STATEMENT OF QUALIFICATIONS

FOR

SOQ 24-021 – ROUTINE ENGINEERING SERVICES FOR STREETS PROJECTS

FOR

JEFFERSON PARISH

Jefferson Parish
State of Louisiana

JULY 16, 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 24-021 - Routine Engineering Services for Streets Projects
Resolution No. 144319

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.

Ben Bartlett, PE, PTOE
bbartlett@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	1 Structural Engineers
___ Chemical Engineers	___Geotechnical Engineers	___Graduate Engineers
2 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:

Ben Bartlett, PE, PTOE
Co-Founder and Principal

Project Assignment:

Professional-in-Charge, 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

Widening of Causeway Boulevard (Airline Drive to West Napoleon Avenue)
Owner: Jefferson Parish. **Scope:** Widening of existing 4-lane roadway and area-wide drainage improvements (1.0 miles of roadway and drainage). **Cost:** ≈$19,000,000 (est.). **Role:** Project Manager and Lead Civil Engineer. Led roadway design, hydrologic and hydraulic design, traffic signal design, and preparation of plans, specifications, and opinion of probable construction cost. Designed 15-inch to 72-inch RCP drainage system, tie-ins to surrounding drainage system, asphalt pavement, concrete curb and gutter, pavement markings, sequence of construction, and temporary traffic control plan while accounting for site-related challenges, such as significant traffic demands, limited right-of-way, congestion of existing drainage and utilities, and the need to sequence construction to minimize disruptions to traffic.

Rehabilitation of Causeway Boulevard/Airline Drive Interchange
Owner: Jefferson Parish. **Scope:** Structural inspection and rehabilitation of 1950s elevated interchange (8 ramps, traffic circle, and 4 lane overpass). **Cost:** ≈$13,000,000 completed, ≈$46,000,000 (est.) remaining. **Role:** Lead Civil Engineer and Construction Engineer. Performed hydrologic and hydraulic analysis. Designed modifications to bridge drainage system, temporary traffic control plans, pavement markings, and other related features. Prepared plans, specifications, and opinions of probable construction cost (OPCC). Managed 4 inspectors; performed inspections; reviewed RFIs, submittals, and pay applications; coordinated construction materials testing; assisted with development of adjustments to post-installed adhesive anchor and reinforcing bar positions to avoid conflicts with existing reinforcement; assisted with development of field adjustments for emergency deck repairs to replace failed expansion joint with only weekend road closures; prepared change orders; and prepared project closeout documentation.

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.

Causeway Boulevard at 17th Street Southbound Roadway and Overpass Widening
Owner: Jefferson Parish. **Scope:** Widening of Causeway Blvd. roadway and overpass of Veterans Blvd. **Role:** Project Manager and Lead Civil Engineer. Designed asphalt milling and overlay, asphalt pavement, concrete curb and gutter, PCC pavement, integral concrete curb, median modifications, pavement markings, signage, and adjustments to drainage structures. Prepared plans, specifications, and opinions of probable construction cost (OPCC).

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. 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.

Veterans Blvd. Transit Signal Priority
Owner: Jefferson Parish (LaDOTD LPA project). **Scope:** Installation of new traffic signal controllers and a transit signal priority system along Veterans Blvd. (32 intersections between Loyola Dr. in Kenner and Pontchartrain Blvd. in Orleans Parish and 22 JPT buses). **Cost:** ≈$510,000. **Role:** Project Manager and Lead Construction Engineer. Led construction engineering and inspection. Managed inspectors; reviewed RFIs, submittals, and pay applications; coordinated priority system testing; advised on priority system requirements and operational gaps; and prepared change orders.

Power Blvd. Median Improvements
Owner: City of Kenner (LaDOTD LPA project). **Scope:** Installation of a multi-use path and landscaping in the median of Power Blvd. as well as a pedestrian/bicycle truss bridge over Canal No. 1. **Cost:** ≈$3,400,000. **Role:** Project Manager and Lead Construction Engineer. Led construction engineering and inspection. Managed inspectors; reviewed RFIs, submittals, and pay applications; coordinated material testing; and prepared change orders. During construction, re-evaluated the location of a pedestrian crossing at Vintage Dr. and prepared a report that identified an improved crossing location based on vehicular and pedestrian traffic data as well as existing site features.

