



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



March 25, 2022

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

RE: Routine Engineering Services for Sewer Projects in Jefferson Parish - Resolution No. 138812

Dear Selection Committee:

Ardurra Group, Inc. is excited to submit this statement of qualifications in response to the above referenced Request for Qualifications. As you evaluate the submittals, please keep the following key advantages of Ardurra in mind:

We Know and Understand Jefferson Parish. Ardurra has completed more than 20 projects for Jefferson Parish, dating back to the 1980s. Recent projects include drainage improvements to Bonnabel Canal, Hoey's Pump to the River Economic Study, Jefferson Parish West Esplanade Avenue Crossing of Elmwood Canal, and various design projects within the Parish's Drainage CIP. Ardurra is a known quantity to Jefferson Parish and has proven to be an excellent steward of the public trust.

100% Local Staff. Ardurra is headquartered within Jefferson Parish in Metairie, just minutes from Parish offices and facilities. Key proposed project personnel are local and boast a career focused on water, wastewater, drainage and streets in the greater New Orleans area. 100% of the work will be performed in Ardurra's Metairie office.

On Target Experience. With 44 years of experience in engineering assessments, design, construction, and program management in the greater New Orleans area, we know the myriad of issues that are involved with executing design and construction services as they relate to the local authorities, US Army Corps of Engineers (USACE) and FEMA. Since 1994, Ardurra has served as program manager for the SELA urban drainage program. This work includes serving as Jefferson Parish's representative in the development and execution of engineering and construction contracts; meetings with USACE, CPRA, utility companies and private landowners; and development, implementation and execution of the Parish's annual Drainage CIP budgets and schedules.

We trust that the enclosed qualification package clearly communicates the Ardurra team's qualifications as they relate to your program. Should you have any questions or concerns, please contact us at 504.454.3866.

Sincerely,



Joseph Becker, PE
Client Service Manager

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:

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

B. Firm Name & Address:

**ARDURRA Group, Inc.
3012 26th Street
Metairie, Louisiana 70002**



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

Ann Springston Shires, PE
Principal-in-Charge Ardurra
Group, Inc.
504-454-3866
aspringston@ardurra.com

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

Ann Springston Shires, PE
Principal-in-Charge Ardurra
Group, Inc.
504-454-3866
aspringston@ardurra.com

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

<u>204</u> Administrative	<u>7</u> Estimators	<u> </u> Specification Writers
<u>16</u> Architects (Licensed)	<u> </u> Geologists	<u>12</u> Structural Engineers
<u> </u> Chemical Engineers	<u> </u> Geotechnical Engineers	<u>68</u> Graduate Engineers
<u>194</u> Civil Engineers	<u> </u> Interior Designers	<u>81</u> Project Managers
<u>104</u> Construction Inspectors	<u>6</u> Landscape Architects	<u>18</u> Clerical
<u>4</u> Ecologists	<u>95</u> Land Surveyor	<u> </u> Grant/Funding Specialist
<u>2</u> Electrical Engineers	<u>2</u> Mechanical Engineers	<u>43</u> Sanitary Engineers
<u>8</u> Engineer Intern	<u>18</u> Environmental Engineers	
<u>45</u> Professional Land Surveyors		<u>927</u> TOTAL

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

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

TEC Professional Services Questionnaire

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

1. N/A

2.

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. N/A		
2.		
3.		

J. Please specify the total number of support personnel that may assist in the completion of this Project:
We can specify this number when we learn the size and scope of the project.

TEC Professional Services Questionnaire

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

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Ann Springston Shires, PE
Principal-in-Charge

Project Assignment:

Principal-in-Charge

Name of Firm with which associated:

ARDURRA Group, Inc.

Years' experience with this Firm:

29 (39 years total)

Education: Degree(s)/Year/Specialization:

Bachelor of Science / 1982 / Civil Engineering

Active registration: Year first registered/discipline:

1992 / Professional, Civil, Environmental Engineer Louisiana
2008 / Civil Engineer Texas
2015 / Professional Engineer New York
2019 / Professional Engineer Florida

Other experience and qualifications relevant to the proposed Project:

Ann has 39 years of experience in civil engineering planning and design throughout Louisiana, with a focus on open channel hydraulics, pipeline hydraulics, hydrologic analyses, computer modeling and pump stations. Relevant experience includes:

Sewerage & Water Board of New Orleans Urban Flood Control Project, New Orleans, LA. Ann served as the hydraulics engineer for this project which included upgrading an existing SWMM computer model, processing drainage improvements and making improvement recommendations. Ann was also responsible for project scheduling; coordination with the owner and the US Army Corps of Engineers; development of the Orleans Parish Feasibility Study; field data collection for structure inventory and hydrologic modeling; hydraulic modeling; report design plates and hydraulic write-up; development of GIS based overflow maps using the SWMM model results to aide in cost-benefit analyses; review of FEMA repetitive flood damage and rate structure information.

Big Island Mining and Atchafalaya Sediment Delivery Projects. Ann served as hydraulic engineer for this project which included setting up a FASTTABS finite element computer model and processing alternate channel

TEC Professional Services Questionnaire

alignments to determine which alignment best diverted flows and sediment for marsh creation.

St. Charles Parish East Bank Master Drainage Plan, St. Charles Parish, LA. For four years Ann served as project engineer for this project with a study area of more than 7,000 acres. Her responsibilities included coordination of topographic mapping with subcontract photogrammetric mapping services, field data collection, hydrologic and hydraulic analyses using the HEC-1 and HEC-2 and final recommendations for drainage improvements. She developed the final master drainage plan which outlined modeling efforts, existing conditions, recommended improvements, and GIS based flood overflow maps for existing and improved conditions for the 10, 50, and 100-year storms. She subsequently provided expanded data from this study for the FEMA Hazard Mitigation Grant Program for project funding.

Ann performed hydraulic analyses to indicate impact to existing drainage from proposed subdivision installations and impact of installation of new pumps at pump stations in St. Charles Parish and acted as project manager during construction of these subdivisions.

US Army Corps of Engineers SELA Project, Hydraulic Analyses and Improvements to Canal Systems in Jefferson and Orleans Parish, LA. This project reconstructs the open canal system by means of concrete flumes and trapezoidal sections and reconstructs multiple bridge crossings. Ann utilized HEC-18 and WSPRO to determine the effects of roadway and utility crossings and canal intersections.

