checkbox"/> Civil Engineers	<input type="checkbox"/> Interior Designers	<input type="checkbox"/> Project Managers
<input type="checkbox"/> Construction Inspectors	<input type="checkbox"/> Landscape Architects	<input type="checkbox"/> Clerical
<input type="checkbox"/> Ecologists	<input type="checkbox"/> Land Surveyor	<input type="checkbox"/> Grant/Funding Specialist
<input type="checkbox"/> Electrical Engineers	<input type="checkbox"/> Mechanical Engineers	<input type="checkbox"/> Sanitary Engineers
<input type="checkbox"/> Engineer Intern	<input type="checkbox"/> Environmental Engineers	<input type="checkbox"/> 104 Others
<input type="checkbox"/> Professional Land Surveyors		<input type="checkbox"/> TOTAL

**These numbers only represent our staff in Louisiana*

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

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

TEC Professional Services Questionnaire

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

1.

2.

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.		
2.		
3.		

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

TEC Professional Services Questionnaire

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

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Project Assignment:

Name of Firm with which associated:

Years' experience with this Firm:

Education: Degree(s)/Year/Specialization:

Active registration: Year first registered/discipline:

Other experience and qualifications relevant to the proposed Project:

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Michael Patorno, PE - Principal in Charge

15 MW Power Generator at Carrollton Water Plant Power Complex, New Orleans, LA. Principal in Charge and Program Manager for this 15MW Generator facility for the USACE New Orleans District at the Sewerage and Water Board of New Orleans Carrollton Water Treatment Complex, including an 15 Megawatt (MW) dual fuel (natural gas and diesel) powered generator. The generator provided supplemental emergency power to 60Hz facilities owned and operated by the Sewerage and Water Board of New Orleans (SWBNO). This critical power unit will provide a much needed power supply to the SWBNO's critical pumping stations during extreme rain events or hurricanes in the event that commercial power fails at those facilities. The design work performed by AECOM included all civil, structural, mechanical, electrical, architectural and instrumentation engineering work, to produce full plans and specifications for the modified design-build project.

Louisiana Avenue Improvements (Constance Street to S. Claiborne Avenue). Mr. Patorno acted as the Principal in charge. As part of the Southeast Louisiana (SELA) Urban Flood Control Project, URS is contracted to the USACE, New Orleans District in coordination with the New Orleans Sewerage and Water Board to design a new box culvert along Louisiana Avenue in New Orleans. The new box culvert extends approximately 1.5 miles between Constance Street and Claiborne Avenue and connects to an existing box culvert at Claiborne Avenue. This included major utility relocations, cofferdam design, and assessment of existing facilities.

Elmwood Pump Station and Fronting Protection Project, Jefferson Parish, LA Work Included:

- Hydraulic modeling of the intake and discharge basins; Floodwalls and levee modifications.
- Two- 3,000 horsepower diesel driven horizontal pumps each producing 1,200 cfs of capacity.
- Fuel storage, fuel supply modifications, pump priming systems, vacuum and mechanical screen cleaning systems.
- Modifications to and new gantry crane lifting systems.
- Access road, water well, drainage, sewerage and side utility modifications; A concrete framed 5,500-sq ft structure with a 40-ft interior height.

Water and Sewer System Evaluations for Sewerage and Water Board. Mr. Patorno acted as Principal in Charge for this program. The Sewerage and Water Board of New Orleans (SWBNO) operates the water treatment and distribution system. The City lost water pressure on the East Bank in the aftermath of Hurricane Katrina. The water distribution system was highly compromised as a result of the disaster. Two and a half years after the storm the City still had significantly increased unaccounted for water losses. FEMA retained AECOM to evaluate the water distribution system and prepare a plan for restoring it to its pre-disaster function and capacity. Using the pre-storm calibration data, the model predicted that the unaccounted for water in late 2008 was about 90 million gallons per day. This provided an estimate of the extent of the damage the system incurred. Review of Wastewater Pumping Stations and reviewed damages to wastewater pumping stations resulting in the replacement of nine stations and repairs to 50 others; new construction cost in excess of \$14 million. Some of these stations discharged into common force mains.

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Michael Patorno, PE - Principal in Charge

Program Management, 1998 Road Bond Improvement Program, Jefferson Parish, Louisiana.

Principal for Jefferson Parish's Program, which includes 112 roadway and bridge projects throughout the Parish. The project included writing contracts and amendments for engineer's contracts; planning meetings; coordination of consultants Parish departments, Parish's politicians, SELA, LDOTD (when necessary), railroad companies and public and private utilities; approving consultant invoices and construction cost estimates; oversight on design; review of plans and specifications submittals; scheduling; budget analysis; right-of-way acquisition support; construction oversight; review of contractor invoices and claims; and project closeout. As a part of this program numerous intersections and signals were upgraded.

Louisiana Coastal Protection & Restoration Authority Maurepas Swamp Freshwater Diversion

Structure, St. John the Baptist Parish, LA. Managed multidisciplinary project involving similar scope of work areas as the proposed project, including planning, project management, modeling, design, detailed GIS, and aerial mapping. Included preparation of an economic and hydraulic feasibility study and contract plans and specifications to install a diversion head works structure and conveyance canal. Project to divert Mississippi River water into the wetlands south of Lake Maurepas through the use of a control structure at the Mississippi River and conveyance channel for eco-system restoration purposes.

Regional Wastewater Design, St. John the Baptist Parish, LA (St. John the Baptist Parish). AECOM provided a planning study and design for a regional 10MGD treatment plant for St. John parish. This study also provided for upgrading several other facilities, headworks, addressing capacity issues and designs to address problems at three other Parish Sewer Treatment Plants.

Reserve Sanitary Sewer Evaluation Study (SSES) and Sewer Repair Design Project, St. John the Baptist Parish, LA (St. John the Baptist Parish). The project involved program management of various consultants doing field investigations, smoke testing, flow monitoring and television inspection of the Parish's sewer system. The result of the study was detailed in reports noting problem areas, proposed solutions, costs and priority lists for repairing, improving and maintaining the system. A final phase of the project for the sewer system involved the designs for the problem areas in a phased approach.

Hurricane Protection Office (HPO) LPV 105-111, New Orleans, Louisiana (USACE-Hurricane Protection Office (HPO), Program Manager. In a follow-up contract to the Task Force Guardian program, awarded contract to assist the HPO with providing improvements to the levee system in New Orleans East. Includes design and construction of floodwalls, levees and gates, and requires utility relocation, pump station remediation, and real estate coordination. Managed all aspects of this \$1.3B geotechnical investigations, feasibility reports, Engineering Alternatives Reports (EARs), design and plans, and specifications for approximately 30 miles of Hurricane Flood Protection System. Worked closely with the HPO team to investigate cost-effective and workable solutions to meet the short time frame. Managed team using staff from multiple offices to maintain HPO's schedule.

Program Manager, Task Force Guardian – Hurricane Katrina Storm Repairs to Levee System New Orleans, Louisiana (USACE, New Orleans District). Managed multiple task orders simultaneously and completed repairs of thousands of feet of concrete floodwall and levee systems. Provided design and construction oversight services for 29 USACE Managed a team of over 100 experts in structural, geotechnical, electrical, mechanical, and civil engineering to complete the repairs.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Project Assignment:
Name of Firm with which associated:
Years' experience with this Firm:
Education: Degree(s)/Year/Specialization:
Active registration: Year first registered/discipline:
Other experience and qualifications relevant to the proposed Project:

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Clay Loyless, E
Clay Loyless, PE - Project Manager
Sr. Civil Engineer/Sr. Project Manager

Wastewater System Improvements City of Kenner, Kenner, LA .Designed the rehabilitation of the pump stations at Woodlake Blvd and Yosemite St., and 34th St. and Indiana Avenue. Designed the re-routing of a sewer force main along Veterans Blvd, including the aerial crossing of the Duncan Canal. Designed the installation of two sewer force mains under the Duncan Canal at Kenner's Wastewater Treatment Plant No. 2 by horizontal directional drilling.

Permanent Canal Closures Pump Stations, US Army Corps of Engineers, New Orleans, LA. Senior Civil Engineering Technical Reviewer for DQA team in support of the USACE providing oversight of the design of storm-water pump stations at 17th St, Orleans Ave and London Ave canals. With a combined pumping capacity of nearly 10 million gpm, these are some of the largest drainage pumping stations in the world. Responsibilities include providing technical design input, insuring compliance with all USACE guidelines, and conformance to the Joint-Venture Contractor's contractual requirements.

Maurepas Drainage Pump Station, CPRA, St James Parish, LA. Project Engineer for design of a 250 cfs stormwater pump station to convey flow from Hope and Bourgeois canals into the conveyance channel of an associated river diversion project.

Sewer Force Main Design, SWB, New Orleans, LA: Prepared the Preliminary Alignment and Preliminary Design Reports for the installation of a new sewer force main from SPS No. 5 to S Jeff Davis Pkwy.

Wastewater Consolidation Study Design, St. Bernard Parish, LA: Evaluated the existing sewer infrastructure of St. Bernard Parish. Determined the capacity and service life of existing pump stations (PS), force mains (FM) and gravity lines, and prepared population forecasts. Developed conceptual PS designs and FM routes for consolidation of five wastewater treatment plants (WWTP) to the Munster WWTP. Developed sewer system improvements for the Dravo Wastewater Treatment Plant service area. Designed upgrades to four pump stations and a new force main network.

Water Treatment Plant Distribution System Improvements, St. James Parish, LA. Conducted an analysis of the St. James Parish water treatment facilities, including on-site surveys, operator interviews, tabulation of water production, chemical usage and billings. Forecast the Parish water demand and modeled the water distribution system using WaterCAD. Recommended modifications and operational improvements to both water treatment plants, the distribution system, and water towers.

Wastewater Infiltration Inflow Study, Jefferson Parish, LA. Developed portions of the Jefferson Parish Infiltration & Inflow flow monitoring program. Participated in the field surveys; wrote the Flow Monitoring Program Report; developed flow-meter installation, operation and maintenance procedures; evaluated vendor equipment and software; and wrote a confined space entry manual.

Gravity Sewer Design, St. Bernard Parish, LA: Designed the gravity sewer collection system for the Todd, Kelly, Ricouard, and Jennie Street areas of St. Bernard Parish.

Water Supply Demand Forecast, St. Bernard Parish, LA. Forecasted the long-term water supply demand projection for St. Bernard Parish and recommended the design capacity for the proposed treatment plant expansion.

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Project Assignment:
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Years' experience with this Firm:
Education: Degree(s)/Year/Specialization:
Active registration: Year first registered/discipline:
Other experience and qualifications relevant to the proposed Project:

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Jennifer Duhe, PE - QQuality Manager

USACE, New Orleans District, Design Engineer, Southeast Louisiana Urban Flood Control Project, Louisiana Avenue Improvements (Constance Street to South Claiborne Avenue), Orleans Parish, LA. Design Engineer for the reconstruction of Louisiana Avenue, including traffic control plans, roadway plan and profile sheets and typical sections. Developed specifications and construction estimates.

Mid-Barataria Sediment Diversion, Louisiana CPRA. Deliverables Manager/Senior Engineer.

Deliverables Manager and Senior Design Team Engineer for the state's first sediment diversion project, which will capture sediment-laden water from the Mississippi River and strategically convey the sediment to the Barataria Basin through a three-component system including a river inlet with gated control structure, conveyance channel, and outfall transition. Responsibilities include design task management for hydraulic modeling, highway-bridge design, structural and civil design of flood protection features, utility relocations, geotechnical analyses and consideration for placement of beneficial use material. The Design Team coordinates with CPRAs Diversion Program Management Team as well as the Construction Manager at Risk (CMAR) to complete project deliverables such as design reports, cost estimates and construction plans.

LPV 109.02b I-10 Realignment Over LPV 109.02 Levee, U.S. Army Corps of Engineers, Senior Engineer.

Senior Engineer for the realignment of I-10 over the LPV 109 Levee in New Orleans East. The earthen embankment was elevated to support the six-lane controlled-access highway, which was realigned vertically to comply with federal and state regulations with consideration for USACE flood protection requirements. Although the contract was administered by USACE, the project was closely coordinated with LDOTD headquarters and district personnel to ensure the project met all state and federal standards. Responsibilities included design, development of construction plans, specifications and estimates, and engineering support during advertisement and construction.

LA CPRA, Project Manager and Senior Engineer, Extension of Staff Support for the LA CPRA, New Orleans to Venice and Non-Federal Levee, Plaquemines Parish, La.

Project Manager and Senior Engineer in providing management and engineering support to CPRA, the co-non federal sponsor, to verify constructability, operability and maintainability of the NOV-NFL Project features to be constructed by the US Army Corps of Engineers (USACE). The projects, located in Plaquemines Parish, consist of 27 separate construction projects that include levees, floodwalls, navigation structures, drainage structures, pump stations, locks and safe houses.

Vienna Street Improvements (Corinne Street – Nighthart Street) (City of New Orleans Department of Public Works). Project Engineer.

Project Engineer for a residential street in New Orleans. Developed construction plans, specifications and estimates for vertical realignment, pavement rehabilitation, utility relocation coordination, and subsurface drainage improvements.

Lakefront Seawall Erosion Control Paving Project (Orleans Levee District), Project Engineer.

Senior Engineer responsible for providing civil site design and inspection services. Tasks included Permanent Signing and Striping Plan for parking lot and truck access roads, Civil Site/Utility Layout and Grading Plans, Milling and Overlaying Sequencing, ADA Pedestrian Access Improvements, Construction Quantities and Cost Estimates, Engineering Support during Advertisement, and Construction Engineering and Inspection services.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Project Assignment:
Name of Firm with which associated:
Years' experience with this Firm:
Education: Degree(s)/Year/Specialization:
Active registration: Year first registered/discipline:
Other experience and qualifications relevant to the proposed Project:

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Phillip Olivier, PE, Civil

Southeast Louisiana Urban Flood Control Project- Louisiana Avenue Improvements. Civil engineer for the Louisiana Urban Flood Damage Reduction Project (SELA) which consisted of horizontal engineering features including new box culvert, drainage pipes, and deep soil mixing. This project was designed to increase drainage capacity for the S&WB. The new box culvert transitions in size from 6'x6' to 12'x10' along its 1.5-mile limit. Managed the progress of all design work, client contacts, and coordination of sub contractor activities, coordination with utility companies and other entities.

USACE New Orleans District, Carrollton Water Plant Power Complex 15 MW Power Generator Facility, New Orleans, LA Lead Civil Engineer. Lead civil engineer for the design of a 15MW generator facility for the USACE New Orleans District's Hurricane Protection Office (HPO) at the Sewerage and Water Board of New Orleans (SWBNO) Carrollton Water Treatment Complex, including a 15MW dual fuel (natural gas and diesel) powered generator.

Lake Borgne Basin Levee District, St Bernard Parish Pump Stations No. 2&3 Seepage Repairs. Lead civil engineer to repair pump station number 2 and 3 by constructing a new concrete T-wall in front of the existing station.

Lake Pontchartrain and Vicinity Remediation to Raise the Maximum Operating Level for the 17th Street Canal OFC-05. Lead Civil Engineer to reinforce the 17th Street Canal flood walls. The project consists of soil mixing the existing levee. The approximate length of the project is 1.75 miles of soil mixing.

New Orleans East Hurricane Protection Levee and T-wall Enlargement from CSX Railroad to Michoud Canal Reach LPVV 111, New Orleans, LA. Lead Civil Engineer on the levee enlargement. The project consists of an extensive soil mix design to support the additional weight of the larger levees. The existing pump station 15 t-walls are being reconstructed to meet the post Katrina criteria.

USACE Hurricane Protection Office (HPO New Orleans East- LPV 110) CSX Railroad Gate Flood Protection, New Orleans, LA. Project Engineer for upgrade to the flood protection at the LPV 110 Reach. LPV 110 is approximately 400-ft long. The project includes the design of the concrete I-walls, T-walls, a railroad gate and earthen levee tie-ins.

New Orleans East Hurricane Protection Levee for Lakefront Airport T-walls Reach LPV 105, New Orleans, LA. Assisted on the demolition, plan and profiles, sections, utility and right of way plans for the hurricane protection system along Hayne Boulevard in New Orleans, LA. The existing I-wall did not meet post-Katrina requirements and a new T-wall is being designed to sustain the new hurricane protection requirements.

Reserve Relief Canal Shoreline Projection, St. John the Baptist Parish, LA. Assisted in the site layout and construction package of the shoreline protection project where the Reserve Relieve canal enters Lake Maurepas. The features consist of a foreshore rock dike with gaps for fish and public access to the lake shoreline.

New Jersey American Water Raritan Millstone Treatment Plant – Long Term Flood Control, Somerset County, NJ Lead Civil Engineer. Lead civil engineer who was responsible for the lead civil design of a flood control system for the largest water treatment plant in the state of New Jersey. Flood control features consisted of levees, T-walls, I-walls, sheet pile combi-wall, and floodgates. Design challenges included working around a very old infrastructure and utilities such as large diameter pipes, high voltage electrical, unknown and undocumented utilities.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:	
Name & Title:	
Project Assignment:	
Name of Firm with which associated:	
Years' experience with this Firm:	
Education: Degree(s)/Year/Specialization:	
Active registration: Year first registered/discipline:	
Other experience and qualifications relevant to the proposed Project:	

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Greg France, PE - Civil

Plaquemines Parish Government (PPG), WBV-09a, Hero Canal to Oakville Levees, and WBV-12, Hero Canal Reach 1, Plaquemines Parish, Louisiana. Performed construction management duties such as engineering review during construction, revising plans and specs as necessary, reviewing and issuing contract modifications, reviewing contractor submittals, performing site inspections, reviewing testing documentation and performing project closeout duties. Also coordinated with PPG, USACE, and CPRA.