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:** Project Manager and Lead Construction Engineer. Led construction engineering and inspection. Inspected temporary lane closures of over 10 miles long and provided suggested modifications to improve motorist safety. Managed 10 inspectors; performed inspections; reviewed RFIs, submittals, and pay applications; managed inventory for approximately $19,000,000 of stockpiled raw materials; inspected fabricated steel posts and rails prior to installation; coordinated construction materials testing; prepared change orders; and prepared project closeout documentation.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Brett Liuzza, 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 (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

Widening of Causeway Boulevard (Airline Drive to West Napoleon Avenue)
Owner: Jefferson Parish. **Scope:** Widening of existing 4-lane roadway and area-wide drainage improvements (1.0 miles of roadway and drainage). **Cost:** ≈$19,000,000 (est.). **Role:** Civil Engineer. Assisted with roadway design, hydrologic and hydraulic design, and traffic signal design. Reviewed design of 15-inch to 72-inch RCP drainage system and tie-ins to surrounding drainage system. Designed asphalt pavement, concrete curb and gutter, pavement markings, sequence of construction, and temporary traffic control plan while accounting for site-related challenges, such as significant traffic demands, limited right-of-way, congestion of existing drainage and utilities, and the need to sequence construction to minimize disruptions to traffic.

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.

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. **Cost:** ≈$23,000,000 (est.). **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.

Brett Liuzza, PE (Continued)

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 roadway geometric layout, 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.

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.

Power Blvd. Median Improvements
Owner: City of Kenner (LaDOTD LPA project). **Scope:** Installation of a multi-use path and landscaping in the median of Power Blvd. as well as a pedestrian/bicycle truss bridge over Canal No. 1. **Cost:** ≈$3,400,000. **Role:** Lead Construction Engineer. Led construction engineering and inspection. Managed inspectors; reviewed RFIs, submittals, and pay applications; coordinated material testing; and prepared change orders.

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:** Project Manager and Lead Construction Engineer. Led construction engineering and inspection. Managed inspectors; performed inspections; reviewed RFIs, submittals, and pay applications; developed adjustments to utilities and drop inlets, manholes, and other drainage structures in the roadway; performed Site Manager duties; coordinated construction materials testing; prepared change orders; and prepared project closeout documentation.

Canal Blvd (R.E. Lee – Amethyst)
Owner: City of New Orleans (LaDOTD LPA project). **Scope:** Replacement of asphalt roadway (including curbs, driveways, sidewalks, and handicap ramps) and drainage, sewer, and water, lines. **Cost:** ≈$4,500,000. **Role:** Project Manager and Lead Construction Engineer. Led construction engineering and inspection. Managed 2 inspectors; performed inspections; reviewed RFIs, submittals, and pay applications; developed adjustments to drop inlets, manholes, and other drainage structures in the roadway; performed SiteManager duties; coordinated construction materials testing; prepared change orders; and prepared 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:** Project Manager and Lead Construction Engineer. Led construction engineering and inspection. Managed inspectors; performed inspections; reviewed RFIs, submittals, and pay applications; coordinated construction materials testing; developed adjustments to drop inlets, manholes, and other drainage structures in the roadway; prepared change orders; and prepared project closeout documentation.

Carey St. Pavement Rehabilitation (LPA Project With City of Slidell)
Owner: City of Slidell (LaDOTD LPA project). **Scope:** Repair/replacement of deficient PCC pavement panels, curb, driveways, and handicap ramps. **Cost:** ≈$970,000. **Role:** Project Manager and Lead Construction Engineer. Led construction engineering and inspection. Managed inspectors; performed inspections; reviewed RFIs, submittals, and pay applications; coordinated construction materials testing; developed adjustments to drop inlets, manholes, and other drainage structures in the roadway; prepared change orders; and prepared project closeout documentation.

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 Structural 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

Rehabilitation of Causeway Boulevard/Airline Drive Interchange
Scope: Structural inspection and rehabilitation of 1950s elevated interchange (8 ramps, traffic circle, and 4 lane overpass). **Cost:** ≈$13,000,000 completed, ≈$46,000,000 (est.) remaining. **Role:** Project Manager, Lead Structural Engineer, and Lead Construction Engineer. Analyzed existing bents and girders. Designed structure jacking plan, steel girder strengthening and repairs, bent cap strengthening, reinforced concrete risers, post-installed adhesive anchors and reinforcing bars, elastomeric bearing pads, and coating of steel components. Prepared plans, specifications, and opinions of probable construction cost (OPCC). Managed 4 inspectors; performed inspections; reviewed RFIs, submittals, and pay applications; coordinated construction materials testing; developed adjustments to post-installed adhesive anchor and reinforcing bar positions to avoid conflicts with existing reinforcement; designed emergency deck repairs to replace failed expansion joint with only weekend road closures; prepared change orders; and prepared project closeout documentation.

I-10 and I-12 College Flyover Ramp Design-Build
Scope: Replacement of I-10 WB flyover ramp; widening and rehabilitation of I-10 WB bridge over Ward Creek; and rehabilitation of I-12 to I-10 EB ramp and Essen Lane bridge over I-12. **Cost:** ≈$52,000,000. **Role:** Lead Structural Independent Technical Reviewer. Reviewed plans and specifications; analyzed reinforced concrete deck and barriers, 360' skewed continuous steel plate girders, steel cross frames, PPC girders, reinforced concrete diaphragms, rolled steel girders, steel diaphragms, reinforced concrete bents, drilled shafts, and PPC piles; and identified potential design and constructability issues.