Southeast Louisiana Drainage Project, New Orleans, LA. Ann served as program manager for this \$460M program. She was responsible for the coordination of construction and design contracts as well as maintaining a public information program. The project involved a 30-minute television program, "Underground Rivers", which aired on PBS and traced the history and future of drainage in the City of New Orleans.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
<p>Joseph Becker, PE Client Service Manager (CSM)</p>
Project Assignment:
<p>Quality Assurance/Quality Control (QA/QC)</p>
Name of Firm with which associated:
<p><i>ARDURRA Group, Inc.</i></p>
Years' experience with this Firm:
<p>3 (34 Total)</p>
Education: Degree(s)/Year/Specialization:
<p>Management Development / 1995 Bachelor of Science / 1985 / Civil Engineering</p>
Active registration: Year first registered/discipline:
<p>1982 / Professional Civil Engineer Louisiana</p>
Other experience and qualifications relevant to the proposed Project:
<p>Joseph has 34 years of engineering experience in engineering planning, design, program management, emergency response, disaster recovery and federal consent decree compliance. Joseph worked for the Sewerage and Water Board of New Orleans for over thirty years and was the General Superintendent of the Sewerage and Water Board for his last ten years at the agency.</p> <p>General Superintendent. 2008-2017. As the General Superintendent, Joseph was the Chief Technical Officer for an agency of over 1,100 personnel. His responsibilities included direction, management, and supervision of all aspects of Sewerage and Water Board operations, maintenance and design for sanitary sewer, potable water, storm drainage as well as power generation and distribution. These responsibilities included the Departments of Operations, Engineering, Networks, Facility Maintenance, Environmental Affairs, Emergency Management, Support Services and Plumbing.</p> <p>Sanitary Sewer Consent Decree. 1998-2017. Owner's representative for over 20 years. Intimately involved with Consent Decree negotiations between the Sewerage and Water Board of New Orleans and the Federal Government from 1996 through 1998 and with the compliance to that decree from 1998 through 2017. He was</p>

TEC Professional Services Questionnaire

the Board expert in several areas of both construction and management and played a key role in the development and implementation of the Board's Preventive Maintenance Manual as well as the Emergency Response Manual, both of which are included in the final consent decree. From 1998 through 2017, he was intimately involved in daily consent decree compliance as well as review of quarterly and annual compliance reporting. Through this effort, Joe cultivated a positive relationship with the Department of Justice and the EPA regional offices.

Disaster Recovery. 2005-2017. Extensive experience negotiating with Federal Emergency Management Agency and the state of Louisiana. Assisted in obtaining, and ensuring compliance with all accounting and tracking requirements, over \$2 billion in federal recovery dollars for both the City of New Orleans and the Sewerage and Water Board since the federal levee failures following Hurricane Katrina. Additional similar experience with other federal agencies have assisted in obtaining an additional \$1.5 billion in recovery funds.

SELA Orleans. 2000-2017. Owners' manager and representative to the \$1.4 billion Corps of Engineers South East Louisiana (SELA) program to increase interior drainage capacity in the New Orleans area. This effort included daily monitoring of construction, supervision of design, as well as program coordination with the Corps of Engineers, neighbors, and residents, and petitioning for funding from the federal government in Washington DC.

Department Manager. 1990-2007. From 1987-1999 was responsible for supervision of activities associated with sewer, water and drainpipe repair and appurtenances within the city of New Orleans. Responsible for a staff of over 150 positions, including engineers, clerical staff, and construction crews. Operating and capital budget of over \$10 million annually. From 1999-2007 was responsible for engineering design and submittal review for all sewer, water and Board maintained drainage within the City of New Orleans. This review included any private, city, state or federal project involving utilities in the public right of way within the city of New Orleans. Worked closely with a wide variety of both local and out of state consulting firms, as well as both large and small contractors, to ensure compliance with Board specifications.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Adam Faschan, PhD, PE Civil/Environmental Engineer
Project Assignment:
Senior Civil and Environmental Engineer
Name of Firm with which associated:
ARDURRA Group, Inc.
Years' experience with this Firm:
8 (36 Total)
Education: Degree(s)/Year/Specialization:
PhD / 1992 / Civil & Environmental Engineering Master of Science / 1989 / Civil Engineering Bachelor of Science / 1987 / Civil Engineering
Active registration: Year first registered/discipline:
1993 / Civil and Environmental Engineering 1998 / Professional Engineer Mississippi 2014 / Environmental Engineer Texas 2015 / Professional Engineer New York 2015 / Professional Engineer South Carolina
Other experience and qualifications relevant to the proposed Project:
<p>Adam has 36 years of experience in civil/environmental engineering for public infrastructure projects. He has been responsible for technical assistance and oversight of infrastructure design projects for the largest water and wastewater treatment facilities in Louisiana and Mississippi. Relevant experience includes:</p> <p>Munster Wastewater Treatment Plant Expansion, St. Bernard Parish LA. Adam served as senior technical advisor for this project that included consolidation of all the Parish's facilities to one major plant - a \$60M wastewater consolidation effort funded substantially through FEMA. The consolidation reduces the Parish's long-term operational costs by \$500K annually, reduces staff requirements and minimizes the need to finance improvements through Parish funds. Work included expansion of the Munster WWTP to an average daily capacity of 15 MGD and a peak capacity of 50 MGD. The WWTP expansion consisted of the design of influent and effluent pump station capacity upgrades, new headworks, new aeration basins, two new final clarifiers, RAS/WAS facilities, new digesters, and associated yard piping.</p> <p>Shoreline Protection Emergency Restoration Project, Louisiana Coastal Protection and Restoration Authority (CPRA), LA. Adam served as senior technical advisor for this project that provides protection to areas where marsh vegetation was highly impacted by the Deepwater Horizon oil spill in order to avoid additional irreversible losses and reduce the continuing threat to the natural resources. Adam provided senior technical oversight through a conceptual planning phase, coordinating between numerous agencies, stakeholders and interested parties. Adam provided oversight of the project team through data collection, permitting and final design.</p> <p>Sewer Capital Program Ascension Parish, Louisiana. Adam served as Program Manager for this project. Ongoing as of 2015. As part of an initial \$63 million program to provide centralized wastewater treatment to Ascension Parish, he served on the program management team. Activities included information Document (EID)</p>

TEC Professional Services Questionnaire

for SRF Loan approval, development of standards, specifications and details for collection system, pump station and treatment plant improvements, management of the selection of design consultants, and oversight of design, bidding and construction activities. Initial program includes approximately \$63 million of collection system, force main and pump station improvements and an initial 2.5 MGD secondary treatment plant. Involved in the implementation of the plan including completion of the conceptual design of over a dozen projects and the Environmental Assessments per HUD NEPA requirements. The Environmental Assessments provided were for a variety of water and wastewater infrastructure projects ranging from water storage tanks and wells to wastewater treatment plants. The Environmental Assessments included requirements for the completion of Phase I ESAs and expanded review for wetlands, Native American resources, and surveys for the Gopher Tortoise, due to the characteristics of the project area.

Adam also served as Senior Technical Advisor for the same project. Served on the program management team for this \$63M program to provide centralized wastewater treatment to Ascension Parish. Work included development and implementation of initial centralized collection and treatment system for the Parish. Tasks included:

- Coordination and review of the Preliminary Engineering Report and Environmental Information Document to obtain State Revolving Loan Funding.
- Coordination of State Revolving Loan Requirements
- Development of the centralized collection system network including initial and build out conditions
- Modeling and sizing of the centralized collection system for initial and build out conditions
- Initial WWTP sizing and site layouts based upon various available treatment technologies
- Development of initial standards for WWTP design
- Development of sample specifications and details for implementation of all program elements

St. Bernard Parish Sewer Rehabilitation Program, St. Bernard Parish, Louisiana. Adam served as a program manager to St. Bernard Parish to provide management of its gravity sewer rehabilitation program. Suffering severe impacts from complete submergence during Hurricane Katrina, the Parish's collection system required comprehensive investigation and repair. FEMA funding provided for a wide variety of repairs to the system, dependent on the ability to establish defects as "storm related". After these repairs, the Parish still had extensive rehabilitation needs, particularly to its older concrete gravity mains. Activities included LDEQ SRF Loan Assistance; permitting and compliance assistance; standard specification development; scoping and conceptual design assistance; design of a pilot rehabilitation project; and design, bidding, and construction oversight of design consultants.

