

Statement of Qualifications

Jefferson Parish

Water Engineering Services

SOQ NO. 024-013

June 2024



Ms. Shanna Folse
Purchasing Specialist
Jefferson Parish Council
200 Derbigny Street
Suite 4400
Gretna, LA 70053

Arcadis U.S., Inc.
3850 N Causeway Boulevard
Suite 990
Metairie, LA 70002
United States
Phone: 504 832 4174
www.arcadis.com

Date: June 21, 2024
Subject: SOQ 24-013 – Routine Engineering Services for Water Projects in
Jefferson Parish Government

Dear Ms. Folse,

The Arcadis team is pleased to submit to Jefferson Parish our qualifications to support the Parish with engineering, design and needed services with their drainage mission. Arcadis and its Water Division are one of the oldest and most respected engineering firms in the country focusing primarily on drainage, water and wastewater infrastructure projects. The Team will perform this work out of our regional office in Metairie and if required will tap our national organization provide the Parish any additional specialization. With a strong local and U.S. resume and superior international capabilities, we will have the expert technical resources and project delivery tools that will provide quality products to the Parish. As shown in our SOQ, we have a wide range of skills and projects – drainage modeling, collection systems, storm water management, MS4, pump stations, planning, construction management, SCADA, environmental and much more to meet all the needs of the Drainage Department.

The Arcadis Metairie location is a full-service engineering, design and management center that has provided drainage related engineering services for over 20 years to the metro area as well as the primary office that supported \$2B in design and construction support to the USACE for Hurricane Protection Projects in the area including the West Closure Complex on the West Bank. Mr. Pete McMaster, PE, our Project Manager, has been working on a wide range of infrastructure projects for over 33 years. This office has a wide range of local expertise in executing drainage projects in the metro area as well as Baton Rouge. We have the ability to respond quickly, after hours, or in any way required by the Parish to support the Water Departments needs to maintain services to the residents of Jefferson Parish.

Thank you for your consideration. We look forward to teaming with Jefferson Parish to support the delivery of projects to the Parish.

Sincerely,
Arcadis U.S., Inc.



Pete McMaster, PE
Vice-President

TEC Professional Services Questionnaire

A. Project Name and Advertisement Resolution Number:

SOQ 24-013 - Routine Engineering Services for Water Projects

B. Firm Name & Address:

Arcadis U.S., Inc.
3850 North Causeway Blvd.
Suite 990
Metairie, Louisiana 70002 USA

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:

Pete McMaster, PE
Principal-in-Charge
Phone: (251) 348 3199

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.

Pete McMaster, PE
Principal-in-Charge
Phone: (251) 348 3199

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

<u>741</u> Administrative	<u>40</u> Estimators	<u>2</u> Specification Writers
<u>31</u> Architects (Licensed)	<u>552</u> Geologists	<u>50</u> Structural Engineers
<u>69</u> Chemical Engineers	<u>15</u> Geotechnical Engineers	<u>0</u> Graduate Engineers
<u>622</u> Civil Engineers	<u>2</u> Interior Designers	<u>504</u> Project Managers
<u>67</u> Construction Inspectors	<u>11</u> Landscape Architects	<u>0</u> Clerical
<u>60</u> Ecologists	<u>13</u> Land Surveyor	<u>15</u> Grant/Funding Specialist
<u>96</u> Electrical Engineers	<u>62</u> Mechanical Engineers	<u>5</u> Sanitary Engineers
<u>279</u> Engineer Intern	<u>1152</u> Environmental Engineers	<u>1203</u> Others
<u>15</u> Professional Land Surveyors		

5062 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. None

2.

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

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

Name & Address:	Specialty:	Worked with Firm Before (Yes or No):
1. None		
2.		
3.		

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

125

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:

Peter McMaster, PE /Principal-in-Charge

Project Assignment:

Project Manager

Name of Firm with which associated:

Arcadis U.S., Inc.

Years' experience with this Firm:

20

Education: Degree(s)/Year/Specialization:

BS, Mechanical Engineering, Clarkson University, 1971

Active registration: Year first registered/discipline:

Professional Engineer – AR, FL, LA, MS, NY, SC, USVI

Other experience and qualifications relevant to the proposed Project:

Mr. McMaster has extensive experience in all aspects of the engineering and construction business from his tenure as a President of a multi-faceted organization that performs engineering, construction and contract operations. His experience includes not only the engineering side of the business in which he performs as program manager for large multi-disciplinary programs, but also the business side where he had complete responsibility for all corporate functions including finance HR and safety. The programs managed were for clients in both the municipal and industrial sector focused primarily on facilities associated with water and wastewater infrastructure. Additionally, he has experience with hazardous waste and nuclear remediation.

- **City of New Orleans DPW: Streets Rehabilitation Engineering/Orleans Parish, Louisiana.** Provided overall quality control. Arcadis was responsible for the scoping, assignment, preliminary design report, final design, preparation of bid documents and the construction oversight of the St. Anthony Quadrant II neighborhood Streets Rehabilitation project. The project consists of the evaluation of all FEMA PW designated repairs for accuracy and completeness modifying those approved repairs to reflect field conditions. Also identify and justify, providing supporting documentation, additional repairs not identified in the initial PW for consideration by FEMA.