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.

John Karlin, SE, PE (Continued)

Causeway Boulevard at 17th Street Southbound Roadway and Overpass Widening
Owner: Jefferson Parish. **Scope:** Widening of Causeway Blvd. roadway and overpass of Veterans Blvd. **Role:** Structural Engineer. Designed reinforced concrete deck (including tie-in to existing bridge), PPC girders, reinforced concrete diaphragms, elastomeric bearing pads, reinforced concrete bent caps, reinforced concrete columns, reinforced concrete pile caps, and PPC piles. Prepared plans, specifications, and opinions of probable construction cost (OPCC).

Lake Pontchartrain Causeway Southbound Bridge Rail Improvements
Scope: Installation of enhanced steel bridge rails and other miscellaneous repairs (48 miles of steel rail) while maintaining ADT of over 20,000. **Cost:** $39,948,424. **Role:** Construction Engineer. Inspected temporary lane closures of over 10 miles long. Managed 10 inspectors; performed inspections; reviewed RFIs, submittals, and pay applications; managed inventory for approximately $19,000,000 of stockpiled raw materials; inspected fabricated steel posts and rails prior to installation; coordinated construction materials testing; prepared change orders; and prepared project closeout documentation.

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.

Earhart/Dakin Ramp
Owner: LaDOTD. **Scope:** Exit ramp from Earhart Expressway to Dakin Street. **Role:** Structural Engineer. Designed reinforced concrete deck and barriers; PPC girders; reinforced concrete diaphragms; elastomeric bearings; and reinforced concrete shear keys. Designed pile bent (reinforced concrete bent cap and PPC piles) adjacent to existing bent to accommodate steel girder span without applying any additional load to the existing bent. Prepared plans.

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:** ≈$130,000,000. **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.

US 90 / Jefferson Hwy. at LA 3046 / Causeway Blvd. Conceptual Planning Study
Scope: Conceptual planning study for potential intersection improvements (15 potential options). **Role:** Project Manager and Lead Structural Engineer. Led coordination with RPC, LaDOTD, Jefferson Parish, and other stakeholders and the conceptual development of potential options to alleviate congestion, including modifications and improvements to the existing J-turn bridge, traffic signals, signage, and pavement markings. Prepared conceptual layouts for 15 potential options; prepared opinions of probable construction costs for 5 potential options; and presented potential options to the public at public meetings.

St. Andrew Street Wharf Erosion Mitigation Project
Owner: Port of New Orleans. **Scope:** Installation of bulkhead consisting of 50-foot long steel sheet pile wall and reinforced concrete pile cap and PCC pavement roadway repairs along the Mississippi River (1,600 feet long). **Cost:** ≈$3,800,000. **Role:** Project Manager and Lead Construction Engineer. Led construction engineering and inspection. Managed inspectors; performed inspections; reviewed RFIs, submittals, and pay applications; prepared design modifications to accommodate field conditions; prepared change orders; and prepared project closeout documentation.

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.

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.

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.

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 road or bridge 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
Rehabilitation of Ramps 4, 5, 8, and Traffic Circle of Causeway Boulevard at Airline Drive	Jefferson Parish	≈$41,000,000 (est.)	John Karlin and Ben Bartlett
Power Blvd. Median Improvements	City of Kenner / LaDOTD	≈$3,400,000	Ben Bartlett and Brett Liuzza
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 Causeway Southbound Bridge Rail Improvements	GNOEC	≈$40,000,000	Ben Bartlett, John Karlin, and Wayne "Dickie" Lemoine
W. Esplanade Bridges @ Duncan Canal	LaDOTD	≈$14,000,000	Ben Bartlett and John Karlin
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.

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.

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).

Ben Bartlett, PE, PTOE will serve as the Professional-in-Charge and as a Project Manager and Civil Engineer and **Brett Liuzza, PE** will serve as a Project Manager and Civil Engineer for this project. They have worked on many different types of road, intelligent transportation system (ITS), and bridge projects for Jefferson Parish and other nearby agencies, such as the City of New Orleans, St. Charles Parish, and LaDOTD. Their experience includes inspection, program management, design, and construction oversight of full reconstruction and repair (milling and overlay and panel replacement) of roads and associated drainage, utility, ITS, traffic signal, and pedestrian facility improvements.

John Karlin, SE, PE will serve as a Project Manager and Structural Engineer for this project. He has worked on some of the largest bridges in Jefferson Parish, such as the Causeway Blvd./Airline Dr. Interchange and the Causeway Bridge, and has expertise in structural inspection and rehabilitation/repair of existing bridges.