CPRA, Extension of Staff Services to Support CPRA for the New Orleans to Venice Flood Protection Improvements, Plaquemines Parish, Louisiana. Reviewed plans, specs and technical reports during design of levees, floodwalls and pump stations; performed construction site visits; attended construction progress meetings and milestone inspections; reviewed modifications, requests for information, and submittals; reviewed construction as-builts prior to USACE turnover to the local sponsor; and provided additional engineering support as requested by PPG and CPRA.

PPG, NOV-NF-W-05 (La Reussite to Myrtle Grove) and NOV-NF-W-06 (Myrtle Grove to St. Jude) Interior Drainage Canal Relocation, Plaquemines Parish, Louisiana. Assisted with the development of hydrologic and hydraulic models, setting up drawings for plans, and conducted site visits to assess the existing conditions.

CPRA, River Reintroduction Into Maurepas Swamp and West Shore Lake Pontchartrain Flood Risk Reduction, St. John the Baptist Parish, LA. Performed utility relocation coordination which includes compiling available utility and pipeline data and coordinating the relocations with the utility and pipeline owners.

CPRA, Mid-Barataria Sediment Diversion, Plaquemines Parish, LA. Led the production of Right-of Way Plans. Assisted with plan technical reviews. Evaluated, alternative back levee designs and performed a life cycle cost analysis for each alternative. Assisted with the development of a wick drain test plan for the diversion channel guide levees.

U.S. Army Corps of Engineers, New Orleans District (USACE-MVN), Morganza to the Gulf Periodic Levee Inspection. Performed a walking inspection of approximately 90 miles of back levee of the Morganza to the Gulf Levee System.

Mississippi Department of Transportation (MDOT), US 61 Over Buffalo River and Sandy Creek, Scour Countermeasures, Wilkinson County, Mississippi. Assisted with the bridge scour countermeasure design for US 61 over Buffalo River and Sandy Creek. Led the production of plans for the preliminary right-of-way submittal.

MDOT, I-20 Eastbound Bridge at I-55 South, Hinds County, Mississippi. Assisted with highway hydraulic design, including hydrology, channel, culverts, energy dissipaters, and storm drainage systems in accordance with the MDOT Roadway Design Manual and other applicable laws. Also assisted with the production of plans and specs.

USACE, FPV03 Floodwalls and Levees, Old River North, Old River South and Tide Gate, Freeport, TX. Performed preliminary modeling and design for the Old River North levee and floodwalls.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Bruce Lelong, PE <i>Civil Manager</i>
Project Assignment:
Structural
Name of Firm with which associated:
AECOM Technical Services, Inc.
Years' experience with this Firm:
21
Education: Degree(s)/Year/Specialization:
BS, Civil Engineering BA, History
Active registration: Year first registered/discipline:
Professional Civil Engineer, 2001, Louisiana License #29393
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Lelong has more than 25 years of experience with hydraulic and marine structures, including flood protection structures, pumping stations, drainage structures, navigation locks, dams, and port facilities. Mr. Lelong has managed and been the engineer of record of projects as large as \$400 million. He has designed reinforced concrete, steel, and masonry structures; prepared contract plans, specifications and cost estimates; and has extensive experience providing engineering support services during construction, as well as construction management services.</p>

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Bruce Lelong, PE - Structural

Permanent Canal Closures and Pumping Stations Design Build Project (USACE, New Orleans District). Consulting structural engineer for AECOM Design Quality Assurance Team (DQA), assisting the USACE in reviewing the contractor's structural designs for contractual conformance for this fast paced, \$615M design-build project to construct concurrently three new stations: 12,000-cfs; 6,500-cfs, and 2,500 cfs.

Senior Civil/Structural Engineer, Rehabilitation of Municipal Treatment Plant Concrete Clarifiers, Gretna, LA (City of Gretna). Inspected damages and designed repairs to heavily damaged reinforced concrete clarifier tanks and appurtenant piping.

Senior Civil/Structural Engineer, City of Gretna Waterworks, Filter Stairs Emergency Replacement, Gretna, LA, (City of Gretna). Supervised the design/build plans and specifications for the emergency filter stairs replacement due to hydrogen sulfide attack to steel.

Civil/Structural Engineer Expert Witness, Arbitration of FEMA Damages Determination to Diamondhead, MS Water and Sewer District Lift Stations before the U.S. Civilian Board of Contract Appeals (FEMA): Authored report and provided expert testimony on causes of observed damages and estimated costs of replacement and repairs to sewer lift stations and tie-in gravity and force main piping.

Mount Kennedy Pumping Station, Jefferson Parish, LA (USACE, New Orleans District): Civil/Structural Engineer performed final designs of reinforced concrete suction and discharge basins and station bridge deck for 600 cfs pumping station. Independent Technical Reviewer of Ames fronting protection. Shop drawing and design reviews of contractor-designed cofferdam systems.

Project Engineer, East of Harvey Canal Floodwall, Jefferson Parish, LA, U.S. Army Corps of Engineers. Supervised and performed structural design work for a proposed, mile-and-a-half long, pile supported, reinforced concrete, inverted T-floodwall and 18 steel, swing flood gates and an aluminum stop log gate closure.

Lead Civil/Structural Engineer, St. John's Baptist Parish Sewage Lift Station, Reserve, LA, (St John Parish Department of Public Works). Engineer of Record for the design of 15-foot deep reinforced concrete wet well sewer lift station.

Old Estelle Drainage Pumping Station Expansion, Jefferson Parish, LA, Jefferson Parish Department of Public Works. Supervised the designs of a rehabilitation to a 600-cfs drainage pumping station, which entailed the replacement of four 150-cfs vertical pumps and discharge tubes, and modifications to the structure to accommodate the new pumps.

Dwyer Road Pumping Station, New Orleans, LA (New Orleans Sewerage and Water Board): Senior Civil/Structural Engineer provided engineering support during construction; designed field modifications of new drainage pumping station, New Orleans East, Louisiana.

Whitney/Barataria Pumping Station, Jefferson Parish, LA (USACE, New Orleans District): Civil/Structural Engineer performed shop drawing and contractor submittal reviews and designed field modifications of new pumping station for Jefferson Parish, Louisiana.

Elmwood Pumping Station and Fronting Protection, Jefferson Parish, LA (USACE, New Orleans District) : Senior Civil/Structural Engineer provided engineering support during construction of expansion of pumping station to 3,400 cfs capacity.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Ryan Koenig, PE <i>Civil/Structural Engineer</i>
Project Assignment:
Name of Firm with which associated:
Years' experience with this Firm:
Education: Degree(s)/Year/Specialization:
BS, Civil and Environmental Engineering BS, Biology
Active registration: Year first registered/discipline:
Professional Engineer, Civil, 2004, LA License #31036
Other experience and qualifications relevant to the proposed Project:
Mr. Koenig has over 20 years of experience in the design and project management of a variety of drainage projects including box culverts (both pile and non-pile supported) pumping stations, sluice gates, levees, flood protection structures, and flood walls. He has been project manager on several large projects while at AECOM including the Louisiana Ave (SELA) box culvert project which included the design of 1.5 miles of concrete box culvert of 3 different sizes; and also included utility relocation, traffic control, and replacement of the roadway. He has also been the project manager for the 15 MW Generator Complex project for the Corps of Engineers and Sewerage and Water Board of New Orleans, LPV 105 floodwall project, 17th St Canal (OFC) Improvements project, and many others.

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Ryan Koenig, PE, Structural

Southeast Louisiana Urban Flood Control Project, Louisiana Avenue Improvements (Constance Street to South Claiborne Avenue), Orleans Parish, LA. Served as Project Manager for roadway improvements to Louisiana Avenue, where a new box culvert is being installed to increase drainage capacity for the S&WB. The new box culvert transitions in size from 8'x8 to 12'x10' along its 1.5 miles limit. Responsible for the progress of all design work, client contacts, coordination of sub contractor activities, and coordination with utilities and other entities, including the City of New Orleans Department of Public Works, the Sewerage and Water Board of New Orleans and the Regional Transit Authority. Was responsible for overall project management and oversight of production of plans and specifications, cost estimates, and all other design aspects. Currently performing engineering during construction including submittal reviews, site visits, and RFI responses.

15MW Generator Project (USACE, New Orleans District-Hurricane Protection Office). Project Manager for the civil and structural portions of a 15MW Generator facility for the USACE at the Sewerage and Water Board of New Orleans Carrollton Water Treatment Complex, including an elevated building designed for 156 mph winds and a concrete containment tank for a 250,000 gallon diesel storage tank.

Permanent Canal Closures and Pumping Stations (PCCP) Design Build Project (USACE, New Orleans District). Lead Structural reviewer and Deputy Team lead for AECOM Design Quality Assurance Team (DQA), assisting the USACE in reviewing the contractor's design for contractual conformance for this fast paced, \$615 mil design-build project that includes pumping stations, floodwalls, and levees. Also providing QA/QC services reviewing construction submittals and RFI's.

Maurepas Diversion Project Box Culverts. Served as Lead Structural Engineer/Project Manager for the design of three (3) 9' x 9' box culverts crossing that will cross under Airline Highway, the Kansas City Southern (KCS) Rail Line, and the Illinois Central (IC) Rail Line. Responsible for oversight of production of plans and specifications, cost estimates, and all other structural design aspects.

OFC-05 Remediation to 17th Street Canal Floodwalls (USACE, New Orleans District). Served as Project Manager for the 17th Street Canal Project Floodwall Remediation Project for the USACE. The project consisted of stabilization of existing levee/I-wall system using soil-cement stabilization (Deep Mixed Material (DMM) or Jet Grouting) for approximately 3 miles on the east and west banks of the 17th Street canal. Responsible for overall project management and oversight of production of plans and specifications, cost estimates, and all other design aspects.

Task Force Guardian-Hurricane Katrina Levee and Floodwall Repairs (USACE, New Orleans District). Responsible for management and coordination as PDT leader for emergency levee and floodwall repair projects at 3 sites in Orleans Parish, Louisiana, encompassing the following projects: Modifications to Citrus Back Levee, Modifications to Pump Station No. 15 and Modifications to Air Products Site. Work included initial site assessments, civil and structural design repairs to areas of levees and floodwalls and preparation of plans and specifications.

Interim Closure Structures & Pump Stations (London Avenue and Orleans Avenue Canals) New Orleans, LA. AECOM provided design and construction engineering services to the USACE New Orleans District for the construction of two interim closure structures on the London and Orleans Ave. Canals in New Orleans. Provided ITR & QA/QC reviews.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Ananth Bukkapatnam, PE <i>Geotechnical Engineer</i>
Project Assignment:
Name of Firm with which associated:
Years' experience with this Firm:
Education: Degree(s)/Year/Specialization:
MBA-Strategic Management MS-Geotechnical Engineering B.S./Civil Engineering
Active registration: Year first registered/discipline:
Professional Engineer, LA, Civil, License #0037634, 2013; TX, AR
Other experience and qualifications relevant to the proposed Project:
Ananth is a geotechnical engineer with over 15 years of experience in geotechnical/civil engineering. He performs site/construction supervision; reviews/performs laboratory tests adhering to the ASTM/ACI standards; is proficient in performing non-destructive testing of deep foundations, geophysical surveys, thermal conductivity analysis, reviewing plans and specifications, and geotechnical engineering analysis and design; and has been an integral part of diverse engineering/construction projects throughout his career. Ananth's experience includes managing crews on levee improvement projects, drilling, and construction/demolition projects.

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Ananth Bukkapatname, PE - Geotechnical

Geotechnical Engineer, O'Neal Lane Sewer/Pump-station Upgrades, Department of Public Works, City of Baton Rouge, LA. Geotechnical Engineer responsible for subsurface geotechnical investigation of 16 existing pump-stations in Baton Rouge, LA. The project is implemented to upgrade existing pump stations to be able to withstand additional collection system capacity for wet-weather flow by increasing the size of the sewers. Analyzed laboratory information to perform design checks for bearing capacity, settlement and flotation calculations.

Geotechnical Engineer, O'Neal Lane Sewer Upgrades, Department of Public Works, City of Baton Rouge, LA. Geotechnical Engineer responsible for subsurface geotechnical investigation of existing forcemain and gravity sewer piping in Baton Rouge, LA. The project is implemented to provide additional collection system capacity for wet-weather flow by increasing the size of the sewers. Analyzed laboratory information to perform checks for bearing capacity and flotation calculations.

St. Bernard Pump Stations 2&3, New Orleans, LA. Geotechnical Engineer responsible for designing temporary and permanent sheet pile structures, performing heave calculations, slope stability/seepage analyses, settlement analyses for various cross-sections at the Pump Station 2 and Pump Station 3 locations. The project was intended for upgrading the existing pump stations along the Mississippi River Levee System.

Louisiana Coastal Protection & Restoration Authority, Maurepas Swamp Freshwater Diversion Structure, St. John the Baptist Parish, LA. Geotechnical Engineer responsible for drilling oversight and design of a temporary cofferdam structure, inlet structure, sedimentation basin and conveyance channel along the Lake Maurepas Diversion Canal. The analysis included slope stability, seepage analysis, pile foundation design and recommending construction specifications for an inlet structure built for routing the Mississippi River water into nearby marshes for restoration purposes.

Hurricane Protection Office Reach Engineering & Design for LPV 109, USACE, New Orleans, LA. Geotechnical Engineer: Engineer responsible for subsurface geotechnical investigation of the newly constructed levee which included borings and cone penetration tests at the crest and the toe. My role was to check the quality of the samples recovered as per USACE drilling procedures and provide the drillers with appropriate sampling depth information which varied for sands and clays. The sub-surface exploration was done as a check for the strength-gain used in the design calculations of the levee.

Hurricane Protection Office LPV 103; 105-108; 110, New Orleans, LA. Geotechnical Engineer responsible for the engineering and design for approximately 5.7 miles of the levee alignment. Engineering analyses involved slope stability using USACE software program: Method of Planes (MOP) and Geostudios software program: Slope W, seepage using USACE software program: DIVR seepage analysis, CWALSHT Analysis, settlement and bearing capacity calculations

Bayou DuPont Marsh Creation and Ridge Restoration, Jefferson Parish, Louisiana, Louisiana Department of Natural Resources, LA. Geotechnical Engineer responsible for supervising the drilling operations for a total of 9 soil borings using an airboat mounted drilling equipment. Engineering analyses involved slope stability, bearing capacity, and settlements using USACE software program: Primary Consolidation, Secondary Compression, and Dessication of Dredged Fill (PSDDF).

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Marty Ollinger, PE <i>Electrical Manager</i>
Project Assignment:
Name of Firm with which associated:
Years' experience with this Firm:
Education: Degree(s)/Year/Specialization:
BS, Electrical Engineering, 1983
Active registration: Year first registered/discipline:
Georgia - P. E. 031748; New Mexico - P.E. 18651 Minnesota - P.E. 47859 NCEES - 31055
Other experience and qualifications relevant to the proposed Project:
Marty is a seasoned electrical engineer who has delivered on more than \$300M in United States Army Corps of Engineer's projects over the past decade for flood risk reduction measures. He is experienced in comprehensive planning, development, and detailed design of electrical power distribution and SCADA systems in large pumping facilities for design-bid-build and alternative delivery methods, as well as large navigable sector gates, closure gates, and locks. He serves as owner's agent for construction, including shop drawing and change order review, inspection, and commissioning. With his extensive background and aptitude for electrical engineering and design, Marty provides strategic and tactical advantages that fuel critical decisions to garner exceptional client service, quality results, and enduring value across the organization.

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Marty Ollinger, PE, Electrical

St. John the Baptist Parish Regional WWTP, Senior Electrical/Instrumentation Engineer.

Responsibilities included development of the Process and Instrument Diagrams (P&ID's) and SCADA system plans.; Electrical distribution, coordination with Entergy Electric Utility Company. Short Circuit Analyses; performed electrical coordination utilizing SKM software. The Plant's Control System configuration was arranged total automation. The Process systems included Automated Influent VFD Controlled Pumping Station, Head Works Facility, Equalization and Pumping, High Rate Aeration Mixing, and Solids Handling Facility. Other responsibilities included development of process equipment and electrical equipment specification, coordination with electrical utility service providers and short circuit study, redundant low voltage distribution, plant wide LAN and development of process equipment specifications.

U.S. Army Corps Of Engineers New Orleans District, Storm Proofing New Orleans Sewerage and Water Board Orleans Parish, Louisiana Hurricane Protection Office, Water Plant Power. Project

Responsibilities included: Technical memorandum, distribution system study, voltage drop calculations and cost estimating. Development of electrical distribution drawings which included power one-line drawings prepared to ANSI standards, underground distribution site plans and facility power plan drawings; development of the Technical Specifications and final cost construction estimate.