TEC Professional Services Questionnaire

- **Emerald Coast Utilities Authority: Program Manager/Pensacola, Florida.** Program oversight of ECUA's \$300-million Central Water Relocation Facility (CWRF) plant relocation program and their inflow/infiltration (I/I) removal program. He has managed several management improvement projects including the recent rate study, management audit and bond report. Successfully managed the completed design-build project for the ECUA/Naval Air Station (NAS) force main and pump station project.
- **USACE, New Orleans District: Hurricane Protection from Segnette Pump Station to Westwego Pump Station No. 2/New Orleans, Louisiana. Project** includes the design of replacements for hurricane protection structures from the Segnette Pump Station to New Westwego Pump Station No. 2 in Jefferson Parish. The fast-track project is one of the high-profile, aggressive-schedule projects required to be completed by 2011. The work includes design and preparation of a design documentation report (DDR); plans, specifications, MII cost estimates, Dr Checks and construction schedules; engineering and design support during advertisement; assistance to the government and the West Jefferson Levee District (WJLD) at public meetings; and coordination with all local, state and federal authorities for the hurricane protection project. The design incorporates the latest Hurricane and Storm Damage Risk Reduction System Design Guideline (HSDRRSDG).
- **Jackson County Board of Supervisors: Industrial Water Project/Jackson County, Mississippi.** Program manager responsible for all aspects of a more than \$40 million water system that includes 86,000 ft of various sizes of water transmission main from 12-inch to 30-inch, several 20-, 24- and 36-inch HDPE complex directional drills under the Pascagoula and Escatawpa Rivers of 24-inch HDPE piping on a 12-inch restrained ductile iron piping system on elevated pipe bridge crossing in a concrete utility chase, a 5-MGD water treatment plant with associated high service pumping and a .75-MGD elevated water storage tank, responsibilities include developing contracting strategy utilizing six contracts, schedule and cost control for all contracts, design oversight and constructability reviews prior to bidding and construction management and field engineering services for the implementation of all the contracts. Financial aspects include value engineering to maintain program budgets and managing the revenue streams from US EPA, Mississippi Department of Economic Development, the USACE, Coastal Impact Assistance Program (CIAP) and local funds to complete the required funding requirements.
- **Mississippi Gulinear feet Coast Regional Wastewater Authority: Sewerage Infrastructure/Mississippi.** Program manager responsible for an \$8-million sewerage infrastructure program to facilitate sewage collection and elimination of overflows for several surrounding communities. Program includes two new pump stations and 72,000 feet of 20" and 24" HDPE of force main to connect the service area to the treatment plant. Program specifics include construction strategy, funding assistance through the Mississippi SRF Program, scheduling, bid assistance including contractor evaluation and subsequent recommendation of rejection of award due to lack of experience, in addition to responsibility for the routine design oversight, constructability reviews and contract management and field engineering.
- **Mobile Area Water & Sewer System: Risk Management Planning/Mobile, Alabama.** Project manager for this project which assisted the municipal utility in complying with Clean Air Act Section 112(r) by preparing risk management plans for two water and two wastewater treatment facilities.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
John Kane, PE, BCEE/National Technical Manager
Project Assignment:
Quality Manger
Name of Firm with which associated:
Arcadis U.S., Inc.
Years' experience with this Firm:
45
Education: Degree(s)/Year/Specialization:
BS, Civil Engineering, University of Cincinnati-Main Campus, 1977
Active registration: Year first registered/discipline:
Professional Engineer in OH Board Certified Environmental Engineer (BCEE)
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Kane specializes in water system evaluation and treatment facilities design. His responsibilities include preparation of engineering reports, development of contract plans and specifications from preliminary stages through final design, preparation of operation and maintenance manuals and construction administration on a variety of municipal water treatment facilities. His experience also includes serving as a quality consultant for projects across the country to offer expert input and provide review of technical issues related to water system planning and design.</p> <ul style="list-style-type: none"> City of Akron: Water Service Study/Columbus, Ohio. As Senior Project Engineer, performed study to evaluate the conditions and regulatory requirements for providing water from Akron's distribution system service area within the Great Lakes Basin to a service area outside the Great Lakes Basin. Montgomery County: Eastern Regional Wastewater Treatment Facilities/Dayton, Ohio. As Project Engineer responsible for monitoring and control system design for plant process systems Work included the preparation of plans and specifications for plant-wide microprocessor-based instrumentation and control system. City of Delaware: Filter Evaluation/Delaware, Ohio. Project Manager for evaluation of existing filters. Project evaluated the condition of the filter and required backwash rates to achieve fluidization and proper bed expansion. Evaluated the use of Zeeweed ultrafiltration as replacement for the existing gravity filter. City of Findlay: Raw Water Pump Station/Findlay, Ohio. Project Manager for the development of water demand projections, investigation and evaluation of the condition and capabilities of the existing pumping stations and computer analysis of reservoir operation under drought conditions. Recommendations were

TEC Professional Services Questionnaire

made to construct a new river pumping station to meet future demand requirements. The new facility was designed with four pumps, two with variable-frequency drives and two with constant-speed drives, providing a firm pumping capacity of 40 MGD. Space was allotted for the addition of a future pump for a firm pumping capacity of 60 MGD. The design also included a new river intake with bar racks and a screen cleaning mechanism.

- **City of Columbus: Combined Sewer Overflow Study/Columbus, Ohio.** As Engineer, directed field operations and report preparation for the sewer system evaluation survey and the combined sewer overflow study for the city.
- **City of Cleveland: Baldwin RFS Task 1/Cleveland, Ohio.** Project Manager for improvements at an 80-year old historical landmark water treatment plant. Work includes modifications to existing arched roof sedimentation basins and the design of new rapid mix facilities, flocculation basins and various process modifications.
- **Birmingham Water Works Board: Carson Water Filtration Plant Expansion Design/Birmingham Alabama.** Served in Quality Assurance/Quality Control role for the design of an expansion to the Carson Filter plant. A 10 MGD treatment train consisting of dissolved air flotation DAF, filtration and CT basin will be added to an existing plant providing a total treatment capacity of 36 MGD. A new chemical storage and feed building, high service pumping station and sludge dewatering building will be added to serve the entire plant capacity. Chemical storage and feed facilities were provided for the following chemicals: alum, liquid lime, polymer, potassium permanganate, phosphoric acid, hydrofluosilicic acid, powdered activated carbon and sodium hypochlorite generated on-site.
- **City of Akron: Water Master Plan/Akron, Ohio.** Deputy Project Manager for comprehensive study of the entire water system, including source of supply, water treatment plant and the distribution system. Work included sampling and treatability testing, hydraulic modeling of the distribution system and safety valuation of chemical storage and handling facilities. The study established a capital improvements program for the water system for the next 15 years.
- **City of Cleveland: Baldwin Waterworks Plant Filter Rehabilitation/Cleveland, Ohio.** As Project Manager/Design Lead, provided engineering services for the preliminary design, final design and construction phase for filtration improvement, new chemical storage and feed facilities and rapid mix, flocculation and sedimentation basin improvements at the plant. The work is being performed under three separate construction projects and consists of process improvements, construction of new chemical storage and feed facilities within the 20 abandoned filters and construction of new in-line rapid mixers and flocculation basins and modifications to the sedimentation basins. Additionally, a preliminary engineering study was performed to evaluate residuals and plant waste streams handling.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Sean Chaparro, PE/Senior Environmental Engineer
Project Assignment:
Process/Regulations
Name of Firm with which associated:
Arcadis U.S., Inc.
Years' experience with this Firm:
20
Education: Degree(s)/Year/Specialization:
BS Environmental Engineering, Michigan Technological University 2000 Mississippi Civil and Environmental Engineering, University of Wisconsin, Madison 2002
Active registration: Year first registered/discipline:
Professional Engineer: FA, MI Certified Construction Documents Technologist (CDT)
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Chaparro has experience in municipal drinking water process planning, design and special evaluations. Experience in drinking water treatment includes water quality planning, treatment process evaluations; facility planning; Safe Drinking Water Act compliance assessments; membrane feasibility evaluations; corrosion control; DBP and simultaneous compliance assessments; plant optimization evaluations; residuals handling, disposal evaluations and design. He has worked on master planning projects and process evaluations for water treatment plants ranging from less than 1 MGD to 340 MGD.</p> <ul style="list-style-type: none"> • City of Venice: As-needed Engineering/Venice, Florida. Manager of the As-Needed Engineering contract for the City of Venice. To date twelve task assignments have been completed under this contract, including developing a comprehensive water master plan, completing a preliminary evaluation of rehabilitation needs for the RO WTP, completing a capacity analysis report for the Eastside WRF and completing structural evaluations of secondary treatment tanks at the Eastside WRF and clear wells at the RO WTP. Served as project manager and technical lead for the Water Master Plan and RO WTP Preliminary Evaluation work assignments. • Suwannee County: Catalyst Site Design Services/Live Oak, Florida. Project Manager for the design, permitting and construction administration of a new water treatment plant site that will provide potable water to a new industrial logging facility and other future commercial/industrial businesses in the area. Water will be supplied by new supply wells for treatment by an onsite water treatment and storage facility and pumped for local distribution through an onsite pumping station. To meet the logging facility water needs, the project is being completed under an accelerated design and construction schedule.