Value Engineering Facilitator, Baton Rouge North WWTP, Baton Rouge, Louisiana. Adam provided a value engineering workshop and assessment of a proposed \$63 million rehabilitation and upgrade to the Baton Rouge North WWTP. Major renovations to this 46 MGD trickling filter facility included major site work and electrical upgrades, new preliminary treatment facilities, new splitter boxes, odor control improvements, storage tanks for sludge processing, and disinfection improvements. Through an abbreviated three-day workshop, the Ardurra team was able to develop 24 creative ideas, 12 of which were developed into value engineering proposals. Initial capital savings were estimated at \$25 million, with additional present worth savings of \$3.7 million. The effort greatly assisted the City of Baton Rouge to proceed with the project with their budget limitation of \$45 million.

Dravo Pump Station to Munster WWTP Force Main, St. Bernard Parish, Louisiana. Mr. Faschan served as the lead technical advisor to provide design, bidding, and construction administration services for the replacement of strategic sections of the Dravo force main. The project called for the replacement of five sections of 32-inch diameter steel pipe with high density polyethylene (HDPE) pipe. Because of the proximity to sensitive infrastructure, the installation of the pipe was designed to use the directional drilling method.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Gerald Preau, PE Civil Engineer
Project Assignment:
Senior Civil Engineer
Name of Firm with which associated:
ARDURRA Group, Inc
Years' experience with this Firm:
8 (43 years total)
Education: Degree(s)/Year/Specialization:
Master of Science / 1978 / Civil Engineering Bachelor of Science / 1975 / Civil Engineering
Active registration: Year first registered/discipline:
1980 / Civil & Environmental Engineer Louisiana 1983 / Civil Engineer Alabama
Other experience and qualifications relevant to the proposed Project:
<p>Gerry has 43 years of experience in engineering design and for public works facilities throughout Louisiana. For 15 years, Gerry was employed with the New Orleans S&WB responsible for oversight of all aspects of drainage, sewer, and water projects. He served as program manager for the Southeast Louisiana Urban Flood Control Program and the Sewer System Evaluation and Rehabilitation Program, two of the largest S&WB programs prior to Hurricane Katrina. Relevant experience includes:</p> <p>Sewerage & Water Board, City of New Orleans Department of Public Works Paving Program, New Orleans, LA. Gerry served as program coordinator, responsible for review and/or management of every paving project in Orleans Parish for impact on S&WB facilities. Work included evaluation of existing utilities within project limits and design of utility improvements, which were added to the paving projects under a cost sharing agreement between the S&WB and the City. Gerry was involved in each project from inception/preliminary cost estimates through design, construction, and final closeout. In this capacity, Gerry was instrumental in the development of the 1992 City of New Orleans Department Public Works Standard Specifications for Street Paving.</p>

TEC Professional Services Questionnaire

City of New Orleans Department of Public Works Capital Improvement Program, New Orleans, LA. Gerry was asked to serve as program manager for the City's \$160M capital program, as a result of his extensive experience with the DPW paving program. This included management of design, construction, scheduling, budgeting and coordination with S&WB and other utilities. He was responsible for initial implementation of the City's DBE Participation Policy on a DPW paving project.

Sewerage & Water Board of New Orleans Sewer System Evaluation and Rehabilitation Program, New Orleans, LA. Gerry served as program manager from program inception until 2000. The program involved a citywide sewer system evaluation study; repair of defects noted in the study; development of a computer model to evaluate capacity deficiencies; design and construction of projects to alleviate deficiencies in the sewerage system; development of standards, budgeting, scheduling, controls, and quality assurance. This was the first S&WB program to leverage scheduling and program control tools to track progress.

Sewerage & Water Board of New Orleans Southeast Louisiana Urban Flood Control Program, New Orleans, LA. Gerry served as program manager for this SELA urban flood control program, which was largely funded by the USACE. The \$400M program included development of a computer model of the stormwater drainage system to evaluate areas subjected to repeated flooding from storm water runoff, as well as design and construction of drainage projects to alleviate flooding. Gerry was responsible for all aspects of the program including development of standards, evaluation of the existing drainage system, design, construction, budgeting, and scheduling.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
David Dodgen, PE Civil Engineer
Project Assignment:
Senior Civil Engineer
Name of Firm with which associated:
ARDURRA Group, Inc.
Years' experience with this Firm:
22 (34 Total)
Education: Degree(s)/Year/Specialization:
Bachelor of Science / 1987 / Civil Engineering
Active registration: Year first registered/discipline:
1994 / Civil Engineer Louisiana
Other experience and qualifications relevant to the proposed Project:
<p>David has 34 years of experience in civil infrastructure planning, design, and construction throughout Louisiana. He has focused his career on coastal restoration, flood protection and hydraulic modeling. Relevant experience includes:</p> <p>Expanded Small Scale Physical Model (ESSPM) of Lower Mississippi River, LA. The ESSPM simulates sediment transport and diversions of the Lower Mississippi River and replaces the SSPM that David and Ardurra completed in 2003. The ESSPM is 90-feet by 120-feet and will utilize cutting edge technology as a computer numerically controlled router will cut the model bed into foam panels.</p> <p>Louisiana Master Plan for Hurricane Protection, LA. After Hurricane Katrina, David assisted the Integrated Planning Team of the Coastal Protection and Restoration Authority to develop a Master Plan for hurricane protection integrated with coastal restoration.</p> <p>Atchafalaya River Flows, LA. David prepared a design report and subsequent construction documents to enlarge three natural distributary channels to enhance river sediment flow from the Atchafalaya River into the East Pass Delta Lobe. The design also included extension of the natural distributary channels configured to create three slack water coves in the contiguous shallow waters of Atchafalaya Bay to promote marsh creation.</p>

TEC Professional Services Questionnaire

Mississippi River Diversion Project, LA. David prepared a hydraulic study to examine the feasibility of diverting freshwater from the Mississippi River, overland through the Bonnet Carré Spillway wetlands, for filtration prior to entering Lake Pontchartrain. He developed overland flow scheme, applied hydraulic modeling using HEC-2, prepared cost estimates, developed conceptual design, prepared report, and presented findings to the Technical Group of the Bonnet Carré Steering Committee and the New Orleans District Corps of Engineers.

United States Army Corps of Engineers Hurricane Protection Projects, LA. David prepared design for multiple hurricane protection projects for the Corps under their accelerated program to restore protection to the City of New Orleans by 2011.

Hurricane Andrew East Timbalier Island Breach, LA. Unconfined hydraulic dredging operations were ineffective in repairing the breach of East Timbalier Island. David completed design report and prepared construction documents for closure of the breach with a rock dike to cut off tidal flows so that the dredged material could be placed.

Marvin J. Braud Pumping Station East Ascension Consolidated Drainage Board, LA. David prepared the design for the enlargement of all the bayous within the watershed of the Marvin J. Braud Pumping Station. The project encompassed one-third of the watershed of Ascension Parish.

Salinity Control Structures, LA. David furnished engineering planning and design services for multiple salinity control structures in coastal Louisiana including a sheet pile structure with 60-inch combination flap/slucice gate configuration near Hopedale, and offset rock dikes configured within Grand Bayou to choke tidal interchange.

Ascension Parish Drainage Improvements, LA. David served as technical advisor to the Ascension Parish Planning Commission to review and approve all subdivision, drainage, and development improvements within the Parish. He also prepared technical appeal of revised FEMA flood study and maps.