Douglas County South Central WWTP, New Waste Water Treatment Plant. Preliminary power distribution development; negotiation and proposal review for utility service provider. The Power system design included Automatic Transition 5,000 and 480-volt plant distribution. Fully Plant Wide Automated SCADA System. The Process systems included Automated Influent VFD-Controlled Pumping Station, Head Works Facility, Equalization and Pumping, Plant wide Odor Control System, High Rate Aeration Mixing, Tertiary Filtration, UV Disinfection and Solids Handling Facility. Other responsibilities included review of process equipment, electrical shop drawings submittals.

U.S. Army Corps of Engineers New Orleans District – Permanent Canal Closure Pump Stations.

Responsibilities included providing assurance the electrical design was within compliance of the proposal. The project included, three storm water pumping facilities. 17th Street Pump Station, London Canal Pump Station and Orleans Pump Station. 17th Street Pump Station includes, 5-5000HP pumps and 2-2500HP pumps, 15-2.8MW, paralleling diesel generators in a ring bus configuration; London Canal Pump Station includes, 4-5000HP pumps and 2-2500HP pumps, 11-4.16MW, paralleling diesel generators also in a ring bus configuration, and Orleans Pump Station includes 3-2500HP pumps and 4-2.6MW paralleling diesel generators. All of the pumps are controlled by redundant feed medium variable frequency drives (VFD).

NYC Department of Environmental Protection, Port Richmond WWTP City wide Total Residual Chlorine Management Program (Senior E&I Project Engineer). Project Responsibilities included; Development of the P&ID Control System Specifications for a new Bulk Sodium Hypochlorite Storage and Distribution Facility; Demolition of existing storage facility. Additional responsibilities included; Electrical System design, project team coordination and equipment specification development.

LDNR, Mississippi River Reintroduction into Maurepas Swamp, (Senior E&I Project Engineer).

Responsibilities included development of the Electrical Distribution System, coordination with Entergy Electric. Coordination with the U.S. Army Corp of Engineers. Responsibilities included flow control automation with PID control loops for flow motorized sluice gate to control water introduction to the Mississippi River Basin.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
John Hangen, PE <i>Electrical Engineer</i>
Project Assignment:
Electrical
Name of Firm with which associated:
AECOM Technical Services, Inc.
Years' experience with this Firm:
10
Education: Degree(s)/Year/Specialization:
BSEE, Electrical Engineering, 2009
Active registration: Year first registered/discipline:
Professional Engineer, Electrical, LA, 40653, 2016; AL, MS, FL
Other experience and qualifications relevant to the proposed Project:
Mr. Hangen has over 12 years of experience in the field of electrical and systems engineering at industrial and government facilities, including power distribution, lighting, and controls. He has provided professional 2D and 3D design using AutoCAD R14/2007/2015/LT/ ELEC and MicroStation. He is the Health, Safety, & Environmental as well as the Quality Assurance/Control representative. His areas of Expertise include: P&ID Drawings, Systems Engineering, Electrical Engineering/Design, Piping & Piping Isometrics, Lighting Systems, and Arc Flash Studies.

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

John Hangen, PE - Electrical Engineer

Green Bay Packaging, Waste Water Clarifier Trash Rake, Morrilton, Arkansas (Electrical Engineer). Developed and constructed field power distribution methods and enclosures, designed ladder diagrams for field control, verified luminary schedule and design. Verified and augmented grounding. Supervised and participated in start-up and check-out.

Boise White Paper Raw Water Clarifier, Jackson, Alabama. (Electrical Engineer) Developed loop drawings, power control schematics, power and systems plans with cable schedules. Designed lighting system for exterior areas.

BP America, Oily Water Drain Line Pipe Replacement, Pascagoula, Mississippi (Electrical Engineer) Developed piping isometrics for replacement of existing drain line. Coordinated with survey and GPR contractor. Developed construction documents including estimates, scopes of work for various stages of the project, and drawings.

Johnson Controls, IA/IT Connectivity Survey, Fort Polk, Louisiana (Electrical Engineer) Surveyed HVAC installations. Recorded data about each connected device in a database. Coordinated with on-site personnel to schedule building visits and escorts

VA, Combined Heat and Power Plant and New Steam Generation Plant, Dublin, Georgia (Electrical Engineer) Developed diagrams and schematics to relocate existing and install new medium voltage electrical equipment. Developed single line diagrams, location plans and cable schedules for paralleling on-site electrical power generation equipment with utility power. Developed systems diagram displaying network connectivity.

TVA, Coal Wash Plant Deconstruction, Paradise, Tennessee (Electrical Engineer) Modified existing drawings to depict selective deconstruction of facility process equipment. Developed solution to repower key features of the facility. Developed drawings to install unit substation.

VA, Combined Heat and Power Plant & Utility Upgrades, Augusta, Georgia (Electrical Engineer) Developed single line diagrams, location plans, and cable schedules for paralleling on-site electrical power generation equipment with utility power. Developed systems diagram displaying network connectivity.

VA, Upgrade Building 77/204 Switchgear and Transformers, Mountain Home, Tennessee (Electrical Engineer) Developed block diagrams, single line diagrams, wiring diagrams, and control schematics for replacing main switchgear and power transformers. Designed cable tray route. Designed new lighting system for electrical equipment room.

Taminco, TMA Column Replacement, Pace, Florida (Electrical Engineer) Engineering team member in support of operating industrial manufacturer, reporting to Project and Engineering Manager. Performed project work and managed time and schedule of drafts persons. Interfaced with client's on-site maintenance, operations, and craft personnel pertaining to process and equipment installation & design.

New Jersey American Water, Long Term Flood Protection, Bridgewater, New Jersey (Electrical Engineer). Developed plans indicating installation locations and details of underground electrical power distribution. Developed single lines, duct bank schedules, and installation details. Produced specifications.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Shelby Eckols PE <i>Senior Vice President and Regional Quality Manager</i>
Project Assignment:
Wastewater Collection and Pumping
Name of Firm with which associated:
AECOM Technical Services, Inc.
Years' experience with this Firm:
37
Education: Degree(s)/Year/Specialization:
BS, Civil Engineering, 1970
Active registration: Year first registered/discipline:
Professional Engineer, TX 41485, 1977; FL 31226, 19981
Other experience and qualifications relevant to the proposed Project:
<p>Shelby is responsible for the management and quality assurance of water projects in AECOM's Austin office. Shelby has been involved in the design and construction of numerous treatment systems and other water system infrastructure. His extensive engineering experience enables Shelby to provide a unique perspective and thorough understanding of both the design and construction aspects of treatment systems. Shelby's expertise includes conceptual, preliminary, final design, and construction phase services associated with utility, pipeline, tunnel, drainage, and hydraulic projects. He oversees the management of individual projects as well as the supervision of project managers on other projects.</p>

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Shelby Eckols PE- Wastewater Collection and Pumping

South Austin Regional Wastewater Treatment Plant Filter Rehabilitation Project, City of Austin, Austin, Texas. Project Manager for the preliminary engineering and Project Principal for the final design and construction phase services for the evaluation of the existing filters and rehabilitation/replacement of the filters. The preliminary engineering phase determined cloth media disk filters were appropriate for installation. Final design implemented this recommendation and construction is complete.

Buda Wastewater Treatment Plant Expansion, City of Buda, Buda, Texas. Project Principal for the preliminary engineering, final design and construction phase services for the expansion of the existing 1.5 mgd plant to a capacity of 3.0 mgd. The project also includes a re-rating study of the existing plant facilities to evaluate the ability to increase its capacity and an additional plant effluent discharge location and associated 20,000 LF pipeline.

Walnut Creek Wastewater Treatment Plant Facility Plan, City of Austin, Austin, Texas. Served as Project Principal of the engineering team preparing the Facility Plan. The project consists of evaluation and definition of rehabilitation requirements for the existing 75 MGD plant and definition of future expansion requirements of the plant to achieve 150 MGD of capacity. Additionally, the project includes evaluation of the need for an off-site wastewater treatment plant to pre-treat a concentrated industrial plant flow, prior to the flow reaching the Walnut Creek plant.

Sacramento Regional WWTP EchoWater Wastewater Treatment Project, Elk Grove, CA. As a subconsultant to Carollo, served as Project Principal for AECOM role in the engineering and design of nitrifying sidestream treatment facilities, tertiary treatment facilities and the heavy equipment maintenance Building relocation.

Wildhorse (Northeast Interim) Wastewater Treatment Plant Expansion, City of Austin, Austin, Texas. As a subconsultant to Carollo Engineers, served as Project Principal/Project Manager for the expansion of the plant from 0.75 MGD to 2.25 MGD with AECOM responsible for the headworks, final clarifiers, RAS/WAS pump stations, overall plant hydraulics and on-site and off-site facilities. Preliminary Engineering is complete and the project is moving into Final Design.

Robindale Wastewater Treatment Plant 5-mgd Expansion, Brownville Public Utilities Board, Brownsville, Texas. Project Manager responsible for final design and construction phase services for the addition of a new 5-mgd contact stabilization treatment train and an upgrade of the existing 5-mgd contact stabilization treatment train.

Water and Wastewater Master Plan 2014, Brownsville Public Utilities Board, Brownsville, Texas. Project Principal for a water and wastewater master plan for the Brownsville Public Utilities Board. Project includes selection of modeling software for the water and wastewater system and the modeling of both systems. The master plan will include a CIP list of recommended projects resulting from the planning and modeling effort of the project.

Dunlap Wastewater Treatment Plant Expansion, Guadalupe-Blanco River Authority, Seguin, Texas. As Project Director, supervised the performance of preliminary engineering, final design and construction phase services for the plant expansion from 0.16 mgd to 0.95 mgd capacity. The project included an oxidation ditch process, UV disinfection, and filtration.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Vinoth Manoharan, PE <i>Project Manager</i>
Project Assignment:
Wastewater Treatment Process Design
Name of Firm with which associated:
AECOM Technical Services, Inc.
Years' experience with this Firm:
8
Education: Degree(s)/Year/Specialization:
MS, Environmental Engineering, 2005 BT, Chemical Engineering, 2002
Active registration: Year first registered/discipline:
Professional Engineer, TX #105070,
Other experience and qualifications relevant to the proposed Project:
Mr. Manoharan is a Project Manager - Water/Wastewater at AECOM's Houston office. He has fourteen years of experience in managing and designing water and wastewater treatment plants, sanitary and storm pump stations and waterline projects. His project involvement includes planning and development of conceptual design and preparation of design reports, design drawings, technical specifications, schedules and construction cost estimates. He manages multi-disciplinary design teams and interface with clients, regulators and sub-consultants. Vinoth has a Master's Degree in Environmental Engineering and a Bachelor's Degree in Chemical Engineering.

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Vinoth Manoharan, PE, Wastewater Treatment Process Design

East Water Purification Plant: Installation of Vertical Shaft Flocculators at Plant 3 and Improvements at Plants 1 and 2, City of Houston, Texas. Project Manager for the design of improvements to process units at all three Plants at the 360 MGD facility. Scope of this project includes selection of flocculator using CFD models, installation of vertical flocculators, rehabilitation of backwash pump station and improvements to sedimentation basins, fire/service water system and backwash system. Prepared a preliminary design report and presented to Drinking Water Operations and Technical Review Committee. Duties include management of internal multi-disciplinary team and subcontractors. Responsible for client communications and maintenance of project budget, schedule and quality control procedures.

East Water Purification Plant: Rehabilitation of Flocculators, Clarifiers, and Thickeners, City of Houston, Texas. Project Manager for the water treatment plant project that included replacement of drives and mechanism at Plant 3 sedimentation basins. Planned and coordinated activities to ensure timely completion. Duties included oversight of plan production and management of design staff. Responsible for client coordination and management of budget, schedule and quality control procedures.

Northeast Water Purification Plant: Improvements to Chemical Feed Systems, Filter Basins and Sludge Processing Facilities, City of Houston, Texas. Project Manager for the design of improvements at the 120 MGD water treatment plant. Managed design of Sodium Hypochlorite feed system, Flocculant Aid feed system, and Liquid Ammonium Sulfate (LAS), improvements to the existing Caustic Feed System. Performed improvements to the existing sludge processing facilities and replaced five filter underdrains and two belt presses. The project also includes installation of new chemical day storage tanks, replacement of existing bulk chemical storage tanks and improvements to the chemical tank farm.

Development of Facility Master Plan and Risk-Based Asset Management Plan of East Water Purification Plant, City of Houston, Texas. Serving as Deputy Project Manager/Technical Lead with responsibility of creating a master CIP program for the 360 MGD water treatment plant. Lead a team of six consultants to perform condition assessment at Plants 1, 2 and 3. Performed desktop analysis to create CIP grouping of assets evaluated. Prepared a report to document the asset management work done and evaluation of alternatives to determine the future of Plants 1 and 2. Prepared life cycle cost of the alternatives evaluated and prepared cost estimates of rehabilitation and replacement of assets/systems at the plant.

Almeda Sims Wastewater Treatment Plant: Improvements to Aeration, Disinfection and Sludge Processing Facilities Improvements, City of Houston, Texas. Project Engineer for the wastewater treatment plant project with improvements to process units, lift stations and sludge processing facilities. Identified mechanical and structural deficiencies and provided recommendations for improvements to facilities. Duties included design and preparation of project manual, report and specifications. Tracked and reported budget on a weekly basis and managed resources accordingly. Ensured effective communication and coordination between disciplines. Managed staff in plan production and coordinated with the city's project managers.

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Vinoth Manoharan, PE - Wastewater Treatment Process Design

Steep Bank/Flat Bank Wastewater Treatment Plant Expansion, City of Missouri City, Texas.

Project Engineer for expansion of the city's existing wastewater treatment plant. Duties included design of oxidation ditch, clarifier, expansion of headworks and UV disinfection system, preparation of engineering report, site layout, yard piping layout and other detailed design drawings. Managed budgets, schedules, scope of work and cost estimates. Prepared the permit amendment for future phases and supervised work of intern.

Sienna Flat Bank Creek Storm Water Pump Station, City of Missouri City, Texas. Designed pump station to discharge up to 110,000 gpm to Brazos River. Duties included design of pump station intake structure with four pumps, site layout, force main sizing and pump selection. Prepared construction cost estimate, design report, contract drawings and specifications. Was responsible for overseeing the design budget, and managed design and production staff. Coordinated with other departments and sub-consultants involved.

Wastewater Treatment Plant Disinfection System conversion, City of Texas City, Texas. Designed a Sodium Hypochlorite disinfection and Sodium Bisulfite dechlorination system to replace the existing chlorine gas disinfection system for the city's 12 MGD wastewater treatment plant. Performed design calculations and prepared cost estimates, design drawings, technical specifications and bid documents. Managed project budget and schedule, and coordinated with the city's wastewater department, sub-consultant and vendors.

Water Line Replacement in Kingspoint Area, City of Houston, Texas. Project Engineer for replacement of 40,000 linear feet of 6-, 8-, and 12-inch water line. Designed the project, managed a team to produce drawings, bid-ready documents and specifications, and prepared estimates, quantity take offs and monthly construction progress reports. Processed invoices and change orders; Monitored and controlled budget and schedule during the design and construction phase. Acted as company's focal point for coordination with the city's project managers, sub-consultants and contractor all through the design and construction phase. Attended design review, onsite constructability review, construction co-ordination and progress meetings.

Sienna Plantation Wastewater Treatment Plant No.2, City of Missouri City, Texas. Designed the expansion phase of wastewater treatment plant, performed process and hydraulic design calculations and prepared design report, construction plans and bid documents. Developed and managed project schedule and budget. Coordinated with the contractor and field inspectors during the construction phase.

Aliana Water Supply Plant and Water Well, City of Houston E.T.J. Duties included design of water plant and water well, preparation of design report, construction plans and bid documents, and resource and budget management. Reviewed driller's log, shop drawings and prepared the well completion package. Coordinated with agencies, contractors and sub-consultants.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Pavani Silaparasetty, PE <i>Project Manager - Water / Wastewater</i>
Project Assignment:
Wastewater Treatment Process Design
Name of Firm with which associated:
AECOM Technical Services, Inc.
Years' experience with this Firm:
3
Education: Degree(s)/Year/Specialization:
ME, Environmental Engineering, 2008 BE, Civil Engineering, 2007
Active registration: Year first registered/discipline:
Professional Engineer, Environmental, TX 114559, 2013
Other experience and qualifications relevant to the proposed Project:
Ms. Silaparsetty is a Registered Professional Engineer in the State of Texas with over ten years of experience in municipal water and wastewater conveyance and treatment plant design and construction support, engineering consulting services investigating technical upgrades, to better operability and reduce the operation cost. In addition to engineering design, gained Project Management experience by assisting Project Managers in developing execution plans, coordinating with various teams to start up a project, track progress, develop proposals for authorization etc.

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Pavani Silaparasetty, PE, Wastewater Treatment Process Design

Process Mechanical Lead, Third Storm Water Pump Station, Fort Bend County Levee Improvement District No. 2 - As the process mechanical lead for this 1 million gpm storm water pump station, taking charge at 60% design, coordinated with different disciplines to complete the contract documents addressing client comments. Additional responsibilities included preparing and coordinating different permits with City of Sugar Land.