TEC Professional Services Questionnaire

- **Tampa Bay Water: Cypress Creek WTP Chemical Feed System Rehabilitation/Land O' Lakes, Florida.** Project manager and process mechanical lead for design work associated with the complete rehabilitation of the sodium hypochlorite chemical storage and feed system at the Cypress Creek WTP. As part of the design, completed a detail evaluation of multiple storage tank configurations and materials (horizontal vs. vertical tanks; polyethylene vs. fiberglass reinforced plastic); and metering pump systems.
- **Sarasota County: Carlton WTF EDR Upgrade (Phase I)/Sarasota, Florida.** Developed cost estimates for various EDR upgrade alternatives to identify the most appropriate upgrade strategy for the Carlton WTF. Alternatives evaluated include retrofitting the existing EDR units with the new stacks or completely replacing them with new EDR units. The need to provide additional future capacity and the ability to do so within the existing footprint and infrastructure was also evaluated. Multiple project construction phasing scenarios were also identified and assessed.
- **City of Palm Coast: Coquina Coast Seawater Desalination Project/Palm Coast, Florida.** Project manager for engineering evaluations to define project components of a new 10 to 15 MGD regional seawater desalination facility. Engineering evaluations completed included preparing a pilot testing plan; preliminary siting, field, funding and permitting investigations; and public outreach activities. These ongoing engineering evaluations were completed to help refine project alternatives and identify viable intake, treatment, discharge and other technical components.
- **Birmingham Water Works & Sewer Board: Carson Filter Plant Expansion/Birmingham, Alabama.** Completed an evaluation and cost estimate analysis of various residuals handling alternatives as part of planning activities to expand an existing 20 MGD facility to 50 MGD. Residuals handling options evaluated included: sand drying beds, belt filter presses and centrifuges. The evaluation addressed equipment configuration and layout alternatives, facility sizing criteria and number of units and preliminary construction and O&M costs for each system. Subsequently served as technical leader in developing basis of design criteria for the recommended residuals handling option as part of a plant wide master plan expansion and upgrade.
- **City of Bay City: Raw Water Supply Evaluation/Bay City, Michigan.** Conducted a comprehensive evaluation of alternatives to supply raw water from the Saginaw-Midland Municipal Water Supply Corporation (SMMWSC) for treatment at the Bay City Municipal Water Treatment Plant. The evaluation included an assessment of requirements to connect to the main raw water supply lines and identified treatment plant and water quality impacts associated with using the SMMWSC for the main raw water supply. Capital and O&M costs to connect and treat the SMMWSC source of supply were also developed as part of this assessment.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Craig Raymond, PE
Project Assignment:
Water Distribution/Specifications/Utility Coordination
Name of Firm with which associated:
Arcadis U.S., Inc.
Years' experience with this Firm:
10
Education: Degree(s)/Year/Specialization:
BS Civil Engineering Louisiana State University 2013
Active registration: Year first registered/discipline:
Professional Engineer - LA
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Raymond began working with Arcadis as a technical intern in Arcadis' Baton Rouge office, gaining experience in civil and structural detailing and design. Immediately after graduating, he began working as a Civil Engineer in their Metairie office. His responsibilities have included civil design, geometrics, roundabout design and cost estimation.</p> <ul style="list-style-type: none"> • U.S. 11 Norfolk Southern Railroad, LADOTD, St. Tammany Parish, Louisiana. Roadway/Bridge design for an Environmental Assessment for replacement of the US 11 Bridge, which includes widening of U.S. 11 from two lanes to four lanes from U.S. 190 north to 1-12. Responsibilities include providing alternative development and plan preparation for two alternatives. • Kansas Lane - Garrett Road Connector and 1-20 Improvements, LADOTD, Ouachita Parish, Louisiana. Roadway Engineer for roadway design for an Environmental Assessment for the improvement of 5 different interchanges along Garrett Rd. The project includes design for incorporating modern roundabouts to the 5 interchanges. • Jefferson Parish Drainage Department: Metairie Road Bioswale and Green Infrastructure Demonstration Project, Metairie, Louisiana. Civil Engineer Manager responsible for SWMM modeling, retention/detention capacity, drainage enhancements, landscaping and infrastructure improvements to a 1-acre site located at Metairie and Labarre Roads. This project will improve the drainage in the area by using water management best practices to increase the efficiency that shed water from the street intersection, use retention/detention techniques to manage the water into the existing drainage system such that these

TEC Professional Services Questionnaire

improvements do not overwhelm the existing system and utilize green infrastructure elements to reintroduce surface water into the groundwater environment. The project will also utilize low impact development techniques to maintain the visual elements of the area. The project includes a conceptual design, engineering and the preparation of bid documents and construction oversight for this \$800K project.

- **Jefferson Parish Drainage Department: Yenni Building Parking Lot Drainage Improvement Study/Jefferson, Louisiana.** Civil Engineer responsible for engineering support for the feasibility study and conceptual design for the development of alternatives to improve the drainage, drainage enhancements, utilizing green infrastructure elements and low impact design approach.
- **City of New Orleans DPW, Gardena Street Rehabilitation and Drainage improvements/ New Orleans, Louisiana.** Civil Designer for drainage improvements and the complete street rehabilitation for Gardena Street from St Bernard Ave to Paris Ave (2,500 feet) that includes drainage calculations and design for the surround area (approximately 20 acres). Design includes runoff, catch basin, inceptors and conveyance to main truck drainage in area. The will be a managed drainage approach as to not to overwhelm the existing main collection system in the area. Surface drainage design, roadway geometry design, utilities coordination, traffic planning, water and sewer design and relocation, resident inspection.
- **Louisiana 44 & Loosemore Road Roundabout Feasibility Study, LADOTD, Ascension Parish, Louisiana.** Roadway Engineer responsible for roadway design for the improvement of existing roadway infrastructure at the intersection of Louisiana 44 & Loosemore Road. The project includes design for incorporating modern roundabouts to the interchanges to enhance mobility and safety, collection of data from all existing utilities and cost estimates.
- **Louisiana 3235 Stage O Safety Study, LADOTD, Lafourche Parish, Louisiana.** Roadway Engineer responsible for gathering information about a 16-mile corridor in Lafourche Parish with the objective to preserve and enhance safety/mobility of the corridor. Also, responsible for drafting the plans of the project. The project includes improvement considerations such as median opening channelization, turn lane storage, closure, among others.
- **Cut-Off/Point-Aux-Ctrenes Levee Rehabilitation Project, LADOTD, Coastal Protection and Restoration Authority, Lafourche Parish, Louisiana.** Preparation of Plans for improvement of an existing levee to meet federal standards and increase its level of protection. Geotechnical analysis of soils.
- **South Central Hydrologic Modeling, Coastal Protection and Restoration Authority, Iberia Parish, Louisiana; St. Mary Parish, Louisiana; St. Martin Parish, Louisiana.** Provided volume calculations of the proposed levees for hurricane protection and coastal restoration in the three parishes.
- **Lower Barataria Sediment Diversion, Coastal Protection and Restoration Authority of Louisiana, Plaquemines Parish, Louisiana.** Preparation of Plans for a design of sediment diversion channels intended to carry sediment-rich river water from the Mississippi River to the marshes of the Barataria Bay for the purpose of rebuilding marshlands that have been eroded away by storms and coastal weather. Assisted in the proposed site model, with a focus on cofferdam design.
- **Bayou Grand Chenier Marsh and Ridge Restoration, Plaquemines Parish Government, Plaquemines Parish, Louisiana.** Preparation of Plans for a design intended to transport material from the bottom of the Mississippi River to restore the marsh and ridge. Developed site model and provided volume calculations needed for the design.
- **St. Anthony Quadrant 1 Neighborhood, City of New Orleans, Department of Public Works, Orleans Parish, Louisiana.** Engineer responsible for review of damages identified in the FEMA Project Worksheet and also review of areas of additional event related damages in the St. Anthony Quadrant 1 neighborhood. Organized a quantity spreadsheet and plans for street, sidewalk, waterline and other repairs.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Dustin Harris, PE/Senior Environmental Engineer
Project Assignment:
Water Distribution
Name of Firm with which associated:
Arcadis U.S., Inc.
Years' experience with this Firm:
27
Education: Degree(s)/Year/Specialization:
MS Civil Engineering Auburn University Main Campus 2005 BS Civil Engineering Auburn University Main Campus 2003
Active registration: Year first registered/discipline:
Professional Engineer – AL Con Documents Technologist - State Issued
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Harris has been involved in multiple projects involving water treatment plant designs and upgrades as a process mechanical engineer. He has been a vital design team member for treatment plant pump station designs, filter designs, and treatment process selection analysis. Additional municipal design work includes plant hydraulics, cost estimating, developing design specifications, and construction management. Along with his design work he has also gained valuable experience in capital program management for large municipalities. He has additional experience in the field of hydrology and hydraulics gained from his degree in Civil Engineering and his master thesis involving 2-dimensional modeling of riverine hydraulics for predicting contraction scour in cohesive soils.</p> <ul style="list-style-type: none"> • Shades Mountain Filter Plant Upgrade-Phase 2, Birmingham Water Works Board, Birmingham, Alabama. Design of 80 MGD transfer pump station vertical turbine with wet well, high service pump stations horizontal split case, associated yard piping for two new 6.0 MG clear wells and associated pump piping. Additional work includes: valve design and selection, cost estimates, specifications, up-front documentation for specifications, preparation of deliverables, bid phase management, site exploration survey, soils, etc. and P&ID development. • Water Filtration Plant Operation and Filter Rehabilitation, Birmingham Water Works Board, Birmingham, Alabama. Development of plan for filter rehabilitation. Including development of existing plant wide P&IDs and memo on GAC media characteristics and O&M practices.

