STATEMENT OF QUALIFICATIONS

FOR

SOQ 24-013 – ROUTINE ENGINEERING SERVICES FOR WATER PROJECTS

FOR

JEFFERSON PARISH

Jefferson Parish
State of Louisiana

JUNE 21, 2024

SUBMITTED BY:

HORIZON ENGINEERING, LLC

HORIZON ENGINEERING

1013 N. CAUSEWAY BLVD., SUITE 201
METAIRIE, LOUISIANA 70001

TEC Professional Services Questionnaire

A. Project Name and Advertisement Resolution Number:

SOQ 24-013 - Routine Engineering Services for Water Projects
Resolution No. 144203

B. Firm Name & Address:

Horizon Engineering, LLC
1013 N. Causeway Blvd., Suite 201
Metairie, LA 70001

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

John Karlin, SE, PE
Co-Founder and Principal
jkarlin@horizonengineeringllc.com
(504) 270-1830

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.

Brett Liuzza, PE
bliuzza@horizonengineeringllc.com
(504) 270-1830

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

___ Administrative	___Estimators	___Specification Writers
___ Architects (Licensed)	___Geologists	___Structural Engineers
___ Chemical Engineers	___Geotechnical Engineers	___Graduate Engineers
_3_ Civil Engineers	___Interior Designers	___Project Managers
_4_ Construction Inspectors	___Landscape Architects	___Clerical
___ Ecologists	___Land Surveyor	___Grant/Funding Specialist
___ Electrical Engineers	___Mechanical Engineers	___Sanitary Engineers
___ Engineer Intern	___Environmental Engineers	_1_ Other (Environmental Scientist)
___ Professional Land Surveyors		_8_ **TOTAL**

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

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

TEC Professional Services Questionnaire

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

1. N/A

2. N/A

H. Has this JOINT-VENTURE previously worked together? Please check:
YES ◯ **NO** ◯ N/A

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

Name & Address:	Specialty:	Worked with Firm Before (Yes or No):
1. Eustis Engineering L.L.C. 3011 28th Street Metairie, LA 70002	Geotechnical Engineering	No*
2. N/A	N/A	N/A
3. N/A	N/A	N/A

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

1

***Horizon has not worked with Eustis yet as a firm; however, Horizon's principals worked with Eustis on numerous projects while at their previous employer.**

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:

Brett Liuzza, PE
Co-Founder and Principal

Project Assignment:

Professional-in-Charge, Project Manager, and Lead Civil Engineer

Name of Firm with which associated:

Horizon Engineering, LLC

Years' experience with this Firm:

<1 year (16 years with other firms)

Education: Degree(s)/Year/Specialization:

Bachelor of Science, 2008, Civil Engineering

Active registration: Year first registered/discipline:

Louisiana PE, License No. 37753, 2013, Civil Engineer

Other experience and qualifications relevant to the proposed Project:

Work Zone Safety / Temporary Traffic Control Certifications
ATSSA Certified Traffic Control Supervisor (TCS), Technician (TCT), and Flagger; LaDOTD Traffic Engineering Process and Report (TEPR) Certification

Waterline Transmission Study
Owner: Jefferson Parish. **Scope:** Feasibility study and conceptual design of 42" to 48" water transmission line. **Role:** Project Manager and Lead Civil Engineer. Performed preliminary analysis; determined preliminary pump and transmission line configuration and sizes; prepared preliminary layouts of water transmission lines; prepared opinions of probable construction cost of preferred conceptual design; evaluated feasibility of multiple conceptual designs; and prepared report summarizing analyses and recommendations.

Lakeside Mall Waterline Improvements
Owner: Jefferson Parish. **Scope:** Replacement of water mains, water lines, valves, manholes, hydrants, and commercial connections along Causeway Blvd. from 14th Street south to Veterans Blvd., including intersecting streets and Lakeside Mall. **Role:** Project Manager and Lead Civil Engineer. Performed preliminary analysis; prepared preliminary plans with layout of water mains and associated components and opinions of probable construction cost; and identified pipe bursting as a feasible method to minimize disruptions to traffic and reduce costs by reducing the amount of required pavement removal.

Sonia Place Waterline Improvements
Owner: Jefferson Parish. **Scope:** Replacement of water mains and house connections along Sonia Place. **Role:** Project Manager and Lead Civil Engineer. Performed preliminary analysis. Prepared preliminary plans with layout of water mains, house connections, fire service, and other components. Prepared opinions of probable construction cost.

MacArthur Interchange Completion
Owner: LaDOTD. **Scope:** Construction of entrance/exit ramps for Westbank Expressway and relocation of frontage road and associated utilities. **Cost:** ≈$42,000,000. **Role:** Civil Engineer. Designed 15" to 48" RCP, 15" to 72" equivalent RCPA, 10" sewer force main relocation horizontally drilled underneath 4-lane roadway, and 8" water line relocation. Prepared plans, specifications, and opinion of probable construction cost.

Brett Liuzza, PE (Continued)

Hurricane Protection Levee Utility Crossings
Owner: Orleans Levee District Non-Flood Protection Asset Management Authority (OLD-NFPAMA). **Scope:** Installation of electrical conduit, water pipe, and sewer force main over Lake Pontchartrain levee for future use by SLFPA-E. **Role:** Construction Engineer. Managed inspectors; performed inspections; reviewed RFIs, submittals, and pay applications; prepared change orders; and prepared project closeout documentation.

St. Charles Parish Library – Paradis Branch
Owner: St. Charles Parish. **Scope:** Site development, including drainage, sewer, and water lines and parking, driveways, curbs, sidewalks, and handicap ramps. **Role:** Civil Engineer. Performed drainage analysis and design and utility design. Designed parking lots and driveway entrances, sidewalk geometric layout, concrete pavement, concrete curb and gutter, 15" to 18" RCP, and sewer and water mains, valves, fittings, and offsets. Prepared plans, specifications, and opinion of probable construction cost. Managed inspector; performed inspections; reviewed RFIs, submittals, and pay applications; prepared change orders; and prepared project closeout documentation.

Laplace Elementary School
Owner: St. John the Baptist Parish. **Scope:** Site development, including drainage, sewer, and water lines; curbs, driveways, and parking; and sidewalks and handicap ramps. **Role:** Civil Engineer. Performed drainage analysis and design and utility design. Designed parking lots and driveway entrances, sidewalk geometric layout, concrete pavement, concrete curb and gutter, 15" to 24" RCP, and sewer and water mains, valves, fittings, and offsets. Prepared plans, specifications, and opinion of probable construction cost. Involved in construction engineering and inspection. Managed inspector; performed inspections; reviewed RFIs, submittals, and pay applications; prepared change orders; and prepared project closeout documentation.

East Baton Rouge Parish School System Site Development
Owner: East Baton Rouge Parish. **Scope:** Design and construction of multiple schools throughout East Baton Rouge Parish. **Role:** Civil Engineer. Designed site grading, drainage pipes and structures, utility connections, and miscellaneous site features. Prepared Stormwater Management Plans, plans, specifications, and opinions of probable construction cost. Prepared permit applications and supporting documents and performed inspections.

RR122 and RR123 Marlyville-Fontainbleau Groups G and H (FRC)
Owner: City of New Orleans. **Scope:** Roadway reconstruction, including drainage, sewer, and water lines and curbs, driveways, sidewalks and handicap ramps. **Role:** Project Manager and Lead Civil Engineer. Led roadway design and performed drainage analysis and design and utility relocation design. Designed roadway, driveway, and sidewalk geometric layout, asphaltic concrete pavement, concrete curb and gutter, 15" to 30" RCP, and sewer and water mains, valves, fittings, offsets, and house connections. Prepared plans, specifications, and opinion of probable construction cost. Led construction engineering and inspection. Managed inspectors; performed inspections; reviewed RFIs, submittals, and pay applications; prepared change orders; and prepared project closeout documentation.

Milneburg Group B (FRC) Streets
Owner: City of New Orleans. **Scope:** Replacement of roadway and drainage, sewer, and water lines. **Cost:** ≈$7,400,000. **Role:** Project Manager and Lead Civil Engineer. Led roadway design, drainage design, and utility relocation design. Designed roadway, driveway, and sidewalk geometric layout, asphaltic concrete pavement, concrete curb and gutter, 15" to 30" RCP, 18x11 to 51x31 RCPA, and sewer and water mains, valves, fittings, offsets, and house connections. Prepared plans, specifications, and opinion of probable construction cost. Led construction engineering and inspection. Managed inspectors; performed inspections; reviewed RFIs, submittals, and pay applications; prepared change orders; and prepared project closeout documentation.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Ben Bartlett, PE, PTOE Co-Founder and Principal
Project Assignment:
Project Manager and Civil Engineer
Name of Firm with which associated:
Horizon Engineering, LLC
Years' experience with this Firm:
<1 year (15 years with other firms)
Education: Degree(s)/Year/Specialization:
Master of Civil Engineering, 2010, Civil Engineering Bachelor of Science, 2008, Civil/Environmental Engineering
Active registration: Year first registered/discipline:
Louisiana PE, License No. 38980, 2014, Civil Engineer PTOE, License No. 4020, 2016, Professional Traffic Operations Engineer
Other experience and qualifications relevant to the proposed Project:

Work Zone Safety / Temporary Traffic Control Certifications
ATSSA Certified Traffic Control Supervisor (TCS), Technician (TCT), and Flagger; LaDOTD Traffic Engineering Process and Report (TEPR) Certification

St. Charles Parish West Bank A Plant Filter Upgrade
Owner: St. Charles Parish. **Scope:** Rehabilitation and improvement of 1960s water treatment plant. **Cost:** ≈$410,000. **Role:** Project Manager and Lead Civil/Environmental Engineer. Led inspection of existing equipment and preparation of plans, specifications, and opinion of probable construction cost. Designed repairs and/or replacement of filter underdrains, lead joint pipes, valves, electronic actuators, agitator bearings, filter media, and miscellaneous hardware/incidentals. Reviewed RFIs, submittals, and pay applications and provided regulatory and technical guidance on National Primary Drinking Water Regulations (NPDWR), Safe Drinking Water Act (SDWA) standards, and National Sanitation Foundation/American National Standards Institute Standard 61 (NSF/ANSI 61) requirements during construction.

Lake Pontchartrain Causeway Bridge Floodwall Utility Relocations
Owner: Jefferson Parish. **Scope:** Relocation of utilities (drainage, water, sewer, electric, and telecommunications) to facilitate construction of ≈$43,000,000 floodwall at base of Causeway Bridge at Lake Pontchartrain. **Role:** Civil Engineer. Designed utility relocations to accommodate floodwall construction. Performed inspections; reviewed RFIs and submittals; and prepared change orders and project closeout documentation.

Lakeside Mall - Severn Avenue Intersection Improvements
Owner: Private. **Scope:** Modification of the existing Lakeside Mall entrance/exit along Severn Avenue at the JC Penney parking lot. **Cost:** $400,000.00 (est.). **Role:** Project Manager, Lead Civil Engineer, and Lead Construction Engineer. Prepared plans and specifications for the expansion of the existing entrance/exit along Severn Avenue; the relocation of public and private utilities (sewer, water, drainage, electricity, gas, internet); the replacement of the existing grease trap system/tank; and the installation of new ADA compliant pedestrian routes. Managed inspectors; reviewed RFIs, submittals, and pay applications; coordinated construction materials testing; and prepared change orders.

Ben Bartlett, PE, PTOE (Continued)

St. Charles Parish Road Maintenance Program (2010 – 2014)
Owner: St. Charles Parish. **Scope:** Annual inspection of all St. Charles Parish-owned roadways and repair/replacement of deficient roadways. **Cost:** ≈$1,500,000 (est.) annually. **Role:** Program Manager and Lead Civil Engineer. Led inspections, roadway design, and preparation of plans, specifications, and opinions of probable construction cost. Developed roadway repair/replacement priority lists for the verifiable expenditure of state/federal funds. Designed asphalt pavement milling/overlay and patching, PCC pavement panel replacement, sidewalk modifications, ADA compliant ramps, and utility adjustments. Led construction engineering and inspection. Managed inspectors; reviewed RFIs, submittals, and pay applications; prepared change orders; and prepared project closeout documentation.

Relocation of East St. Bernard Highway and Associated Utilities (CMAR)
Owner: Port of New Orleans. **Scope:** Relocation of East St. Bernard Highway and associated utilities and construction of new bridge over railroad to facilitate construction of the ≈$1.8B Louisiana International Terminal (1.05 miles of roadway, drainage, and utilities and 1,100-foot-long bridge). **Cost:** ≈$50,000,000 (est.). **Role:** Project Manager and Lead Civil Engineer. Reviewed preliminary plans, drainage studies, traffic studies, and other related information and prepared gap analysis identifying critical items to be addressed between preliminary and final design. Performed preliminary design of horizontal and vertical road geometry and utility relocation to dedicated utility corridor. Prepared LaDOTD preliminary design report, including lane, shoulder, and median widths, superelevation, and other related design features; prepared value engineering proposals; evaluated CMAR contractor value engineering proposals; and coordinated with LaDOTD, CMAR contractor, and other stakeholders.

Jefferson Parish Submerged Roadways Program
Owner: Jefferson Parish. **Scope:** Evaluation of Hurricane Katrina related roadway damage and repair/replacement of deficient roadways (85 PCC pavement streets and 8 miles of asphaltic concrete roadway). **Cost:** ≈$50,000,000 (est.). **Role:** Civil Engineer. Evaluated roadway damage; prepared plans, specifications, and opinion of probable construction cost; and designed asphaltic concrete pavement milling/overlay and patching, PCC pavement panel replacement, sidewalk modifications, ADA compliant ramps, utility adjustments, and adjustments to drop inlets, manholes, and other drainage structures in the roadway. Reviewed RFIs, submittals, and pay applications; prepared change orders; and prepared project closeout documentation.

419 Carondelet Street
Owner: Private. **Scope:** Renovation of historic building in New Orleans Central Business District. **Role:** Civil Engineer. Designed relocation of utilities (water, sewer, gas, electrical, telecommunications) and drainage within public right-of-way to avoid conflicts and facilitate connections to a mixed commercial/residential building. Designed water commercial connections, valves, backflow preventers, and flow meters (including hot-tapping of the existing SWBNO water main) to avoid disruptions to traffic and the shutoff of utilities to adjacent buildings in a high density urban area.