Construction Manager, Third Storm Water Pump Station – Construction Packages, Fort Bend County Levee Improvement District No. 2. As Construction Manager for this 1 million gpm storm water pump station included leading construction of three different packages awarded to three different Contractors. Specific responsibilities included overseeing flow of submittals and RFIs and timely response, leading regular progress meeting with contractor and stakeholder, tracking progress over schedule and budget, reviewing and recommending payment of pay applications from contractors, preparing request for cost proposals, preparing change orders, providing progress summaries/reports to the client, preparing invoices and attending client board meetings as necessary.

Project Engineer, Spears Road Pump Station, North Harris County Regional Water Authority. Responsibility includes design of water softening system, sump pump modifications and other minor modifications throughout the pump station site. Specific tasks included coordinating with other disciplines (specifically structural and electrical) to develop plans for the scope elements. Perform engineering calculations, contact vendors and develop contract drawings and specifications. Additional responsibilities included review of other engineer's work, assistance in cost estimation and development of control logic for the modifications within the scope of the Project.

Project Manager, East Levee Improvements- Services During Construction, Gulf Coast Water Authority. Responsibilities include ensuring review and timely return of submittals and RFIs, attend monthly construction progress meetings, coordinate with client for additional support, support during pump start up and commissioning.

Project Engineer, Northeast Water Purification Plant Expansion Project, City of Houston. As the Deputy Lead for dewatering facility on this 320 MGD water purification plant expansion design-build project specific tasks include, leading and managing coordination between different disciplines and running weekly coordination calls, process mechanical design of portion of dewatering process, developing specifications and drawings, coordinating with and providing input to cost estimators, coordinating with procurement and construction groups on the Project in evaluating major equipment and contract bidders, assisting in workshop presentation material development, preparing workshop summaries, reporting monthly progress for invoicing.

As the Project Engineer for this Expansion Project specific tasks include preparing and participating in weekly stakeholder and client progress meetings, producing meeting summaries, maintaining action items log, assisting Project Manager with coordination and creation of sub-contracts, assisting in running cost benefit analysis, coordinating and supporting project controls and document controls team as needed.

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Pavani Silaparasetty, PE, Wastewater Treatment Process Design

Water Engineer, WCID #111 Wastewater Treatment Plant Improvements, City of Houston. Led the preliminary engineering report development and deliverable effort. Assisted Project Manager in design coordination of the project sub-consultants and invoicing. Specific engineering tasks include lead process mechanical engineer for return activated sludge system, scum handling system, supporting chlorine contact basin modifications and non-potable water system modifications calculations, technical memorandum, developing technical specifications and drawings.

Water Engineer, Alexandria Renew Enterprises. Led the hydraulic modelling effort to evaluate Primary Effluent Pump Station (PEPS) with current design capacity of 120 MGD to future capacity of 127 MGD. Specific tasks include updating an existing AFT Fathom model to reflect as-built conditions, further developing parts of model to reflect additions to the system and producing a technical memorandum for the modelling section. Additional tasks included coordinating with other modelers and equipment vendors. Developed AFT Fathom hydraulic model to analyze Raw Sewage Pump Station (RSPS) originally designed for 108 MGD capacity for additional flow by pump replacement. In addition to the hydraulic analysis, this task included discussions with manufacturers to upgrade existing pumps (impeller replacement vs. new pumps) and condition assessment of the facility and contributing to a technical memorandum.

Water Engineer, Hedrick Force Main Replacement, City of Houston. Assisted lead engineer and Project Manager in design coordination of the force main. Project elements include open cut installation of 36inch diameter ductile iron pipe to replace existing sewer line and installation 42-inch diameter high density polyethylene (HDPE) pipe under the Buffalo Bayou to replace aerial crossing. Specific tasks included support in drawing development including mark ups and coordination with the drafter, restrained joint calculations, developing specifications, participation in progress meetings and producing memoranda as required. Continued contribution during construction in review of submittals and request for information (RFI) response coordination.

Project Engineer, Beltway WWTP Improvements, City of Houston. Project responsibilities included coordination of the design team, providing support to process mechanical and process leads in design efforts, engineering calculations of treatment facilities (chlorine contact basins, air flow requirements in aerobic digesters, aeration basin drains etc.). Supported Project Manager in progress meetings with the client and producing project deliverables such as technical memoranda, construction documents (specifications and the drawings). Led services during construction and supported with submittal reviews, responses to RFIs, attended monthly construction progress meetings and coordinated with design team and subconsultants.

Project Engineer, Park Ten WWTP Abandonment and Flow Diversion to Turkey Creek WWTP, City of Houston. Project elements included gravity sewer to divert flow from Park Ten WWTP to new regional lift station and a new force main from the lift station to a manhole in the Turkey Creek WWTP service area. Project responsibilities included wastewater flow analysis, sizing the gravity sewer and force main, producing technical memoranda, leading preliminary engineering report efforts, participating in progress meetings with the client and assisting Project Manager as needed.

Water Engineer, Parkway WWTP, Washington Suburban Sanitary Commission (WSSC). As a part of the Project team specific responsibilities included process mechanical design of polymer feed system, modifications to gravity thickeners, scum handling system. Responsible for sizing the equipment, piping and valves and producing corresponding technical specifications, drawings and technical memoranda.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Lakhbir Chauhan, PE <i>Senior Mechanical Engineer</i>
Project Assignment:
Mechanical
Name of Firm with which associated:
AECOM Technical Services, Inc.
Years' experience with this Firm:
13
Education: Degree(s)/Year/Specialization:
MS, Rotodynamic Machines, 1970 BS, Mechanical Engineering, 1966
Active registration: Year first registered/discipline:
Professional Engineer, LA, 0016530, 1977; FL
Other experience and qualifications relevant to the proposed Project:
<p>Lakhbir is a seasoned principal mechanical engineer who spent his entire career developing mechanical engineering design solutions specifically for coastal storm risk management measures, including pump stations within a levee/flood risk reduction system and mechanical and hydraulic systems associated with floodgates and sector gates. His portfolio includes 14 years in manufacturing for axial, mixed flow, hydraulically driven, and submersible electric pumps for coastal systems as a chief mechanical engineer, where he gained hands-on experience with the equipment he uses in designs today. He spent 10 years as a consulting mechanical engineer specializing in pumping applications for drainage systems, flood risk reduction systems, and pump design applications. Lakhbir's experience is vast and his aptitude in mechanical engineering is diversified, which garners exceptional client service, quality results, and enduring value across the organization.</p>

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Lakhbir Chauhan, PE - Mechanical

Permanent Canal Closures and Pumps, New Orleans, LA (USACE, New Orleans District: Design Review and Construction Management for Hurricane Protection Project for the Outfall Canals at 17th Street, Orleans Avenue, and London Avenue, Orleans Parish. Pump Sizes: #10- 1,800 CFS, 142", 5,000 HP Gear-Motors Drives #7-900 CFS, 100", 2,500 HP Gear-Motors

- Pump Station G508 Design, Everglades, Hendry County, Florida: Pump Engineer:
- Mechanical Inspection/Detailed Report of pump station S-5, Capacity=800 cfs, in collaboration with Metcalf & Eddy.
- Mechanical Inspection/Detailed Report of Pump Station S-6, Capacity = 2,925 cfs, and in collaboration with Sverdrup Inc.
- Cost Estimate for Purchasing Pumping Equipment for G-335 and G-310, Cost estimate \$20 million.
- Design Review-Technical Specifications Pump Station G-335 and G-310, in collaboration with Metcalf & Eddy, Station Design by Brown & Caldwell.
- Equipment Review for Sewage Treatment Plant-Altamonte Springs.
- Pumping Equipment Review for Gee & Jenson, for South Florida Water Management District.
- Reviewed roller gates and operating systems for Hutcheon Engineers.

Hurricane Protection Office (HPO) LPV 105-111, New Orleans, LA (USACE-Hurricane Protection Office (HPO) Pump Engineer. Due to the raising of the levees, three pumping station required replacement pumping equipment that will enable them to contend with increased head conditions. The projects included selection of new equipment, specifications and drawings, cost estimates and follow up on the reviews and engineering support.

Task Force Guardian – Hurricane Katrina Storm Repairs to Levee System, New Orleans, LA. Pump Engineer. Due to the raising of the levees, three pumping station required replacement pumping equipment that will enable them to contend with increased head conditions. The projects included selection of new equipment, specifications and drawings, cost estimates and follow up on the reviews and engineering support.

Dallas Drainage Pump Station Improvements, Dallas, TX (City of Dallas Public Works and Transportation): Pump Engineer. AECOM was selected to design flood control pump stations for the City of Dallas utilizing Concrete Volute Pumps (CVP). The City called for AECOM to design the stations to operate for the 100-year frequency storm event. The stations consisted of three new and two refurbished stations. The task consisted of head calculations, pump selection, budget pricing and independent technical reviews of the 35% design.

The Contra Costa Water District (CCWD) Oakland, CA, Pump Engineer: CCWD proposes to raise the current Los Vaqueros Reservoir (LVR) level by 35-ft to a new peak elevation of 507-ft. The CCWD retained URS Corporation to evaluate pumping options relating to the existing pumping station for filling the reservoir to the new elevation while maintaining the current average weekly pumping rate of 200-cubic feet per second (cfs). The new pumping system must be capable of operating under the varying head conditions that it could experience during its life cycle. The task consists of providing new design conditions, selection and evaluation of existing and new equipment, cost analysis and prepare plans and specification for replacement of existing equipment.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Chris Accardo, PE <i>Senior Consulting Engineer</i>
Project Assignment:
Permit Specialist
Name of Firm with which associated:
AECOM Technical Services, Inc.
Years' experience with this Firm:
4
Education: Degree(s)/Year/Specialization:
BS Civil Engineering, 1980 MS Engineering Management, 2001
Active registration: Year first registered/discipline:
Professional Engineer, Civil, LA #21574, 1983
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Accardo is a Civil Engineer with 34 years of experience. Most of this time (32 years) was spent working with the U.S. Army Corps of Engineers, New Orleans District (MVN). At MVN Mr. Accardo held various positions such as Chief, Operations Division; Chief, Physical Support Branch; Deputy District Engineer; Operations Manager; Project Manager; and Civil Engineer. During this time, Mr. Accardo was always engaged with permitting within MVN. During his last 9 years with MVN as Chief, Operations Division, Mr. Accardo was responsible for the MVN Regulatory Branch which processed all MVN permits. The day-to-day activities of the Regulatory Branch were handled by MVN Regulatory staff, but Mr. Accardo was often actively engaged in high profile permits that were important to MVN, the applicants and the public.</p>

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Chris Accardo, PE- Permit Specialist

Independent Engineering Consultant

- As an Independent Engineering Consultant, works with clients to obtain permits from the U.S. Army Corps of Engineers for refineries located in Louisiana along the Mississippi and Atchafalaya Rivers.
- Testifies as a permitting expert in court cases.
- Works with clients on dredging and/or marsh creation projects.

Supervisory Civil Engineer / Chief, Operations Division GS-15

- Oversaw the District's Regulatory program and was actively engaged with all major permits such as permits relating to the BP oil spill; major DOTD road improvements; and major proposed developments along the Mississippi River.
- Acted as primary technical authority and consultant on the operations and maintenance (O&M) of the District's civil works projects.
- Navigation Accomplishments - Oversaw the O&M on two deep draft channels (Mississippi River and Calcasieu River), several shallow draft channels, 12 locks and 6 control structures.
- Flood Risk Reduction Accomplishments - Oversaw the daily maintenance on 7 hurricane structures (IHNC Surge Barrier, West Closure Complex, Seabrook Control Structure, Harvey Sector Gates, London Ave. Canal Pump Station, 17th St. Canal Pump Station and Orleans Ave. Canal Pump Station). Was responsible for over 900 miles of Mississippi River levees and floodwalls and over 300 miles of hurricane protection levees and floodwalls.
- During hurricane events, made recommendations to higher authorities on the operation of the 7 hurricane structures mentioned above. Coordinated the operation of these structures with the navigation industry, state agencies and local levee authorities.
- Oversaw the New Orleans District's dredging program which is the largest Corps District dredging program in the United States.
- Worked under the general supervision of the District Commander, and was a key member of the District Commander's Technical Staff.
- Worked through subordinate Branch Chiefs, supervisors and managers and directed the activities of a multi-disciplined workforce consisting of 450-475 professional, technical, administrative, clerical and blue collar employees engaged in the O&M of District projects.
- Managed approximately \$200 million annually.
- Acted as a liaison with state and local government officials, other federal agencies, the media, navigation interests, levee districts and business groups.
- During emergencies such as flood-fights, hurricanes and oil spills, served as a key advisor to the Commander in the coordination and direction of District response and recovery.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Mervin Tassin <i>Inspector</i>
Project Assignment:
Inspection
Name of Firm with which associated:
AECOM Technical Services, Inc.
Years' experience with this Firm:
37
Education: Degree(s)/Year/Specialization:
Structural Steel, Basic & Advanced Piping and Geological Drafting One-year survey Program 40-Hour Isotope Radiographic Safety
Active registration: Year first registered/discipline:
N/A
Other experience and qualifications relevant to the proposed Project:
Mr. Tassin is the chief resident project representative for various civil projects, conferring directly with the owner, representatives, and the contractors. In each of the projects, the tasks included daily coordination with the contractor and the AECOM Construction Manager, assuring that the project was being constructed in conformity with the plans and specifications; verifying daily quantities; initial review of the contractor's pay request and resolving any discrepancy; coordination of the testing laboratory scheduling; and verification of shop drawings and submittal items. His project experience includes asphalt and concrete roadways, drainage, sewer, slope paving, box culverts, levee repairs and trench drains.

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Mervin Tassin, Inspection

Gretna Waste Water Treatment Plant Rehabilitation, Jefferson Parish, LA (City of Gretna), (Clarifier Rehabilitation). Construction Inspector. Rehabilitation of clarifiers, travelling bridge, sludge collection piping, weirs, gates, concrete rehabilitation, pumps and trickling filters.

Fleur De Lis Boulevard, New Orleans, LA. Construction Inspector. Installation of sewer forcemains, water forcemains, gravity sewer, RCP drainlines, jack and bores under Veterans Boulevard, and 9 roadway paving.

Za Road Lift Station Construction Services and Inspection Montz Sewer Pump Station, Reserve, LA. Construction Inspector. Installation on new sewer pumps and ductile iron piping inside the station. Rehabilitation of existing station.

Hillaryville, Sewer Improvements, Ascension, LA. Construction Inspector. Installation of new sewer plant, lift station, forcemain, gravity lines, drainlines and asphalt roadways.

Avenue B Drainage Basin Improvement, Jefferson Parish, LA (Jefferson Parish Department of Drainage). Construction Inspector of the installation of new RCP drainlines, building of conflict boxes, junction boxes and drainlines and new asphalt roadway pavement.

Avenue D Drainage Basin Improvements, Jefferson Parish, LA (Jefferson Parish Department of Drainage). Construction Inspector of the installation of new RCP drainlines, building of conflict boxes, junction boxes, drain inlets and new asphalt roadway pavement.

Dwyer Road Pump Station, New Orleans, LA. Construction Inspector. Construction of major pump station and box culvert.

Orleans Levee District, Lakeshore Drive Improvements, Reach 2B. Stamped and colored concrete monoliths driving piles, electrical for new lighting.

Estelle Pump Station addition, Marrero, LA. Construction Inspector. Installation of new drainage pumps.

West Jefferson V-Line Levee Repair (Emergency due to Hurricane Juan), Marrero, LA. Construction Inspector. Repair to breaks in levees.

Lake Pontchartrain Floodwall, New Orleans, LA. Construction Inspector. Levee and roadway improvements. Installation of new floodwall.

Task Force Guardian – Hurricane Katrina Storm Repairs to Levee System, New Orleans, LA (USACE, New Orleans District. Construction Inspector. Inspection of levee repairs, new pump stations and gates associated with damage from Hurricane Katrina.

Hurricane Protection Office (HPO) LPV 105-111, New Orleans, LA (USACE, Hurricane Protection Office). Construction Inspector of placing and compaction of clay levee materials, building of drainage structures (outlet structures, sluice gate structures and inlet structures). Laying of large RCP drainlines, building floodgate structures at Highway 90 and Highway 11. Rehabilitation of existing pump stations and asphalt roadways.

Earhart Boulevard Segments, New Orleans, LA. Construction Inspector. Concrete roadway, drainage, sewer, water, and electrical ductbank improvements.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Al Naomi, PE <i>Program Manager</i>
Project Assignment:
Construction Administration
Name of Firm with which associated:
AECOM Technical Services, Inc.
Years' experience with this Firm:
13
Education: Degree(s)/Year/Specialization:
MS, Civil Engineering, 1975 BS, Civil Engineering, 1971
Active registration: Year first registered/discipline:
Professional Engineer, Civil, LA, 15264, 1975
Other experience and qualifications relevant to the proposed Project:
Mr. Naomi is a manager in the AECOM New Orleans office. He has managed a 40-person team to provide planning, designs, and project and construction management for the USACE \$14 billion Hurricane Storm Damage Risk Reduction System. Mr. Naomi has extensive experience in the management, design, and construction of major projects. He has provided construction manager, project engineers, and inspectors for numerous contraction projects. He has coordinated with numerous Federal, State and local agencies including US Fish and wildlife, FEMA, EPA, NOAA, CPRA, DOTD, Sewerage and Water Board, St. Charles Parish, Jefferson Parish Government, Pontchartrain Levee District, and many others. He has made numerous presentations to technical groups and to the public.