TEC Professional Services Questionnaire

- **Carson Water Filtration Plant Expansion Design, Birmingham Water Works Board, Pinson, Alabama.** Master planning level design, cost estimating, and evaluations used to determine the best process options for the 10 MGD plant expansion.
- **SMFP Phase 2, Birmingham Water Works Board, Birmingham, Alabama.** Review of process mechanical and civil technical submittals. Review of request for information and request for change orders. Coordinate issue with contractor and produce engineering clarification as required.
- **2009 General Consulting, Birmingham Water Works Board, Birmingham, Alabama.** Developed Business Case template and business cases for all project associated the clients' 5 Year Capital Improvement Plan.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Anwer Ahmed, PE, DWRE, ENV SP/Stormwater & Watersheds Practice Technical Leader
Project Assignment:
Green Infrastructure
Name of Firm with which associated:
Arcadis U.S., Inc.
Years' experience with this Firm:
20
Education: Degree(s)/Year/Specialization:
Mississippi Water Resources Iowa State University 1987 BS Civil Engineering Iowa State University 1984
Active registration: Year first registered/discipline:
Professional Engineer: GA, IL Certified Construction Documents Technologist (CDT)
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Ahmed serves as the Arcadis Watersheds and Stormwater Practice Technical Leader. He has more than 26 years of professional experience in multi objective watershed planning and urban stormwater management. His experience includes watershed modeling, watershed protection, stormwater management, ordinances, floodplain and floodway studies, watershed restoration, green infrastructure and urban stormwater best management practices. His experience includes economic and financial analyses for water resources projects.</p> <ul style="list-style-type: none"> City of Chattanooga: "Resource Rain" Green Infrastructure Design Competition/Chattanooga, Tennessee. Provided overall technical review and assistance for this grand prize-winning entry, in which the team re-imagined Cherokee Boulevard, an underused thoroughfare and transecting neighborhoods are in need of a solution to reduce flooding and foster further economic development. The Arcadis team produced an effective and winning conceptual design, which is currently being reviewed as a future project, as well as a solution for communities with similar stormwater issues. City of Chattanooga: Runoff Reduction Standards and Green Infrastructure Manual/Chattanooga, Tennessee. Project Manager for the Arcadis Team to develop runoff reduction and volume control standards and development of site design standards for new development and redevelopment projects to manage the first inch of rainfall with no discharge to surface waters. This project is part of a larger effort by the City to restore the vitality of Chattanooga's neighborhoods and establish a new philosophy for

TEC Professional Services Questionnaire

development and redevelopment. The outcome was a comprehensive web-based stormwater management manual that provides developers and design professionals with site specific tools and techniques to meet stormwater ordinance provisions and implement GI and Low Impact Development (LID), new stormwater ordinance, incentives for GI, amended city codes and policies and technology-based practical and user-friendly tools for the development community and City staff.

- **U.S. Postal Service: Preparation of Water Manuals and Nationwide NPDES Stormwater Services/Nationwide and Southeast Facilities Office.** Project Manager for preparation of two comprehensive Water Manuals. One manual was for the managers of Postal Service facilities and the other for the environmental supervisors and managers. These manuals were to assist the facilities and the environmental coordinators with identifying and maintaining appropriate water-related permits nationwide. Project manager for permitting of US Postal Service facilities nationwide that required coverage under the NPDES Stormwater regulations for industrial facilities. More than 200 facilities were included in the project in the US and its territories.
- **Georgia DOT Stormwater Mississippi 4 Permit Program Development and Implementation/Statewide, Georgia.** Program Manager to assist Georgia DOT in negotiating an Mississippi permit with Georgia EPD, developing a stormwater management program and preparing a comprehensive stormwater management plan to comply with all aspects of the Mississippi permit. Services include preparation and implementation of all Mississippi4 Permit mandated plans and managing the work flows to maintain compliance with the permit. Comprehensive compliance tracking and reporting tools will be developed as part of this program.
- **City of Atlanta: Watershed Improvement Plan/Atlanta, Georgia.** Project Manager for preparation of a Watershed Improvement Plan for South River Watershed for portions within the city limits. A comprehensive plan was prepared by employing GIS and remote sensing techniques and a watershed model. Various structural and non-structural BMPs were evaluated control sediment and pathogen loads into the South River. A total of 55 onsite BMP project sites, 109 stream stabilization sites and 149 stream buffer restoration sites were identified. In addition, many nonstructural and programmatic management practices utilizing green infrastructure/LID strategies to benefit reduction in rates and volumes of stormwater runoff as well as biology and water quality were analyzed. These included green roofs, rain harvesting, street sweeping, pervious pavements, ordinance revisions, among others.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
David Fulks, PE/Senior Civil Engineer
Project Assignment:
Infrastructure
Name of Firm with which associated:
Arcadis U.S., Inc.
Years' experience with this Firm:
12
Education: Degree(s)/Year/Specialization:
BS Civil Engineering Portland State University 1997
Active registration: Year first registered/discipline:
Professional Engineer: AR, MS, LA, TX
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Fulks has more than 20 years of experience in the design of levees, roadways, land developments and airports. His experience encompasses analysis and design of site hydrology and hydraulics; geometric and pavement design of levees, highways, streets, parking lots, runways, taxiways and aprons; traffic impact analysis; and geotechnical and structural design and analysis of foundations and structures for electrical substations. His responsibilities have included: preparing engineering designs, reports, plans and specifications; preparing and managing project schedules and cost estimates; preparing grant applications and providing construction administration.</p> <ul style="list-style-type: none"> • City of New Orleans DPW: Streets Rehabilitation Engineering/Orleans Parish, Louisiana. Provided roadway design. Arcadis was responsible for the scoping, assignment, preliminary design report, final design, preparation of bid documents and the construction oversight of the St. Anthony Quadrant II neighborhood Streets Rehabilitation project. The project consists of the evaluation of all FEMA PW designated repairs for accuracy and completeness modifying those approved repairs to reflect field conditions. Also identify and justify, providing supporting documentation, additional repairs not identified in the initial PW for consideration by FEMA. • USACE, New Orleans District: West Roosevelt Street Sewer Force Main Relocation New Orleans, Louisiana. Project Engineer for bid document preparation for the relocation of a 36-inch-diameter ductile iron sewer force main. Close coordination was required with City-Parish DPW and CN Railroad, because the project was located directly adjacent to railroad right-of-way. The relocation involved designing a permanent bypass offset horizontally and vertically to avoid conflict with a proposed box culvert being

TEC Professional Services Questionnaire

constructed by DPW. Minimal down time during construction was a major consideration in the design of the proposed relocation.