505 East Travis Street
Owner: Private. **Scope:** Renovation of historic building in San Antonio. **Role:** Civil Engineer. Designed water and sewer commercial connections, valves, backflow preventers, and flow meters within public right-of-way to avoid conflicts with existing utilities and facilitate connections to a mixed commercial/residential building.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
John Karlin, SE, PE Co-Founder and Principal
Project Assignment:
Project Manager and Civil Engineer
Name of Firm with which associated:
Horizon Engineering, LLC
Years' experience with this Firm:
<1 year (7 years with other firms)
Education: Degree(s)/Year/Specialization:
Master of Science, 2017, Civil (Structural) Engineering Bachelor of Science, 2016, Civil Engineering
Active registration: Year first registered/discipline:
Louisiana PE, License No. 44795, 2020, Civil and Structural Engineer Illinois SE, License No. 081-008511, 2020, Structural Engineer
Other experience and qualifications relevant to the proposed Project:

Work Zone Safety / Temporary Traffic Control Certifications
ATSSA Certified Traffic Control Supervisor (TCS), Technician (TCT), and Flagger; LaDOTD Traffic Engineering Process and Report (TEPR) Certification

Sewer Pump Station No. 8
Owner: Sewerage and Water Board of New Orleans. **Scope:** Construction of City of New Orleans Sewer Pump Station No. 8. **Cost: Role:** Construction Engineer. Performed reinforcement inspections; reviewed RFIs and submittals; and assisted with review of pay applications and preparation of change orders.

RR3 Plum Orchard/West Lake Forest Group A
Owner: City of New Orleans. **Scope:** Water main aerial crossing over Citrus Canal. **Role:** Lead Structural Engineer. Designed water main aerial crossing, including timber piles, timber bracing, reinforced concrete pile caps, 8" ductile iron pipe and fittings, pipe saddles and straps, and chain link screens. Prepared plans and specifications.

Relocation of East St. Bernard Highway and Associated Utilities (CMAR)
Owner: Port of New Orleans. **Scope:** Relocation of East St. Bernard Highway and associated utilities and construction of bridge over railroad (1.05 miles of roadway, drainage, and utilities and 1,100-foot-long bridge). **Cost: ≈**$50,000,000 (est.). **Role:** Lead Structural Engineer. Performed preliminary analysis and design of truss span (approximately 200 feet long) over railroad to reduce superstructure depth and bridge length; prepared LaDOTD preliminary design report, including lane, shoulder, and median widths, superelevation, and other related design features; prepared value engineering proposals; evaluated CMAR contractor value engineering proposals; and coordinated with LaDOTD, CMAR contractor, and other stakeholders.

Geisenheimer Canal Improvements (Loumor Outfall Ditch to Hoey's Canal)
Owner: Jefferson Parish. **Scope:** Design of box culvert connecting Loumor Outfall Ditch and Woodvine Ditch to Hoey's Canal (12'x8' precast boxes and 3 cast-in-place concrete junction boxes). **Role:** Project Manager and Lead Structural Engineer. Led structural analysis and design and preparation of plans, specifications, and opinions of probable construction cost. Designed precast boxes, cast-in-place reinforced concrete junction box, and curved cast-in-place reinforced concrete transition section for HL-93 vehicular live load and other miscellaneous components.

John Karlin, SE, PE (Continued)

W. Esplanade Bridges @ Duncan Canal
Owner: LaDOTD. **Scope:** Replacement of bridges with reinforced concrete box culverts (two 38'x13' cells and two 14'x8' cells). **Cost:** ≈$14,000,000. **Role:** Structural Engineer. Designed reinforced concrete base slab, walls, pipe penetrations, top slab, columns, girder, wingwalls, and apron slab considering LADV-11 and HL-93 vehicular live load. Reviewed RFIs and submittals.

Lakefront Airport Drainage Improvements – Phase 1
Owner: Lakefront Management Authority. **Scope:** Reinforced concrete reservoir (approximately 123'x43'x28' deep) for a future 600 CFS pump station. **Role:** Lead Structural Independent Technical Reviewer for pump station temporary retaining structure (TRS). Reviewed pump station TRS design and calculations and associated plans, specifications, geotechnical report, and construction phase geotechnical investigation information. Prepared independent calculations for approximate TRS force effects and TRS components, including sheeting, walers, and struts. Prepared report summarizing the independent technical review.

West Esplanade Avenue Canal Crossing (Between Williams Boulevard and David Drive)
Owner: Jefferson Parish. **Scope:** Installation of ≈1,100 feet of 96-inch RCPA and a confluence box to transfer water from existing and future commercial developments and facilitate closing in of the West Esplanade Canal (Canal No. 2). **Cost:** ≈$730,000. **Role:** Structural Engineer. Designed reinforced concrete headwalls, wingwalls, and apron slabs.

Seawall Erosion Control Paving Project (Reaches 1A-1C, 2A-2D, 3A-3C, 4, 5, and 5B)
Owner: SLFPA-E. **Scope:** Fortification of the Lake Pontchartrain seawall and road, drainage, and lighting improvements (5.2 miles long). **Cost:** ≈$50,000,000. **Role:** Structural Engineer and Construction Engineer. Designed pile and sheet piling layouts, grade beams, tree preservation walls, slabs, expansion joints, retaining walls, drainage outfalls, sheet pile pipe penetrations, and light foundations. Assisted with preparation of permit drawings for SLFPA-E, CPRA, and USACE for construction in proximity to existing Bayou St. John floodwalls. Performed reinforcement inspections; reviewed RFIs and submittals; and assisted with review of pay applications and preparation of change orders and project closeout documentation.

Belle Chasse Bridge and Tunnel Replacement (Public-Private Partnership Project)
Owner: United States Army Corps of Engineers (USACE)/LaDOTD. **Scope:** Replacement of 2-lane vertical lift Judge Perez Bridge and 2-lane Belle Chasse Tunnel with 4-lane fixed bridge over GIWW. **Cost:** ≈$134,000,000. **Role:** Safety Assurance Review (SAR) Panel Lead Structural Reviewer. Led structural review in accordance with USACE SAR requirements. Visited site; reviewed plans, specifications, and structural analyses/calculations for vertical lift bridge demolition, tunnel decommissioning, and replacement of tunnel flood gates with permanent floodwalls considering the effect of construction on nearby existing levees and floodwalls; and identified potential public safety issues.

Nashville Avenue Wharf "A" Substructure Repairs Phase 2 (CMAR)
Owner: Port of New Orleans. **Scope:** Structural inspection and rehabilitation of 1960s wharf along Mississippi River (5,375 steel piles, approximately 1,000,000 square foot reinforced concrete deck, and 2,400 foot long reinforced concrete bulkhead). **Cost:** ≈$25,000,000 (est.). **Role:** Project Manager and Lead Structural Engineer. Led above water and underwater inspections; structural analysis and design; preparation of plans, specifications, and opinion of probable construction cost; and coordination with CMAR contractor. Managed 10 inspectors and 4 divers. Evaluated CMAR contractor value engineering proposals. Designed pile bracing, coating of steel components, epoxy-grouted pile jackets, pile strengthening, partial and full depth deck repairs, and bulkhead repairs considering site-related challenges, such as fluctuating water levels, limited accessibility for equipment, and the need to sequence construction to minimize disruptions to Port NOLA's operations. Reviewed RFIs and submittals.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Jeff Puissegur Senior Inspector
Project Assignment:
Inspector
Name of Firm with which associated:
Horizon Engineering, LLC
Years' experience with this Firm:
<1 year (16 years with other firms)
Education: Degree(s)/Year/Specialization:
Bachelor of Arts, 1999, Social Science Associate of Arts, 1996, Business Management
Active registration: Year first registered/discipline:
N/A
Other experience and qualifications relevant to the proposed Project:

Inspection and Work Zone Safety / Temporary Traffic Control Certifications
Certified by LaDOTD in Embankment and Base Course and PCC Paving; ATSSA Certified Traffic Control Supervisor (TCS), Technician (TCT), and Flagger

Airline Park Blvd (Camphor – W Napoleon)
Owner: Jefferson Parish (LaDOTD LPA project). **Scope:** Replacement of asphalt roadway and PCC pavement roadway (including curb, driveways, sidewalks, and handicap ramps); drainage, sewer, and water improvements; and installation of drainage pump station and associated canal bank sheeting and riprap. **Cost:** ≈$6,000,000. **Role:** Lead Inspector. Performed inspections; reviewed quantities; prepared daily work records (DWRs); assisted with materials sampling and coordination of construction materials testing; assisted with the review of RFIs; assisted with the development of adjustments to utilities and drop inlets, manholes, and other drainage structures in the roadway; prepared redline as-built plans; and assisted with the preparation of project closeout documentation.

Jefferson Parish Submerged Roadways Program
Owner: Jefferson Parish. **Scope:** Evaluation of Hurricane Katrina related roadway damage and repair/replacement of deficient roadways (85 PCC pavement streets and 8 miles of asphaltic concrete roadway). **Cost:** ≈$50,000,000 (est.). **Role:** Inspector. Performed inspections; reviewed quantities; prepared daily work records (DWRs); assisted with materials sampling and coordination of construction materials testing; assisted with the review of RFIs; assisted with the development of adjustments to drop inlets, manholes, and other drainage structures in the roadway; and assisted with the preparation of project closeout documentation.

Milneburg Group B (FRC) Streets
Owner: City of New Orleans. **Scope:** Replacement of asphalt roadway and drainage, sewer, and water improvements. **Cost:** ≈$7,400,000. **Role:** Lead Inspector. Performed inspections; reviewed quantities; prepared daily work records (DWRs); assisted with materials sampling and coordination of construction materials testing; assisted with the review of RFIs; assisted with the development of adjustments to utilities and drop inlets, manholes, and other drainage structures in the roadway; prepared redline as-built plans; and assisted with the preparation of project closeout documentation.

Jeff Puissegur (Continued)

Magazine St (Leake Ave to East Drive)
Owner: City of New Orleans (LaDOTD LPA project). **Scope:** Replacement of asphalt roadway with PCC pavement roadway (including curb, driveways, sidewalks, and handicap ramps) and drainage, sewer, and water improvements. **Cost:** ≈$4,500,000. **Role:** Lead Inspector. Performed inspections; reviewed quantities; prepared daily work records (DWRs); assisted with materials sampling and coordination of construction materials testing; assisted with the review of RFIs; assisted with the development of adjustments to utilities and drop inlets, manholes, and other drainage structures in the roadway; prepared redline as-built plans; and assisted with the preparation of project closeout documentation.

Seawall Erosion Control Paving Project (Reaches 1A-1C, 2A-2D, 3A-3C, 4, 5, and 5B)
Owner: SLFPA-E. **Scope:** Fortification of the Lake Pontchartrain seawall and roadway, drainage, and lighting improvements (5.2 miles long). **Cost:** ≈$50,000,000. **Role:** Lead Inspector. Performed inspections; reviewed quantities; prepared daily work records (DWRs); assisted with coordination of construction materials testing; assisted with the review of RFIs; and assisted with the preparation of project closeout documentation.

Grafton Drive Pavement Rehabilitation
Owner: City of Slidell (LaDOTD LPA project). **Scope:** Repair/replacement of deficient PCC pavement panels, curb, driveways, and handicap ramps. **Cost:** ≈$1,000,000. **Role:** Lead Inspector. Performed inspections; reviewed quantities; prepared daily work records (DWRs); assisted with materials sampling and coordination of construction materials testing; assisted with the review of RFIs; assisted with the development of adjustments to drop inlets, manholes, and other drainage structures in the roadway; prepared redline as-built plans; and assisted with preparation of project closeout documentation.

Carey St. Pavement Rehabilitation
Owner: City of Slidell (LaDOTD LPA project). **Scope:** Repair/replacement of deficient PCC pavement panels, curb, driveways, and handicap ramps. **Cost:** ≈$970,000. **Role:** Lead Inspector. Performed inspections; reviewed quantities; prepared daily work records (DWRs); assisted with materials sampling and coordination of construction materials testing; assisted with the review of RFIs; assisted with the development of adjustments to drop inlets, manholes, and other drainage structures in the roadway; prepared redline as-built plans; and assisted with the preparation of project closeout documentation.

Lake Forest Boulevard
Owner: City of New Orleans (LaDOTD LPA project). **Scope:** Replacement of roadway with PCC pavement roadway; asphalt roadway milling and overlay; and drainage, sewer, and water improvements. **Cost:** ≈$490,000. **Role:** Lead Inspector. Performed inspections; reviewed quantities; prepared daily work records (DWRs); assisted with materials sampling and coordination of construction materials testing; assisted with the review of RFIs; assisted with the development of adjustments to utilities and drop inlets, manholes, and other drainage structures in the roadway; prepared redline as-built plans; and assisted with the preparation of project closeout documentation.

LPV-104.01a London Avenue Canal to IHNC
Owner: USACE. **Scope:** Raising of multiple levee ramps in accordance with USACE HSDRRS between London Avenue Canal and IHNC. **Cost:** ≈$14,000,000. **Role:** Inspector. Performed inspections; reviewed quantities; prepared daily work records (DWRs); assisted with materials sampling and coordination of construction materials testing; assisted with the review of RFIs; and assisted with the preparation of project closeout documentation.