2. Size of firm

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

- Conceptual planning and feasibility evaluation
- Design and preparation of plans and specifications, including full road reconstruction (asphalt and PCC); road repair/rehabilitation (milling and overlay, patching, and panel replacement); associated drainage, utility (water, sewer, gas, electric, telecommunications, etc.), ITS, traffic signal, and pedestrian facility improvements; new bridges; rehabilitation and repair of existing and/or historic bridges; and large culverts at canal crossings
- Construction administration, including Request for Information (RFI), submittal, pay application, and construction schedule review
- Construction engineering and inspection, including resident inspection and bridge 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 and local LaDOTD road and bridge projects, such as:

- Widening of Causeway Boulevard (Airline Drive to West Napoleon Avenue)
- Jefferson Parish Submerged Roadways Program
- Rehabilitation of Ramps 6, 7, and Overpass of Causeway Boulevard at Airline Drive
- Coating of Ramps 6, 7, and Overpass of Causeway Boulevard at Airline Drive
- Rehabilitation of Ramps 4, 5, 8, and Traffic Circle of Causeway Boulevard at Airline Drive
- Causeway Boulevard at 17th Street Southbound Roadway and Overpass Widening
- W. Esplanade Bridges @ Duncan Canal

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.

We are very familiar with Jefferson Parish's road and bridge 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
- 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 and LaDOTD's road and bridge 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 projects remain 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 how important safe and functional roads and bridges are to 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: July 16, 2024**

TEC Professional Services Questionnaire

A. Project Name and Advertisement Resolution Number:

SOQ 24-021, Resolution No. 144319
Routine Engineering Services for Streets Projects

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 L.L.C. 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 Jefferson Parish. 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:

- **Jefferson Parish** – North Causeway Boulevard (Southbound), Veterans Memorial Boulevard Overpass Ramp Extension, Metairie, Louisiana, Eustis Engineering Project No. 23914

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

- **State of Louisiana – Department of Transportation and Development**, Ames Boulevard Between the West Bank Expressway and Happy Street, Jefferson Parish, Louisiana, Eustis Engineering Project No. 24631
- **State of Louisiana – Department of Transportation and Development**, Fortune Road Pavement Preservation, Youngsville, Louisiana, Eustis Engineering Project No. L0585
- **State of Louisiana – Department of Transportation and Development**, I-10 and I-12 College Drive Flyover Ramp, Design-Build Project, East Baton Rouge Parish, Louisiana, Eustis Engineering Project No. B0646

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. 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, pavements, 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 900 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 foundation systems; and

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

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

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:

- **Westside Terrace Subdivision** – Tallow Tree Lane Renewal, 1045 Orange Blossom Lane, Harvey, Louisiana, Eustis Engineering Project No. 24677
- **Cleveland On the Lake Estates** – Earthen Surcharge Evaluation Monitoring, and Reporting for Existing Roadway, 6000 Cleveland Place, Metairie, Louisiana, Eustis Engineering Project Nos. 24124 and 24124.01

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Travis R. Richards, P.E. / Senior Project Manager and Vice President (Testing)

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:

17

Education: Degree(s)/Year/Specialization:

Graduate Certificate / 2018 / Coastal Engineering
Master of Science / 2017 / Engineering
Master of Science / 2015 / Engineering Management
Bachelor of Science / 1998 / Geotechnical & Structural Engineering

Active Registration: Year First Registered/Discipline:

Louisiana: 2004 / Civil Engineering
Alabama: 2017 / Engineering
Florida: 2016 / Engineering
Texas: 2016 / Civil Engineering

Other Experience and Qualifications Relevant to the Proposed Project:

Mr. Richards' experience in the field of civil and geotechnical engineering includes responsibility for the technical and supervisory functions of planning, permitting, design, exploration, construction materials testing, and project management. He has been involved in a variety of project assignments including residential, commercial, and municipal clientele practicing in the fields of land development and geotechnical engineering. In addition, he is experienced in the geotechnical design and construction quality control of foundations for industrial, levee, and heavy civil construction projects.

Mr. Richards began with Eustis Engineering as Staff Engineer in 1999. Mr. Richards' experience includes all phases of geotechnical engineering practice with particular emphasis in planning field exploration programs, supervision of soil mechanics laboratory testing, engineering analyses, and report presentation. He is proficient with analyses that include allowable soil bearing values, pile load capacities, slope stability, settlement estimates, pavement designs, and other analyses pertinent to the preparation of geotechnical reports. An understanding of these analyses also assists with the review of plans, specifications, and contractor submittals associated with the construction of these features.

In addition to geotechnical engineering, Mr. Richards has experience with management of construction materials testing, and in-situ instrumentation while working for Universal Engineering Sciences, LLC, Louisiana Transportation Research Center, and Eustis Engineering. Mr. Richards has been the engineer in responsible charge of construction materials testing/construction quality control departments on projects such as 2,000-home residential developments, major FDOT transportation projects, and several large-scale projects for the Everglades Restoration Program in association with the U.S. Army Corps of Engineers. His current principal focus is the oversight and quality control of Eustis Engineering's construction materials testing services at the organizational level. This includes the day-to-day involvement with operational components in all branches, technical liaison to branch managers, management of internal quality control resources, and planning of construction materials testing capabilities and services.