Sorrento Flood Protection, LA. David prepared the design for five miles of earthen levee to provide flood protection for the Town of Sorrento. The project included multiple drainage structures retrofits in wetland environments including two runs of 60" × 225' long culvert siphons installed by tunneling under ten existing gas pipelines.

Bonnabel Canal Drainage Improvement Project, Jefferson Parish, Louisiana. This project involves planning and design for canal dredging, widening and bank stabilization to improve drainage through the Bonnabel Canal.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
<div style="background-color: #D9E1F2; padding: 5px; border: 1px solid black;"> Mark Arnold, PE Mechanical Engineer </div>
Project Assignment:
<div style="background-color: #D9E1F2; padding: 5px; border: 1px solid black;"> Senior Mechanical Engineer </div>
Name of Firm with which associated:
<div style="background-color: #D9E1F2; padding: 5px; border: 1px solid black;"> ARDURRA Group, Inc. </div>
Years' experience with this Firm:
<div style="background-color: #D9E1F2; padding: 5px; border: 1px solid black;"> 20 (37 Total) </div>
Education: Degree(s)/Year/Specialization:
<div style="background-color: #D9E1F2; padding: 5px; border: 1px solid black;"> Bachelor of Science / 1982 / Mechanical Engineering </div>
Active registration: Year first registered/discipline:
<div style="background-color: #D9E1F2; padding: 5px; border: 1px solid black;"> 1989 / Mechanical & Environmental Engineer Louisiana 2013 / Mechanical Engineer Florida </div>
Other experience and qualifications relevant to the proposed Project:
<p>Mark has 37 years of experience in engineering planning, design, and program management of public works projects with a focus on stormwater pump stations, wastewater pump stations, water purification plants and wastewater treatment plants. Prior to joining Ardurra, Mark was employed for 17 years by the Sewerage and Water Board of New Orleans. Relevant experience includes:</p> <p>Jefferson Parish Sewerage Capital Improvements Program, Jefferson Parish, LA. Mark serves as program manager for the Parish's Sewerage Capital Improvements Program. His responsibilities include management of design and construction schedules to keep projects on track; review of comments submitted by engineers; construction status updates for reporting and scheduling; and overall support to the Dept of Sewerage Director. Mark managed the following Jefferson Parish projects:</p> <ul style="list-style-type: none"> — master design and construction plan for the \$500M parish wide I&I management plan. — master plan for regionalization of future sewage pumping stations and the consolidation of existing redundant sewage pumping stations for the Westbank — design and construction of \$14M five MGD expansion to the Marrero WWTP including rehabilitation of existing headwork's facility and construction of new primary clarifier, secondary clarifier and trickling filter — design and construction of new \$5.5M gravity sewer and water system along Harvey Canal industrial area <p>Sewerage & Water Board of New Orleans East Bank of New Orleans Municipal Water Treatment Plant, New Orleans, LA. Mark was responsible for review and coordination of design plans and specifications for the rehabilitation of a headwork's facility at the East Bank's 120 MGD WWTP. Work included rehabilitation of mechanically raked bar screens, screenings conveying, air diffuser system, grit pumping, washing and removal, valves, and piping.</p>

TEC Professional Services Questionnaire

Sewerage and Water Board of New Orleans Various Projects, New Orleans, LA (1984-2001). Mark was responsible for direction and supervision of the S&WB's mechanical engineering department; preparation and supervision of designs, plans and specifications of water, sewage and drainage pumping stations; review of contract submittals; coordination of projects with consulting engineering firms; administration of construction projects; hydraulic testing of pumps; and preparation of budgets for capital programs. Select projects include:

- preparation and supervision of design and review of technical submittals for the mechanical systems for two new 1,700 GPM sewage pumping stations
- preparation and supervision of design for a facility to dry vacuum truck collected sludge to allow for disposal
- review and coordination of design and specifications for rehabilitation of a trickling filter and construction of a primary and secondary clarifier at Westbank of New Orleans 40 MGD WWTP



TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Ryan Ruiz Resident Inspection/CADD Designer
Project Assignment:
Resident Inspection and CADD Designer
Name of Firm with which associated:
ARDURRA Group, Inc.
Years' experience with this Firm:
8 (24 Total)
Education: Degree(s)/Year/Specialization:
Bachelor of Science / 2006 / Information Technology Associate of Science / 2004 / Computer Network and Security Technology
Active registration: Year first registered/discipline:
N/A
Other experience and qualifications relevant to the proposed Project:
<p>Ryan has 24 years of experience in construction inspection, debris monitoring and database management. He played a key role in Katrina cleanup and debris management efforts responsible for development of procedures, database management, map software training and debris monitoring of commercial and residential areas as well as monitoring at debris drop off locations. Project experience includes:</p> <p>Site Inspector, Bonnabel Canal Drainage Improvement Project, Jefferson Parish, Louisiana. This project involves planning and design for canal dredging, widening and bank stabilization to improve drainage through the Bonnabel Canal.</p> <p>Site Inspector, Lake Hermitage Marsh Creation Project, Plaquemines Parish, Louisiana. Ardurra was selected to furnish engineering planning, design, and construction phases services for this project. Construction Restoration</p> <p>Resident Inspector, Gretna Boat Launch on the Mississippi River Project, Jefferson Parish, Louisiana. Resident Inspector responsible for daily site inspections. Project entails driving pipe piles, concrete pile cap formations, steel girder installations, and electrical component relocation and installations. Work includes issuing daily reports, conduct Davis Bacon payroll interviews, coordinate with Kostmayer Construction on any project operation issues that may deviate from the contract plans and specifications, and review invoices and payment applications.</p>

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
<div style="color: #00a0e3; font-weight: bold;">Hector E. Pena, PE</div> <div style="color: #00a0e3; font-weight: bold;">Civil Engineer</div>
Project Assignment:
Engineering Support
Name of Firm with which associated:
<i>ARDURRA Group, Inc.</i>
Years' experience with this Firm:
6 (8 Total)
Education: Degree(s)/Year/Specialization:
Bachelor of Science / 2014 / Civil Engineering
Active registration: Year first registered/discipline:
2018 / Professional Civil Engineer Texas
Other experience and qualifications relevant to the proposed Project:
<p>South Laredo Wastewater Treatment Plant 6 MGD Expansion, Laredo, TX. Hector was a Project Engineer for management of the construction phase of the 6 to 12 MGD expansion project. He reviewed shop drawing submittals for the process mechanical equipment, contractor's RFI's and requests for change orders. Hector was a Project Engineer in the 12 to 18 MGD plant expansion. He worked on the design of the process mechanical drawings and coordinated with the different disciplines to put together the bid documents for the project. He worked in the development of an engineer's opinion of probable construction cost for the project and assisted in writing the technical specifications for the process mechanical equipment.</p> <p>O.N. Stevens Water Treatment Plant, Corpus Christi, TX. Hector was a Project Engineer in the design phase of the project which included the addition of a new high service pump station and the rehabilitation of an existing high service pump station, replacing the existing pumps and pump control valves. Hector worked in the selection of the new pumps and pump control valves for the two high service pump stations.</p> <p>Six Mile Creek Drainage Improvements SA-43A, Bexar County, TX. Project engineer responsible for the development of the drawing, specifications, opinions of probable construction cost and SW3P for two channel conveyance reaches (CCRs) of the Six Mile Creek. The work was part of a multi-stage project to reconstruct the existing channel to reduce the floodplain in adjacent residential areas and provide for unflooded access across several bridges during the ultimate 1% (100-year) storm.</p> <p>Dos Rios WRC Re-Rating Headworks Improvements and Process Enhancement Phase I, SAWS, San Antonio, TX. Project Engineer for the construction phase of the headworks improvements of the Dos Rios Water Recycling Center. His responsibilities included site visits, attending monthly meetings, preparing meeting agendas and meeting minutes and providing RFI responses.</p>

TEC Professional Services Questionnaire

City of Weslaco Water Treatment Plant Expansion, City of Weslaco, TX. Project Engineer. During the construction phase of this water treatment plant, Hector assisted with the construction documents, shop drawing reviews and RFI responses.