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

AI Naomi, PE, Construction Administration

Permanent Pump Stations, Orleans Parish, LA. Provide and manage a team of technical experts to review and validate work of a design-build contractor for three large pump stations at the 17th Street, London, and Orleans Outfall Canals.

West Bank and Vicinity Hurricane Protection Project, New Orleans, LA (USACE, New Orleans District). Program Manager for the USACE, New Orleans District in charge of management of over \$3 billion in storm risk reduction projects for the West Bank and Vicinity project in metropolitan New Orleans.. This included the following:

- Western Closure Complex, Jefferson Parish, LA.
- Western Tie-in, St. Charles Parish, LA.
- Eastern Tie-in, Plaquemines Parish, LA.
- Lake Cataouatche Levee Enlargement, Jefferson Parish, LA.

USACE New Orleans, Construction Management Services, New Orleans, LA. Construction Management. The design and construction management of over 7-miles of major hurricane protection levee. This includes a major relocation of I-10 in east New Orleans, placement of wick drains and significant instrumentation to monitor consolidation. The design and construction management of over 5-miles of major hurricane protection levee. This includes the largest deep soil mixing project in history, the construction of pump station protection and major floodwall construction. The design and construction management of over 8-miles of major hurricane protection levee. This includes floodgates, floodwalls and levee enlargements. Design and construction management of a six-lane interstate highway over the new hurricane protection levee. Project included deep soil mixing and major high-speed bypass roadways.

Lake Pontchartrain and Vicinity Hurricane Protection Project, New Orleans, LA (USACE, New Orleans District). Senior Project Manager for the Lake Pontchartrain and Vicinity Hurricane Protection Project. Responsible for management of the design and construction of levees, floodwalls, pump station fronting protection and structures in a four parish area in metropolitan New Orleans. Responsibilities included budgeting, scheduling, and stakeholder relationships. Provided significant support to Corps leadership in wake of Hurricane Katrina to disseminate information and to represent the USACE in numerous media interviews. Testified before Congressional committee on Katrina related issues. Managed the following contracts:

Pump Station # 4 on London Ave Canal, Orleans Parish, LA. Pump station work included the management of the design and construction of fronting protection at Pump Station #4 on London Ave. Outfall Canal. This included reinforced concrete walls in front of the pump station.

Pump Station #6 on the 17th Street Outfall Canal, Orleans Parish, LA. Pump station work included the management of the design and construction of fronting protection at Pump Station #6 on 17th Street. Outfall Canal. This included reinforced concrete walls in front of the pump station.

Pump Stations #1 and #4, Jefferson Parish Lakefront, LA. Managed the construction of breakwaters in Lake Pontchartrain to protect the pump stations from storm induced wave action.

East Bank Levee, Jefferson Parish, LA. Managed the planning, design and construction of over 12-miles of levees and floodwalls on the East Bank of Jefferson Parish. This included numerous floodgates, and extensive coordination with public officials and local residents during construction.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Eric Walter <i>Civil Technician</i>
Project Assignment:
CADD
Name of Firm with which associated:
AECOM Technical Services, Inc.
Years' experience with this Firm:
Education: Degree(s)/Year/Specialization:
Associate of Science, December 1986 Civil Engineering, Delgado Community College, New Orleans, LA University of New Orleans, Civil Engineering, New Orleans, LA, 2 years in the program. Did not complete.
Active registration: Year first registered/discipline:
N/A
Other experience and qualifications relevant to the proposed Project:
Mr. Walter is a Civil/Structural Designer with 30 plus years of design experience and is the Lead CAD designer for the AECOM New Orleans office. His primary experience are related to civil / structural design of flood protection and buildings, large civil works projects, such as levees, locks and dams also commercial structural steel buildings. Other experience includes designs of docks, roadways, bridges and Pump Stations.

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Eric Walter, CADD

Louisiana Avenue Improvements (Constance Street to S. Claiborne Avenue), New Orleans, LA.

Design team member for the reconstruction of the Louisiana Avenue roadway, intersections, subsurface drainage and box culvert installation. Civil designer whose responsibilities included generating alignments, profiles, cross sections, striping and signing, maintenance of traffic, inlet selection and placement, grading plans, and intersection layouts. This project was located in a dense urban area and involved difficult phased construction and utility coordination with multiple government organizations.

New Orleans East Hurricane Protection Levee and T-wall Enlargement from CSX Railroad to Michoud Canal Reach LPV 111, New Orleans, LA.

Lead Designer on the levee enlargement. The project consists of an extensive soil mix design to support the additional weight of the larger levees. The existing pump station 15 t-walls are being reconstructed to meet the post Katrina criteria.

USACE Hurricane Protection Office (HPO) - New Orleans East- LPV 110 CXS Railroad Gate Flood Protection, New Orleans, LA. Project designer for upgrade of the flood protection at the LPV 110 Reach. LPV 110 is approximately 400-ft long. The project includes the design of the concrete I-walls, T-walls, a railroad gate and earthen levee tie-ins.

Levee Reach, LPV 109.02a, South Point to CSX Railroad, New Orleans East, LA (USACE – HPO).

Lead Civil Designer for the development of the plans and specifications for reach LPV 109.02a. This effort will include design on 39,400-linear feet of existing levee (stage construction with prefabricated vertical drains and deep soil mixing), transition T-walls, redesign of four (4) drainage structures, and redesign of two (2) pumping stations. The project also included coordination with utilities, and development of Right-of-Way drawings. Elaboration of construction cost estimate and project schedule. Coordination with the USACE Hurricane Protection Office, sponsors and subcontractors.

Raritan Millstone Water Treatment Plant Long Term Flood Protection Project, Bridgewater, New Jersey. Lead civil/Structural designer on the demolition, plan and profiles, sections, utility and right of way plans for the hurricane protection system in Somerset County, New Jersey. The existing plant required, and a new flood protect system involving a combination of T-wall and Combi-walls designed to sustain the new hurricane protection requirements.

Lake Borgne Basin Levee District, St Bernard Parish Pump Stations No. 2 & 3 Seepage Repairs.

Lead civil designer to repair pump station number 2 and 3 by constructing a new concrete T-wall in front of the existing station.

Houma Navigation Canal Lock and Floodgate, Houma, LA. Project Designer for the design of a lock and floodgate on the Houma Navigational Canal. Assignment duties include overall layout and alignment of the structures, excavation plans, final site plans, soil mixing plans, T-wall layouts and a stone closure dam layout. Other duties included coordinating with geotechnical engineers for slope stability and settlement issues, coordinating with structural engineers for the platform layouts, and coordinating with architects for building and utility layouts.

Mississippi River Diversion to Maurepas Swamp, St. John the Baptist Parish, LA. Lead structural designer responsible for development of the construction plans, sections and details for the pump station building in this project. The project involves 2000 cfs freshwater diversion from Mississippi River into the swamps south of lake Maurepas. The project involved control structures at the river, 5 miles of channel crossing 2 major rail roads, 3 major highways including Interstate 10 and 250 cfs drainage pumping station.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Brian Merceron <i>Civil Technician</i>
Project Assignment:
CADD
Name of Firm with which associated:
AECOM Technical Services, Inc.
Years' experience with this Firm:
38
Education: Degree(s)/Year/Specialization:
General studies / AutoCad / Micro Station
Active registration: Year first registered/discipline:
N/A
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Merceron has 30 years of experience as an engineering Technician, Designer and CADD Technician. Mr. Merceron has additionally worked as a field technician with inventorying structures as well monitoring construction and environmental sampling for air quality. Mr. Merceron has also performed detailed quantity take-offs, traffic studies and surveying work.</p> <p>Mr. Merceron's CADD capabilities should also not go unnoticed. Mr. Merceron is intimately familiar with AutoCAD as well as Bentley Systems drafting programs. He has also performed computer modeling work and mapping projects during his tenor.</p>

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Brian Merceron

Task Force Guardian – Hurricane Katrina Storm Repairs to Levee System New Orleans, LA (USACE, New Orleans District). CADD Technician. Mr. Merceron worked on all levee and pump stations included in the Task Force Guardian Task. This work included: civil site work, structural detailing, structural take-offs and cross sections.

Houma Navigation Canal Lock and Floodgate, Terrebonne Parish, LA (USACE, Vicksburg District LA. CADD Technician. Mr. Merceron worked on the lock structure, civil site work and steel detailing and concrete structure details.

Elmwood Pumping Station and Fronting Protection, Jefferson Parish, LA (USACE, New Orleans District). CADD Technician/Designer. Mr. Merceron worked on drawings and planning layout of plans, sections and details. Task also included Structural Civil takeoffs. Plans and details included gantry crane lifting system, 5,500-sq. ft. 40' interior structure, floodwall and screen cleaning system. Layout included site plan and levee modifications. Mechanical included 3,000 H.P. diesel driven horizontal pump and fuel storage system.

Pump Station No. 6 Fronting Protection, New Orleans, LA (USACE, New Orleans District). CADD Technician/Designer. Task included drawings and planning layout of plans, sections and details. Also Structural Civil takeoffs. Plans and details included structural sluice gate and control structures civil site plan layout and mechanical pump drawings.


Westwego to Harvey Canal Reach 3 Structures Jefferson Parish, LA (USACE, New Orleans District). CADD Technician/Designer. Task included drawings and planning layout of plans, sections and details. Also Structural Civil takeoffs. Plans and details included structural T-wall foundation plan, special T-wall monolith, 30' swing gate monoliths plans, elevation and details. Also plan and profile, rights-of-way and cross section drawings.


New Estelle Drainage Pump Station, Jefferson Parish, LA. Detailing, calculations, drafting supervision.

Avenue D Drainage Improvements, Jefferson Parish, LA. 10th Street to US Highway 90B 12' x 7' concrete box culverts.

Sewage Collection Systems

- Numerous gravity sewer systems included in subdivision design.
- Avondale North and South Sewage Treatment Plants, Avondale, LA.
- Force main Relocating along Westbank Expressway, Jefferson Parish, LA.
- Numerous sewerage systems for Jefferson Parish.
- Zone 2 Marrero Mini Systems.
- Zone 5 Eastbank Mini Systems Sewerage Improvements.
- Numerous gravity sewer systems included in subdivision design.
- St. John the Baptist Parish, Parish-wide Sewer project.

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> Gretna Wastewater Treatment Plant Rehabilitation <i>Jefferson Parish, LA</i> George Folse City of Gretna, Public Utilities 100 5th St. Gretna, LA 70054 (504) 363-1540 gfolse@gretnala.com </p>  <p> <i>AECOM was contracted by the City of Gretna to provide engineering design and construction management services for rehabilitation of the wastewater treatment plant.</i> </p>	<p> AECOM has developed contract drawings and specifications for repair to the primary clarifiers and final clarifiers. Specific project tasks included the following: </p> <p> Evaluation of Existing Conditions: AECOM conducted assessments of the existing conditions of the primary clarifiers with respect to structural integrity and treatment process parameters, and of H2S levels in the main treatment building; and identified the location of the proposed odor control system. </p> <p> Detailed Design for Rehabilitation of Existing Clarifiers: AECOM developed plans and specifications for removal and replacement of the existing traveling bridges and concrete repairs for both the primary and final clarifiers. AECOM has also developed associated mechanical, electrical, and instrumentation design drawings and specifications. AECOM also developed the bypass mechanism and piping layout to allow for the required repairs to be completed in a minimized time period. AECOM has also developed a system to avoid any infestation problems in the system due to in operation of biological trickling filters during repairs. </p> <p> Trickling Filter Media Replacement: AECOM specified the material for replacing the trickling filter media, including the methodology for control of roaches, snails and filter flies during the process of removing and replacing the media. </p> <p> Permit Modification Application: AECOM coordinated with LA DEQ to develop discharge criteria during construction. </p> <p> Final Design and Construction Management: AECOM provided final plans and specifications to the City of Gretna. </p> <p> Bidding and Construction: AECOM provided engineering during bidding and award phases and is currently providing assistant during construction. Included in the services are assistance to the City of Gretna in preparing bid documents, responding to contractors, and issuance of addendums during bid, resident inspection during construction, pre-construction meeting, site visits, construction management, grant management, project closeout and preparation of record drawings. </p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2014	\$41M	\$347K

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:	Nature of Firm's Responsibility:	
<p>Emergency Generator at East Bank Wastewater Treatment Plant <i>Jefferson Parish, Louisiana</i> Jefferson Parish Government Mike Lockwood 1221 Elmwood Park Blvd. Suite 803 Harahan LA 70123 (504) 736-6661 JPSewerage@jeffparish.net</p>  <p><i>AECOM was contracted by Jefferson Parish to provide engineering design and construction management services for installation of an emergency generator for the East Bank Wastewater Treatment Plant.</i></p>	<p>AECOM was contracted by Jefferson Parish to provide engineering design and construction management services for installation of an emergency generator for the East Bank Wastewater Treatment Plant. AECOM has developed contract drawings and specifications for the generator, soft starter, manual transfer switch, radiator, fuel storage tank, fuel port, reinforced concrete foundations, timber piling, duct banks, conduit and wiring. Specific project tasks included the following:</p> <p>Evaluation of Existing Conditions: Conducted assessments of the existing conditions of the electrical substation at the plant and performed load analyses of all of the plant equipment to be operated by the generator during a power outage.</p> <p>Site Layout: Developed plans and specifications for the layout of the site, including the location of the foundations for the generator, transfer switch and fuel tank, as well as the interconnecting duct banks. The work was coordinated around the location of the East Bank Plants 78" effluent discharge force main.</p> <p>Detailed Design for Generator and Ancillary Components: Developed plans and specifications for all of the major electrical components, including the generator, soft starter, and manual transfer switch. AECOM also developed plans and specifications for structural design of the foundations. The mechanical fueling facilities were also designed by AECOM, including the fuel storage tank, pumps, valves and piping.</p> <p>Soft Start Installation Plan: A plan was developed to maintain full plant operations during the installation of the new electrical components as well as to transfer power over to the generator under emergency conditions.</p> <p>Community Development Block Grant: Coordinated with CDBG requirements throughout the design and construction process.</p> <p>Final Design: Provided final plans and specifications to Jefferson Parish.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2016	\$3.5M	\$336K

PROJECT NO. 2 *continued*

Nature of Firm's Responsibility:

Bidding and Construction: Provided engineering during bidding and award phases and is currently providing assistant during construction. Included in the services are assistance to Jefferson Parish in preparing bid documents, responding to contractors, and issuance of addendums during bid, resident inspection during construction, pre-construction meeting, site visits, construction management, grant management, project closeout and preparation of record drawings. The project is currently under construction.

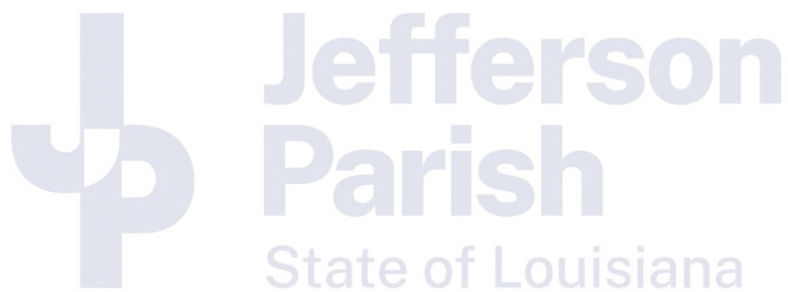


L. Work by Firm or Joint-Venture members which best illustrates current qualifications relevant to this Project. Please include any and all work performed for Jefferson Parish. Please attach additional pages if necessary.		
PROJECT NO. 3		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Louisiana Avenue Improvements (Constance Street to South Claiborne Avenue) New Orleans, LA</p> <p>USACE, New Orleans District / Sewerage and Water Board, New Orleans, LA</p> <p>Mr. Larry Mickal 7400 Leake Avenue New Orleans, LA 70118 Larry.E.Mickal@usace.army.mil 504.862.2711</p>  <p><i>AECOM was contracted to the USACE, New Orleans District to design a new box culvert along Louisiana Avenue in New Orleans and provide Engineering During Construction (EDC) services.</i></p>	<p>As part of the Southeast Louisiana (SELA) Urban Flood Control Project, AECOM was contracted to the USACE, New Orleans District to design a new box culvert along Louisiana Avenue in New Orleans and provide Engineering During Construction (EDC) services. The new box culvert extends approximately 1.5 miles between Constance Street and Claiborne Avenue and connects to an existing box culvert at Claiborne Avenue. The new box culvert transitions in size beginning with an 8' x 8' structure to 10' x 8', and finally a 12' x 10' box culvert. AECOM performed all structural design of the box culvert, as well as geotechnical engineering for foundation support and construction. In addition, AECOM also provided civil and roadway design. This includes utility relocations and traffic maintenance throughout the construction phase. AECOM prepared plans and specifications for bidding, assisted USACE during the bid phase process, and is currently providing EDC services. Civil and structural drawings include</p> <ul style="list-style-type: none"> • Roadway plan/profile sheets. • Drainage connection at cross streets; roadway typical sections. • Side road grading plans. • Geometric intersection details. • Utility layouts / relocations. • Maintenance of Traffic and construction and signing sequencing (6 phases). • Permanent signing and striping plans. • Plan/profile of box culvert. • Box culvert cross-sections with reinforcing details. • Foundation details. • Ground improvement design/box support foundation (jet grouting). • Bypass and coordination in crossing existing aging sewer force main with new box culvert 	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2017	\$84M	\$3.6M



PROJECT NO. 3 *continued*

Nature of Firm's Responsibility:

The project is complex due to the nature of the project site. Louisiana Avenue is an urban, 4-lane street with on-street parking, a narrow median and many historic structures and other features such as street tiles and slate curbing. The box culvert will also have to cross under the St. Charles Avenue streetcar tracks. In addition, the avenue is lined with live oak trees that must be protected during the construction phasing. Therefore, close coordination has been necessary with the City of New Orleans Public Works, Traffic/Streets Department, New Orleans Regional Transit Authority (RTA), Parks and Parkways, and the individual utility companies with facilities along the route. Utility relocations include: 8" waterline, gate valves, fire hydrants, minor drainage structures, as well as sewer and gas lines, and a sewer force main bypass and tie in.