Mr. Richards began his geotechnical engineering career installing and monitoring strain gauge instrumentation on various construction components including geotextiles, concrete, corrugated pipe, and carbon fiber reinforcements for various entities including the State of Louisiana Department of Transportation and Development. He continues to oversee the instrumentation services provided by Eustis Engineering which include the installation and monitoring of

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Travis R. Richards, P.E. / Senior Project Manager and Vice President (Testing)

slope inclinometers, settlement plates, settlement gauges, piezometers, strain gauges, and SAA inclinometers. He has recently upgraded the delivery of data monitoring services through the use of data logger systems and near real-time remote sensing equipment.

Mr. Richards currently provides oversight of the in-house testing and development of instrumentation for marsh creation and coastal restoration projects. This includes the supervision of our settling column and self-weight consolidation testing.

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

- **Jefferson Parish** – Maplewood Drive and Pailet Street, Drainage Improvements, Jefferson Parish, Louisiana, Eustis Engineering Project No. 22942
- **Jefferson Parish** – Westbank Projects, Instrumentation Installation and Monitoring, Lapalco Boulevard Overpass at Bayou Segnette, Westwego, Louisiana, Eustis Engineering Project No. 23937
- **State of Louisiana – Department of Transportation and Development**, Ames Boulevard Between the West Bank Expressway and Happy Street, Jefferson Parish, Louisiana, Eustis Engineering Project No. 24631
- **Cleveland On the Lake Estates** – Earthen Surcharge Evaluation Monitoring, and Reporting for Existing Roadway, 6000 Cleveland Place, Metairie, Louisiana, Eustis Engineering Project Nos. 24124 and 24124.01
- **Jefferson Parish** – Cleary Avenue Improvements, Veterans Boulevard to West Esplanade Avenue, Jefferson Parish, Louisiana, Eustis Engineering Project No. 24137

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Matthew K. Morales, P.E. / Branch Manager

Project Assignment:

Project Manager

Name of Firm with which Associated:

Eustis Engineering L.L.C.

Years' Experience with This Firm:

15

Education: Degree(s)/Year/Specialization:

Bachelor of Science / 2008 / Civil Engineering

Active Registration: Year First Registered/Discipline:

Louisiana: 2013 / Civil Engineering

Other Experience and Qualifications Relevant to the Proposed Project:

Since joining Eustis Engineering L.L.C.'s staff as an Associate Engineer/Engineering Intern, Mr. Morales' duties have included coordinating field personnel for geotechnical explorations, preparing draft letters and reports for engineering projects, and performing various analyses including allowable soil bearing values, estimates of allowable pile load capacity for various types of piles, settlement analyses, and pavement designs. With his continued growth in the firm as a licensed Professional Engineer, Mr. Morales is adept at lateral pile load analyses, anchored and cantilever sheetpile wall analyses using the U.S. Army Corps of Engineers' CWALSHT program, analyzing effects of drag loads on deep foundations, wick drain design, and slope stability analyses. He is proficient in soil/foundation modeling programs such as LPILE® and GROUP® by Ensoft, Inc., SLOPE/W by GeoStudio, WEAP and CAPWAP® by Pile Dynamics, Inc., and Settle3 by RocScience Inc.

His field engineering duties/capabilities have also expanded and include performing and interpreting cone penetration test data, inclinometer data, and vibrating wire piezometer data; dynamic pile testing; pile integrity testing; crosshole sonic logging; and sonic echo/impact response testing. Mr. Morales is certified at the Master level by the Dynamic Measurement and Analysis Proficiency Test issued by Pile Dynamics, and the Pile Driving Contractors Association. He has performed dynamic pile testing on more than 100 projects in Louisiana, Texas, Mississippi, and Iowa.

In 2018, Mr. Morales was named Branch Manager to Eustis Engineering's Baton Rouge office. As Branch Manager, Mr. Morales oversees operations of the branch including laboratory workflow and CMT services in addition to managing staff engineers and interns. He routinely performs design analyses and reviews the geotechnical aspects of plans and specifications for local/municipal and state government projects, federal projects, and industrial clients. Mr. Morales is familiar with regulations, policies, procedures, and standards for these various stakeholders.