- **USACE, New Orleans District: Hurricane Protection Office Engineering Design Support | New Orleans, Louisiana.** Project civil engineer providing design support to the USACE Levee Section. Assignment involves working as contract personnel within the Section, providing civil engineering design support. Also providing support to the Cost Engineering Section.
- **USACE, New Orleans District: Concrete Levee and Floodgate Conceptual Design Report | New Orleans, Louisiana.** Project civil engineer providing conceptual design of precast concrete navigation floodgate and modular levee sections, as well as construction durations and cost estimates. This phase of the work was to produce a conceptual design report for several height, draft and beam configurations. The estimated construction costs ranged from \$50-\$300 million.
- **USACE, New Orleans District: St. Bernard Parish Hurricane Protection System | St. Bernard Parish, Louisiana.** Senior civil engineer overseeing the design of pile supported concrete floodwalls and a concrete girder span bridge and associated approaches. This phase of the work was to produce an engineering alternative report presenting the engineering design, calculations, construction schedules and cost estimates for several alternatives. The estimated construction costs for these portions of the work ranged from \$100-\$175 million.
- **USACE, New Orleans District: Periodic Inspections of Locks and Control Structures | New Orleans, Louisiana.** Civil engineer and team leader conducting periodic inspection of Schooner Bayou Control Structure, Bayou Boeuf Lock and Bayou Sorrel Lock. Schooner Bayou consists of two 75-foot gateways with sector gates, earthen dikes and closure dam. Bayou Boeuf Lock consist of two concrete sector gate structures connected by 600 feet of earth chamber and timber guide walls. Bayou Sorrel Lock consist of two concrete sector structures separated by 1,117 feet of earth chamber and timber guide walls. Prioritized recommendations and assigned an estimated cost. Coordinated report production and client communication.
- **USACE New Orleans District: Cross Bayou Access Road and Bridge/St. Charles Parish, Louisiana.** Preparation of plans and specifications for new access road and bridge in St. Charles Parish. Design of two-lane bridge and road to provide access to the Cross Bayou Drainage Structure project. Improvement layout, quantity calculations in support of cost estimates and determination of real estate needs. Also provided engineering support during construction including site visit and engineering observation reports.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Ryan Stoddard, PE/Civil Engineer
Project Assignment:
Infrastructure
Name of Firm with which associated:
Arcadis U.S., Inc.
Years' experience with this Firm:
18
Education: Degree(s)/Year/Specialization:
Mississippi Civil Engineering University of Florida 2010 BS Civil Engineering, University of Florida 2004 Cum Laude
Active registration: Year first registered/discipline:
Professional Engineer: LA, FL, TX, MS, AL
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Stoddard has more than 15 years of experience in a broad variety of fields, including roadway design, pavement design, residential development, commercial and industrial site development, retaining walls, hydrology, stormwater management facilities, floodwalls and flood protection, pile foundations, channels, levees and drainage structures. His responsibilities have included survey coordination, geotechnical coordination, site investigation, soils and hydrologic analysis, storm water hydraulics and computer modeling, sanitary sewer layout and design, site planning, roadway geometric design, digital terrain models, flood modeling and mapping, earthwork, landfill caps, site engineering and permitting as well as serving in the role of construction technical advisor and inspector. He has used and is proficient in stormwater modeling software, Microstation, Geopak, Inroads and has trained junior staff in civil engineering principles and plans production.</p> <ul style="list-style-type: none"> • USACE New Orleans District: Bayou Dupree Flood Gate/St. Bernard Parish, Louisiana. Civil engineer-of-record for the preparation of final plans and specifications for a major flood gate structure in St. Bernard Parish, Louisiana. Provided survey coordination, creation of digital terrain models, alignment layout and design, vertical profile generation, bridge layout, access road design and associated grading plans. Duties included slope stability issues and analysis of channel stability, T-Wall and pile design, coordinating on unbalanced force mitigation, coordinating wall positioning and sand layer issues, channel dredging and excavation design, scour protection and armoring design, specification preparation and attending all relevant project meetings.

TEC Professional Services Questionnaire

- **USACE New Orleans District: LPV149/St. Bernard Parish, Louisiana.** Civil engineer-of-record for the preparation of final plans and specifications for a trio of flood gate structures including a highway closure gate, railroad closure gate and channel closure gate in St. Bernard Parish, Louisiana. Tasks included survey coordination, creation of digital terrain models, railroad shoofly detour alignment layout and design, vertical profile generation, access road design and associated grading plans. In addition to general site civil and layout, duties included design of T-wall tie in with Mississippi River Levee System, scour protection and armoring design, geotechnical coordination and attending all relevant project meetings. Also designed interior drainage infrastructure and conveyance system working closely with hydraulic modelers on tailwater simulations and rainfall data. Performed quantity calculations and assisted with specifications preparation. Preliminary work included the preparation of an Engineering Alternatives Report. Tasks included creation of digital terrain model, alignment profile generation, structural analysis and T-Wall design and layout using MathCAD, Group 7 and CPGeorgia Pile analysis, plans preparation, quantities calculation and creation of tables and narratives to be used in the master report. Coordinated daily with project managers and other disciplines and attended meetings.
- **USACE New Orleans District: Task Order 9 – St. Charles Floodwall and Structures Phase II, Cross Bayou Drainage Structure/St. Charles Parish, Louisiana.** Assisted with the preparation of an Engineering Alternatives Report and 65% plans and specifications for a drainage structure in St. Charles Parish, Louisiana. Tasks included creation of digital terrain model, profile generation, structural analysis of T-Wall systems including stem and footing and pile design using MathCAD, Group 7 and CPGeorgia Pile analysis, pile layout, plans preparation and quantities calculation. Coordinated daily with project managers and other disciplines and attended meetings and trained other staff in the use of Microstation, Inroads, MathCAD and basic structural analysis.
- **USACE New Orleans District: Non-Federal Levees/Plaquemines Parish, Louisiana.** Performed analysis and modeling of a multi-basin section for multiple level alignment alternatives for an Engineering Alternatives report. Analyzed land use, soil data and rainfall data to create hydrologic simulations of 21 potential alternative scenarios. Used SCS curve number method to determine flow rates and required pump station capacities. Prepared figures and wrote narrative section and appendices for use in report. Worked closely with civil designers and mechanical engineers and attended all project meetings. Other responsibilities included red team review, man-hour estimates and scope writing ahead of contract negotiations.
- **USACE New Orleans District: NOV16, Empire to Buras Flood Protection/Plaquemines Parish, Louisiana.** Tasked with the preparation of an Engineering Alternatives Report for a section of levee/floodwall in Plaquemines Parish, Louisiana. Coordinated with out of state survey crews to capture cross section and boring data. Worked closely with geotechnical team on boring maps, stability analysis and generation of typical sections and cross section data. Served in a technical role on plans production and worked with fellow staff to meet deadlines and plan project logistics.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Joseph J Chiriyankandath/Technical Expert (ENG)
Project Assignment:
Infrastructure
Name of Firm with which associated:
Arcadis U.S., Inc.
Years' experience with this Firm:
10
Education: Degree(s)/Year/Specialization:
BS (Industrial Engineering) Kerala University 1975
Active registration: Year first registered/discipline:
None
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Chiriyankandath, a specialist in Instrumentation, Controls and Automation, has extensive experience in needs assessments, evaluation of existing technologies, economic analysis, preparation of master plans for large utilities, monitoring/control system design, vendor negotiation and assistance during construction. He has managed or personally designed control and automation systems for more than 30 projects, including his award-winning project work for the Buffalo Sewer Authority and the Northeast, Ohio Regional Sewer District (NEORS). A specialist in design and development of treatment process monitoring and control systems and plant automation systems, he has been responsible for conceptual and detailed design, software configuration and startup of technologically advanced control/automation systems for some of the nation's largest municipal and industrial treatment plants and hazardous waste and solid waste management facilities.</p> <ul style="list-style-type: none"> • Buffalo Sewer Authority: Management Audit SCADA System and Energy Efficiency/New York. Developed master plan, economic analysis, implementation planning, design of automatic process control and remote monitoring of satellite pump stations and managed construction administration. The project included evaluation of available technologies vendor selection and procurement of HMI software, HMI software configuration and programming of Distributed Control Units and programmable logic controllers. The plant treats an average of 150 MGD with a peak flow of over 500 MGD. The project consisted of a detailed study of the process conditions, determination of interface requirements of mechanical and electrical equipment and development of standard operating procedures. The process monitoring and controls included automatic control of plant flow using six 120 MGD main sewage pumps and another six