LPV-113 Michoud Slip/Canal Levee
Owner: USACE. **Scope:** Raising of levee, levee enlargement, channel excavation, foreshore protection works, levee scour protection, and relief wells in accordance with USACE HSDRRS between Michoud Canal and the Michoud Slip. **Role:** Inspector. Performed inspections; reviewed quantities; prepared daily work records (DWRs); assisted with materials sampling and coordination of construction materials testing; assisted with the review of RFIs; and assisted with the preparation of project closeout documentation.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Wayne "Dickie" Lemoine Senior Inspector
Project Assignment:
Inspector
Name of Firm with which associated:
Horizon Engineering, LLC
Years' experience with this Firm:
<1 year (53 years with other firms)
Education: Degree(s)/Year/Specialization:
Coursework at Nicholls State University
Active registration: Year first registered/discipline:
N/A
Other experience and qualifications relevant to the proposed Project:

Inspection and Work Zone Safety / Temporary Traffic Control Certifications
Certified by LaDOTD in Structural Concrete (previously held certifications in Embankment and Base Course, PCC Paving, Concrete Pipe Installation, and Metal Pipe Installation); ATSSA Certified Traffic Control Supervisor (TCS), Technician (TCT), and Flagger; completed numerous inspection, engineering, and surveying training courses, including LaDOTD Comprehensive Bridge Inspection Training, LaDOTD Comprehensive Movable Bridge Inspection Training, PennDOT Basic Bridge Safety Inspector's Training, University of Wisconsin-Madison Bridge Inspection Update, University of Wisconsin-Madison Nondestructive Evaluation of Bridge Conditions, and SSPC C-3 Supervisor/Competent Person Training for Deleading of Industrial Structures.

LaDOTD District 02 Bridge Inspections
Owner: LaDOTD. **Scope:** Structural inspections of thousands of on-system and off-system fixed bridges, moveable bridges, tunnels, locks, and box culverts throughout LaDOTD District 02. **Role:** Multiple roles, including District 02 Bridge Maintenance Inspection Supervisor, Bridge Inspector Team Leader, Engineering Specialist, and Engineering Aide. Planned, scheduled, supervised, and performed in-depth and routine structural inspections in accordance with the National Bridge Inspection Standards (NBIS). Estimated bridge damage repair costs; supervised repairs completed by bridge maintenance crews; inspected road construction; surveyed; and sampled and tested soil and concrete. Inspected all moveable bridges in LaDOTD District 02, including swing, bascule, and vertical lift bridges such as:

- Barataria Bridge (over Bayou Barataria) / Swing Bridge / Jefferson Parish
- Chef Menteur Bridge (over Chef Menteur Pass) / Swing Bridge / Orleans Parish
- Danziger Bridge (over Inner Harbor Navigation Canal) / Vertical Lift Bridge / Orleans Parish
- Harvey Bridge (over Harvey Canal) / Bascule Bridge / Jefferson Parish
- Judge Seeber Bridge (over Inner Harbor Navigation Canal) / Vertical Lift Bridge / Orleans Parish
- Causeway Bridge NB and SB Bascules (over portions of Lake Pontchartrain) / Bascule Bridge / St. Tammany Parish
- Maestri Bridge North and South Draws (over portions of Lake Pontchartrain) / Bascule Bridge / Orleans Parish
- Senator Ted Hickey Bridge (over Inner Harbor Navigation Canal) / Bascule Bridge / Orleans Parish

Inspected all tunnels in LaDOTD District 02, including:

- Harvey Tunnel
- Belle Chasse Tunnel
- Houma Tunnel

Wayne "Dickie" Lemoine (Continued)

Huey P. Long Bridge Widening
Owner: LaDOTD. **Scope:** Widening of the Huey P. Long Bridge while maintaining vehicular traffic (nearly 50,000 ADT), railroad traffic, and marine traffic. **Cost:** ≈$1,200,000,000. **Role:** Lead Inspector. Managed 22 inspectors. Performed inspections; reviewed quantities; prepared daily work records (DWRs); used rope access techniques to climb and inspect trusses; uploaded documentation to SiteManager; reviewed inspector SiteManager uploads; coordinated with 4 contractors; assisted with coordination of construction materials testing; performed sampling and field testing of concrete; and assisted with the review of RFIs.

Rehabilitation of Ramps 6, 7, and Overpass of Causeway Boulevard at Airline Drive
Owner: Jefferson Parish. **Scope:** Structural inspection and evaluation and rehabilitation of 1950s elevated interchange (2 ramps and 4 lane overpass). **Cost:** ≈$13,000,000. **Role:** Inspector. Performed inspections; reviewed quantities; prepared daily work records (DWRs); assisted with coordination of construction materials testing; assisted with the review of RFIs; assisted with the development of adjustments to post-installed adhesive anchor and reinforcing bar positions to avoid conflicts with existing reinforcement; assisted with the inspection, coordination, and development of field adjustments for emergency deck repairs to replace failed expansion joint with only weekend road closures; and assisted with the preparation of project closeout documentation.

LA 70: Mississippi River Bridge – Phase II
Owner: LaDOTD. **Scope:** Coating of the Sunshine Bridge and strengthening of steel members for corrosion (22,000 ADT). **Cost:** ≈$25,000,000. **Role:** Lead Inspector. Managed inspectors. Performed inspections of coating, structural steel, concrete repairs, and temporary traffic control; reviewed quantities; prepared daily work records (DWRs); used SiteManager; assisted with coordination of construction materials testing; and assisted with the review of RFIs.

Lake Pontchartrain Causeway Southbound Bridge Rail Improvements
Owner: GNOEC. **Scope:** Installation of enhanced steel bridge rails and other miscellaneous repairs (48 miles of steel rail) while maintaining ADT of over 20,000. **Cost:** ≈$40,000,000. **Role:** Lead Inspector. Inspected temporary lane closures of over 10 miles long; performed inspections; reviewed quantities; prepared daily work records (DWRs); assisted with coordination of construction materials testing; and assisted with the review of RFIs.

Demolition of 9-Mile Turnaround Spans
Owner: GNOEC. **Scope:** Demolition of 9-mile turnaround spans of Lake Pontchartrain Causeway Bridge. **Cost:** ≈2,500,000. **Role:** Lead Inspector. Performed inspections of removal of span superstructure and substructure; reviewed quantities; prepared daily work records (DWRs); used SiteManager; assisted with coordination of construction materials testing; and assisted with the review of RFIs.

Violet Siphon Intake Structure Repairs
Owner: Louisiana Coastal Protection and Restoration Authority (CPRA). **Scope:** Replacement of damaged siphon intake structure with steel support frame and warning piles in the Mississippi River. **Cost:** ≈$250,000. **Role:** Lead Inspector. Performed inspections; reviewed quantities; prepared daily work records (DWRs); assisted with coordination of construction materials testing; and assisted with the review of RFIs.

Erato Street Cruise Terminal Inspection
Owner: Port of New Orleans. **Scope:** Structural inspection of 6-level parking garage precast concrete beam ends, corbels, and bearing pads. **Role:** Inspector. Performed inspections and assisted with preparation of inspection report.

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:
Zellwood Station Phase 3 Zellwood, Florida Zellwood Development Group, LLC 2893 Upland Ridge Chuluota, FL 32766 Steve MacGeorge (321) 356-1802 stevemacgeorge@smacgeorge.com	The Zellwood Site consists of approximately 10.4 acres and is located on the east side of W. Orange Blossom Trail (US 441). The site will be developed to accommodate multiple commercial properties. Horizon Engineering, LLC (Horizon) prepared a conceptual planning study to investigate the subdivision of the site, drainage requirements, and improvements to access from US 441 and is currently completing the final design. Horizon's duties included: • Review of site zoning information/maps, topographic and boundary surveys, traffic studies, and geotechnical investigations and reports. • Preparation of preliminary site plans illustrating potential configurations of commercial lots within the site. • Hydrologic and hydraulic modeling, analysis, and design to determine subsurface drainage and detention pond requirements for multiple configurations of the site. • Coordination with the Florida Department of Transportation (FDOT) and Federal Aviation Administration (FAA). • Investigation of potential improvements to access from US 441, including the feasibility of widening the existing shared driveway and adding new driveways, turn lanes, and/or a signalized intersection. • Coordination and relocation of utilities. • Permitting assistance. • Preparation of final plans and specifications, including site grading, subsurface drainage, detention pond, widening of existing driveway, new driveway, and other miscellaneous features. • Construction support.

Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	**Work for which Firm was Responsible:**
August 2024 (estimated design completion date)	TBD	$71,850 (fee)

TEC Professional Services Questionnaire

PROJECT NO. 2		
Project Name, Location and Owner's contact information:	**Nature of Firm's Responsibility:**	
Hogshead Road Temporary Facilities Apopka, Florida S.A. Casey Construction 2822 Commerce Park Drive, Suite 400 Orlando, FL 32819 Shawn Casey (407) 240-6775 scasey@sacaseyconstruction.com	Horizon Engineering, LLC prepared site plans for the installation of temporary construction facilities on an approximately 3-acre site, including field office, utilities (including 28,000-gallon water tank), storage, and parking. The site plans were used to facilitate permitting for the project.	
Completion Date (Actual or estimated):	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
May 2024	TBD	$2,290 (fee)

TEC Professional Services Questionnaire

PROJECT NO. 3		
Project Name, Location and Owner's contact information:	**Nature of Firm's Responsibility:**	
Independent Technical Review of Lakefront Airport Pump Station Temporary Retaining Structure Design New Orleans, Louisiana RNGD 1730 Tchoupitoulas Street New Orleans, LA 70130 Stephen Abadie (504) 620-8022 sabadie@rngd.com	Horizon Engineering, LLC (Horizon) performed an independent technical review (ITR) of the Lakefront Airport pump station temporary retaining structure (TRS) design. The TRS is required to facilitate construction of an approximately 123'x43'x28' deep reinforced concrete reservoir for a future 600 CFS pump station. The TRS is used to stabilize a 45' deep excavation in soft clays outside of flood protection prior to construction of the seal slab and reservoir. Horizon reviewed the TRS design and calculations and associated plans, specifications, geotechnical report, and construction phase geotechnical investigation information. Horizon prepared independent calculations for approximate TRS force effects and TRS components, including sheeting, walers, and struts, and a report summarizing the independent technical review.	
Completion Date (Actual or estimated):	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
June 2024	≈$13,000,000	$5,400 (fee)

TEC Professional Services Questionnaire

<table>
<tr><th colspan="3">PROJECT NO. 4</th></tr>
<tr><th>Project Name, Location and Owner's contact information:</th><th colspan="2">Nature of Firm's Responsibility:</th></tr>
<tr><td>Crescent City Brewhouse Structural Inspection for New Water Tank Installation
New Orleans, Louisiana

Crescent City Brewhouse
527 Decatur Street
New Orleans, LA 70130

Joel Zetzmann
(504) 522-0571
joel@ccbno.com</td><td colspan="2">Horizon Engineering, LLC performed a structural inspection and evaluation of the historic Crescent City Brewhouse building in the New Orleans French Quarter to determine whether the existing structure could support the installation of new water tanks on the fourth floor. The structural inspection and subsequent recommendations considered the material type, dimensions, configuration, and current condition of structural components, including timber decking, timber beams, brick masonry walls, steel girders, steel columns, masonry foundations, and reinforced concrete foundations.</td></tr>
<tr><th rowspan="2">Completion Date (Actual or estimated):</th><th colspan="2">Estimated Cost:</th></tr>
<tr><th>Entire Project:</th><th>Work for which Firm was Responsible:</th></tr>
<tr><td>February 2024</td><td>N/A</td><td>$875 (fee)</td></tr>
</table>

TEC Professional Services Questionnaire

PROJECT NO. 5	
Project Name, Location and Owner's contact information:	**Nature of Firm's Responsibility:**
Staff Experience at Previous Employer	We have the available capacity to quickly complete work and will make any awarded project our top priority. Although we have not completed any Jefferson Parish drainage projects yet as a firm, our engineering staff has over 35 years of combined experience delivering successful infrastructure projects across Louisiana, including numerous projects for Jefferson Parish. Additionally, our inspection staff has over 100 years of combined experience. Our staff frequently worked together on major Jefferson Parish projects at their previous employer. Please see the table below for a list of such projects and Sections K and N for additional information regarding the expertise and experience of our staff and the projects that they have worked on.

PROJECTS WORKED ON BY STAFF AT PREVIOUS EMPLOYER

PROJECT	OWNER	CONSTRUCTION COST	KEY PERSONNEL INVOLVED
Widening of Causeway Boulevard (Airline Drive to West Napoleon Avenue)	Jefferson Parish	≈$19,000,000 (est.)	Ben Bartlett and Brett Liuzza
Jefferson Parish Submerged Roadways Program	Jefferson Parish	≈$50,000,000	Ben Bartlett, Brett Liuzza, and Jeff Puissegur
Rehabilitation of Ramps 6, 7, and Overpass of Causeway Boulevard at Airline Drive	Jefferson Parish	≈$13,000,000	John Karlin, Ben Bartlett, and Wayne "Dickie" Lemoine
Geisenheimer Canal Improvements (Loumor Outfall Ditch to Hoey's Canal)	Jefferson Parish	≈$13,000,000 (est.)	John Karlin and Ben Bartlett
Independence Park Drainage Pump Station Study	Jefferson Parish	≈$15,000,000 (est.)	Brett Liuzza and Ben Bartlett
West Esplanade Avenue Canal Crossing (Between Williams Boulevard and David Drive)	Jefferson Parish	≈$730,000	Ben Bartlett and John Karlin
W. Esplanade Bridges @ Duncan Canal	LaDOTD	≈$14,000,000	Ben Bartlett and John Karlin
Relocation of East St. Bernard Highway and Associated Utilities	Port of New Orleans	≈$50,000,000	Ben Bartlett, John Karlin, and Brett Liuzza
Lake Pontchartrain Seawall Area Erosion Control Paving	SLFPA-E	≈$50,000,000	Brett Liuzza, Ben Bartlett, John Karlin, and Jeff Puissegur

Completion Date (Actual or estimated):	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
N/A	N/A	N/A

TEC Professional Services Questionnaire

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

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

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

Horizon Engineering, LLC (Horizon) is led by three Louisiana engineers with over 35 years of combined experience delivering successful infrastructure projects across the Gulf Coast region. Our principals have worked together for nearly 10 years and have an extensive and complementary skillset that encompasses civil, structural, and environmental engineering. Horizon is certified as a Small Entrepreneurship with Louisiana Economic Development's (LED) Hudson Initiative and certified by the LED Division of Small and Emerging Business Development as a Small and Emerging Business Enterprise.

Horizon's principals serve as our lead design and construction engineers and are always available to respond to Jefferson Parish's needs. All of our principals were born and raised in southern Louisiana (John Karlin was born and raised in Jefferson Parish) and care deeply about our region. Ben Bartlett and John Karlin are both current Jefferson Parish residents. We have a personal connection to our work and are extremely invested in the success of our projects.