Mr. Morales has involvement in the following projects relative to this submittal:

- **State of Louisiana – Department of Transportation and Development**, I-10 and I-12 College Drive Flyover Ramp, Design-Build Project, East Baton Rouge Parish, Louisiana, Eustis Engineering Project No. B0646
- **City of Kenner** – Power Boulevard Median Improvements, West Esplanade Avenue to Vintage Drive, Kenner, Louisiana, S.P. No. H.011779. F.A.P. No. H011779., City of Kenner P.W. No. 2014-001B-CIP, Eustis Engineering Project No. 25176

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:

29

Education: Degree(s)/Year/Specialization:

Associate of Applied Sciences / 1998 / Safety

Active Registration: Year First Registered/Discipline:

LA Driller's License /2013

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 limits 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
- CBR of laboratory compacted soils
- Consolidated drained triaxial shear tests
- Consolidated undrained triaxial shear tests
- Consolidation tests
- Direct shear
- Direct simple shear
- Flexible wall permeability test
- Hydrometer
- Miniature vane shear
- Moisture content of soil and rock
- Organic content
- Particle size analysis of soils and aggregates
- Percent finer than U.S. Standard No. 200 sieve
- Pocket penetrometer
- Relative density tests
- Settlement column testing of dredged materials
- Sieve analyses
- Soil constants
- Specific gravity of soils
- Standard and modified compaction
- Swell pressure tests
- Torvane shear tests
- Unconfined compressive strength of soil
- Unconsolidated undrained triaxial shear tests
- Unified Soil Classification System
- Unit weight
- 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, 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 U.S. Army Corps of Engineers' (USACE's) fixed piston sampling. He is quite familiar with splitspoon, pitcher, Osterberg, Denison, and hollow stem auger sampling operations. He also performs down hole vane shear testing. 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 seven 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, fleet management, as well as other duties.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Lawrence W. Rome, C.E.T. / Operations Manager and Vice President (Operations)
Mr. Rome has direct involvement with the following projects related to this submittal: • **Jefferson Parish** – Maplewood Drive and Pailet Street, Drainage Improvements, Jefferson Parish, Louisiana, Eustis Engineering Project No. 22942 • **Jefferson Parish** – North Causeway Boulevard (Southbound), Veterans Memorial Boulevard Overpass Ramp Extension, Metairie, Louisiana, Eustis Engineering Project No. 23914 • **Westside Terrace Subdivision** – Tallow Tree Lane Renewal, 1045 Orange Blossom Lane, Harvey, Louisiana, Eustis Engineering Project No. 24677

<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
Maplewood Drive and Pailet Street
Drainage Improvements
Project No. 2009-63-R
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>
</table>

PROJECT NO. 02	
Project Name, Location, and Owner's Contact Information:	**Nature of Firm's Responsibility:**
Jefferson Parish **Westbank Projects** **Instrumentation Installation and Monitoring** **Lapalco Boulevard Overpass Over Bayou Segnette** **Westwego, Louisiana** **Parish Project No. 2017-045-RBP** **Parish Account No. 44220-411-7452 (42211.016)** **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.

PROJECT NO. 02		
Project Name, Location, and Owner's Contact Information:	**Nature of Firm's Responsibility:**	
	Instrumentation data showed that movements with respect to time were very slight (less than 1.5 millimeters) over the six-month 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.	
Completion Date (Actual or Estimated)	**Estimated Cost:**	
	Entire Project:	**Work for Which Firm Was Responsible:**
10/2019 (A)	Unknown	$22,900

PROJECT NO. 03	
Project Name, Location, and Owner's Contact Information:	**Nature of Firm's Responsibility:**
Jefferson Parish **North Causeway Boulevard (Southbound)** **Veterans Memorial Boulevard** **Overpass Ramp Extension** **Metairie, Louisiana** **Jefferson Parish Project No. 2017-011-RBP** **DEI Project No. 3017** **Eustis Engineering Project No. 23914** **Contact Information:** Jefferson Parish Through Design Engineering, Inc. Suite 250 3300 West Esplanade Avenue Metairie, Louisiana 70002 John Holtgreve @ 504-836-2155	The project included roadway widening work as well as structural modifications to a portion of the bridge over Veterans Memorial Boulevard. A sign foundation also required removal and relocation to facilitate the bridge widening. The existing sign foundation was to be abandoned with supporting timber piles cut to 3 feet below finished grade. Three new column bents were proposed for the project, each consisting of five to nine vertical 14-in. square, precast concrete piles (SPCs). Three existing piles would be incorporated into one of these pile caps. Four additional bents along the widened slab spans would each require three additional vertical 14-in. SPCs. The relocated sign foundation would be supported by four vertical 14-in. SPCs. Finally, four individual vertical 12-in. SPCs were proposed for support of the curtain wall. Based on this information, forty-four 14-in. and four 12-in. SPCs would be installed as part of the structural modifications. Dynamic pile testing was proposed on at least two of the piles. The roadway widening would extend approximately 700 feet north from the bridge and include a shift in the median to the west. This shift would require partial pavement removal as well as additional paving. The average daily traffic volume was 31,619 vehicles per day for the right southbound lane along the project corridor. Our field investigation included one undisturbed soil boring and two direct push borings to determine the subsurface conditions at the project site and to supplement available subsurface data from the original project plans. The undisturbed boring extended to a depth of 100 feet below the existing ground surface, and the push borings were performed to a depth of 10 feet each below the existing asphalt pavement. Once the field investigation was completed, we performed soil mechanics laboratory tests in our accredited laboratory in Metairie. Testing included visual classification, natural water content, unit weight, unconfined compression shear, unconsolidated undrained triaxial compression shear, Atterberg limits determinations, and grain size analyses. Engineering analyses and recommendations for the project included: • site preparation recommendations including temporary and permanent drainage, clearing and stripping, and demolition;