TEC Professional Services Questionnaire

120 MGD secondary lift pumps, each equipped with synchronous motors; automatic control of four 3000-hp air blowers and dissolved oxygen to aeration tanks and chemical systems.

- **Westchester County: Design and Installation of Pump Station Generators and SCADA Systems/Yonkers New York.** Managed planning and design of an expansion of the county's wastewater treatment plant SCADA system to incorporate monitoring of 42 wastewater pump stations. Planning phase included a cost/ benefit analysis of radio telemetry, telephone service and fiber optic communication media.
- **Clear Lake City Water Authority: Robert T. Savely WWTP/Clear Lake City, Texas.** Performed electrical design to add two automatic power factor correction capacitor units to an existing 4000A, 480V switchboard.
- **City of Abilene: Hamby Wastewater Treatment Plant Improvements/Hamby, Texas.** Performed electrical and instrumentation design plant improvements project.
- **City of Beaumont: Beaumont WWTP/Beaumont, Texas.** Performed electrical design to add one 2,250-kW, 13.2-kV emergency generator and one 1,250-kW, 480-V emergency generator to the existing WWTP plant.
- **City of Denton: Hartlee Field Road Booster Pump Station/Denton, Texas.** Performed electrical and instrumentation design for this booster pump station with three 400-Hp pumps.
- **City of Denton: Lake Ray Roberts WTP/Denton, Texas.** Performed electrical design for this new WTP.
- **City of Fort Worth: Eagle Mountain Raw Water Pumping Station/Fort Worth, Texas.** Performed electrical design for solid state reduced voltage starters for two 2,000-Hp 4160V pumping units.
- **City of Kilgore: 3-MGD Surface Water Treatment Plant/Kilgore, Texas.** Performed electrical and instrumentation design for City of Kilgore's first surface water treatment plant.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Avery Love/CADD Drafter
Project Assignment:
CADD
Name of Firm with which associated:
Arcadis U.S., Inc.
Years' experience with this Firm:
14
Education: Degree(s)/Year/Specialization:
Louisiana Technical College / AS Drafting and Design Technology
Active registration: Year first registered/discipline:
None
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Love is experienced in providing advanced levels of CADD support for water resource design projects and many others. His computer skills encompass Microstation V8, V8i, Bentley Inroads, AutoCAD, Land Desktop, Architectural Desktop, Civil 3D and many others.</p> <ul style="list-style-type: none">• City of Dallas: Dallas Flood Protection System Upgrade of the Trinity River Levee System / Dallas, Texas. Co-led the technical portion of the civil and structural design effort to upgrade the Trinity River Levee system to meet 100-year Flood Protection standards for the City of Dallas.• National Park Service: Cane River Lake Embankment Restabilization / Natchitoches, Louisiana. Led the technical portion of the civil design effort for the restabilization of Cane River Lake's embankment for the National Park Service in Natchitoches.• National Park Service: Salt River Hotel Demolition / Christiansted, U.S. Virgin Islands. Led the technical portion of the civil design effort to coordinate the demolition, selective removal of materials for recycle, stabilization of haul roads and regradation and revegetation of the Salt River Bay peninsula to restore the coastal environment for the National Park Service.• USACE New Orleans District: I-310 Hurricane Flood Protection System / St. Rose, Louisiana. Led the technical portion of the civil and structural design effort to construct a floodwall system that meet 100-year hurricane flood protection standards beneath the St. Charles Parish interstate interchange in St. Rose.• Hurricane Flood Protection System / Oakville, St. Jude, Louisiana. Led the technical portion of the civil design effort to upgrade 32 miles of levees to meet 100-year Hurricane Flood Protection standards from Oakville to St. Jude.

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:	
Western Filter Plant Sodium Hypochlorite Conversion Birmingham, AL Birmingham Water Works Board Name Hattye McCarrol Chief Engineer Contact (205) 244 4182	The project included for the design of a new Hypochlorite building to replace the chlorine gas Disinfection Process at the 60 MGD Western Filter Plant. Project also included the design of the liquid lime system for the plant. Design included construction of a new masonry building, provision of 30-days of hypochlorite storage and replacement of electrical and controls equipment and associated site civil and process mechanical work.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
May 2024	Total Construction Estimate: \$12M	Design Fee: \$820,000

TEC Professional Services Questionnaire

PROJECT NO. 2		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
GAC Treatment System Design for Ellyson Well Pensacola, FL Emerald Coast Utilities Authority Daniel Corliss Assistant Director of Water Production (850) 969 6677	Arcadis is assisting in the design of a granular activated carbon treatment system to remove perfluorinated compounds (PFCs) and polyfluoroalkyl substances (PFAS). ECUA currently operates all of their GAC treatment systems in parallel and this design accommodates the flexibility to run in series or in parallel. Arcadis is doing an optimization study to determine the effectiveness in operating these facilities in series as opposed to the current parallel operation. This design gives ECUA the capability to run a lead-lag system in the future to allow the lead vessel to remain in operation beyond the point at which contaminants begin breaking through. Once the breakthrough reaches a certain threshold, water is rerouted so that the lag vessel is in the lead position, and then the GAC in the former lead vessel is replaced.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2021	Total Construction Value: \$850,000	Design Fee: \$105,000

TEC Professional Services Questionnaire

PROJECT NO. 3		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility	
Surface Water Treatment Plant Pascagoula, MS Jackson County Utility Authority Chase Glisson (228) 762-0119	Arcadis responsible for the design of a 1.5 mgd surface water advanced treatment plant. The treatment process consisted of conventional clarification followed by ultra-filtration and reverse osmosis. Responsibilities included the design responsibility for the water supply plant including site work, water modeling, permit coordination, development of specifications and grant management of a \$12MM SPAP Grant that had been maintained since the late 1990's.	
Completion Date (Actual or estimated)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2014	Total Construction Value: \$11.5 million	Design Fee: \$850,000

TEC Professional Services Questionnaire

PROJECT NO. 4		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
Groundwater Wells at the SWTP Pascagoula, MS Jackson County Utility Authority Chase Glisson Assistant Director (228) 762-0119	Arcadis performed design and construction administration services for two 350-gpm groundwater wells to serve as backup water supply at the Jackson County Utility Authority's Surface Water Treatment Plant. Responsibilities included design calculations, coordination between various disciplines, specification and contract document preparation, managing bid phase, performing value engineering, and construction oversight services.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2015	Total Construction Value: \$450,000	Design Fee: \$70,000

TEC Professional Services Questionnaire

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

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

TEC Professional Services Questionnaire

4.