KEY PERSONNEL

Ben Bartlett, PE, PTOE

Brett Liuzza, PE

John Karlin, SE, PE

We are committed to quality and efficiency. Our goal is to help Jefferson Parish get the most out of their available budget. We leverage technology to minimize our overhead costs and maximize the productivity of our personnel.

Horizon's ability to satisfy each of the evaluation criteria is summarized below.

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

1. Professional training and experience

Horizon's staff consists of highly educated, trained, and experienced civil, structural, and environmental engineers and inspectors. All of our engineers are licensed professional engineers in Louisiana and have completed graduate level coursework. Our personnel have a unique combination of experience in both design and construction, which enables us to identify potential constructability issues during the design phase and reduce the potential for costly change orders during construction.

Our professional development program ensures that our personnel remain up to date with the latest industry advancements, such as software, analysis/design methods, materials, and construction methods. We understand that work zone safety and the maintenance of traffic during construction are essential elements of a successful Jefferson Parish project. Each of our engineers are certified by the American Traffic Safety Services Association (ATSSA) as a Traffic Control Supervisor (TCS), Technician (TCT), and Flagger and the Louisiana Department of Transportation and Development (LaDOTD) for the Traffic Engineering Process and Report (TEPR).

Brett Liuzza, PE will serve as the Professional-in-Charge, Project Manager, and Lead Civil Engineer for this project. He is very familiar with Jefferson Parish's water requirements and has worked on various types of water projects across Jefferson Parish, including major transmission lines.

Ben Bartlett, PE, PTOE will serve as a Project Manager and Civil Engineer for this project. He has experience with all facets of water projects, including water treatment.

John Karlin, SE, PE will serve as a Project Manager and Civil Engineer for this project. He will provide structural engineering support for the design and construction of water transmission lines, water main aerial crossings, and other water features with significant pressure, gravity, and/or lateral loads.

2. Size of firm

Horizon has sufficient personnel to perform a variety of tasks, such as:

- Hydraulic modeling and analysis
- Conceptual planning and feasibility evaluation
- Design and preparation of plans and specifications, including water transmission lines, water mains, house/commercial connections, aerial crossings, and water treatment
- Construction administration, including Request for Information (RFI), submittal, pay application, and construction schedule review
- Construction engineering and inspection, including resident inspection and structural inspection and evaluation

3. Capacity for timely completion of newly assigned work

We have the available capacity to quickly complete work and will make any awarded project our top priority.

4. Past performance by person or firm on Parish contracts

Horizon has not completed any Jefferson Parish projects yet as a firm; however, Horizon's personnel have worked on many Jefferson Parish water projects, such as a waterline transmission study (42" to 48" water transmission line), Lakeside Mall Waterline Improvements, and Sonia Place Waterline Improvements. We are very familiar with Jefferson Parish's water requirements. Additionally, Horizon's personnel have successfully completed projects for numerous clients, such as:

- Jefferson Parish
- United States Army Corps of Engineers
- Louisiana Department of Transportation and Development
- New Orleans Regional Planning Commission
- Louisiana Coastal Protection and Restoration Authority
- Southeast Louisiana Flood Protection Authority – East

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.

- Port of New Orleans
- Greater New Orleans Expressway Commission
- Lakefront Management Authority
- Sewerage and Water Board of New Orleans
- St. Charles Parish
- City of New Orleans
- City of Kenner
- City of Slidell
- City of Covington
- City of Mandeville
- Numerous private clients

Please see Sections K and L for additional information regarding the projects our personnel have worked on.

5. Location of the principal office

Horizon is a local small business. Our principal office is centrally located in Jefferson Parish at 1013 N. Causeway Blvd.; therefore, we can be nearly anywhere in the Parish in less than 15 minutes, including project sites, the Yenni Building, and the General Government Building.

6. Adversarial legal proceedings

Horizon is not involved in and has never been involved in any legal proceedings with the Parish.

7. Prior successful completion of projects

Horizon has not completed many projects yet as a firm; however, Horizon's personnel have successfully completed many projects for Jefferson Parish and other clients throughout southeast Louisiana. If selected, our personnel will provide the same expertise and experience that they have on previously completed Parish projects. Please see Criterion 4, Past performance by person or firm on Parish contracts, and Sections K and L for additional information.

WHY SELECT HORIZON ENGINEERING, LLC?

- We have a unique combination of design and construction experience.
- We are local and are very familiar with Jefferson Parish's water requirements.
- We have the available capacity to quickly complete work and will make any awarded project our top priority.
- Our low overhead costs will allow us to significantly reduce project costs and ensure that the project remains within budget.
- We have a personal connection to our work and are deeply invested in the success of our projects. We care about our work and understand its impact on our community.

We appreciate your consideration of our Statement of Qualifications and hope to partner with Jefferson Parish to deliver exceptional infrastructure projects that improve our community.

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

Signature: John Karlin **Print Name: John Karlin, SE, PE**

Title: Co-Founder and Principal **Date: June 21, 2024**

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 02/05/2024

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	**CONTACT NAME:** Devin Arocha
Eagan Insurance Agency, LLC	**PHONE (A/C, No, Ext):** (504) 836-9600 **FAX (A/C, No):** (504) 836-9621
2629 N. Causeway Blvd.	**E-MAIL ADDRESS:** arochad@eaganins.com
P. O. Box 8590	**INSURER(S) AFFORDING COVERAGE** / **NAIC #**
Metairie LA 70002	**INSURER A :** Travelers Casualty Ins Co of America
INSURED	**INSURER B :** LA Work Comp Corp 22350
Horizon Engineering LLC	**INSURER C :** Palms Insurance Company Limited
1013 North Causeway Blvd	**INSURER D :**
	INSURER E :
Metairie LA 70001	**INSURER F :**

COVERAGES **CERTIFICATE NUMBER:** CL242570637 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	[X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: [ ] POLICY [ ] PRO-JECT [ ] LOC [ ] OTHER:			68G-7X730251-24-47	01/29/2024	01/29/2025	EACH OCCURRENCE	$ 1,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 1,000,000
							MED EXP (Any one person)	$ 5,000
							PERSONAL & ADV INJURY	$ 1,000,000
							GENERAL AGGREGATE	$ 2,000,000
							PRODUCTS - COMP/OP AGG	$ 2,000,000
								$
A	**AUTOMOBILE LIABILITY** [ ] ANY AUTO [ ] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS [X] HIRED AUTOS ONLY [X] NON-OWNED AUTOS ONLY			68G-7X730251-24-47	01/29/2024	01/29/2025	COMBINED SINGLE LIMIT (Ea accident)	$
							BODILY INJURY (Per person)	$
							BODILY INJURY (Per accident)	$
							PROPERTY DAMAGE (Per accident)	$
							Hired & Non-Owned	$ Included
	[ ] **UMBRELLA LIAB** [ ] OCCUR [ ] **EXCESS LIAB** [ ] CLAIMS-MADE [ ] DED [ ] RETENTION $						EACH OCCURRENCE	$
							AGGREGATE	$
								$
B	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** Y / N ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? N **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		186091	01/29/2024	01/29/2025	[ ] PER STATUTE [ ] OTH-ER	
							E.L. EACH ACCIDENT	$ 1,000,000
							E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000
C	Professional Liability			CSIPAE00066-00	01/29/2024	01/29/2025	Each Claim Limit	$1,000,000
							Aggregate Limit	$1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

*Hired and Non-owned Auto Liability included on General Liability policy #68G-7X730251-24-47

CERTIFICATE HOLDER

PROOF OF COVERAGE

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

TEC Professional Services Questionnaire

A. Project Name and Advertisement Resolution Number:

SOQ 24-013, Resolution No. 144203
Routine Engineering Services for Water Projects in Jefferson Parish

B. Firm Name & Address:

Eustis Engineering L.L.C.
3011 28th Street, Metairie, Louisiana 70002

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

Gwendolyn P. Sanders, P.E. / President / 504-834-0157 / gsanders@eustiseng.com

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

Gwendolyn P. Sanders, P.E. / President / 504-834-0157 / gsanders@eustiseng.com

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

7	Administrative		Estimators		Specification Writers
	Architects (Licensed)	2	Geologists		Structural Engineers
	Chemical Engineers	17	Geotechnical Engineers	3	Graduate Engineers
	Civil Engineers		Interior Designers		Project Managers
	Construction Inspectors		Landscape Architects	11	Clerical
	Ecologists		Land Surveyor		Grant/Funding Specialist
	Electrical Engineers		Mechanical Engineers		Sanitary Engineers
5	Engineer Intern		Environmental Engineers	47	**Other**
	Professional Land Surveyors				
				92	**TOTAL**

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

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

TEC Professional Services Questionnaire

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

1. Not applicable.

2.

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

YES ☐ **NO** ☐

I. List all subcontractors anticipated for this Project. Please note that 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. Not Applicable.		
2.		
3.		

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

We estimate 16 individuals will be needed to complete the geotechnical services associated with projects under this advertisement. This includes a three-member drill crew as well as laboratory, clerical, and engineering staff. More employees can be added, as necessary, to complete any project.

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:

Gwendolyn P. Sanders, P.E. / President and Project Principal

Project Assignment:

Project Principal / Limited Liability Corporation Member

Name of Firm with which Associated:

Eustis Engineering L.L.C.

Years' Experience with This Firm:

31

Education: Degree(s)/Year/Specialization:

Master of Science / 1992 / Civil Engineering
Bachelor of Science / 1990 / Civil Engineering

Active Registration: Year First Registered/Discipline:

Louisiana: 1997 / Civil Engineering
Mississippi: 2003 / Engineering
Texas: 2020 / Civil Engineering

Other Experience and Qualifications Relevant to the Proposed Project:

Mrs. Sanders began her professional career with Eustis Engineering in 1993. Over the past 31 years, she has worked her way up through the ranks of the engineering department including Associate Engineer, Project Engineer, Project Manager, and Engineering Manager. She has been on Eustis Engineering's Board of Directors since 1997. In 2020, Mrs. Sanders became Eustis Engineering's first woman president after previously serving as a Vice President and Executive Vice President. As President, she is responsible for day-to-day business operations including quality, safety, marketing, and long-term strategic growth. She also actively participates in the engineering design and review processes.

Considering her experience with Eustis Engineering, a leading Gulf Coast geotechnical firm, Mrs. Sanders has extensive experience in soft soils and working on projects in coastal Louisiana. She has been directly and indirectly involved in numerous projects throughout the Gulf Coast area, particularly in the Greater New Orleans area. Mrs. Sanders has been involved in and managed every aspect of a geotechnical engineering project, namely developing appropriate scopes of work for projects, planning and coordinating field investigations, assigning laboratory testing, performing geotechnical engineering analyses, preparing detailed reports with engineering analyses and recommendations, reviewing reports prepared by other professionals, and consulting with clients. Much of her work experience has dealt with identifying soil properties, developing criteria for design of foundations, and determining an appropriate foundation to support the structure under consideration.

In 2017, Mrs. Sanders served as program advisor for the Deep Foundations Institute's 42nd annual conference. She has twice been named one of the 50 Women of the Year by New Orleans CityBusiness, first in 2017 and again in 2021. She is currently serving as an associate member of the ASCE Standards Committee for the Design of Foundations. She has a keen eye for detail and is a stickler for quality. Her work ethic, combined with her communication skills, translates to Mrs. Sanders' ability to deliver successful geotechnical engineering projects to her clients.

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

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

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Gwendolyn P. Sanders, P.E. / President and Project Principal

- **Jefferson Parish** – **Department of Public Works**, Proposed Pump Station, West Esplanade at the 17th Street Canal, Jefferson Parish, Louisiana, Eustis Engineering Project No. 24427
- **Jefferson Parish** – Veterans Boulevard, Pump Stations, Jefferson Parish, Louisiana, Eustis Engineering Project Nos. 23396.00, .01, & 24426
- **Jefferson Parish** – Design and Construction of Improvements to Causeway Boulevard and West Esplanade Avenue, North and South Sewer Pump Stations, Metairie, Louisiana, Eustis Engineering Project No. 22448

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

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

Project Assignment:

Project Manager

Name of Firm with which Associated:

Eustis Engineering L.L.C.

Years' Experience with This Firm:

21

Education: Degree(s)/Year/Specialization:

Master of Science / 1999 / Civil Engineering
Bachelor of Science / 1996 / Civil Engineering

Active Registration: Year First Registered/Discipline:

Louisiana: 2002 / Civil Engineering
Mississippi: 2007 / Engineering
Texas: 2014 / Civil Engineering
Florida: 2001 / Engineering
Alabama: 2003 / Engineering
Arkansas: 2014 / Engineering

Other Experience and Qualifications Relevant to the Proposed Project:

From 1993 to 1994, Mr. Benjamin M. Cody first worked with Eustis Engineering as a part-time laboratory soil technician while obtaining his undergraduate degree. After leaving Eustis Engineering in 1994, Mr. Cody worked as an engineering technician with the Sewerage & Water Board of New Orleans and as a student laboratory coordinator at Tulane University's Department of Civil Engineering. Mr. Cody also assisted in teaching the introductory soil mechanics laboratory sessions. For more than a year, he then worked as a graduate research assistant at Tulane University while pursuing his Master's degree. At that time, he was responsible for the design, construction, and implementation of bench scale testing system in contaminated soil remediation.

From 1998 until 2001, Mr. Cody worked for engineering firms in Florida. He performed such duties as soil evaluation and engineering recommendations for projects of varying sizes including multi-story structures, bridges, and roadways. He performed Phase I environmental site assessments as well as geotechnical sensor installation.

In 2001, he returned to the New Orleans area and to Eustis Engineering as a Project Engineer. He now serves as a Principal Engineer with the firm. Since his return, Mr. Cody has performed a wide variety of engineering services including geotechnical project management, engineering design, engineering during construction, and dynamic pile testing. Private sector projects have varied from small private or commercial structures to multi-story high-rise structures, storage tanks, and other industrial facilities. Public projects have included roads and bridges, port facilities, government buildings and facilities, schools, and hurricane protection system improvements.