Fort Bend County MUD No. 25 WWTP Nos. 1 and 2 Improvements Project, Sugar Land, Texas.

Mr. Pena was the project manager in the design and construction phase of the rehabilitation project of two wastewater treatment plants for the Municipal Utility District. Mr. Pena developed the process mechanical drawings for the two facilities, and coordinated with the sub-disciplines (electrical, structural and instrumentation) to implement their design into the bid document.

Rehabilitation of Sanitary Sewer for the Lake Forest Subdivision, City of Lake Jackson, Texas. Hector was the project manager for a sanitary sewer rehabilitation project which consisted of replacing approximately 30,000 LF of pipe at two residential subdivisions. The method of replacement was via pipe bursting, and consisted of upsizing the existing pipe infrastructure, rehabilitating, and replacing manholes. Hector developed recommendations based on CCTV inspection and developed plans and technical specifications to bid the project for construction.

Fort Bend County MUD No. 25 Water Network Analysis, Sugar Land, Texas. Hector analyzed and produced a water network analysis as backup for an Alternative Capacity Requirement (ACR) letter and submitted to the TCEQ. The project consisted of updating the district's water model to include proposed development, running the model for normal pressures, peak demand, and fire flows, documenting the water supply and storage facilities, TCEQ criteria, District demand, H2ONet Model, results, and recommendations in a report that served as backup to the request for alternative capacity.

Fort Bend County MUD No. 25 GRP, Sugar Land, Texas. As the District Engineer, Hector prepares, submits, and oversees the District's Groundwater Reduction Plan (GRP). Hector receives monthly well pumpage data and prepares the necessary paperwork for collection of groundwater reduction credits through the district's sale of treated effluent from its wastewater treatment plants to customers near the district. Hector prepares a quarterly tracking report and spreadsheet of the credit availability and use, prepares the annual GRP report and over-conversion credit applications as needed and submits to the Subsidence District.

Fort Bend County MUD No. 25 Water Plant Rehabilitation, Sugar Land, Texas. The district owns and operates four water plants. Hector was the project manager in two separate projects to rehabilitate three of the water plants as part of the district's ongoing maintenance program for existing infrastructure. The project consisted of protective coating rehabilitation on inside and outside of ground storage tanks, hydropneumatic tanks, booster pumps and piping, visually inspecting the inside of the ground storage tanks and making recommendations on spot repairs required to maintain the ground storage tanks structural integrity and maintain the tanks' useful life.

John Hargrove WRF Expansion, City of Pearland, Texas. Hector was a project engineer on the preliminary and final design of the project, which consists of expanding the plant's capacity from 4 MGD average daily flow to 6 MGD. The plant uses sequencing batch reactors (SBR) technology, and his work included doing a study to compare the advantages and disadvantages between expanding the existing SBR capacity and converting to membrane bioreactor (MBR) technology. Hector's responsibilities on this project have also consisted of the design of a new headworks structure, which includes a new step screen, new grit removal system and flow split to the SBR tanks, as well as doing the hydraulic modeling of the whole facility.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
William “Billy” Blackwell Construction Manager
Project Assignment:
Construction Manager
Name of Firm with which associated:
ARDURRA Group, Inc.
Years’ experience with this Firm:
39 (59 Total)
Education: Degree(s)/Year/Specialization:
Multiple CM/I Certifications
Active registration: Year first registered/discipline:
N/A
Other experience and qualifications relevant to the proposed Project:
<p>Billy’s successful career working in both the engineering consulting and construction fields has made him an invaluable team member. He supervises all Ardurra’s construction work and resident inspectors. He is certified as a class IV sewer plant operator with the Louisiana Department of Health & Human Resources, holds a wastewater collection systems class III and water distribution class IV, and is a licensed electrician. Billy has extensive experience in both the design and construction of major drainage pumping stations. He collaborated in the design and supervised the construction of Cousins Pumping Station in Jefferson Parish. Relevant experience includes:</p> <p>Jefferson Parish Replacement and Point Repair of Sewer Mains, Jefferson Parish, LA. This project consisted of the development of specifications and standard plans for construction, to be bid on an annual basis, for the replacement and point repair of sewer mains throughout Jefferson Parish. Billy assisted in development of contract documents and was responsible for coordinating the functions of contractor crews, field inspection personnel and Jefferson Parish Department of Sewerage personnel.</p> <p>Jefferson Parish Sewerage Improvements South New Orleans Subdivision, Jefferson Parish, LA. Billy served as project manager for the construction of 25,000 LF of gravity main sewer line, three lift stations and 4,500 LF of force mains and manholes. Work included restoration of concrete and asphalt roadway, driveways and sidewalks, dewatering, waterline relocations, connecting 9,900 LF of house service liner, and relocation of fire hydrants and miscellaneous hidden infrastructure.</p> <p>Jefferson Parish Manhattan Boulevard Phases I and II, SP No 742-01-41, FAP No. 86199004, Jefferson Parish, LA. Billy was responsible for daily supervision of contractor operations and the inspection and testing for construction of this major four-lane arterial roadway. Work included verification and recording of all pay quantities to LDOTD standards and the preparation and negotiation of change orders.</p>

TEC Professional Services Questionnaire

Jefferson Parish Various Roadway and Bridge Projects, Jefferson Parish, LA. Was responsible for daily supervision of contractor activities and inspection laboratory on roadway and bridge projects in Jefferson Parish. Projects included multi-span bridge structures for Vintage Drive crossing the Duncan Canal and Canal No. 17; type II AASHTO girder structures on Breaux Street crossing Convent Canal and Patriot Street crossing Canal A.

Jefferson Parish Cousins Pumping Station, Jefferson Parish, LA. Billy served as project engineer for the construction of this \$7.3M drainage pumping station. Duties included interpretation of plans and specifications and verification of installation tolerances on mechanical equipment.

Jefferson Parish Westbank and Eastbank Sewerage Mini Systems, Jefferson Parish, LA. Billy was instrumental in the design of these two systems including evaluation of existing sewerage lift stations, I&I investigations and design of new pump and control systems.