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

Introduction to Arcadis

Arcadis has more than a century-long history of consulting with a concentration on water and the environment. We are devoted exclusively to water and wastewater engineering and management consulting to enhance the performance of public and private organizations in meeting their environmental responsibilities.

Arcadis is an international leader in the fields of infrastructure, environment and buildings. The firm's multidisciplinary staff provides consulting, design, engineering and management services across the U.S. and around the world to enhance mobility, sustainability and quality of life.

Comprehensive Water Consulting

We are devoted exclusively to water engineering and management consulting to enhance the performance of public and private organizations in meeting their environmental responsibilities. Our public-sector clients range from small municipalities to large cities, state agencies and agencies of the United States and other governments. In the private sector, our industrial clients range from single plant manufacturing facilities to Fortune 500 companies with locations worldwide. Regardless of size, every client receives personal attention and responsive service from a dedicated client service manager and a carefully selected project team.

Water quality regulatory standards and the treatment processes capable of attaining those standards have changed significantly during recent years, largely in response to public concerns about drinking water quality. Water treatment professionals worldwide have responded by achieving important advances in the technology of water treatment. Arcadis employs some of the most talented and experienced water treatment specialists in the industry today, serving a diverse range of clients and actively participating in the development of regulations to keep the firm at the forefront of the water treatment industry.

Our 100-year history of leadership in water engineering has been built on the collective experience of hundreds of on-staff experts in improving the quality of water supplies and developing effective water purification systems. We serve utility clients across the U.S. and abroad ranging in size from small water systems to some of the largest utilities in the nation and the world. Our staff members' participation in the research and development arena includes numerous American Water Works Association Research Foundation (AWWARF) and United States Environmental Protection Agency (USEPA) research projects on emerging issues facing the industry. We dedicate substantial staff time to supporting the development of federal regulations and attending technical conferences on water treatment issues and technologies.

Our experts have planned and implemented innovative water treatment facilities throughout the United States and internationally. Our experience includes the design of more than 100 new or upgraded surface water filtration facilities during the last 10 years alone. This work has included the evaluation, study, design and construction administration of well over 3 billion gallons per day of drinking water treatment, collectively.

Unparalleled Water Technical Expertise

Arcadis provides the following wastewater specialty services:

- Transmission and distribution pipeline evaluation and engineering
- Intake, pumping and storage facilities
- Computer modeling of water systems
- Water quality and treatment process evaluation
- Bench, pilot and full-scale treatability studies
- Water treatment process design
- Regulatory compliance and permitting assistance
- Applied technology research
- Management and reuse of water
- Water facilities master planning

Consistent Focus on Value to the Client

Our clients tell us that they want a consulting relationship that offers several key advantages:

TEC Professional Services Questionnaire

- Specialized knowledge of issues that affect the client's particular organization, not generalized, broad-brush consulting or a narrow project focus
- Project staff who pay attention to the client's unique needs, can adapt to local situations and promote trust and confidence
- Consistent effort to develop a relationship with the client and act in the client's best interests

Arcadis places the utmost priority on meeting these requirements to build strong partnerships with our clients across our entire wide range of service offerings.

We take a "total systems" approach to the array of challenges that our client faces. We begin by assembling the right team from the staff of our national practice, supplemented as needed with the specialized expertise of our many associate individuals and firms. We maintain a strong focus on implementation throughout the team selection process so that individuals with the appropriate expertise are involved from the start. The project team considers all aspects of the client's organization from management to infrastructure, processes, operations and maintenance. Participation of the appropriate experts facilitates the smooth progress of the project from initial assessment through implementation of the optimal solutions.

Past Performance on Similar Projects

To the best of our knowledge, Arcadis has not been removed from a contract or failed to complete a contract as assigned, due to time delays, cost overruns and/or design inadequacies in prior projects for which Arcadis was to be held at fault.

A challenging economy means now, more than ever, we must focus on delivering excellence from day one of every assignment. Tight budgets mean limited resources to change directions or correct mistakes. We understand that it isn't just what we deliver – how we get there matters, too. That is why we will continue to clearly define your expectations for every project and then work efficiently to exceed them. We prefer to develop a complete scope of work, plan the work carefully, price the scope appropriately and then manage the project to meet the schedule and budget. We do not like to request change orders. We focus instead on delivering excellence on every project and doing so with great efficiency.

Information/Data Management System

Arcadis understands that consultant-client communication is of utmost importance to our clients. We have successfully tracked the status of countless projects, while delivering exceptional results to our clients. The Information/Data Management System (IDMS) tool, a web-based project status reporting and information sharing tool, allows Arcadis to post updates to task assignments and share documents with clients in real time.

In addition, the IDMS serves as a digital liaison among all parties in work authorization contracts involving multiple assignments for project managers. The capabilities of the IDMS allow user settings to be customized based upon the level of the staff member and, in turn, provides for consistent data input. Anyone assigned viewing permission by the IDMS administrator will be also assigned a tier of user authority. By assigning these tiers, we protect site security and integrity. Tier authorizations vary from read-only to data uploading/downloading and commenting.

These functions centralize data stewardship while maximizing data accuracy, staff communication and work efficiency.

Document Tracking and Control

Arcadis uses Primavera Expedition® software for document control of City projects. Document control is critical on assignments and this software offers exceptional capabilities for filing, document control, document tracking and reporting.

TEC Professional Services Questionnaire

The Arcadis Team

Your local office. The Metairie, LA office will perform any services requested by the Parish of Jefferson, LA.

Arcadis U.S., Inc.
3850 North Causeway Boulevard
Suite 990
Metairie, Louisiana 70002
Phone: 504 648 3601
Fax: 504 832 2145
www.arcadis.com
Manager: Garret Keller, PE

National Resources/Size of Firm

With more than 150 offices and 5,000 employees nationwide, Arcadis has the depth of resources from which to complement the local Metairie, LA office as-needed. The Arcadis Team has a water focused practice both locally and nationally that has a full breadth of wastewater and sewer utility engineers, designers and operations professionals. The Metairie office is a full service engineering & design office located in the heart off Jefferson parish. This office, in addition to being an industry provider of water resources engineering projects, managed and delivered \$2 billion of engineering and design for the USACE for the Hurricane Protection Office for levees, floodwalls and flood control structures in St. Bernard, Plaquemines, Orleans and Jefferson Parishes.

In addition to the Metairie location, the Arcadis Team has office in New Orleans and Baton Rouge that can support the Metairie location as-needed.