Some of Mr. Cody's project experience, shown in this submittal, includes the following:

- **Jefferson Parish** – **Department of Public Works**, Proposed Pump Station, West Esplanade at the 17th Street Canal, Jefferson Parish, Louisiana, Eustis Engineering Project No. 24427
- **Jefferson Parish** – Veterans Boulevard, Pump Stations, Jefferson Parish, Louisiana, Eustis Engineering Project Nos. 23396.00, .01, & 24426
- **Jefferson Parish** – Jung and Falcone Lift Station Upgrades (K-11-3), New Sanitary Sewer Lift Station, Marrero, Louisiana, Eustis Engineering Project No. 23819

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Benjamin M. Cody, P.E. / Principal Engineer
• **City of Kenner** – Sewer Capital Improvement Program, Sewage Pumping Station Upgrade, 31st Street and Jasper Street Lift Station, Jefferson Parish, Louisiana, Eustis Engineering Project Nos. 21834 & 22559 • **Jefferson Parish** – Proposed Lift Station, Melody Drive and West Esplanade Avenue, Metairie, Louisiana, Eustis Engineering Project No. 24782

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

James J. Hance, P.E. / Senior Project Manager and Vice President (Finance)

Project Assignment:

Senior Project Manager / Limited Liability Corporation Member

Name of Firm with which Associated:

Eustis Engineering L.L.C.

Years' Experience with This Firm:

20

Education: Degree(s)/Year/Specialization:

Master of Business Administration / 2011 / Business Administration
Master of Science / 2003 / Civil Engineering (Geotechnical)
Bachelor of Science / 1998 / Civil Engineering

Active Registration: Year First Registered/Discipline:

Louisiana: 2004 / Civil Engineering
Mississippi: 2012 / Engineering
Texas: 2010 / Civil Engineering

Other Experience and Qualifications Relevant to the Proposed Project:

For 3 years, Mr. Hance was a Staff Engineer and Assistant Project Manager on numerous design and construction phase projects in the Washington D.C. metropolitan area. His duties included management of field technicians who performed concrete, asphalt, and soils testing as well as foundation construction observations of spread footings, mats, drilled shafts, augercast piles, driven steel H-piles, tiebacks, and underpinning piers.
After relocating to Austin, Texas, to eventually pursue graduate studies in engineering, Mr. Hance acted as an assistant project engineer for several design phase projects. These projects involved retention and stream bank stabilization applications. The types of systems designed included mechanically stabilized earth (MSE), single and multi-tiered walls and slopes utilizing geogrid reinforcement, and the use of geosynthetic materials in engineering applications such as erosion control solutions for open channel flow conditions.

Mr. Hance was a graduate research assistant at the University of Texas at Austin where he published his Master's thesis in association with a Master of Science in Civil Engineering degree: *Assessment of Seafloor Slope Stability Based on a Database of Published Submarine Slope Failures*.

Mr. Hance has spent the past 20 years with Eustis Engineering and has worked on many projects for Jefferson Parish. During his tenure at Eustis Engineering, he has earned four promotions: Project Engineer (July 2004), Project Manager (November 2007), Vice President (August 2011), and Chief Financial Officer (August 2012). Mr. Hance manages geotechnical services associated with commercial, industrial, environmental, and civil works projects. His responsibilities include managing a wide variety of design and construction phase projects (public and private sectors), management of staff engineers and development of their skill assets, developing scopes of work and appropriate fees for new projects with clients, participating in business development and marketing ventures, and negotiating contracts.

Some of his experience relative to this submittal includes the following:

- **Jefferson Parish** – Jung and Falcone Lift Station Upgrades (K-11-3), New Sanitary Sewer Lift Station, Marrero, Louisiana, Eustis Engineering Project No. 23819
- **Jefferson Parish** – Proposed Lift Station, Melody Drive and West Esplanade Avenue, Metairie, Louisiana, Eustis Engineering Project No. 24782

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

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

Project Assignment:

Project Manager

Name of Firm with which Associated:

Eustis Engineering L.L.C.

Years' Experience with This Firm:

11

Education: Degree(s)/Year/Specialization:

Master of Science / 2010 / Civil Engineering
Bachelor of Science / 2007 / Civil Engineering

Active Registration: Year First Registered/Discipline:

Louisiana: 2013 / Civil Engineering

Other Experience and Qualifications Relevant to the Proposed Project:

For his first 5 years after graduation, Mr. Sean G. Walsh was a Project Engineer on numerous projects in New York and the New Orleans metropolitan area where he gained experience in civil, geotechnical, and geo-environmental engineering projects for a variety of public and private clients.

Since joining Eustis Engineering in 2012 as a Project Engineer, Mr. Walsh has been responsible for developing and managing engineering package preparations (e.g., engineering design and analysis, reporting, developing construction and permit drawings, contract specifications, cost estimates, and design reporting) for a diverse range of design and analysis projects, including deep foundations, excavation support systems, utility foundations, slope stabilization, solid waste closure systems, levee inspection/safety, and seepage modeling.

Mr. Walsh was promoted to Project Manager in 2017, Engineering Manager in 2019, and Vice President in 2020. Mr. Walsh is also a graduate of the 2017 New Orleans Regional Leadership Institute (NORLI), a 1-year training program designed to help shape community leaders.

During his employment with Eustis Engineering, Mr. Walsh has provided engineering services on more than 650 projects. Mr. Walsh has risen to the level of Vice President and Engineering Manager, in which he is responsible for personnel resource allocation, the overall engineering schedule, and execution of engineering services. Mr. Walsh also functions as a mentor to the engineering staff.

A large portion of Mr. Walsh's experience, before and after joining Eustis Engineering, involved development of design and construction recommendations associated with flood protection systems in southeastern Louisiana. Mr. Walsh has served as the project engineer and project manager responsible for the development and implementation of geotechnical exploration programs; development of soil testing laboratory programs; and interpretation of the results to evaluate strength, compressibility, and general soil characterization. Mr. Walsh used these data for geotechnical designs comprising pile capacity curves; bearing capacity analyses; cantilever retaining analyses; anchored retaining wall analyses; temporary retaining structure design; time-settlement projections for earthen levees with lift schedules; soil pressure profiles; structural and earthen levee under seepage analyses; levee and bank stability by Spencer's Method of Slices and Method of Planes; reinforced embankment design; stability analyses of flood protection walls (e.g., T-walls, I-walls, L-walls, and braced 'A-Frame' walls); downdrag and settlement analyses; settlement induced bending moments (SIBM) in foundation piles; piping analyses; uplift analyses; heave analyses; three-dimensional modeling of fill and structural load placements for predictions of time-rate settlements of

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

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

foundation systems; and numerical modeling of soil-structure interaction (SSI) of flood protection structures by the finite element method (FEM).

Mr. Walsh has also worked on many local government projects in towns and cities including New Orleans, Golden Meadow, and Kentwood; numerous projects in Jefferson, Orleans, St. Bernard, St. Charles, and Plaquemines Parishes; several Port Commissions (e.g., Baton Rouge, New Orleans, South Louisiana); the Sewerage & Water Board of New Orleans; etc.

Regardless of the types of projects engineered for these agencies, his responsibilities have remained the same, namely defining the project philosophy; developing and maintaining the schedule; providing status reports to clients; controlling expenditures; overseeing project personnel; and reviewing the project design for compliance with engineering principles, company standards, and client requirements. He is hands-on in coordinating activities concerned with technical developments and in resolving engineering design/test problems.

Mr. Walsh's skills over the past 16 years in the industry have developed exponentially with the variety of projects that have crossed his desk. Regarding this submittal, Mr. Walsh has been directly involved with the following projects:

- **Jefferson Parish** – Jung and Falcone Lift Station Upgrades (K-11-3), New Sanitary Sewer Lift Station, Marrero, Louisiana, Eustis Engineering Project No. 23819
- **Lafourche Parish Government** – Butch Hill Pump Station, Lafourche Parish, Louisiana, Eustis Engineering Project No. 24723

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Lawrence W. Rome, C.E.T. / Operations Manager and Vice President (Operations)

Project Assignment:

Operations Manager / Limited Liability Corporation Member

Name of Firm with which Associated:

Eustis Engineering L.L.C.

Years' Experience with This Firm:

Education: Degree(s)/Year/Specialization:

Associate of Applied Sciences / 1998 / Safety

Active Registration: Year First Registered/Discipline:

N/A

Other Experience and Qualifications Relevant to the Proposed Project:

Accreditations / Affiliations / Certifications

American Society of Certified Engineering Technicians
Confined Space Entry Certification
Greater New Orleans Industrial Education Council Safety Training
Medic First Aid and CPR Course 2015
HAZMAT Certification, 49 CFR 172, Subpart H, Nuclear Gauges

International Code Council: Soils Special Inspector

National Institute for Certification in Engineering Technologies:
- Level I: Construction Materials Testing, Asphalt
- Level II: Construction Materials Testing, Concrete
- Level IV: Construction Materials Testing, Soils
- Level II: Geotechnical Engineering Technology, Construction
- Level III: Geotechnical Engineering Technology, Generalist
- Level IV: Geotechnical Engineering Technology, Exploration
- Level IV: Geotechnical Engineering Technology, Laboratory
- Level III: Transportation Engineering Technology, Highway Materials

10-Hour OSHA Training
Transportation Workers Identification Card (TWIC)
Registered Well Driller for the States of Louisiana and Mississippi

Professional Experience

After joining Eustis Engineering in 1994, Mr. Rome has worked in several departments throughout our firm. He began as a laboratory technician, performing simple testing such as grain size analyses, Atterberg liquid and plastic limits, and unconfined compression shear. Mr. Rome has become involved in more complex testing procedures such as permeability and consolidation tests. His capabilities have expanded to include lime stabilization studies, California Bearing Ratio tests, hysteresis, direct shear tests, swelling pressure and percent swell tests, consolidated undrained triaxial shear tests, relative density tests, and compaction tests.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Lawrence W. Rome, C.E.T. / Operations Manager and Vice President (Operations)

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

- Atterberg limits
- Consolidated drained triaxial shear tests
- Consolidation tests
- Direct simple shear
- Hydrometer
- Moisture content of soil and rock
- Particle size analysis of soils and aggregates
- Pocket penetrometer
- Settlement column testing of dredged materials
- Soil constants
- Standard and modified compaction
- Torvane shear tests
- Unconsolidated undrained triaxial shear tests
- Unit weight
- CBR of laboratory compacted soils
- Consolidated undrained triaxial shear tests
- Direct shear
- Flexible wall permeability test
- Miniature vane shear
- Organic content
- Percent finer than No. 200 sieve
- Relative density tests
- Sieve analyses
- Specific gravity of soils
- Swell pressure tests
- Unconfined compressive strength of soil
- Unified Soil Classification System
- Visual classification of soils
- Moisture density relationships of soil-cement mixtures
- Molded sand triaxial test using Mississippi Department of Transportation specifications
- U.S. Army Corps of Engineers' New Orleans District Classification System

In early 1998, Mr. Rome joined the Drilling Department as a soil technician, while assisting the drilling crew as a wrenchman. In November 1998, Mr. Rome became a driller for Eustis Engineering. In this capacity, he performed sampling operations using 3-in. diameter Shelby tubes and 5-in. diameter Corps of Engineers' fixed piston sampling. He is also quite familiar with splitspoon, pitcher, Osterberg, Denison, and hollow stem auger sampling operations. He is competent in the installation of piezometers, monitoring wells, inclinometers, and pore pressure transducers. Mr. Rome has drilled to depths in excess of 300 feet utilizing 5-in. fixed piston samplers and in excess of 400 feet for 3-in. diameter Shelby tube sampling. Mr. Rome has drilled from various types of equipment including pontoons, cargo buggies, shallow draft elevating boats, barges, and pull boats using CME, Diedrich, and Failing drill rigs. Mr. Rome has also served as a Quality Assurance/Quality Control inspector for drilling operations for FFEB JV. This included ensuring as many as 22 drill crews were performing sampling operations in strict compliance with USACE specifications.

In the early 2000s, Mr. Rome attended the University of Missouri at Rolla for Advanced Soil Mechanics training. In 2005, he began serving as Operations Manager overseeing the laboratory department's daily objectives, reviewing calculations, and developing new skills in laboratory personnel, as well as other duties. In the drilling department, he oversees up to five drilling crews which involves ordering parts, looking at prospective sites, making crew schedules, lining up subcontract equipment, and ensuring the highest quality samples are obtained by drill crews and subcontractors. Mr. Rome also serves as a driller or soil technician when his experience is required or to train new employees.

In 2013, Mr. Rome added the CMT Department under his operational duties in addition to his operational duties within the lab and drilling departments. Mr. Rome works closely with the operations supervisor for CMT, overseeing the department's daily objectives, reviewing reports, reviewing invoices, addressing staffing needs, as well as other duties.

Mr. Rome has direct involvement with the following projects related to this submittal:

- **Jefferson Parish** – Jung and Falcone Lift Station Upgrades (K-11-3), New Sanitary Sewer Lift Station, Marrero, Louisiana, Eustis Engineering Project No. 23819

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Lawrence W. Rome, C.E.T. / Operations Manager and Vice President (Operations)
• **Lafourche Parish Water District No. 1** – Sugar Ridge Wastewater Treatment Facility, Proposed Structures, Dogwood Drive, Lafourche Parish, Louisiana, Eustis Engineering Project No. 24757 • **Jefferson Parish** – Maplewood Drive and Pailet Street, Drainage Improvements, Jefferson Parish, Louisiana, Eustis Engineering Project No. 22942

<table>
<tr><th colspan="3">PROJECT NO. 01</th></tr>
<tr><th>Project Name, Location, and Owner's Contact Information:</th><th colspan="2">Nature of Firm's Responsibility:</th></tr>
<tr><td>Jefferson Parish
Department of Public Works
Proposed Pump Station
West Esplanade at the 17th Street Canal
Jefferson Parish, Louisiana
Eustis Engineering Project No. 24427

Contact Information:
Jefferson Parish Through
ECM Consultants, Inc.
Suite 200
1301 Clearview Parkway
Metairie, Louisiana 70001
Sunina Shrestha, P.E. @ 504-885-4080</td><td colspan="2">Jefferson Parish proposed a pump station at the intersection of the 17th Street Canal and West Esplanade Avenue in Metairie, Louisiana. The pump station would be built on the west bank of the canal.