TEC Professional Services Questionnaire

L. Work by Firm or Joint-Venture members which best illustrates current qualifications relevant to this Project. Please include any and all work performed for Jefferson Parish. Please attach additional pages if necessary.		
PROJECT NO. 1		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p style="text-align: center;">St. Bernard Parish Sewer Rehabilitation Program</p> <p style="text-align: center;">St. Bernard Parish Department of Public Works 1125 E. St. Bernard Hwy. Chalmette, LA 70043</p> <p style="text-align: center;">Donald Bourgeois 504.236.3877</p>	<p>Ardurra was selected by St. Bernard Parish to provide management of its gravity sewer rehabilitation program. Suffering severe impacts from complete submergence during Hurricane Katrina, the Parish's collection system required comprehensive investigation and repair. FEMA funding provided for a wide variety of repairs to the system, dependent on the ability to establish defects as "storm related". After these repairs, the Parish still has extensive rehabilitation needs, particularly to its older concrete gravity mains. Work includes:</p> <ul style="list-style-type: none"> - LDEQ State Revolving Loan Assistance - Evaluation of Asset Management System - Permitting and Compliance Assistance - Review of Existing Conditions and Standard Specification Development - Scoping & Conceptual Design Assistance - Pilot Rehabilitation Package - Collection System Flow Monitoring & Modeling Design, Bidding and Construction oversight 	
Completion Date (Actual or estimated):	Estimated Cost:	
Ongoing	Entire Project:	Work for which Firm was Responsible:
Ongoing	\$990K	100%

PROJECT NO. 2		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p style="text-align: center;">Judge Perez Sewer Rehabilitation</p> <p style="text-align: center;">St. Bernard Parish Department of Public Works 1125 E. St. Bernard Hwy. Chalmette, LA 70043</p> <p style="text-align: center;">Hillary Nunez 504.278.4317</p>	<p>Ardurra was hired to develop plans and specifications to rehabilitation gravity sewers and force mains along and near Judge Perez Boulevard in St. Bernard Parish. Over 9,000 feet of gravity sewer line 24 inch in diameter and larger and 2,000 feet of 20-inch diameter force main required repair, and replacement, respectively, to prevent potential roadway collapse along this major thoroughfare within the Parish. Ardurra utilized existing CCTV records and defect coding from a recent FEMA funded project to fast track the development of plans and specifications within three (3) months to rehabilitate these lines and replace the existing force main. Replacement of the force main section required expedited survey and coordination with both a gas utility and levee district to establish a route that had the least utility and servitude conflict. Using CIPP lining methods for gravity sewer main repairs and Horizontal Directional Drilling for the force main replacement, Ardurra was able to develop a project that should reduce traffic disruption during construction and expedite the necessary repairs. Ardurra has completed the design of this project to facilitate closing of an LDEQ SRF loan to support its funding.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
2017	Entire Project:	Work for which Firm was Responsible:
2017	\$230M	100%

TEC Professional Services Questionnaire

PROJECT NO. 3		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility	
<p style="text-align: center;">Ascension Parish Sewer Capital Program</p> <p style="text-align: center;">Ascension Parish Government 42077 Churchpoint Road Gonzales, LA 70737</p> <p style="text-align: center;">Ron Savoy 225.450.1340</p>	<p>Arduarra served on the program management team for this \$63M program to provide centralized wastewater treatment to the Parish. As a quickly growing Parish, Ascension Parish has seen a wide variety of methods utilized to address the wastewater treatment needs of its citizens, ranging from small treatment plants for subdivisions, home treatment units and septic systems. The quick development and lack of centralized treatment has resulted in a variety of problems from improperly maintained treatment plants to failing septic systems. The result is a need for a centralized approach to wastewater treatment to address growing threats to the human health and the environment within the Parish. Work includes:</p> <ul style="list-style-type: none"> - Coordination and review of the Preliminary Engineering Report and Environmental Information Document to obtain State Revolving Loan Funds - Coordination of State Revolving Loan Requirements - Development of the centralized collection system network including initial and build-out conditions - Modeling and sizing of the centralized collection system for initial and build- out conditions - Initial WWTP sizing, and site layouts based upon various available treatment technologies - Development of initial standards for WWTP design - Development of sample specifications and details for implementation of all program elements. 	
Completion Date (Actual or estimated)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2015	\$63M	45%

TEC Professional Services Questionnaire

PROJECT NO. 4		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p style="text-align: center;">City of Baton Rouge Value Engineering for North Wastewater Treatment Plant Improvement</p> <p style="text-align: center;">East Baton Rouge Department of Public Works 15202 S. Choctaw Drive Baton Rouge, LA 70819</p> <p style="text-align: center;">Adam Smith 225.389.5623</p>	<p>To address Consent Decree requirements related to SSOs the City contracted with CH2M Hill as its Program Manager to prepare a Program Delivery Plan (PDP). The North WWTP Master Plan Plant Improvements Project was one project to be completed within the overall PDP. Ardurra was hired to perform value engineering services for the 30% design completed by the design engineer for the rehabilitation of this 46 MGD Trickling Filter plant. Items reviewed included:</p> <ul style="list-style-type: none"> — Site Work — Gravity Headworks/Gravity Influent Pump Station — New Preliminary Treatment Facility/Preliminary Treatment Building — Primary Settling Tanks — Primary Effluent and Trickling Filter Splitter Boxes — Odor Control Improvements — Secondary Sludge Storage Tanks/Thickened Sludge Mixing Tank — Sodium Hypochlorate Storage and Feed Equipment 	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2015	\$50M	100 %

TEC Professional Services Questionnaire

PROJECT NO. 5		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Sewerage & Water Board of New Orleans Central Wetlands Unit Wetlands Assimilation Project A-2 Area</p> <p>Sewerage & Water Board of New Orleans 625 St. Joseph Street North New Orleans, LA 70165</p> <p>Felicia Bergeron 504.865.0438</p>	<p>To rebuild wetlands near its existing Eastbank Sewerage Treatment (STP) and enhance hurricane surge protection for this facility, the Sewerage and Water Board of New Orleans (S&WB) initiated a wetlands assimilation project. The assimilation project consists of diverting 2 to 4 MGD on treated effluent from its 90 MGD Eastbank STP to the Central Wetlands. Through the dispersion and assimilation of the remaining nutrients in this discharge, the wetlands in the discharge are anticipated to be restored through enhanced growth and accretion. To allow this discharge to occur, the effluent that currently discharges to the Mississippi River, must be dechlorinated prior to discharge to the wetlands. Ardurra was hired by the S&WB to design the dichlorination facility for this wetland discharge. The facility will provide dichlorination through the use of sulfur dioxide addition to the effluent of the Eastbank STP to be discharged to wetlands in St. Bernard Parish, A2 Project. Multiple challenges were presented by this project including insufficient chlorine contact time on the plant grounds and the desire from the plant operator to have the facility located within the plant fence. The injection point for dichlorination is several thousand feet from the plant fence line. Accordingly, the system was designed to maintain consistent flow in the wetland assimilation force main branched from the main effluent line.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2017	\$64M	100%

TEC Professional Services Questionnaire

PROJECT NO. 6		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>San Jacinto River Authority Woodlands Wastewater Master Plan</p> <p>San Jacinto River Authority 1577 Dam Site Road Conroe, TX 77304</p> <p>Chris Meeks O&M Manager 936.588.3111</p>	<p>Ardurra is part of a team that is assessing the existing service areas for the existing Wastewater Treatment Facilities (WWTFs) No. 1 and No. 2 and identifying options and creative solutions for reconfiguration of the service areas to maximize available treatment capacity. This plan will also determine, based on the SJRA's asset management plan, how best to extend the useful life of the existing components and systems, recommend rehabilitation versus replacement, and formulate a future blueprint for replacement of the systems and facilities, to leverage growth and renewal needs into a comprehensive plan of action, including recommendations for needed capital improvements. This study will include a review of previous reports and studies and incorporate information from the reports and studies into the wastewater system optimization study, as needed. Detailed cost estimates and project descriptions will be developed for capital planning. This study will be a key component to develop the future capacity needs for future development. This project will work closely with the development of the 6th Interim Accounting and be utilized to develop capacity projects for the wastewater collection system and the wastewater treatment facilities. These capacity projects will then be used to develop project costs that will be utilized by the 6th Interim Accounting to determine the capacity fees.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2017	\$200K	70%