Scheduling and Capacity

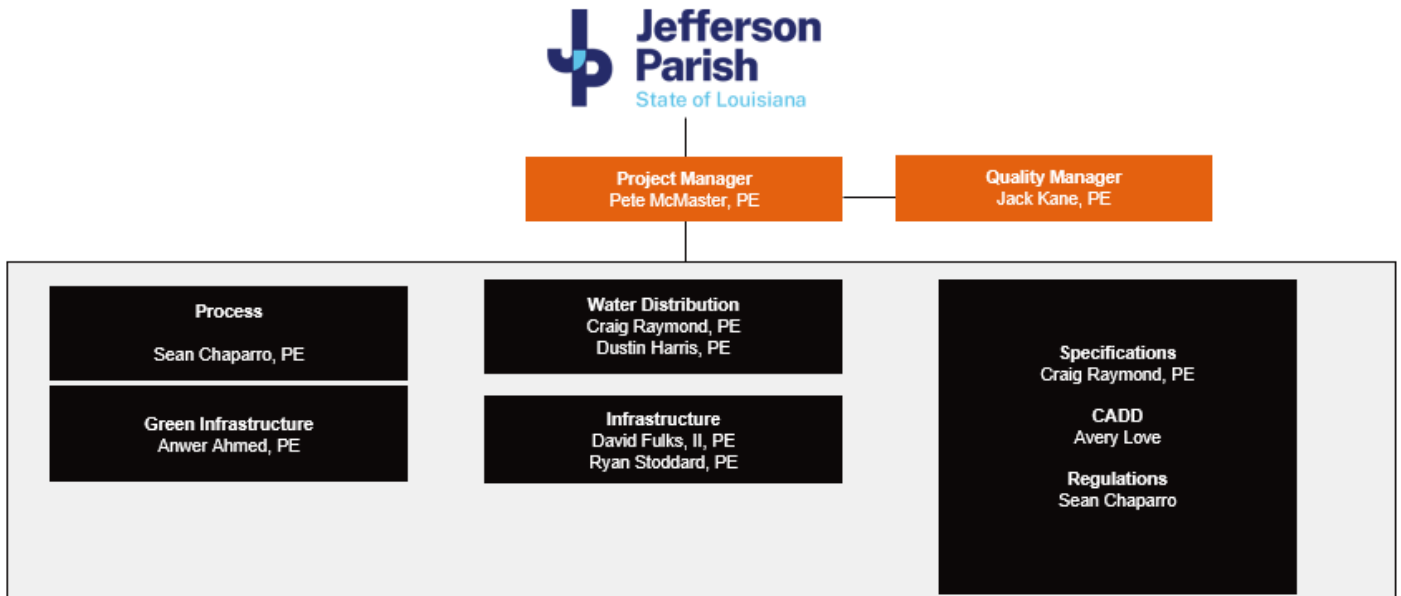
Arcadis team members consistently and effectively complete multiple work orders simultaneously on-time. With a large pool of professionals both locally and nationally to pull from, we have the ability to perform your project efficiently and effectively no matter the circumstance. Throughout the region, the Arcadis Team has a number of water resources professionals that have specific expertise to support Jefferson Parish in all of the areas required to run a world-class wastewater and sewer utility. Critical to any project's success is the ability to meet deadlines and schedules, with the appropriate staff availability. Arcadis has a proven project management protocol to track work authorization progress at every level. As a result, we enjoy a reputation that matches or exceeds that of any firm in the industry for completing work authorizations on schedule. This is the approach that delivered more than \$2 billion in projects for the USACE over the past 7 years.

Arcadis uses Primavera® Project Planner (P6), SureTrak® Project Manager and Microsoft Project®, as appropriate, for planning and scheduling projects. We will select the application that is most appropriate for the task, leading to a consistent level of success and deadlines. Arcadis establishes scheduling measures as part of every project to provide a consistent level of success. Our project planning process involves dividing the scope of services into smaller, well-defined and more manageable elements. Through the use of a Work Breakdown Structure (WBS), these services can be illustrated and used in a manner that promotes organization and effective communication in order to succeed in a project.

TEC Professional Services Questionnaire

Organization Chart

The proposed organizational chart for the team is shown below.



Quality Assurance / Quality Control

Whether performing design work under a task order or serving Jefferson Parish as an owner's representative, QA/QC is a critical aspect of our work under this contract. QA/QC is the ultimate responsibility of the local project manager on each project under this contract. It will be the Arcadis management team's responsibility to make certain that the proper people are conducting quality reviews.

QA/QC reviews can take several forms, including:

- Quality Assurance Reviews
- Quality Control Reviews
- Executive Project Reviews

The extent and type of project reviews will be defined in the Project Plan for each task order according to the nature, size and complexity of the project.

Quality Assurance Reviews

Quality Assurance Reviews are performed by the Quality Consultants to assist the team in producing the deliverable. These Reviews should be performed early in the project, or their impact is lost. Reviews performed early also minimize cost to the project as input at this stage can provide direction without significant re-work.

Quality Control Reviews

Quality Control Reviews are the responsibility of every person involved on a project. At a minimum, every product or deliverable must be reviewed by the Project Officer and/or Project Manager before submittal.

Executive Project Reviews

Executive Project Reviews are project reviews where technical and business representatives audit a project to help improve team performance. These reviews help us identify good performance and needed improvements in the firm's processes and systems

Health & Safety

TEC Professional Services Questionnaire

Arcadis has developed and currently implements a comprehensive health and safety (H&S) program and management system, focused on proactive project planning and identification and assessment of job hazards early in the planning and design stage. Appropriate controls are then determined and implemented to prevent and eliminate said hazards. Once a task or activity starts, the project team has the tools and processes necessary to address changing situations to stay ahead of hazards and prevent adverse impacts. Arcadis project teams have successfully applied these tools to maintain a high degree of operational safety in a variety of environments including terminals and refineries.

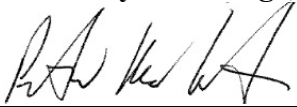
In addition to maintaining a strong internal safety program, Arcadis also addresses the H&S needs of our clients by offering on-site health and safety oversight. Whether it be on-site construction or remediation sites, or the development of an H&S management system, our staff can effectively handle a wide range of H&S needs. Our H&S staff has oil and gas industry experience and includes Certified Industrial Hygienists (CIH) and Certified Safety Professionals (CSP).

Arcadis teaches and uses the TRACK method to reduce or eliminate Health & Safety incidences. Think through the task, Recognize the hazards, Assess the risks, Control the hazards, Keep health and safety first in all things.

TEC Professional Services Questionnaire

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

Signature:



Print Name:

Pete McMaster, PE

Title: Vice President

Date:

June 21, 2024

About Arcadis

Arcadis is the leading global Design & Consultancy firm for natural and built assets. Applying our deep market sector insights and collective design, consultancy, engineering, project and management services we work in partnership with our clients to deliver exceptional and sustainable outcomes throughout the lifecycle of their natural and built assets. We are 29,000 people, active in over 70 countries that generate \$4.2 billion in revenues. We support UN-Habitat with knowledge and expertise to improve the quality of life in rapidly growing cities around the world.

www.arcadis.com

Supporting our clients in their quest to become Fit-for-Future.

Utilities must plan for unprecedented scenarios while navigating a changing workforce, but where should leaders focus?

Use the QR code below to explore the five fundamentals of becoming a fit-for-future water utility and the common thread that unites them.



Arcadis. Improving quality of life