The pump station was planned to have approximate dimensions of 50' × 36' with a sump depth of approximately 18 feet. A new 78" × 122" arch-shaped reinforced concrete pipe would feed collected drainage water to the pump station. A new generator pad with approximate plan dimensions of 16' × 37' would be located southwest of the pump station.

Discharge pipes, 32 inches in diameter, would be installed from the pump station, extending over the levee and floodwall to discharge stormwater from the pump station into the 17th Street Canal. The discharge pipes were to be pile-supported on the land and flood sides of the levee and floodwall.

Eustis Engineering performed engineering analyses based on data obtained from previous subsurface explorations at the site supplemented by those in the project area.

The scope of service for this project included compiling and updating geotechnical analyses from previous reports that were still applicable to the pump station plans. These previous analyses included deep-seated global stability analyses, seepage potential evaluation, and estimates of pile load capacities for various types and sizes of piles.

We performed supplemental deep-seated global stability analyses to provide an alternative analysis as part of the Safety Assurance Review (SAR) required by the U.S. Army Corps of Engineers for the construction permit application. We also furnished supporting documentation for temporary retaining structure design as well as seepage and heave analyses. Finally, we generated recommendations for general site preparation and foundation construction procedures.</td></tr>
<tr><th rowspan="2">Completion Date (Actual or Estimated)</th><th colspan="2">Estimated Cost:</th></tr>
<tr><th>Entire Project:</th><th>Work for Which Firm Was Responsible:</th></tr>
<tr><td>09/2021 (A)</td><td>Unknown</td><td>$25,500</td></tr>
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PROJECT NO. 02	
Project Name, Location, and Owner's Contact Information:	**Nature of Firm's Responsibility:**
Jefferson Parish **Veterans Boulevard** **Drainage Pump Stations** **Jefferson Parish, Louisiana** **Eustis Engineering Project Nos.** **22024, 22631, 23396.00-.01, and 24426.00-.01** **Contact Information:** Jefferson Parish Through ECM Consultants, Inc. Suite 200 1301 Clearview Parkway Metairie, Louisiana 70001 Sunina Shrestha, P.E. @ 504-885-4080	Two new drainage pump stations are proposed on the north and south sides of Veterans Memorial Boulevard at the 17th Street Canal. Each of these pump stations will discharge into the 17th Street Canal. Due to a planned bike path along the hurricane protection floodwall, these discharge pipes will need to penetrate the flood protection. As a result, plans called for the replacement of portions of the existing West 17th Street Canal I-walls (which cannot be penetrated and still comply with the U.S. Army Corps of Engineers' [USACE] guidelines) with T-walls. Both pump stations would require demolition of approximately 20 feet of existing concrete I-wall for installation of the new T-wall in order to accommodate a discharge pipe through each wall. Access gates will also be provided as part of the floodwall modifications. For additional data at the site, Eustis Engineering L.L.C. used soil boring and laboratory test data contained in our own files from prior explorations as well as data obtained through a Freedom of Information of Act request to the USACE. Due to the modifications to the flood protection, a safety assurance review (SAR) was conducted by an independent reviewer. The SAR included a review of the plans and specifications as well as design reports and calculations. Comments from the SAR were incorporated into the permit package submitted to the review agencies. The project plans have civil, structural, mechanical, and electrical components. Engineering analyses for the evaluation of the proposed T-wall to support the construction permit application and the SAR followed the USACE's Hurricane and Storm Damage Risk Reduction System Design Guidelines, dated June 2012. Global and local stability analyses were performed to evaluate the design and construction of the T-wall, including temporary flood protection (TFP) and temporary retaining structures (TRS). Stability analyses were also performed to address construction dewatering requirements for the pump station excavation with respect to the existing and proposed flood protection. Our work to support the design included estimates of allowable axial pile load capacity for piles supporting the T-wall foundations as well as the pump station and discharge pipes. We also performed analyses to evaluate the potential for seepage and heave during and after construction for the proposed features. New generator pads were located adjacent to each pump station to house controls outside the new intake excavation. Eustis Engineering is currently performing Engineering During Construction (EDC) services as required by the SAR. To date, we have responded to contractor requests for information (RFIs) and have performed submittal reviews. The EDC submittal reviews include the test pile program (TPP) plan, TRS and TFP methods, and sequences

PROJECT NO. 02		
Project Name, Location, and Owner's Contact Information:	**Nature of Firm's Responsibility:**	
	proposed by the contractor. We evaluated the results of the TPP to confirm the design pile capacity as well as installation criteria. We will review the results of geotechnical instrumentation to monitor the excavation and dewatering, including piezometers and inclinometers.	
Completion Date (Actual or Estimated)	**Estimated Cost:**	
	Entire Project:	**Work for Which Firm Was Responsible:**
04/2025 (E)	Unknown	$109,826 (to date)

<table>
<tr><th colspan="3">PROJECT NO. 03</th></tr>
<tr><th>Project Name, Location, and Owner's Contact Information:</th><th colspan="2">Nature of Firm's Responsibility:</th></tr>
<tr><td>Jefferson Parish
Maplewood Drive and Pailet Street
Drainage Improvements
Jefferson Parish, Louisiana
Eustis Engineering Project No. 22942

Contact Information:
Jefferson Parish Through
Burk-Kleinpeter, Inc.
4176 Canal Street
New Orleans, Louisiana 70119
Henry M. Picard, III, P.E. @ 504-486-5901</td><td colspan="2">After completing the geotechnical exploration and design for the project in 2011, Eustis Engineering was asked to provide construction materials testing services associated with the Maplewood Drive and Pailet Street drainage improvements project in Harvey, Louisiana. The project's general scope included the installation of subsurface drainage and street resurfacing along Maplewood Drive and the surrounding area. Our services included:

• the performance of soil mechanics laboratory tests on various materials to be used for bedding, backfill, and roadway base materials to confirm they comply with project specifications;
• in-place density tests on these same materials to determine their compaction complied with the project specifications;
• inspection of the placement of concrete for slope paving, junction boxes, roadway paving, and various foundations;
• more than 80 sets of concrete cylinders were subjected to compressive strength testing at 7 days and 28 days;
• the inspection of more than 1,300 tons of asphalt both at the plant and in the field along with asphalt coring after placement; and
• vibration monitoring services during construction.

Our technicians recorded more than 8,200 hours for the project. Our engineers reviewed daily reports for compliance with our quality control manual and program.</td></tr>
<tr><th rowspan="2">Completion Date (Actual or Estimated)</th><th colspan="2">Estimated Cost:</th></tr>
<tr><th>Entire Project:</th><th>Work for Which Firm Was Responsible:</th></tr>
<tr><td>11/2017 (A)</td><td>Unknown</td><td>$363,600</td></tr>
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<table>
<tr><th colspan="3">PROJECT NO. 04</th></tr>
<tr><th>Project Name, Location, and Owner's Contact Information:</th><th colspan="2">Nature of Firm's Responsibility:</th></tr>
<tr><td>Jefferson Parish
Jung and Falcone Lift Station Upgrades (K-11-3)
New Sanitary Sewer Lift Station
Marrero, Louisiana
Eustis Engineering Project No. 23819

Contact Information:
Jefferson Parish Through
Principal Engineering, Inc.
Suite 19
1011 North Causeway Boulevard
Mandeville, Louisiana 70471
Jeneva Hinojosa, E.I. @ 985-624-5001</td><td colspan="2">The new lift station was to consist of a fiberglass wet well and fiberglass valve pit. The wet well was to be approximately 6 feet in diameter and 18 feet in depth. The valve pit was to be approximately 6 feet in diameter and 8 feet in depth. Site improvements were to include a gravity sewer line installed approximately 12 feet below grade and a force main approximately 4 feet below grade.

Our field investigation included the drilling of one soil boring to a depth of 80 feet below the existing ground surface using one of our truck-mounted rigs. Once in our laboratory, samples selected by our engineering staff were subjected to soil mechanics laboratory tests including visual classification, natural water content, unit weight, unconfined compression shear, and one-point unconsolidated undrained triaxial compression shear.

Using these data, our staff performed engineering analyses and developed recommendations for the project documented in a report including:

• recommendations for site preparation encompassing temporary and permanent drainage, dewatering and pressure relief of excavations, and ways to limit lateral movement;
• methods for excavation, base preparation, and bedding associated with the sanitary gravity sewer line, wet well, and valve box;
• estimates of lateral earthen pressures;
• recommendations for material placement and compaction of backfill for the force main and sanitary sewer line;
• allowable soil bearing value recommendations for the wet well and valve box;
• allowable pile load capacities, in compression and tension, for treated ASTM D25 quality timber piles; and
• settlement estimates for both ground-supported and pile-supported project features.</td></tr>
<tr><th rowspan="2">Completion Date (Actual or Estimated)</th><th colspan="2">Estimated Cost:</th></tr>
<tr><th>Entire Project:</th><th>Work for Which Firm Was Responsible:</th></tr>
<tr><td>06/2018 (A)</td><td>Unknown</td><td>$4,900</td></tr>
</table>

PROJECT NO. 05	
Project Name, Location, and Owner's Contact Information:	**Nature of Firm's Responsibility:**
Jefferson Parish **Westbank Projects** **Instrumentation Installation and Monitoring** **Lapalco Boulevard Overpass** **at Bayou Segnette** **Westwego, Louisiana** **Eustis Engineering Project No. 23937** **Contact Information:** Jefferson Parish Office of Public Works Suite 904 1221 Elmwood Boulevard Jefferson, Louisiana 70123 Miles Bingham @ 504-736-8753	Eustis Engineering performed a site visit and developed a plan for instrumentation installation and monitoring of relative movements of the Lapalco Boulevard Overpass bridge structures at Bayou Segnette in Westwego, Louisiana. We were contracted to install six crackmeters, three tiltmeters, and three temperature sensors on the Lapalco Boulevard Overpass. These instrumentation installations occurred on Bents 4, 24, and 34. The crackmeters were installed at the determined bents. They measured displacements to the nearest 0.0375 millimeter. A set of crackmeters were installed at each bent, one to measure displacement in the direction of traffic and one to measure displacement perpendicular to traffic. Tiltmeters were installed on the faces of the supporting pedestals with inclination measured to the .001 of a degree and oriented to measure uniaxially in the vertical direction perpendicular to traffic. Eustis Engineering measured inclination of the bridge pedestals utilizing a digital level with a precision to the .01 of a degree. These measurements were taken to establish the initial orientation of the tiltmeters. Measurements were taken of inclination in the transverse and longitudinal directions to relate to the structure at the end of the monitoring period. In addition, we conducted a survey to measure relative elevation differences between the tops of pile caps for comparison to the as-built plans. Finally, we conducted traditional survey readings to estimate the movement of the bridge abutments. In an attempt to isolate temperature-related movements of the bridge from traffic-related movements, Eustis Engineering also installed a temperature sensor at each bent in the area exposed to the greatest amount of sunlight. This approach showed variation in temperature as compared to the bridge structure. Finally, Eustis Engineering conducted a level survey of pile caps relative to each other, where available. Some pile caps were inaccessible due to excessive vegetation or water above the pile caps. These measurements were related to two independent temporary benchmarks taken on each side of the bridge structure (east and west) and on the south side of the bridge. Review of existing and gathered data revealed approximately 3 feet of ground subsidence occurred since the bridge was completed. Survey data from Eustis Engineering showed the pile caps towards the center of the bridge span were between 2 and 3 feet higher in elevation than the pile caps near the approaches. Instrumentation data showed that movements with respect to time were very slight (less than 1.5 millimeters) over the six-month

<table>
<tr><th colspan="3">PROJECT NO. 05</th></tr>
<tr><th>Project Name, Location, and Owner's Contact Information:</th><th colspan="2">Nature of Firm's Responsibility:</th></tr>
<tr><td></td><td colspan="2">monitoring period. The movements also appeared to be strongly correlated with fluctuations in temperature. While there were some minor fluctuations, the crackmeters and tiltmeters generally moved with respect to temperature and to less extent, the height of Bayou Segnette.</td></tr>
<tr><th rowspan="2">Completion Date (Actual or Estimated)</th><th colspan="2">Estimated Cost:</th></tr>
<tr><th>Entire Project:</th><th>Work for Which Firm Was Responsible:</th></tr>
<tr><td>10/2019 (A)</td><td>Unknown</td><td>$22,900</td></tr>
</table>

PROJECT NO. 06		
Project Name, Location, and Owner's Contact Information:	**Nature of Firm's Responsibility:**	
Jefferson Parish **Design and Construction of Improvements to** **Causeway Boulevard and** **West Esplanade Avenue** **North and South Sewer Pump Stations** **Metairie, Louisiana** **Eustis Engineering Project No. 22448** **Contact Information:** Jefferson Parish Through ECM Consultants, Inc. 4409 Utica Street Suite 200 Metairie, Louisiana 70006 Chris Maniscalco @ 504-885-4080	Jefferson Parish planned to make improvements to the existing north and south sewer pump stations near the intersection of Causeway Boulevard and West Esplanade Avenue. Horizontal directional drilling technology would be used to install the proposed 8- and 12-in. diameter sewer pipes. The ground surface at the site was at approximate el -5. Soil bearing values were requested for the lift station planned at approximate el -22, a valve box at el -10, and manholes at approximate el -20. Recommendations for a sheetpile cofferdam were requested where the directional drilling would terminate at the Causeway Boulevard/West Esplanade intersection. One of Eustis Engineering's in-house drill crews traversed the short distance to the site to perform the field exploration developed by our engineering team. Three soil borings were made for the project to depths of 25, 50, and 75 feet below the existing ground surface considering the component feature depths and locations. Boring location coordinates were obtained using a handheld GPS unit. Samples of the subsoils retained from our drilling operations were transported to our accredited Metairie laboratory for testing. Once in our laboratory, classification, index, and strength tests were performed on the undisturbed samples to inform the soil design parameter selection. We developed geotechnical engineering recommendations for lateral earth pressures; bedding material and compaction requirements including the use of geotextiles as a material separator; and structural fill (material, placement and compaction recommendations) when used as backfill between the side walls of the buried structure and the temporary sheetpile cofferdam. Our design analyses resulted in estimates of allowable soil bearing values for the lift station and valve box mat foundations as well as estimates of settlement and differential settlement for these features. We also addressed the use of a temporary retaining structure; excavation, dewatering, and groundwater control operations; and ways to minimize lateral movement and settlement of the adjacent ground surface.	
Completion Date (Actual or Estimated)	**Estimated Cost:**	
	Entire Project:	**Work for Which Firm Was Responsible:**
02/2015 (A)	Unknown	$7,200