<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></td><td colspan="2">subgrade preparation including recommended fills, their compaction, and estimated fill settlement;
areal subsidence;
excavation recommendations including OSHA requirements, bracing, opencuts, dewatering and pressure relief, working surfaces, lateral movement, and settlement of the adjacent ground surface;
retaining structures;
deep foundation analyses including ultimate vertical pile capacity, in compression and tension, for SPC piles supporting the ramp extension and sign relocation; load resistance factors; pile spacing; estimated pile settlement due to structural loads; and differential settlement between the existing bridge and the proposed pile supported road widening;
soil/pile interaction analyses for laterally loaded pile groups;
pile installation recommendations; and
pavement analyses.</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>04/2019 (A)</td><td>Unknown</td><td>$22,500</td></tr>
</table>

PROJECT NO. 04		
Project Name, Location, and Owner's Contact Information:	**Nature of Firm's Responsibility:**	
Westside Terrace Subdivision **Tallow Tree Lane Renewal** **1045 Orange Blossom Lane** **Harvey, Louisiana** **Eustis Engineering Project No. 24677** **Contact Information:** JLN Properties I, LLC Through Tallow Tree Lane Renewal, LLC 2307 General Taylor Street New Orleans, Louisiana 70115 Jonathan L. Levy @ 225-255-1130	Tallow Tree Lane Renewal, LLC planned to redevelop a portion of the existing Westside Terrace Subdivision in Harvey, Louisiana; a 550' × 220' development was proposed. The site was slated to be a mixture of townhomes or possible multi-use structures, all supported on deep foundations consisting of timber piles. Eustis Engineering performed a geotechnical exploration at the site. This included the drilling of one undisturbed sample type soil test boring and performance of four cone penetration tests (CPTs) all with our in-house crews and equipment. Based on our review of the area geology and considering no more than 12 inches of fill was planned to raise site grades, we selected an exploration depth of 80 feet to characterize the site for this proposed development. Engineering analyses, based on the soil boring, laboratory tests, and CPT data were performed to estimate allowable vertical pile load capacity for timber piles to be used to support the proposed structures. Our report also addressed estimates of settlement of the piles due to structural loads and the site due to fill placement and areal subsidence. We also provided general construction recommendations including pile installation, load testing, and vibration monitoring using experiences developed by our construction phase services in the project area and informed by local building codes.	
Completion Date (Actual or Estimated)	**Estimated Cost:**	
	Entire Project:	**Work for Which Firm Was Responsible:**
11/2021 (A)	Unknown	$10,300

PROJECT NO. 05		
Project Name, Location, and Owner's Contact Information:	**Nature of Firm's Responsibility:**	
State of Louisiana **Department of Transportation and Development** **Ames Boulevard Between** **the West Bank Expressway and Happy Street** **Jefferson Parish, Louisiana** **S.P. No. H.011797** **F.A.P. No. H011797** **Eustis Engineering Project No. 24631** **Contact Information:** State of Louisiana Through Design Engineering, Inc. Suite 205 3330 West Esplanade Avenue Metairie, Louisiana 70002 Jeff Monfrey @ 504-836-2155	This project involved renovations and upgrades to a section of the roadway pavement along Ames Boulevard between the West Bank Expressway and Happy Street in Jefferson Parish. Eustis Engineering was brought in to provide construction materials testing and inspection services during the laying of asphalt and concrete for this work; specifically asphalt base course, asphalt binder course, asphalt wearing course, asphalt incidental mix, and Portland cement concrete types B and M. Eustis Engineering's specific duties included molding concrete cylinders, testing asphalt courses, performing inspections, and generally providing quality control oversight to ensure materials and processes conform to manufacturer's specifications, the Job Mix Formula (JMF), and the LaDOTD's criteria. Our field inspectors logged over 50 hours on site for these services. Daily reports were reviewed for quality control by our engineering staff and issued through our online client portal in MetaField.	
Completion Date (Actual or Estimated)	**Estimated Cost:**	
	Entire Project:	**Work for Which Firm Was Responsible:**
08/2021 (A)	Unknown	$3,500