PROJECT NO. 7		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>John Hargrove Water Reclamation Facility Wastewater Master Plan</p> <p>City of Pearland 3519 Liberty Drive Pearland, TX 77581</p> <p>Robert Upton Director of Public Works 281.652.1900</p>	<p>Ardurra was selected to provide preliminary engineering services for improvements to this facility. Services included analysis of the service area including determination of the ultimate plant flow; analysis of the existing treatment plant to provide recommendations for improvements and/or replacement of existing equipment and to allow for a phased expansion of treatment capacity from the current average daily (ADF) of 4.0 MGD in accordance with current design standards; regulatory requirements; and end of service life improvements. The service area analysis, in conjunction with expansion criteria developed during the preliminary design phase, determined the proposed phased expansion capacity of 5.0 MGD with an ultimate capacity of 11.0 MGD.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2018	\$1.1M	70%

TEC Professional Services Questionnaire

PROJECT NO. 8		
Project Name, Location and Owner's contact information: Alvin WWTP Optimization Improvements Phase II City of Alvin, TX 1100 W. Highway 6 Alvin, Texas 77511 Brian Smith 281.388.4325	Nature of Firm's Responsibility: Ardurra is responsible for the design, bidding, and construction phase services for the Alvin WWTP Optimization Improvements Phase II Project. The project consists of the replacement of surface aerators with fine bubble diffusers in two aeration basins, installation of a new multi-stage centrifugal blower, installation of one new final clarifier mechanism, replacement of coarse bubble diffusers within the aerated sludge holding tanks, installation of a new belt filter press, construction of a new sludge pump station and construction of a new non-potable water pump station.	
Completion Date (Actual or estimated): 2018	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2018	\$650M	100%
PROJECT NO. 9		
Project Name, Location and Owner's contact information: United Water (Nassau County) Sewer Maintenance Plan United Water of Nassau County 200 Old Country Road Suite 265 Mineola, NY 11501 Benoit Kaeppli 516.390.6454	Nature of Firm's Responsibility: United Water turned to Ardurra to develop its sewer maintenance plan during transition of service from Nassau County. Ardurra provided a review of current activities performed by Nassau County staff including sewer cleaning rates, CCTV activities, and review of hot spot areas including establishing potential causes of the hot spots. GIS data was reviewed to further establish location of problem areas within the collection system. Upon completion of this review, Ardurra developed a sewer maintenance plan to be implemented by United Water and approved by Nassau County upon their assumption of O&M activities for Nassau County. Over 25 new Standard Operating Procedures were provided to formalize and/or improve the current procedures performed for the maintenance of sewer collection system. Key recommendations of the plan included utilizing root control and sonar inspection techniques to increase the effectiveness and reduce the cost of sewer maintenance and investigation activities. Expanded investigation of repetitive maintenance areas were recommended to establish the cause of the repetitive maintenance and develop long-term solutions to reduce repetitive maintenance. The approaches developed are anticipated to reduce annual maintenance costs by several million dollars per year while meeting contract requirements and increasing the level of service to the County.	
Completion Date (Actual or estimated): 2015	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2015	\$120K	100%

TEC Professional Services Questionnaire

PROJECT NO. 10		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>United Water (Nassau County) Infiltration and Inflow Abatement Plan</p> <p>United Water of Nassau County 200 Old Country Road Suite 265 Mineola, NY 11501</p> <p>Benoit Kaeppli 516.390.6454</p>	<p>Ardurra was selected by United Water to provide a comprehensive plan to investigate infiltration and inflow (I/I) in Nassau County sewer collection system. Objectives include targeting locations and causes where excessive I/I exists; assessing collection system condition in association to I/I, sewage blockages and overflows; and providing capital improvements to address capacity limitations through system upgrades or rehab projects to address excessive I/I for a 20-year period. Methodology for the I/I plan includes:</p> <ul style="list-style-type: none"> ▪ Flow Monitoring and Data Collection. ▪ Wastewater Flow Projections. ▪ Assessment of I/I Flows. ▪ Capacity Analysis. ▪ Dependent on the location and degree of RD I/I the following conceptual recommendations will be considered by location: <ul style="list-style-type: none"> - Capacity Improvements that may consist of increased system capacity (relief sewers and/or pump stations, increased line sizes, etc.) - I/I reduction through sewer rehab - comprehensive SSES evaluation including collection system repairs - Investigation and elimination of illegal inflow sources and cross-connections - Active flow maintenance during wet weather events (planned SCADA improvements & repairs to pump stations may facilitate future active flow monitoring & mgmt. at stations) - Flow equalization storage - Additional investigation of results that are inconclusive 	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2016	\$300M	100%

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. N/A		
2.		
3.		
4.		

TEC Professional Services Questionnaire

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

ABOUT ARDURRA GROUP, INC.

Headquartered in Metairie, Ardurra has been providing engineering services throughout Louisiana since 1987. The firm has developed an expertise in civil works projects - specifically drainage, flood control, sewer, water, wastewater, and streets for local public agencies. In this regard, Ardurra's staff of over 900 professional and technical personnel have completed in excess of \$2B in assessment, design, development of O&M manuals, construction management and program management of related facilities in the region.

1. PROFESSIONAL TRAINING & EXPERIENCE

Ardurra has carefully crafted a team of seasoned professionals with the experience and capabilities to lead a successful project. Proposed personnel have been extensively involved in the hydraulic modeling of numerous drainage basins in Jefferson and Orleans Parishes. Notable experience includes hydraulic design of the Harahan Pump to the River project involving pumping 1,200 cfs through over 8,700 LF of triple pressure pipes, hydraulic design for City of New Orleans master drainage plan, and urban flood control projects for Jefferson Parish involving feasibility studies for canal and roadway drainage. Key personnel:

Gerald Preau, PE, Senior Civil Engineer

- 43 years of experience in civil engineering planning, design, and construction
- worked or S&WB for 15 years overseeing all aspects of drainage, sewerage, and water projects
- program manager for Sewerage & Water Board of New Orleans SELA and SSERP, two of the largest S&WB programs prior to Hurricane Katrina

Adam Faschan, PhD, PE, Senior Civil & Environmental Engineer

- 36 years of experience in assessment and design of drainage, water, sewer, and wastewater treatment facilities
- held senior technical and oversight roles for infrastructure design projects at the largest water and wastewater treatment facilities in LA and MS
- implemented hazard mitigation for a variety of water and wastewater infrastructure
- led third party damage assessments of the S&WB's entire infrastructure post-Katrina

David Dodgen, PE, Senior Civil Engineer

- 34 years of experience in drainage, water, sewer and street planning, design, construction oversight
- key role in drainage projects in Jefferson Parish and improvements to Bonabel Canal
- technical advisor to Ascension Parish Planning Commission for drainage projects
- planned and designed enlargement of all bayous without the Marvin Braud Pumping Station for the East Ascension Consolidated Drainage Board

Mark Arnold, PE, Senior Mechanical Engineer

- 37 years of experience in assessment and design of local drainage, water, and wastewater facilities
- served as program manager for the Jefferson Parish Sewer CIP
- managed the design and construction of Jefferson Parish's \$500M I&I plan, \$14M five MGD expansion to Marrero WWTP, new \$5.5M gravity sewer and water system along the Harvey Canal Industrial area; and prepared a master plan for consolidation of sewage