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>South Austin Regional WWTP Filter Rehabilitation Project <i>Austin, TX</i></p> <p>City of Austin Steve Parks, PE (512) 974-3576 steve.parks@austintexas.gov 505 Barton Springs Road, Suite 900, Austin, TX 78704</p> <div>   </div> <p><i>AECOM completed the final design of filter improvements at SARWWTP.</i></p>	<p>AECOM was selected by the City of Austin to perform a comprehensive engineering evaluation of the existing Filter Building and filter cells at the South Austin Regional WWTP, followed by final design and construction phase engineering services for rehabilitation of the filters. AECOM coordinated this effort with the simultaneous evaluation of the Filter Building and filter cells at the City's Walnut Creek WWTP.</p> <p>The SARWWTP Filter Building was constructed as part of the Train B expansion, completed in 1988. The Filter Building houses 12 single-media, intermittently backwashed deep bend sand filters. The existing filters are over 30 years old and have not had major rehabilitation since they were constructed. In the early 1990's, the Filter Building flooded and many of the pipe, valves and control devices in the lower levels were submerged. The SARWWTP maintenance staff had performed routine maintenance and some repair but the filters did not maintain an acceptable level of performance.</p> <p>AECOM performed a hydraulic evaluation which determined that the maximum hydraulic flow that can be passed through the Filter Building is 100 MGD if specific water surface elevation criteria are met downstream of the filters, and a process/mechanical evaluation which identified the need for rehabilitation of the existing filters backwashing systems including repairs and/or replacement of existing pipes, valves, pumps, motors, blowers, meters, and electrical and instrumentation equipment, as well as removal and replacement of the filter underdrain system and media. AECOM also evaluated alternative filtration technologies that could be considered in lieu of rehabilitating the existing filters. A Preliminary Engineering Report was prepared with recommendations for retrofitting of the existing filters to reliably meet TCEQ requirements.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2019	\$28M	\$2M



PROJECT NO. 4 *continued*

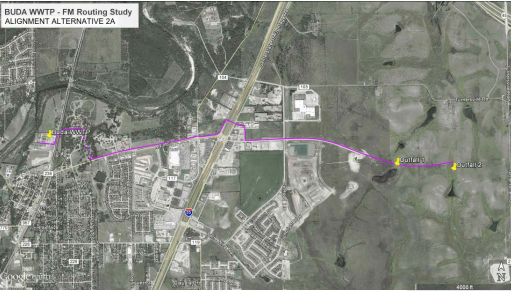

Nature of Firm's Responsibility:

The proposed upgrade includes retrofitting up to six of the existing deep bed filters to rotating cloth media type (disc) filtration units, with four-disc units per filter converted. The refurbished filter system will provide an average hydraulic capacity of 3 MGD per unit, with a total design average filtration capacity of 72 MGD and a peak filtration capacity of 144 MGD with all Disc Filter units in operation, making this installation the largest rotating disk filtration facility in the world.

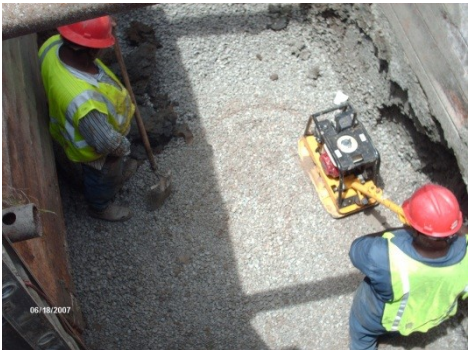
Based on the results of preliminary investigations, AECOM completed the final design of filter improvements at SARWWTP. The proposed upgrade includes retrofitting up to six of the existing deep bed filters to rotating cloth media type (disc) filtration units, with four-disc units per filter converted. The refurbished filter system will provide an average hydraulic capacity of 3 MGD per unit, with a total design average filtration capacity of 72 MGD and a peak filtration capacity of 144 MGD with all Disc Filter units in operation, making this installation the largest rotating disk filtration facility in the world.



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>O'Neal Lane Area Force Main and Gravity Improvements <i>Baton Rouge, LA</i></p> <p>City of Baton Rouge, Department of Public Works Mr. Jim Ferguson 222 St. Louis Street Baton Rouge, LA 70802 225.389.3158</p> <div>   </div> <p><i>AECOM performed a route analysis to assess potential alternate routes for the proposed sewers, as well as new locations within the existing sewer corridors.</i></p>	<p>During the preliminary design phase, AECOM performed a route analysis to assess potential alternate routes for the proposed sewers, as well as new locations within the existing sewer corridors. Alternate routes identified during this process reduced the total length of required sewer upgrades by approximately 10,000 linear feet. The associated construction cost savings are estimated to be approximately \$4 million. The changes are also expected to mitigate potentially significant social and traffic impacts in the affected corridors.</p> <p>Design reports, including preliminary and final plan and profile drawings, evaluation of potential construction methods (i.e.trenchless), identification of design and constructability issues, and identification of right-of-way requirements will be produced for the proposed project routes. AECOM also performed geotechnical and environmental (Phase I ESA) site investigations during preliminary design.</p> <p>The project involved upsizing of gravity main in an area that extends north of Florida Blvd to the Monticello Subdivision and continues south to include the Shenandoah and Old Jefferson areas of East Baton Rouge Parish. The upgrades are developed to alleviate chronic SSOs at pump stations and increase the gravity main capacity. The forcemain upgrades are in an area that extends north of Florida Blvd to the Monticello Subdivision and continues south to include the Shenandoah and Old Jefferson areas of East Baton Rouge Parish. The upgrades are developed to alleviate chronic SSOs at the pump stations and increase the forcemain capacity.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2013	\$2.9M	\$2.9M


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>City of Buda WWTP Phase III Effluent Force Main Buda, TX</p> <p>City of Buda John Nett, PE, CFM 512.523.1025 JNett@ci.buda.tx.us 405 E. Loop St., Bldg. 100, Buda, TX 78610</p>   <p><i>AECOM performed desktop hydraulic and treatment process modeling, and assisted the WWTP operators in conducting full scale 24-hour stress testing of the existing facilities.</i></p>	<p>The City of Buda WWTP is going through the Phase III expansion, which will increase the design capacity from 1.75 MGD to 3.5 MGD. As part of the Phase III expansion project, the effluent force main preliminary engineering scope originally involved a second parallel force main along the existing force main alignment, from the expanded effluent pump station to the existing outfall location. However, preliminary TCEQ modeling of the downstream receiving water body precluded the existing outfall as a viable alternative for discharge of 3 MGD or greater effluent flow.</p> <p>Several outfall location alternatives as well as routing alternatives of the proposed force main were investigated. Eventually an outfall location in the Sunfield development tract along the future alignment of Main St. east of IH-35 was selected, and the force main route was finalized.</p> <p>A total of four principal pipeline alignment alternatives was evaluated for this routing study. PVC, ductile iron pipe (DIP) and high-density polyethylene (HDPE) were considered for piping material. PVC pipe with ductile iron valves and fittings was recommended).</p> <p>The selected alignment consists of approximately 20,000 feet of 24-inch PVC DR-18 pipe. The pipeline will cross IH-35 near the downtown area of the City of Buda. The proposed pipeline assignment includes City and TXDOT ROW, park land, and easements through private property. Trenchless construction will be used for the perpendicular crossing of IH-35 (a 450 feet segment) in compliance with TxDOT utility requirements, and for crossing under the Union Pacific Railroad ROW. Final Design was completed in 2020. Approximately 750 LF of the proposed force main within City ROW was constructed in 2021 as part of the Main Street Reconstruction CIP project.</p> <p>AECOM furnished separate construction plans and performed construction phase services. Construction of the remaining 19,250 LF is anticipated in 2022 following easement acquisition by the City of Buda.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2020	\$4.7M	\$1M

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>10th Street and Maria Street Lift Station Rehabilitation Kenner, LA</p> <p>City of Kenner Joanna L. Massony, Director 1610 Rev. Richard Wilson Dr. Kenner, LA 70662 504.468.7292</p>  <p><i>This rehabilitation included the replacement of the pumps, motors, valves, and control systems, as well as the addition of an emergency generator.</i></p>	<p>AECOM was contracted with the City of Kenner to provide design, bidding, and construction management services for the rehabilitation of the sewage pump station at 10th Street and Maria Street. This rehabilitation included the replacement of the pumps, motors, valves, and control systems, as well as the addition of an emergency generator. This is a major pump station in an extremely close proximity to the Louis Armstrong Airport in Kenner and bypass pumping had to be considered to keep the system operating during construction. Other considerations included the limited space near the station to provide the emergency generator, security fencing, and designing the rehabilitation so that the existing structure could accommodate the improvements.</p> <p>Specific project tasks include the following:</p> <p>Collection of Data: AECOM visited the site to inventory existing facilities including piping, pumps, motors, and other equipment</p> <p>Evaluation of the Existing Conditions: Based on the data collected, AECOM analyzed the existing sewage system to determine the most effective way to provide a new sewer pumping station with minimum interruption to existing service. AECOM worked with the City of Kenner to recommend the best use of the existing 10th and Maria station facilities and equipment in order to minimize construction costs.</p> <p>Detailed Design Calculations: AECOM calculated the system curve for the existing 7,500 ft. discharge pipeline from the existing pump station so that new pumps could be accommodated with the existing forcemain. The electrical system of the station, including pump startup requirements, was analyzed to determine required generator capacity.</p> <p>Final Plans and Specifications: AECOM prepared final plans and specifications for the rehabilitation of the 10th and Maria sewer station, and it is currently scheduled for bid. URS is currently preparing plans and specifications for construction of the sewer pumping station at 27th and Salem.</p> <p>Bidding and Construction: AECOM provided engineering during bidding and construction, including assisting the City of Kenner in preparing bid documents, responding to contractors, and issuing addendums during construction. AECOM was present for pre-construction meeting, site visits, project closeout, and the preparation of record drawings.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2014	\$656K	\$656K

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>Sacramento Regional WWTP EchoWater Wastewater Treatment Elk Grove, CA</p> <p>Vick Kyotani 918.875.9001 8521 Laguna Station Road, Elk Grove, CA 95758</p>   <p>Benefits to Client:</p> <ul style="list-style-type: none"> • Reduction of plant ammonia load, economical and beneficial use of nitrate, elimination of odor issues in collection system • Successful compliance of new effluent limits 	<p>In 2013, the 181 MGD Sacramento Regional WWTP initiated a 10-year, \$2 billion improvements project called EchoWater Program. As a subconsultant to Carollo, AECOM played a major engineering and design role on three of the four main projects of the program:</p> <p>(1) Nitrifying sidestream treatment (2) Tertiary treatment facilities, and (3) Heavy Equipment Maintenance Building relocation.</p> <p>Nitrifying Sidestream Treatment: This process will produce nitrates from ammonia-laden process water to be used for collection system odor control, saving the utility \$2M per year. AECOM performed overall process design and detailed design of the nitrifying sequencing batch reactors (NSBRs), and structural/ architectural design services.</p> <p>Tertiary Treatment Facilities: New tertiary filtration and disinfection processes will be added for pathogen removal to California Title 22 before May 2023. AECOM established the chlorine dosage and contact time criteria, designed the 343 MGD filter influent pump station (expandable to 626 MGD), 330 MGD disinfection contact basins, three reclaimed water distribution pump stations with a combined capacity of 30 MGD, water chemical feed facilities, electrical and control buildings, as well as structural and architectural services.</p> <p>AECOM designed the new HEMB facilities on a green field site, and the existing building will be demolished to accommodate the tertiary treatment facilities.</p> <p>All three projects utilized state of the art design tools such as computational fluid dynamics (CFD) simulation, Revit 3D model, etc.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2018	\$300M	\$1.6M

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>FEMA Assistance, Sewerage & Water Board of New Orleans FEMA, New Orleans, LA</p> <p>Mr. Eddie Williams 337.281.5711</p>  <p><i>FEMA retained AECOM to evaluate the water distribution system and prepare a plan for restoring it to its pre-disaster function and capacity.</i></p>	<p>The Sewerage and Water Board of New Orleans (SWBNO) operates the water treatment and distribution system for the City of New Orleans, LA. The water system consists of 1,700-miles of pressure mains varying in diameter from eight to fifty inches, about 89 percent of which (1,500 miles) is located on the East Bank of the Mississippi River. The City had a population of approximately 480,000 prior to Hurricane Katrina in August 2005 with over 400,000 people residing on the East Bank. The water lines are antiquated with over 30 percent aged 100 years or more and another 30 percent ranging in age from 40 to 100 years. Prior to the storm the City's distribution system had unaccounted for losses approximating 60 million gallons per day at a pressure of approximately 70 psi leaving the water treatment plant. This was from a total production averaging about 113 million gallons per day</p> <p>The City lost water pressure on the East Bank in the aftermath of Katrina. Much of the East Bank was flooded for nearly 30 days with peak flooding depths exceeding 30-feet. Although the water plant was operational within a few days, the water distribution system was highly compromised as a result of the disaster. With the City mostly evacuated and only relief workers and some stranded residents left, the water plant was producing 140 million gallons per day at pressures less than 60 psi. Two and a half years after the storm the City still had unaccounted for water losses of 91 million gallons per day with pressure restored to 65 psi serving a population of under 250,000. FEMA retained AECOM to evaluate the water distribution system and prepare a plan for restoring it to its pre-disaster function and capacity.</p> <p>The SWBNO provided AECOM with a computer model of the East Bank water distribution system containing over 12,900 nodes and associated pipes. The model contained all the major distribution lines and was originally prepared as part of a master planning effort prior to Katrina. AECOM collected water meter readings from commercial and residential accounts and obtained treatment plant production records for several months prior to and after Katrina. AECOM was able to calibrate and verify the model to pre-storm conditions for the first half of 2005.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2013	\$1.3M	\$1.3M

Nature of Firm's Responsibility:


The model predicted flows within 2 percent of actual recorded values for the calibration run and within 0.3 percent for the verification run. Additional verification runs for other months showed the model predicted actual consumption within 1 percent of the actual flows. AECOM then applied the calibrated model to the post-Katrina consumption data. Using the pre-storm calibration data, the model predicted that the unaccounted for water in late 2008 was about 90 million gallons per day. This provided an estimate of the extent of the damage the system incurred. However, the pressure in the system was less in late 2008 than it was before the storm (65 psi versus 70 psi pre-disaster). Because loss rates increase with increasing pressure, the actual extent of damages is actually greater than reflected in the model results as the higher pressures present in the system before Katrina would have resulted in even greater losses. Following the work by AECOM, FEMA agreed to pay for the purchase of six mainline flow meters for installation on the major distribution lines leaving the treatment plant and three others strategically placed in the system. The flow meters allow isolation of various parts of the system to permit better modeling of those areas.

Additionally, FEMA authorized the purchase of 2400 leak detectors to permit the SWBNO to locate major and minor leaks throughout the distribution system. AECOM continued to monitor and model the water distribution system for FEMA and the SWBNO, using the data gathered in the field to reflect system repairs and the consumption records to update the model on a regular basis. Pressure is now restored to about 68 psi and unaccounted for water is down to about 85 mgd.

Other services provided on this contract include:

- Inspections for Design and Installation of over 10 miles of water system pipe lines. URS provided PM/CM over the installation of over 10 miles of pipe lines damaged during hurricane Katrina.
- Review of Wastewater Pumping Stations: Reviewed damages to wastewater pumping stations resulting in the replacement of nine stations and repairs to 50 others; new construction cost in excess of \$14 million.
- Water Treatment Plant Improvements: Resulted in FEMA funding \$26 million in repairs to critical facilities at the treatment plant.
- Cathodic Protection System – Documented damage to Cathodic Protection System for water lines and major sewerage force mains, resulting in FEMA funding of repairs.