PROJECT NO. 07		
Project Name, Location, and Owner's Contact Information:	**Nature of Firm's Responsibility:**	
Jefferson Parish **Proposed Lift Station** **Melody Drive and West Esplanade Avenue** **Metairie, Louisiana** **Eustis Engineering Project No. 24782** **Contact Information:** Jefferson Parish Through ECM Consultants, Inc. 1301 Clearview Parkway Suite 200 Metairie, Louisiana 70006 Sunina Shrestha P.E. @ 504-885-4080	A new lift station was proposed to be constructed at the intersection of Melody Drive and West Esplanade Avenue in Metairie, Louisiana, just east of the existing lift stations. The structure's wet well and valve pit would have a 2-ft (thick) base slab extending 2 feet beyond all sides. Two options regarding the wet well size and dimensions were being considered. A new pile-supported sewer force main aerial canal crossing was also proposed. Eustis Engineering's subsurface exploration comprised one undisturbed sample type soil test boring to a depth of 70 feet below the existing ground surface using a truck-mounted rotary-type drill rig. Due to the existing site features and overhead and underground utilities, our crew coordinated closely with the designer and representatives of Jefferson Parish to select the boring location. After completion of the field work, the samples were transported to our certified Metairie laboratory for testing. Soil mechanics laboratory tests consisted of visual classification, natural water content, unit weight, unconfined compression shear, unconsolidated undrained triaxial compression shear, and Atterberg liquid and plastic limits tests. These test results were utilized to develop soil design parameters for the geotechnical analyses. We made recommendations for both shallow (mat/slab) and deep (driven pile) foundation design, installation, and materials. Engineering analyses included settlement and lateral earthen pressures (at-rest, active, and passive). For mat foundations, we calculated allowable soil bearing values, net applied pressure intensity, estimated settlement, and uplift pressure. For pile foundations, we calculated allowable pile load capacities in compression and tension and estimated settlement. We also provided recommendations for pile materials, size, and installation methods.	
Completion Date (Actual or Estimated)	**Estimated Cost:**	
	Entire Project:	**Work for Which Firm Was Responsible:**
05/2022 (A)	Unknown	$6,160

<table>
<tr><th colspan="3">PROJECT NO. 08</th></tr>
<tr><th>Project Name, Location, and Owner's Contact Information:</th><th colspan="2">Nature of Firm's Responsibility:</th></tr>
<tr><td rowspan="2">City of Kenner
Sewer Capital Improvement Program
Sewage Pumping Station Upgrade
31st Street and Jasper Street Lift Station
Kenner, Louisiana
Eustis Engineering Project
Nos. 21834 and 22559

Contact Information:
City of Kenner
Department of Public Works Through
Design Engineering, Inc.
Suite 205
3330 West Esplanade Avenue
Metairie, Louisiana 70002
John Holtgreve @ 504-836-2155</td><td colspan="2">Construction was to consist of a new wet well 20 to 25 feet below the existing ground surface, a valve pit 6 to 8 feet below the existing ground surface, and an electrical panel at the ground surface. The wet well and valve pit would each have a 12' × 12' pad. The electrical panel would have a 2' × 5' pad. Both shallow foundation systems and treated timber piles were being considered for support of the project features.

Eustis Engineering conducted one undisturbed soil test boring at the site. The boring was drilled to a depth of 80 feet below the existing ground surface to provide sufficient information for the evaluation of piles and sheetpiles. Our laboratory technicians performed tests on samples obtained from the boring at the direction of our engineers in order to evaluate the physical properties of the various substrata.

Engineering analyses, based on the soil boring and laboratory test results, were made to determine recommendations regarding site preparation and drainage, pipe bedding, estimates of allowable soil bearing values, estimates of allowable load capacities for timber piles, estimates of settlement, a temporary restraining system, and foundation construction procedures as well as recommendations for rigid and flexible pavements. Eustis Engineering also provided construction materials testing services for this project. Those services included:

• soil mechanics laboratory tests including moisture content, Atterberg limits, mechanical analysis, and standard Proctor;
• inplace density tests on sand, limestone, and crushed concrete for use as structural backfill, bedding, and base course;
• visual and physical inspection of more than 1,620 feet of timber piles;
• pile logging during installation;
• performance of vibration monitoring during pile installation;
• review of asphalt and concrete mix designs intended for use on the project;
• visual and physical inspection of concrete placed for the lift station slab, seal slab, foundation slab, skid foundation, tank bottom, manhole, electrical pad, sidewalk, and roadway;
• compressive strength tests on concrete cylinders made during the above inspection; and
• the coring and inspection of asphalt.

Our engineers performed quality reviews of these inspection reports prior to issuing the results.</td></tr>
<tr><td rowspan="2">Completion Date
(Actual or Estimated)</td><td colspan="2">Estimated Cost:</td></tr>
<tr><td>Entire Project:</td><td>Work for Which Firm Was Responsible:</td></tr>
<tr><td>04/2015 (A)</td><td>Unknown</td><td>$19,300</td></tr>
</table>

PROJECT NO. 09		
Project Name, Location, and Owner's Contact Information:	**Nature of Firm's Responsibility:**	
Lafourche Parish Water District No. 1 **Sugar Ridge Wastewater Treatment Facility** **Proposed Structures** **Dogwood Drive** **Lafourche Parish, Louisiana** **Eustis Engineering Project No. 24757** **Contact Information:** Lafourche Parish Water District No. 1 Through 21 Design Group, Inc. Suite 301 1351 Jefferson Street Washington, Missouri 63090 Jeremy Lay @ 636-432-5029	A Moving Bed Biofilm Reactor (MBBR) and Clarifier are proposed for construction at the Sugar Ridge Wastewater Treatment Facility in Lafourche Parish, Louisiana. Shallow and deep foundations are currently under consideration. Eustis Engineering conducted a geotechnical exploration to assess the subsoil suitability to the intended project features. Based on review of the furnished information and knowledge of the area geology, Eustis Engineering recommended drilling two soil borings for this project. One boring was drilled to a depth of 70 feet and the other extended to a depth of 50 feet. Borings were drilled at the approximate center of each proposed structure's footprint using a truck mounted drill rig; undisturbed samples of cohesive or semi-cohesive subsoils were obtained at close intervals or changes in stratum using a 3-in. diameter thinwall Shelby tube sampler. Laboratory tests were performed to evaluate the subsoil characteristics, shear strength, and relative compressibility of the subsoils encountered. The geotechnical engineering design report of our findings and recommendations included: • a boring location plan; • individual logs of the borings; • a summary of the laboratory test data; • a discussion of the subsoil and groundwater conditions; • recommendations for site preparation and drainage; • recommendations for placement and compaction of fill material; • estimates of allowable soil bearing values for mat foundations constructed at grade and at a depth of 9 feet below grade; • an evaluation of uplift pressures on the below grade features; • estimates of allowable vertical load capacities for various embedments of driven timber piles installed at grade or below grade; • recommendations for pile installation and testing methods; • estimates of settlement due to fill placement and structural loads; and • general construction recommendations.	
Completion Date (Actual or Estimated)	**Estimated Cost:**	
	Entire Project:	**Work for Which Firm Was Responsible:**
04/2022 (A)	Unknown	$7,975

PROJECT NO. 10		
Project Name, Location, and Owner's Contact Information:	**Nature of Firm's Responsibility:**	
Lafourche Parish Government **Butch Hill Pump Station** **Lafourche Parish, Louisiana** **Eustis Engineering Project No. 24723** **Contact Information:** Lafourche Parish Government Through GIS Engineering, L.L.C. Suite 600 935 Gravier Street New Orleans, Louisiana 70112 Augustin Rega, P.E. @ 504-364-4784	The Lafourche Parish Government wishes to increase capacity at the existing Butch Hill Pump Station. This involves the removal of the existing station to introduce the new station. An existing vehicular bridge spanning the existing discharge pipes will be replaced during the construction of the new station. The intake canal may also be increased in width to provide greater flow into the new station. The new pump station may be located east of the existing pump station to allow for continued use of the old pump station during construction. This will require excavation and realignment of the intake drainage canal to support the updated design layout. Eustis Engineering L.L.C. performed a geotechnical exploration to support our engineering design recommendations associated with this project. We performed one soil boring to a depth of 150 feet and three cone penetration tests (CPTs) to depths of 150 feet. Soils mechanics laboratory tests performed on samples from the boring included natural water content, unconfined compression shear, unconsolidated undrained triaxial compression shear, and Atterberg liquid limits and plastic limits determinations. The test assignments were directed by our engineers to aid in the development of the soil design parameters. Eustis Engineering developed comprehensive draft and final geotechnical design reports for the project. Engineering analyses included estimates of lateral earthen pressure coefficients, local stability analyses of the pump station headwall and intake walls, and deep-seated stability analyses of the pump station and intake walls. For support of the pump station components, bridge, and other ancillary features, we provided estimates of allowable pile load capacity for various types and sizes of timber piles; square, precast concrete piles; and steel pipe piles for average grades at el 0 beyond the limits of the pump station and at el -21 beneath the structure. We evaluated seepage and heave beneath and around the pump station. Our geotechnical design report included estimates of allowable soil bearing values for the future equipment pad; estimates of settlement for foundation piles for both the pump station and the future discharge pipe foundations; estimates of subgrade moduli; and estimates of p-y, t-z, and Q-z soil values. We performed deep seated stability analyses of the drainage canal side slopes and slope stabilization needed to reroute the conveyance channels as part of the new pump station location.	
Completion Date (Actual or Estimated)	**Estimated Cost:**	
	Entire Project:	**Work for Which Firm Was Responsible:**
06/2022 (A)	Unknown	$48,500

TEC Professional Services Questionnaire

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

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

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

When Eustis Engineering L.L.C. opened its first office in Vicksburg, Mississippi, in 1946, it housed its entire operation in less than 500 square feet of space. ***Seventy-eight years later,*** our personnel and equipment occupy 40,000+ square feet of space in five locations.

Eustis Engineering is the third oldest, continually operating geotechnical firm in the United States. From a single two-man office to approximately 115 individuals in five offices, the firm has grown to house accounting, administrative, quality control, safety, drilling, engineering, laboratory, and construction materials testing departments. These departments work together to provide our clients with the quality work desired in a cost efficient and timely manner.

Eustis Engineering is headquartered in Metairie, Louisiana, in the heart of Jefferson Parish's East Bank. We also operate branch offices in Baton Rouge and Lafayette, Louisiana, Gulfport, Mississippi, and Houston, Texas. Our offices and staff collaborate seamlessly using Microsoft Teams and other virtual platforms.

Eustis Engineering's services encompass many disciplines including the performance of:

- subsurface exploration (drilling of soil borings, cone penetration testing, downhole vane, and Geoprobe®);
- soil mechanics laboratory tests;
- field instrumentation and monitoring;
- non-destructive testing of piles and shafts including dynamic pile testing, crosshole sonic logging, single-hole sonic logging, low strain pile integrity testing, and thermal integrity profiling;
- geotechnical engineering design;
- special inspections; and
- construction quality control and materials testing services.

Eustis Engineering L.L.C. Important Numbers	
Item	**Number**
Unique Entity Identifier (UEI)	R83MG9NLTMS4
CAGE Code	4MOP2
Firm License - Louisiana	EF.0003558
Firm License - Mississippi	2078
Firm Registration – Texas	13895

Eustis Engineering has worked on over 850 geotechnical and construction materials testing projects for Jefferson Parish Government entities, many of which focused on water facilities and infrastructure. We have also worked on over 4,000 projects of all types throughout the east and west banks of Jefferson Parish alone, not considering similar projects in the surrounding parishes. This work history gives our engineering staff

unparalleled familiarity with the foundation conditions in the Gulf Coast and the challenges that may arise for projects associated with this contract.

ENGINEERING SERVICES

Eustis Engineering has geotechnical engineering capabilities to fulfill the requirements of nearly any project. As evidenced by the included write-ups in this package, our experience with various water, sewer and drainage infrastructure projects is varied and extensive.

We have developed pile capacity and bearing capacity analyses for projects throughout Jefferson Parish and the coastal areas of the United States. Eustis Engineering's evaluation of piles includes estimates of vertical capacity for groups. We also perform lateral analyses of individual piles and pile groups using LPILE® and GROUP® software. Our evaluation of bearing capacity considers the excavation depth, base preparation and utility diameter.

We evaluate local and deep-seated global stability of canals, waterway slopes and embankments as well as excavation shoring and sheeting. We provide assessments of heave, seepage and erosion control measures. We evaluate floodwalls, including I-walls, L-walls, T-walls and gates.

We perform settlement studies including estimates of settlement and time-rate of settlement with and without wick drains to enhance consolidation. These settlement studies include estimates and recommendations for lift construction affecting a gain-in-strength of foundation soils associated with subsoil consolidation. Preload/surcharge operations are also a component of our settlement evaluations.

In our practice, Eustis Engineering has developed methodologies associated with the estimates of negative skin friction on pile foundations. The methods are the current state of practice. The extension of these methods is an evaluation of settlement induced bending moments. Eustis Engineering is also utilizing a numerical model program, SIGMA/W, in association with the rigorous settlement program Settle3.

Engineering Staffing

Our engineering staff has 20 master's degrees in Civil Engineering, Engineering, Engineering Management, Geology, and Business Administration. Participation in post-Bachelor of Science curricula, as well as continuing education and professional registration that emphasizes engineering management and technical issues, is very important to Eustis Engineering. Our engineers also regularly present at technical conferences. We encourage and fund our staff for these activities and programs.