TEC Professional Services Questionnaire

- pumping stations on WestBank
- employed by S&WB for 17 years where he managed mechanical engineering department

Hector Pena, PE, Civil Engineer

- has 8 years experience in Sewer and Water Design and Construction Management
- was a project engineer for management of the construction phase of the South Laredo Wastewater Treatment Plant Extension
- extensive experience in design and construction management for wastewater treatment Plants and recycling facilities
- manager for a sanitary sewer rehabilitation project replacing approximately 30,000 linear feet of pipe in two residential subdivisions

Billy Blackwell, Construction Manager

- 59 years of construction related experience and cost estimating experience in southeast Louisiana
- extensive experience in the construction of roadway, water, sewer, and drainage projects in Jefferson Parish



TEC Professional Services Questionnaire

EDUCATION & EXPERTISE OF PROPOSED STAFF

Name	Yrs of Exp	Education	Expertise	Jefferson Parish Exp
Ann Springston Shires, PE	39	BS in Civil Engineering	Program Management, Water, Sewer, Drainage	Yes
Joseph Becker, PE, CSM	34	BS in Civil Engineering	Program Management, Water, WW, Drainage, Hazard Mitigation	Yes
Adam Faschan, PhD, PE	36	PhD, MS & BS in Civil Engineering	Water, WW, Hazard Mitigation	Yes
Mark Arnold, PE	37	BS in Mechanical Engineering	Drainage, Water, Sewer, Pump Stations, Process Engineering	Yes
Jeffrey Peters, PE	26	BS in Civil Engineering	Wastewater, Water, Drainage	No
Hector Pena, PE	8	BS in Civil Engineering	Wastewater, Water, Drainage	No
Gerald Preau, PE	43	MS & BS in Civil Engineering	Roadway, Drainage, Sewer, Water	Yes
David Dodgen, PE	34	BS in Civil Engineering	Drainage, Water, Sewer, Roadway	Yes
Ryan Ruiz	24	AutoCAD 1, 2, 3 & 12 Upgrade	Roadway, Drainage, Sewer, Water, WW, Streets, Inspection	Yes
Billy Blackwell	59	Multiple CM/I Certifications	Roadway, Construction, O&M	Yes



State of Louisiana

TEC Professional Services Questionnaire

2. CAPACITY FOR TIMELY COMPLETION OF NEWLY ASSIGNED WORK

Ardurra's professional, technical, construction and support personnel proposed for Jefferson Parish projects are currently available and mobilized to begin work. Ardurra has multiple contracts that are in the final stages of completion, which makes available several professional and construction personnel. Ardurra's significant newly assigned work includes disaster recovery work, which draws upon a different skillset than required for Jefferson Parish routine engineering services. Ardurra's track record with Jefferson Parish projects is a testament to our project managers' and professional staff's ability to deliver projects on time and within budget.

3. LOCATION OF PRINCIPAL OFFICE WHERE WORK WILL BE PERFORMED

All work will be completed in Ardurra's office located at **3012 26th Street, Metairie, Louisiana 70002, in Jefferson Parish.**

4. ADVERSARIAL LEGAL PROCEEDINGS BETWEEN THE PARISH & THE FIRM

Ardurra has never been involved in litigation with Jefferson Parish nor has Ardurra been involved in litigation with a public entity in which the public entity prevailed.

5. PRIOR SUCCESSFUL COMPLETION OF PROJECTS OF THE TYPE AND NATURE OF ROUTINE ENGINEERING SERVICES

Ardurra has provided program management services to Jefferson Parish for the \$52M CIP, which includes routine engineering services related to drainage and flood control. These services were expanded to include program management for the federally funded and cost shared Southeast Louisiana Flood Control Program. Since 1997 the program has invested \$500M in drainage improvements for which Ardurra has led the interface with the U.S. Army Corps of Engineers (USACE). Other routine engineering services contracts and similar projects include:

Project	Description	Client Reference
USACE New Orleans District Hurricane Katrina Flood Protection Projects	Design of floodwalls along Inner Harbor Navigation Canal, design of control structures for Bayous Bienvenue and Dupre, and design of temporary closure structures at several outfall canals	Chris Dunn, 504.862.1799
USACE New Orleans District West Esplanade Ave Crossing of Elmwood Canal	Preliminary and final design as well as construction supervision of this canal crossing	Chris Dunn, 504.862.1799
Ascension Parish \$63M Sewer Capital Program	Part of program management team, design, and construction oversight for WWTP improvements	Bill Roux, 225.450.1340
South Florida Water Management District S-5A Pump Station Refurbishment	Design report for feasibility of modernization of existing horizontal drainage pumps and their driver machinery and automation of station operations at this pumping station. Design and construction oversight for refurbishment of pumping station	Richard Virgil, 561.682.6759

TEC Professional Services Questionnaire

6. SIZE OF FIRM

Ardurra has ample manpower, professional qualifications, and direct and relevant experience to furnish Jefferson Parish with routine engineering tasks to include project evaluation, design, drafting of technical Plans, development of technical specifications and construction administration. Nationwide, Ardurra has 900+ staff in 48 offices which includes the following staff by discipline:

Discipline	# Staff
Admin, Accounting, CADD, Drafting, Designers, IT, HR	204
Civil Engineers	194
Structural Engineers	12
Environmental Engineers	18
Mechanical Engineers	2
Engineering Interns & Engineers in Training	76
Project Managers	81
Environmental Professionals & Scientists	21
Ecologists	4
Landscape Architects	6
Land Surveyors	95
Grant Fund / Disaster Recovery Specialists	28
Construction Managers & Inspectors	104
Other	82
Total	927

7. PAST PERFORMANCE ON PARISH CONTRACTS

For 44 years, Ardurra has been providing engineering services within the metropolitan area to include multiple Parishes, the Sewerage & Water Board of New Orleans, and the City of New Orleans Public Works Department. Ardurra has successfully completed more than 20 projects for Jefferson Parish and is currently furnishing program management services to for Jefferson Parish's Drainage \$1B CIP/SELA program. Other recent Jefferson Parish work includes drainage improvements to Bonnabel Canal and Hoey's Pump to the River Economic Study. In each case, Ardurra completed projects on time, without cost overruns, and without design inadequacies. Ardurra has delivered multiple projects efficiently and within expectations - Ardurra personnel have not been held at fault for errors or omissions on previous projects. Some of Ardurra's Jefferson Parish projects include:

- Power Boulevard Phase I West Esplanade Ave to Vintage Drive
- Power Boulevard Phase II I-10 to West Esplanade Avenue
- West Esplanade Avenue at Houma Boulevard
- Drainage Improvements Suburban Canal Veterans Blvd to West Esplanade Ave
- Drainage Improvements Huey P. Long Bridge Westbank Traffic Circle
- Cousins Pumping Station Addition
- Intersection Improvements Clearview Parkway/West Metairie Ave
- Manhattan Boulevard Phase I Gretna Blvd to Lapalco Blvd
- Manhattan Boulevard Phase II West Bank Expwy to Gretna Blvd

TEC Professional Services Questionnaire

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

Signature: Joseph R. Becker **Print Name:** Joseph R. Becker, PE

Title: Client Service Manager **Date:** March 25, 2022





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