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>Walnut Creek WWTP Optimization and Facility Plan Austin, TX</p> <p>Austin Water Rebecca Vento, PE 7113 FM 969, Austin, TX 78724 512.972.1455 Rebecca.vento@austintexas.gov</p>  <p><i>AECOM met TPDES effluent limits within borders of current plant and completed the project on time</i></p>	<p>The purpose of the Walnut Creek Wastewater Treatment Plant (WWTP) Optimization and Facility Plan was to assist Austin Water (AW) in developing a plan to optimize current treatment processes, maximize existing and untapped treatment capacity, and identify strategic capacity additions or modifications that optimize site development of the Walnut Creek WWTP property while meeting the environmental, regulatory, social and financial requirements. This Facility Planning accounted for AW's long-range financial plan and Walnut Creek WWTP's current and future place within the community. Improvements were identified to conform to the Texas Pollutant Discharge Elimination System (TPDES) permit and to address anticipated regulations. The Walnut Creek WWTP Optimization and Facility Plan was the ultimate deliverable for this project, which will allow Austin Water to plan for and initiate future improvement projects, as needed.</p> <p>The Walnut Creek WWTP's existing treatment processes include screening, aerated grit removal, primary clarification, flow equalization, aeration, secondary clarification, disinfection with chlorine, tertiary filtration, and dechlorination with sulfur dioxide. The AECOM Team evaluated each of the existing treatment units and defined rehabilitation needs to maximize the capacity of the existing facility.</p> <p>Additionally, AECOM defined future capacity expansion phases and the process units necessary in each phase to accommodate the proposed expansion. The facilities were optimized to meet the hydraulic limitations within the plant as well as to meet future more stringent effluent permit requirements. The recommended improvements included modifications of the influent headworks facilities, which consist of Headworks 1 and Headworks 2, and construction of new facility units including transfer pump station, LE process treatment trains with Westbank process for phosphorus removal, filters, chlorination system, side-stream wet weather treatment trains, and electrical and I/C improvements.</p> <p>The facility Plan resulted in definition of rehabilitation needs for the existing facilities and definition of phased plant expansion to address future plant capacity and process requirements. The first phase of expansion is defined to be a 25 MGD expansion.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2019	\$300M	\$15M

TEC Professional Services Questionnaire

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

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

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

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

Signature:  Print Name: _____

Title: _____ Date: _____

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

Minimum Qualifications

1. Principal who is a licensed, registered professional engineer in Louisiana

Mr. Michael Patorno, PE, PMP is our Principal for this program. Mr. Patorno has more than 38 years of engineering experience specific to Jefferson Parish and has been a licensed Louisiana Civil and Environmental Engineer (#0024197).

2. A professional in charge of the Project who is a licensed, registered professional engineer in Louisiana with a minimum of five years' experience

In addition to Mr. Patorno, our Principal, Mr. Clay Loyless is a registered Louisiana PE (#0028552), with more than 40 years of experience. In addition to Mr. Loyless, we have also included a variety of other engineers with the skillsets required for this program with Louisiana PE's that have more than the five (5) years required minimum experience including our subconsultants' staff engineers. Please reference the resume section for additional information on experience.

3. The persons or firms under consideration shall have one (1) employee who is a licensed, registered professional engineer in the State of Louisiana. A subcontractor may meet this requirement only if the advertised Project involves more than one discipline

AECOM has several individuals that are licensed and registered as professional engineers in the State of Louisiana. Please refer to our organizational chart and resumes for additional staff that meet this criteria.

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

Introduction

AECOM has modelled, designed, managed, and provided quality oversight on numerous sewer, drainage, and canal projects, seven major pumping station projects and hundreds of miles of drainage systems throughout Jefferson Parish and the Metro Area.

AECOM has resided and worked in and with Jefferson Parish since 1965 on a variety of projects as is demonstrated herein. AECOM is a global professional services firm providing integrated design, planning, engineering, environment, program management, and construction management services to a broad range of markets.

AECOM's presence now spans more than 80 countries with the skills of more than 55,000 specialized professionals, including more than 200 employees who work in our Louisiana offices. AECOM currently has about 100 staff that live and support their families within Jefferson Parish. Many of these same staff will be those working on this project. We focus AECOM personnel expertise and experience as needed for projects of all scales, assembling the combination that best suits the individual task and site. We blend global knowledge, local experience, technical excellence, innovation and creativity to offer our clients unparalleled possibilities.

During our 50-plus years in the Jefferson Parish and Greater New Orleans area, we have worked extensively with and in Jefferson Parish on numerous sewer, water, sewer, pumping station, canal, drainage structure, bridge, roadway, floodwall, levee, and building projects.

With our unparalleled global resources, including our strong local presence, AECOM has the ability to provide Jefferson Parish with the necessary expertise and experience no matter what situations arise.

ENR2021

TOP 500 WATER

- 1 Dams and Reservoirs
- 1 Water Treatment Lines
- 2 Water
- 2 Water Supply
- 2 Wastewater Treatment
- 3 Water Treatment, Desalination
- 3 Sewer and Waste

AECOM is continuously ranked as one of the top design firms in the US. In addition to No. 2 in Wastewater Treatment and #3 in Sewer and Waste. These rankings are the best "top down" evidence we can provide of satisfied clients. We'll continue this successful track record working for Jefferson Parish.

AECOM's strength is in the diversity and depth of our team, including a variety of disciplines that can address aspects such as mechanical, electrical and instrumentation, SCADA, structural, geotechnical, and all our professional experience in designing, constructing, and commissioning lift stations.

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

Evaluation Criteria

1. Professional Training and Experience

The AECOM Team will provide a management team that works cost effectively and efficiently to guide and manage our overall team to accomplish required project tasks. A brief paragraph of experience is provided below for each key individual identified in the Organization Chart, and the following Table 1 clearly demonstrates how our AECOM Team far exceeds the Jefferson Parish requirements for this project. Resumes are included as an attachment to this proposal.

Michael Patorno, PE – Principal in Charge

Mr. Patorno has 40 years of experience as a professional engineer in Louisiana and has worked in and managed the Jefferson Parish office of AECOM for more than 25 years. Programs and projects accomplished in Jefferson Parish include planning, designs, program and construction management on water programs as well as alternative delivery programs and permitting up to \$2 billion in project size.

Jennifer Duhe, PE – QA/QC

Ms. Duhe will serve as our lead QA/QC. Ms. Duhe is a civil engineer with 20 years of design experience for civil works and utility transportation projects. Her primary experience is related to civil layout and design of flood protection features, roadway, and subsurface/urban drainage systems.

Clay Loyless, PE – Project Manager

Mr. Loyless will oversee wastewater collection engineering. Mr. Loyless has 42 years of civil engineering experience with design and construction management emphasis in lift stations, water, wastewater and storm water projects. He has designed wastewater and storm water pump stations, sewer force mains, and gravity sewer and drainage collection networks.

Phillip Olivier, PE – Civil/Utility Relocation

Mr. Olivier will lead the civil engineering, utility relocation, and CADD design requirements for AECOM. Mr. Olivier is a civil engineer with over

18 years of design experience and is the CADD Dept. Manager. His primary experience is related to civil layout, sewer, drainage, roadway, river diversion and utilities.

Ryan Koenig, PE–Structural

Mr. Koenig will serve as a structural engineer. Mr. Koenig has worked on all phases of engineering and construction projects: conceptual design, permitting, final design, shop drawing review, field inspection and project and construction management. Mr. Koenig has worked on Louisiana Avenue drainage project in New Orleans.

Bruce Lelong, PE–Structural Engineer

Mr. Lelong will serve as our lead structural engineer. Mr. Lelong's experience encompasses flood protection structures, pumping stations, drainage structures, inland marine structures, navigation locks, port facilities, and industrial structures. He has managed and been the engineer of record of projects as large as \$400 million. He has designed reinforced concrete, steel, and masonry structures; prepared contract plans, specifications and cost estimates; and has extensive experience providing engineering support services during construction, construction management services. Mr. Lelong also is experienced inspecting structures and bridges.

Brent Jones, PE–Structural

Mr. Jones has 14 years of civil and structural engineering experience in the analysis and design of new and existing water treatment and environmental structures, port and marine facilities, floodwalls, industrial facilities and multi-story commercial buildings. Projects in which he has designed have included gravity and lateral load analyses including hydrostatic, wind, and seismic loads as well as the structural design of reinforced and post-tensioned concrete, steel, masonry and deep and shallow foundations. Additionally, Mr. Jones has performed condition assessment surveys, peer reviews, and renovations of existing structures and has experience in preparing construction drawings and specifications, coordinating with State and Local permitting agencies and providing

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

engineering support during construction and construction administration of projects. Previous project clients include New Orleans Sewerage and Water Board (S&WB) - East Bank Wastewater Treatment Plant Improvements Phase 1 & 2, International Boundary and Water Commission (IBWC) - Rehabilitation to Flood Protection at Edinburg Pump Station, and State Agencies in Texas - Shallowford Lift Station Improvements and Temple-Belton Wastewater Treatment Plan Improvements.

Ananth Bukkapatnam, PE: –Geotechnical

Mr. Bukkapatnam has 17 years of field/office experience in geotechnical/civil engineering: performing site supervision, laboratory tests, CPT data analysis, shallow and deep foundation design and analysis, settlement analyses, slope and bank stability analysis, non-destructive testing of foundations, geophysical surveys, thermal conductivity analysis, reviewing topographical surveys, construction oversight and has been an integral part of some diverse projects for AECOM. He has keen interest in leveraging his management and engineering skills for successful project management, client management, budgets/proposal development, specifications and report writing, and developing quality control/quality assessment techniques. Mr. Bukkapatnam was the Design Engineer for the Baton Rouge O'Neal Lane Group B Forcemain and Gravity Sewer Improvement Project. He is also the Design Engineer for the Construction and Rehabilitation of sixteen (16) Pump Stations as part of the O'Neal Lane Project.

Marty Ollinger, PE*–Electrical

Mr. Ollinger will serve as our Sr. electrical engineer. Mr. Ollinger has over 40 years of experience as a consulting electrical engineer. Mr. Ollinger has been responsible for the planning, development and design of electrical power, instrumentation and SCADA systems in large pumping facilities, water and wastewater treatment plants and industrial facilities. Activities included preliminary investigations, scope development, feasibility studies, detailed design drawings, specification development, system coordination, construction estimating, value engineering and recommendations. Additionally, Mr. Ollinger has been involved with the designs of power and control systems presently utilized in

large pumping facilities, semi-conductor, municipal, mining and industrial plants. His design approach is to coordinate with key process operational personnel and develop the process and instrumentation diagrams (P&ID) drawings. The P&ID drawings typically depict all of the major components, instruments and sensors in the treatment facility. These instruments include flow, pressure, level and analytical transmitters. Also, the P&ID drawings indicate the control system architecture and system communication and data gathering.

John Hangen, PE–Electrical

Mr. Hangen will serve as our electrical engineer. Mr. Hangen has over 12 years of experience in the field of electrical and systems engineering at industrial and government facilities, including power distribution, lighting, and controls. He has provided professional 2D and 3D design using AutoCAD R14/2007/2015/LT/ ELEC and MicroStation. He is the Health, Safety, & Environmental as well as the Quality Assurance/Control representative. His areas of Expertise include: P&ID Drawings, Systems Engineering, Electrical Engineering/Design, Piping & Piping Isometrics, Lighting Systems, and Arc Flash Studies.

Shelby Eckols, PE*– Wastewater Collection and Pumping

Mr. Eckols will serve as our Wastewater Collection and Pumping engineer. Mr. Eckols is responsible for the management and quality assurance of water projects in AECOM's Austin office. Shelby has been involved in the design and construction of numerous treatment systems and other water system infrastructure. His extensive engineering experience enables Shelby to provide a unique perspective and thorough understanding of both the design and construction aspects of treatment systems. Shelby's expertise includes conceptual, preliminary, final design, and construction phase services associated with utility, pipeline, tunnel, drainage, and hydraulic projects. He oversees the management of individual projects as well as the supervision of project managers on other projects.

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

Vinoth Manoharan, PE*– Wastewater Treatment Process Design

Mr. Manoharan is a Project Manager - Water/Wastewater at AECOM's Houston office. He has fourteen years of experience in managing and designing water and wastewater treatment plants, sanitary and storm pump stations and waterline projects. His project involvement includes planning and development of conceptual design and preparation of design reports, design drawings, technical specifications, schedules and construction cost estimates. He manages multi-disciplinary design teams and interface with clients, regulators and sub-consultants.

Pavani Silaparasetty, PE*– Wastewater Treatment Process Design

Ms. Silaparsetty is a Registered Professional Engineer in the State of Texas with over ten years of experience in municipal water and wastewater conveyance and treatment plant design and construction support, engineering consulting services investigating technical upgrades, to better operability and reduce the operation cost. In addition to engineering design, gained Project Management experience by assisting Project Managers in developing execution plans, coordinating with various teams to start up a project, track progress, develop proposals for authorization etc.

Al Naomi, PE–Construction Administration

Mr. Naomi will serve as our construction administrator. Mr. Naomi is a civil engineer with 46 years of experience and has served as program and project manager of major flood control, navigation, and coastal restoration projects. He provided construction management services and personnel for the Harahan Pump to the River project, and for SELA projects in Uptown New Orleans. He provided over 40 construction inspections to the USACE for over \$5 billion in construction contracts post-Katrina. Mr. Naomi was the AECOM program manager for over \$2 billion in design work for the USACE contracts. While employed by the USACE he worked closely with Jefferson Parish officials and representatives of East Jefferson Levee District on significant drainage and flood protection projects.

Greg France, PE–Civil

Greg has experience in construction management; levee design, construction and inspection; pump station and floodwall inspection; hydrologic and hydrographic modeling; bridge scour countermeasure design; bridge inspection; and roadway drainage design.

Mervin Tassin–Inspection

Mr. Tassin will conduct inspections. Mr. Tassin is the chief resident project representative for various civil projects of the AECOM New Orleans office conferring directly with the owner, representatives and the contractors.

Eric Walter–CADD

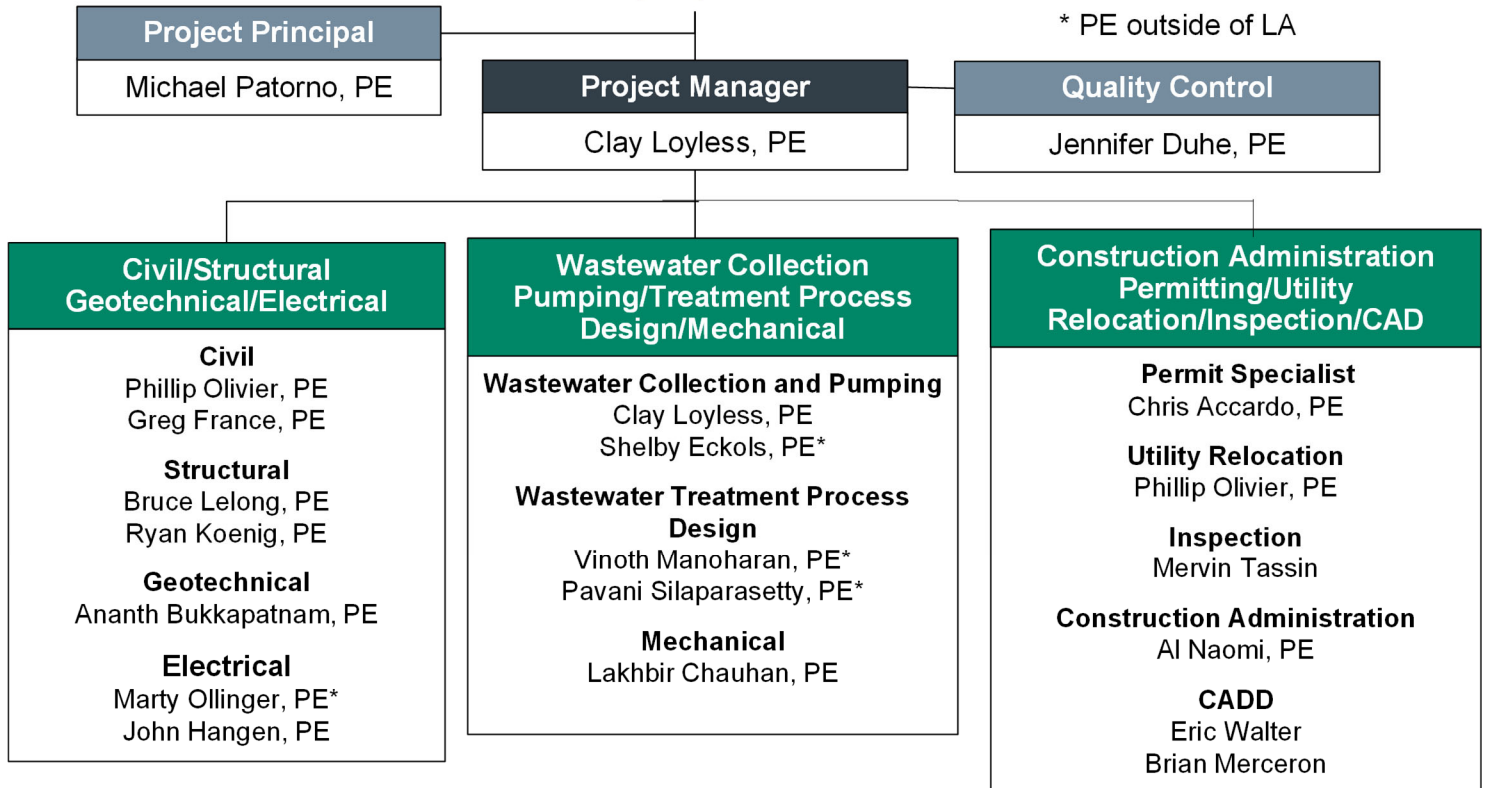
Mr. Walter will serve as our CADD designer. Mr. Walter has 32 years of experience in the Engineering Field as a Drafter/Designer. His experience includes troubleshooting structural related problems between engineering design and construction. Mr. Walter was involved in field work including inspection of utilities, measurements and photographic documentation for drafting facility plan layouts and structural details. Mr. Walter is proficient in AutoCAD R-13 through R-2011, and is capable of using Civil 3-D, AutoCAD Map 3-D, MicroStation, and Raster CAD, Corpscon, WP, Excel, Power Point and Microsoft Word.