Employee	Education	Experience	
		Years with Eustis Engineering	Total Years
Professional Engineers (P.E.)			
Benjamin M. Cody	M.S. / Civil Engineering	22	26
Brian A. Deschamp	B.A. / Business Administration	12	12
	M.S. / Civil Engineering – Geotechnical		

P. Tennant Duckworth	M.S. / Civil Engineering	3	3
James J. Hance	M.S. / Civil Engineering	20	24
	M.B.A. / Business Administration		
Chad L. Held	M.S. / Civil Engineering	33	33
Matthew K. Morales	B.S. / Civil Engineering	15	15
Tomas K. Morales	B.S. / Civil Engineering	10	10
Travis R. Richards	M.S. / Engineering	17	24
	M.S. / Engineering Management		
	Coastal Engineering Certificate		
Chad D. Roe	M.S. / Civil Engineering	1	11
Gwendolyn P. Sanders	M.S. / Engineering	31	31
Sanjay S. Shahji	M.S. / Civil Engineering	1	18
Shaun R. Simon	M.S. / Civil Engineering	24	24
Alice E. Stark	M.S. / Civil and Environmental Engineering	<1	8
Patrick A. Thurmond	M.S. / Engineering Management	9	9
	M.S. / Civil Engineering		
	Coastal Engineering Certificate		
Sean G. Walsh	M.S. / Civil Engineering	11	16
James M. Williams	M.S. / Civil Engineering	6	6
Henry C. Worley	M.S. / Engineering	6	7
	Coastal Engineering Certificate		
Engineering Interns (E.I.)			
Adam K. Abdulbagi	B.S. / Civil Engineering	1	1
Naba Almofraji	B.S. / Civil Engineering	<1	6
Alvaro E. Carvajal	B.S. / Civil Engineering	1	1
Joseph P. DiGiovanni	B.S. / Civil Engineering	1	1
Steven B. Tidwell	B.S. / Geological Engineering	<1	13
Engineering Graduates			
Alexander Soriano Doninelli	B.S. / Civil Engineering	<1	4
Lesley L. Reitmeyer	B.S. / Civil Engineering	15	15
Xia (Bruce) Xialong	PhD / Geotechnical Engineering	<1	10
	M.S. / Geotechnical Engineering		
Geologists			
Matthew J. Blasini, G.I.T.	B.S. / Geology	5	6
Nathan A. Quick, P.G.	M.S. / Geology	2	7
Total Years of Experience		**246**	**341**

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

Cone Penetration Testing Capabilities

Eustis Engineering owns two dedicated track-mounted cone penetration test (CPT) rigs and operates four other multi-purpose rigs capable of performing CPTs. Operators are either specifically trained engineering technicians or engineers who perform field operations utilizing the CPT equipment. Engineers with specialized knowledge and experience operating the rigs evaluate the sounds and produce the CPT logs. Five of our rigs can be placed on a cargo buggy, shallow draft barge, or airboat to access coastal marsh or open water. We have sounded to depths of 180 feet and have the ability to perform dissipation and seismic testing. Field testing is performed according to ASTM D5778 and common industry practices. Eustis Engineering has been performing CPTs and using CPT technology since the early 2000s.

A CPT can be accomplished rapidly with four or five being performed in the same time frame as a standard geotechnical boring; therefore, CPTs are typically cost-effective in providing enhanced subsurface exploration and better delineation of subsurface conditions at a project site.

Dynamic Pile Testing Capabilities

Eustis Engineering was the first private consulting firm to own and operate dynamic pile testing equipment in the States of Louisiana and Mississippi. The pile types tested include timber piles; small size pipe piles; square, precast concrete piles and large (60 to 72-in. diameter) spun-cast, prestressed concrete piles; open-end and closed-end steel pipe piles; and steel H-piles.

We often upgrade our data collectors and operate four Pile Driving Analyzers® (PDAs): one PAX unit and three PDA-8G units. These units can be battery operated and use wireless gauge transmitters to eliminate the need for a main cable to connect directly to the units. We also stock and use underwater gauges to monitor pile driving in marine environments when the pile head descends below the water surface. To support our four PDA units, Eustis Engineering maintains an extensive inventory of calibrated gauges and accessories. To provide quality assurance and rapid responses to issues in the field, all PDAs have wireless communication, enabling our engineers direct oversight of the dynamic pile testing process in real time.

We also use this PDA equipment to maintain the calibrations of our automatic Standard Penetration Test (SPT) hammers on our drill rigs.

Other Non-Destructive Testing Capabilities

Our engineering staff at Eustis Engineering performs other non-destructive testing services to verify the structural integrity of drilled shafts, augercast piles, and precast concrete piles. Some of these processes include crosshole/single-hole sonic logging (CSL or SSL), low strain pile integrity testing (PIT), and thermal integrity profiling (TIP™). We also perform parallel seismic testing to evaluate existing foundation depths.

INSTRUMENTATION

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

Eustis Engineering provides the following instrumentation services:

- Vibrating wire devices including piezometers, extensometers, settlement gauges, and strain gauges
- Data loggers to enable periodic collection of data for vibrating wire devices
- Data links for remote web access to data loggers in near real time
- Settlement plates
- Conventional slope inclinometers or MEM sensor array inclinometers
- Monitoring services of all instrumentation devices with geotechnical interpretation

Instrumentation is a natural complement to our design services, providing data to verify or modify recommendations based on the observational method. Ongoing monitoring enables us to provide continuing services from project inception to the end of a project's design life.

DRILLING/FIELD EXPLORATION

Eustis Engineering possesses licenses and credentials to perform geotechnical drilling in Louisiana and Mississippi (no license is needed in Texas). With our licenses and credentials, Eustis Engineering drills soil borings and performs sampling operations for our clients' projects in all types of environments including land, marsh, swamp, and marine. Our personnel have the capability and experience to provide these services from trucks, barges, pontoons, and swamp or marsh buggies. We also have portable units that can be used inside structures planned for retrofit/renovations.

Field Exploration Personnel

We can provide up to nine drillers and drill rigs capable of obtaining standard 3-in. diameter Shelby tube samples and 5-in. diameter fixed piston samples, sounding CPT, advancing Geoprobe samplers, and installing geotechnical instrumentation on land, in water, and in marsh environments as indicated in the following table.

Capabilities of Eustis Engineering's Field Exploration Staff	Blair Armant	Scott Bombard	James Cordes	Tevin Crawford	Rene Davidson	Eric Held	James Lubben	George Reitmeyer	Lawrence Rome
Hand Auger Borings	X	X	X	X	X	X	X	X	X
General Type (3-in. Diameter Borings)	X	X	X	X	X	X	X		X
General Type (3-in. Diameter Borings) in Hard Access Locations (Marsh, Swamp, Heavily Forested)	X	X	X	X	X	X	X		X
Undisturbed Type (5-in. Diameter Borings)	X	X	X	X	X	X	X		X
Undisturbed Type (5-in. Diameter Borings) in Hard Access Locations (Marsh, Swamp, Heavily Forested)	X		X	X	X	X	X		X
Location Information (Latitude, Longitude)	X		X	X	X	X	X		X
Set Permanent Benchmarks	X		X	X	X	X	X		X
Install Instrumentation	X		X	X	X	X	X		X
Cone Penetration Tests						X		X	
Geoprobe Sampling		X	X			X	X		X

Field Exploration Equipment

Eustis Engineering owns and operates six wet rotary drill rigs, both truck-mounted and skid-mounted. This equipment includes one Diedrich truck-mounted D-50 turbo drill rig (with an automatic SPT hammer); one Failing skid only rig (with an automatic SPT hammer); one truck-mounted CME-55 rig; one track-mounted CME-850X rig with an automatic hammer; one track-mounted CME-850XR rig with an automatic hammer; and one truck-mounted CME-55 rig with a detachable CME-55 skid unit and automatic hammer. We also own two track-mounted cone penetrometer systems capable of providing up to 15 tons of reaction. Our CME track rigs provide low ground pressure and are designed to traverse soft ground surfaces, steep slopes, and lightly wooded areas. Eustis Engineering also owns four direct push Geoprobe units: two 3230DTs, the 6620DT, and the 540M. Eustis Engineering's 6620DT/3230DT Geoprobe with their 12-in. tracks allow this equipment to be used on pavement as well as off road and in rugged terrain. The 6620DT and 3230DT rigs also can be placed on specialized equipment. This includes a jack-up barge and a cargo buggy for operations over marsh/water. These units can install shallow monitoring wells and other instrumentation. We also have the capability to perform CPTs and downhole vanes using the 3230DT rigs.

Our 540M Geoprobe can fit into confined spaces as narrow as 32 inches. The 540M can also be utilized on an airboat for coastal terrains.

Other Specialized Soil Sampling Equipment

In addition to our drill rigs, Eustis Engineering owns and operates an Acker Vane Shear to perform down hole in-situ testing. We also have hand augers to obtain samples at various depths for use in classification and stratification of soil deposits. This equipment can be used in association with handheld piston samplers to obtain small diameter samples. Finally, we operate a dynamic cone penetration tests (DCPTs) to assess the in-situ strength of undisturbed soils and compacted materials in accordance with ASTM D 6951.

Drone Capabilities

Eustis Engineering utilizes small Unmanned Aerial Systems (sUAS), more commonly known as "drones," to enhance our services. We use drones to perform site inspections, field reconnaissance, pre/post-construction condition surveys, construction inspections, and other forms of visual monitoring. We currently operate a DJI Mavic Air 2S Drone piloted by a Part 107 Certified Remote Pilot.

LABORATORY SERVICES

Eustis Engineering's laboratories are constantly evolving with the purchase of new equipment on a yearly basis. Our gINT® data management software from Bentley allows for maximum efficiency in the production of boring logs and data entry.

Eustis Engineering has also acquired OpenGround®, Bentley's Cloud platform, which interfaces with a collection of geotechnical applications. OpenGround provides a comprehensive solution for collecting, reporting, managing, visualizing, analyzing, and accessing data. Its advanced digital workflows combine both subsurface and surface data into one cohesive design. This software provides Eustis Engineering's team members access to a data source via connected applications or a web portal, increasing both collaboration and efficiency. Improved access and reliability will save time and money in the planning, design, analysis, construction, and operation of infrastructure projects.

Eustis Engineering has also acquired KeyLAB® from Bentley. KeyLAB is the leading laboratory management system built specifically for geotechnical and construction materials testing laboratories. It improves our laboratory efficiency at every stage of the geotechnical and construction testing process, including sample and storeroom management, as well as electronic scheduling, testing, and reporting. It integrates with Microsoft Excel®, allowing for the efficient development of customized worksheets and reports.

Technical testing common to our laboratories includes ASTM; American Concrete Institute (ACI); State of Louisiana, Department of Transportation and Development (LaDOTD); AASHTO; FAA; and the U.S. Army Corps of Engineers (USACE). Our laboratories hold accreditations from AASHTO, LaDOTD, and the USACE.

Laboratory Staffing

Eustis Engineering currently has qualified technicians to sample construction materials and perform soil mechanics laboratory testing. These technicians are versed in the latest standards from ASTM, LaDOTD, MDOT, AASHTO, FAA, and the USACE. Many of our technicians have earned certifications with the National Institute for Certification in Engineering Technologies (NICET) in the area of geotechnical engineering technology and in the subfields of construction, exploration, generalist, and laboratory.

Laboratory Quality Control

In our effort to ensure the quality of our laboratory and materials testing, our programs are regularly inspected by outside agencies such as the USACE, the AMRL Group of the American Association of State Highway and Transportation Officials, and the CCRL Group of AASHTO. Eustis Engineering is also accredited by the Mississippi Department of Transportation.

Eustis Engineering has three soil mechanics laboratories where our laboratory practices and quality management system meet the requirements of AASHTO R 18 and ASTM E329. These offices are located in Metairie, Baton Rouge, and Gulfport. Individual offices may comply with ASTM quality system specifications including ASTM C1077, ASTM D366, and ASTM D3740. Accreditations in the various areas are shown below.

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

To further show quality is paramount to Eustis Engineering, we have two individuals in charge of maintaining quality in our testing. Travis R. Richards, P.E., is the Engineer-In-Charge. Timmy Holleman, dedicated Quality Control Manager, oversees the calibration of our equipment and maintenance of our quality system. The biggest reward of our quality system is knowing our clients are confident our testing laboratories produce the highest quality results and conform to state and national standards.

CONSTRUCTION MATERIALS TESTING

Eustis Engineering has been involved in construction materials testing (CMT) and inspection on a regular basis since the mid-1980s. Over the past 30+ years, Eustis Engineering has accumulated a wealth of experienced technicians in these areas. Whether 20 feet down in an excavation or 20 stories up in a high rise, our CMT technicians are there providing the inspection services needed on individual projects.

Staffing

Eustis Engineering currently has nearly 30 technicians on staff to provide construction inspection services on a daily basis. These services encompass the areas of soils, piling, asphalt, concrete, steel, and others.

Services

Soils testing in the field is performed by means of density tests, fill placement inspection, and depth checks. These services are performed by technicians who have attended courses by Troxler or Humboldt in the use of nuclear density devices.

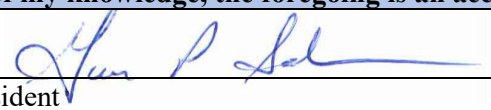
Piling services include the inspection of various types of piles, logging these piles, and performance of pile load tests with calibrated equipment. Load test results are, in turn, interpreted and reported by a registered engineer on our staff.

Our realm of concrete inspection includes the formulation and review of mix designs, quality control at the plant and in the field, materials testing and sampling, precast piling inspection, post tension inspection, floor flatness, and mortar and grout inspection. These services are performed by our ACI and NICET certified technicians.

Steel inspection may include the visual inspection of structural steel at the site or in the shop, steel and pipe coating sampling, post tension and welder certification witnessing, and the performance of ultrasonic and x-ray testing. These services are performed by members of our staff currently certified with AWS, ASNT, and/or ASME.

Other CMT services provided by Eustis Engineering personnel include fireproofing inspection, vibration and acoustical monitoring, paint inspection, and more.

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

Signature:  **Print Name:** Gwendolyn P. Sanders, P.E.

Title: President **Date:** 12 June 2024