Brian Merceron–CADD

Mr. Merceron has over 38 years of experience as an engineering Technician, Designer and CADD Technician. Mr. Merceron has additionally worked as a field technician with inventorying structures as well monitoring construction and environmental sampling for air quality. Mr. Merceron has also performed detailed quantity take-offs, traffic studies and surveying work. Mr. Merceron is intimately familiar with AutoCAD as well as Bentley Systems drafting programs. He has also performed computer modeling work and mapping projects during his tenor.

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



TEC Professional Services Questionnaire

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Figure 1 below identifies each key individual listed above on an Organization Chart, while Table 1 provides a summary of the qualifications of each team member relative to the minimum Jefferson Parish RFQ requirements for experience.

Table 1 - Key Personnel Qualifications and Experience Based on Jefferson Parish Criteria

Name of Individual	Role in Project	PE License Status	Min. 5 Yrs. LA PE in Discipline	Min. 5 Yrs. PE Expertise	Total Years of Experience	Education
Michael Patorno	Principal-In-Charge	PE (LA) 24197	●	●	40	BSCE
Jennifer Duhe	QA/QC	PE (LA) 31336	●	●	20	BECE
Clay Loyless	Project Manager	PE (LA) 28552	●	●	42	BSCE; MS Envr Engr
Phillip Olivier	Civil Engineer & Utilities	PE (LA) 36348	●	●	18	BSCE
Greg France	Civil	PE (LA) 41249	●	●	11	BSCE
Ryan Koenig	Structural	PE (LA) 31036	●	●	23	BSCE
Bruce Lelong	Structural	PE (LA) 29393	●	●	26	BSCE – Structural
Brent Jones	Civil Engineering	PE (LA) 38935	●	●	14	BSCE; MSCE
Ananth Bukkapatnam	Geotechnical Engineer	PE (LA) 37634	●	●	17	MSCE; BSCE
Marty Ollinger	Electrical Engineering	PE (GA) 31748	●	●	40	BSEE
John Hangen	Electrical Engineering	PE (LA) 40653	●	●	12	BSEE
Shelby Eckols	Wastewater Water Collection/Pumping	PE(TX) 41485		●	37	BSCE
Vinoth Manoharan	Wastewater Treatment Process Design	PE (TX) 105070		●	15	BS, Chemical; MSEE
Pavani Silaparasetty	Wastewater Treatment Process Design	PE (TX) 114559		●	13	MSEE; BSCE
Al Naomi	Construction Administration	PE (LA) 15264	●	●	46	BSCE; MSCE
Lakshbir Chauhan	Mechanical	PE (LA) .16530	●	●	42	MSc, Rotodynamic Machines BSc, Mechanical Engineering
Chris Accardo	Permit Specialist	PE (LA) 21574	●	●	36	MS, Eng. Mgmt. BSCE
Mervin Tassin	Resident Inspector				37	DOTD CERTS
Eric Walter	CADD				32	AS
Brian Merceron	CADD				38	AS

TEC Professional Services Questionnaire

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2. Additional Capacity

Considering the factors of engineering tasks required for the project, current unfinished workload, the firm's available professional and support personnel, AECOM has the personnel, communication systems, and equipment to perform the work in accordance with the Parish's schedule. AECOM has historically performed on schedule, within budget, and produced quality technical projects for Jefferson Parish, the City of New Orleans, USACE New Orleans District, and other local clients. AECOM's large size as a consultancy allows the firm to provide virtually unlimited resources to any project we are selected to perform. Our local workload currently in water and wastewater engineering and construction is moderate - so many of our key personnel resources are available to immediately work on the rehabilitation of a lift station for Jefferson Parish.

AECOM has developed a highly capable and experienced wastewater conveyance planning, design and construction team to perform as proposed in this section of the SOQ and as summarized in the Organization Chart and Table 1 Key Personnel Qualifications and Experience. This team is available currently to Jefferson Parish to conduct the project upon notice to proceed and will not be substituted without permission of Jefferson Parish officials. Many of the personnel selected for this team are the same team members who have allowed AECOM as an organization to successfully complete several sewerage related projects in Jefferson Parish and surrounding parishes in Louisiana.

Communications Systems



AECOM offices and personnel have the resources for instant communications with clients utilizing our extensive local and national networks through our telephone systems, e-mail, video configuration for sites, and/or courier. The rapid

transfer of data, text, and graphic information from office to office and to our clients is easily achieved, effective, and critically important to the production of quality work within stringent time and budgetary constraints.

Computer Equipment and CADD Systems

The project at heart is a detailed design project, requiring delivery of drawings and technical specifications as key client deliverables. To perform design at state-of-the-art levels, AECOM maintains multiple in-house computer systems which support a variety of applications. Our CADD applications include MicroStation and AutoCAD. AECOM supports the following CADD formats: SIF, ISIF, IGES, IGDS and GeoMedia. AECOM also uses various add-on CADD applications including Inroads, InXpress, Softdesk software, and Eaglepoint software and is well versed in the use of TIN data, LIDAR generated contour maps and Oracle software.

AECOM manages internal IT resources with a Wide Area Network (WAN) linking AECOM offices globally and to individual Local Area Networks (LAN) in each office serviced by Windows 7 operating systems. Our office has multiple links to the internet with appropriate firewalls, anti-spam filters, and web filtering for security, that allow direct access to the internet for research from the desktops of each of our engineering staff. We also have a corporate wide Microsoft Outlook E-Mail system with a gateway to the internet. These systems operate and are contained in our Louisiana Offices and in other Gulf Coast Offices and can be accessed for the project as required.

AECOM also houses an Oracle database server designed to handle multiple requests from the local CADD/GIS support staff as well as the Web community (including availability for clients and subconsultants to directly access ongoing project works) working on projects concurrently with AECOM.

TEC Professional Services Questionnaire

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AECOM also has high speed computers on the desks of each staff member with the appropriate software, RAM and Disk Space required. For specific advanced modeling projects and drafting, AECOM maintains in-house high-end computers able to handle the most sophisticated software. AECOM also maintains the following:

- Multiple HP 1055 CM Plotters
- Multiple HP 5500DN Color Printers
- Standard Color and Black and White Printers
- HP Network Attached Storage (1 Terabyte Memory)

In addition to AutoCAD and MicroStation CADD software and all of the standard Microsoft desktop software AECOM maintains in-house, AECOM also maintains the following GIS capability:

- ESRI ArcView
- ESRI Adriano
- ESRI ArcView
- ESRI ArcIMS
- ESRI ArcSDE
- ESRI ArcPad
- ESRI ArcGIS Spatial Analyst
- ESRI ArcGIS E-D Analyst
- Oracle *I Database
- GeoMedia Pro
- GeoMedia WebMap

With broad web connectivity available as summarized above, AECOM can assuredly perform projects from a local project office located near to the client offices, which are proposed herein.

3. Location of Principal Office

The location of the principal office for these services will be our New Orleans office located at 1555 Poydras St., Suite 1200, New Orleans, LA 70112

4. Adversarial Legal Proceedings

AECOM is not involved in any litigation against Jefferson Parish.

5. Prior Successful Project Completion

Primary projects which represent similar and/or relevant experience selected for presentation in this SOQ, with references who can be contacted for verification, include those in the TEC Questionnaire, as well as those in the figure below.

AECOM offers the following list of local client references who may attest to the value and service offered by AECOM over a wide range of engineering design and construction projects, over more than 50 years of service to the local communities. In addition, please see the list of references for our affiliated team partners in their attached SOQ submittals.

Client References

Prior successful completed projects selected for presentation in this SOQ, with references who can be contacted for verification, include those in **Section 3, Projects.**

AECOM offers client references (see section 3, projects) who may attest to the value and service offered by AECOM over a wide range of engineering design and construction projects with over 50 years of service to the local communities.

TEC Professional Services Questionnaire

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Examples of Team Members Successful Experience in Sewer, Water and Drainage Projects in Jefferson Parish by the AECOM Team



- Jefferson Parish Emergency Generator at East Bank WWTP
- West Bank Sewerage Facility Plan, I/I Analysis and Sanitary Sewer Evaluation Study
- Zone II (Marrero) Lift Station Facilities
- Zone V (Council District 5) Lift Station Facilities
- Bridge City Sewer Mini-Systems
- Jefferson Parish West Bank Treatment Plant Upgrade
- Drainage Master Plan West Bank Jefferson Parish
- Avondale Wastewater Treatment Plant
- East Bank River Ridge / Harahan Mini Systems Improvements
- West Bank Zone II Marrero Mini Systems Improvements
- City of Kenner WWTP Nos. 1 and 2 Improvements
- Jean Lafitte Wastewater Treatment Plant
- City of Gretna Wastewater Treatment Plant Rehabilitation
- New Estelle Drainage Pump Station
- Westminster/Lincolnshire Drainage Pump Station
- Old Estelle Pumping Station
- Elmwood Pump Station
- Whitney/Barataria Pump Station
- Swift / Canal "A" Drainage Improvements
- Swift Canal Phases I and II Drainage Improvements
- Avenue D Drainage Basin Improvements Phases I, II, III and IV
- Avenue B Drainage Basin Improvements
- Elmwood Canal Bridge Crossing at Kawanee Avenue

Other Examples of Our Success on Louisiana and Gulf Coast Public Works Contracts



- City of Gretna Water Plant Improvements
- City of New Orleans Water Plant Upgrades
- City of New Orleans Water Distribution System Repairs
- City of New Orleans Water System Model
- St. John Parish Water Plant System Improvements
- St. John Parish Water Plan Model
- St. James Parish Water Plant Upgrades
- Baton Rouge Metro, Sewerage/Drainage Tunnel Program
- City of Baton Rouge Water Pumping Station
- St. John Parish Regional Wastewater Treatment Plant
- St. John Parish Wastewater Master Planning
- Town of Reserve Sewer Collection System Repairs
- City of Kenner WWTP Sludge Pumping Station
- City of Kenner Lift Station Programs
- City of New Orleans Lift Station Upgrades System Wide
- City of New Orleans Water Treatment Plant Upgrades
- City of New Orleans 15 MW Generator Backup Water Plant
- City of New Orleans Wastewater Treatment Plant Upgrades
- Interim Pump Stations for London Avenue and Orleans Avenue following Hurricane Katrina
- Dwyer Road Drainage Pumping Station
- Pumping Station No. 6 (17th Street Canal) Fronting Protection
- Algiers Canal Levee and Floodgates

TEC Professional Services Questionnaire

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QUALITY ASSURANCE



Quality Assurance and Safety



AECOM offers Jefferson Parish name a proven Quality Management System (QMS) that is certified to the internationally renowned ISO 9001:2015 standard yet is sufficiently flexible to address

the specific requirements of this project. Quality management is central to our project management approach, and our project team includes individuals assigned to specific quality roles under our system. The general components of AECOM's approach to project quality management, and the parties responsible for them, are depicted below.

Initiating Quality. Quality begins with AECOM's understanding of your project goals and objectives, emphasizing communication with Jefferson Parish and a thorough review of project inputs. Assigning technically qualified and experienced personnel to produce and review the work is an important next step. Our initial planning and scheduling activities, including defining the various project work tasks and associated quality activities, are foundational to a successful project.

Producing Quality. AECOM requires a project plan on all projects to define key parameters and guide the work of the team. The plan is discussed at the project team kickoff meeting and updated as needed to inform the team of new developments. As work proceeds, a number of critical technical activities are undertaken, including:

- Proper application of codes, standards and design criteria
- Ongoing oversight and supervision for accuracy and completeness as work proceeds
- Distribution of in-progress documents at defined intervals for quality review
- Coordination among disciplines

- Verification of compatibility and consistency among document types, such as drawings and specifications
- Resolution and closure of in-progress review comments

Confirming Quality. While it is important to build quality into the work as it is performed, formal checking and review are critical QMS activities. Quality checking activities, which are all documented with two-level approvals, include

- *Checking calculations* to verify correctness and completeness of mathematics, methodology, selection of software, application of standards and codes, and general approach.
- *Checking drawings* within each discipline to confirm design layout, dimensions and details. Potential interferences, conflicts and interface issues are resolved through interdisciplinary reviews.
- *Checking specifications* for content and application, as well as compliance with the prescribed format, and for consistency throughout the specifications.
- *Checking studies/reports* for content, logic, clarity and soundness of recommendations, as well as grammar, punctuation and format.

Delivering Quality. All deliverables undergo a final verification check before they are submitted. A lead verifier evaluates the deliverable for completeness and consistency, adherence to quality requirements, and resolution of comments. The lead verifier then signs a Technical Quality Review Record and transmits it to our project manager, who is then responsible for the final overlook, approval and submittal. This final independent evaluation assesses the submittal's state of readiness, without diminishing the project manager's accountability for the quality of the work being released. As a check-and-balance activity, this review pairing helps AECOM consistently deliver quality and value to our clients.

TEC Professional Services Questionnaire

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Improving Quality. A key component of AECOM's quality program and ISO 9001 is continuous improvement. We learn from our experiences and apply those lessons to future work through a formal, iterative process. The true focus of this process is to generate client satisfaction, one of AECOM's core values.

What does this mean to Jefferson Parish?

AECOM will bring a world-class QMS which sets forth the policies and procedures in maintaining quality while identifying areas of continual improvement. It means that AECOM consistently applies a set of quality and safety practices throughout the company, regardless of where work is performed or managed.

The AECOM team's QMS is a powerful yet very friendly union of the industry's best QA/QC planning, control, and documentation practices. Planning and controlling standards for quality are fundamental in not only the Construction Phase of a project but in the Planning and Design Phases as well. Quality is not naturally inherent in all projects; it is the result of good planning, a team effort, and an understanding by all the team members as to how quality is achieved.

Accurate Cost Estimates

It is essential that the Jefferson Parish Department of Water is provided with accurate capital and operating cost estimates, as early as possible. "Surprise budget increases" are a sure way to significantly delay the implementation of the project or reduce its expected scope and reliability. AECOM pays close attention to costs from the outset and builds detailed and accurate cost estimates early in the work that are continually refined as the project proceeds. We are proud of our track record in this area where overall budgets are identified at an early stage and the project constructed within those budgets.

AECOM approaches each cost estimate from several directions:

- For capital cost estimates, detailed bills of quantities are prepared with unit rates supported from recent similar projects and/or supplier quotations. The resulting estimates are compared against similar AECOM projects and often, we also solicit input from

contractors to vet and advise on the estimates as a further accuracy check.

- Operating costs are also developed from first principles with detailed estimates of the component labor, power, chemical and other consumable costs. Operating costs are also compared with data drawn from similar utilities who are members of a Water and Wastewater Benchmarking program that has been managed by AECOM for almost 20 years.

We are proud of our track record in this area where overall budgets are identified at an early stage and the projects constructed within those budgets. This was especially true in the 1998 2009 Jefferson Parish Bond Program, where tight monitoring of the budget provided an additional \$6.5M in extra projects for the Parish.

6. Size of Firm - Professional and Support Personnel

AECOM has a current local Louisiana staff over 150 engineers, planners, environmental scientists and support staff, as detailed in Section E Personnel by Discipline of this SOQ. Nationally, AECOM has a staff of over 50,000 from which to draw unequalled expertise and experience in lift stations and wastewater treatment systems and upgrades.

7. Past Performance on Parish Contracts

AECOM has an extensive list of prior projects for sewer projects including those listed in **Section 3 — Projects** of this Statement of Qualifications. We also have a long history and hundreds of projects conducted for Jefferson Parish government or for private sector or government clients located in Jefferson Parish, over a period of more than 50 years. The prior projects were all successfully completed, and typically on time and within budget.

AECOM has more than adequate staff to provide this project with experienced water planners, process, chemical, civil, geotechnical, sanitary, mechanical, hydrologic, hydraulic, electrical, and structural engineers with expertise in all aspects of lift stations and wastewater, conveyance design and construction.

About AECOM

AECOM is the world's trusted infrastructure consulting firm, delivering professional services throughout the project lifecycle – from planning, design and engineering to program and construction management. On projects spanning transportation, buildings, water, new energy and the environment, our public- and private-sector clients trust us to solve their most complex challenges. Our teams are driven by a common purpose to deliver a better world through our unrivaled technical expertise and innovation, a culture of equity, diversity and inclusion, and a commitment to environmental, social and governance priorities. AECOM is a *Fortune 500* firm and its Professional Services business had revenue of \$13.3 billion in fiscal year 2021. See how we are delivering sustainable legacies for generations to come at aecom.com and [@AECOM](https://twitter.com/AECOM).