PROJECT NO. 06	
Project Name, Location, and Owner's Contact Information:	**Nature of Firm's Responsibility:**
Cleveland On the Lake Estates **Roadway Surcharge and Earthen Surcharge Evaluation, Monitoring, and Reporting for Existing Roadway** **6000 Cleveland Place** **Metairie, Louisiana** **Eustis Engineering Project Nos. 24124.00 & 24124.01** **Contact Information:** Khan Metairie Development, LLC Through Treuting, Inc. 3600 Metairie Heights Avenue Metairie, Louisiana 70002 Jack Treuting @ 504-259-4728	The former Beach Club, associated tennis courts, and swimming pool of Cleveland (On the Lakes) Estates subdivision were demolished and plans set to replace them with a new 600-ft long street providing access to 17 new residential lots. Original plans and specifications indicated the residential street would be constructed to the standards of Jefferson Parish Department of Streets and would comprise 7 inches of concrete underlain by 12 inches of compacted sand fill. These plans also called for the excavation and removal of peat and humus materials encountered approximately 2 to 10 feet below the proposed roadway. In 2019, Eustis Engineering conducted a geotechnical exploration at the site, evaluating a proposed roadway surcharge. The exploration included the drilling of two undisturbed sample type soil test borings to depths of 20 and 60 feet below the existing ground surface. This allowed for determination of subsoil conditions and stratification and acquisition of samples of the various strata encountered. Engineering analyses were made to determine estimates of settlement due to the proposed pavement section before and after the proposed surcharge program, estimates of time-rate of settlement, recommended surcharge height and monitoring schedule, general site preparation, and other construction recommendations for the proposed roadway surcharge. Eustis Engineering recommended an instrumented surcharge program to reduce post-construction settlement of the proposed roadway. This included using settlement plates monitored by Eustis Engineering to record the actual rate and magnitude of settlement. The surcharge design was intended to limit residual settlement of the roadway to less than 0.2 foot (2.4 inches) over a design life of 20 years. We recommended surficial deposits of low permeability clay be removed and replaced with a layer of select sand fill to allow drainage during the surcharge program. In order to minimize differential settlement to future grade supported features like adjoining driveways, sidewalks, or utilities, we recommended the crown of the surcharge pad extend at least 5 feet beyond the outside curb of the proposed roadway and slope to existing grade on a 4 horizontal on 1 vertical (4H:1V) slope. This transition slope also provided stability of the surcharge stockpile. Following this initial investigation, Eustis Engineering implemented a three-month surcharge with approximately 2 to 3 feet of surficial low permeability clay deposits removed and replaced with sand fill to the existing grade for

PROJECT NO. 06			
Project Name, Location, and Owner's Contact Information:	**Nature of Firm's Responsibility:**		
	drainage. An additional 5 feet of sand fill was placed above the existing ground surface to surcharge the roadway right-of-way. We installed seven settlement plates along the proposed roadway alignment at the locations designated in our design report. Eustis Engineering performed an initial site visit during the surcharge program, during which we evaluated the transition from the surcharge to the existing street near the entrance to the property. Due to the observed potential for damage to existing utilities, Eustis Engineering agreed the surcharge should be placed up to the edge of the previous driveway then sloped to leave a buffer between the surcharged area and the existing roadway. At the request of Treuting, a second site visit was performed on 11 November 2019 to discuss drainage along the surcharge alignment. Treuting had observed water pooling near the base of the surcharge, so Eustis Engineering recommended swales/ditches be provided along the perimeter of the surcharge to promote drainage. This followed the recommendation that positive drainage of water should be maintained throughout the program, found in our report dated 23 August 2019. Following the program, engineering analyses used to predict settlement of the surcharge were modified based on the observed surcharge settlement curves. These modified models were used to predict post-construction settlement of the roadway section and assess successful completion of the surcharge operations.	
Completion Date (Actual or Estimated)	**Estimated Cost:**		
	Entire Project:	**Work for Which Firm Was Responsible:**	
04/2020 (A)	Unknown	$15,100	

<table>
<tr><th colspan="3">PROJECT NO. 07</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
Cleary Avenue Improvements
Veterans Boulevard to
West Esplanade Avenue
Jefferson Parish, Louisiana
Project No. 2017-014-RBP
Eustis Engineering Project No. 24137

Contact Information:
Jefferson Parish Through
Barowka & Bonura
Engineers & Consultants, LLC
209 Canal Street
Metairie, Louisiana 70005
Jeffrey Bonura, P.E. @ 504-828-0030</td><td colspan="2">Eustis Engineering was selected to provide the construction materials testing services for approximately 2 miles of roadway improvements along the very busy Cleary Avenue in Metairie, Louisiana.

Our services on the project included:

• vibration monitoring during construction activities;
• performance of soil mechanics laboratory tests on sand (for embankments) as well crushed concrete and No. 57 limestone (as bedding material). Tests included gradation analyses, Atterberg limits determinations, organic content, standard Proctor (ASTM D698), and relative density (ASTM D4253, D4254);
• more than 100 inplace density tests were performed on these same materials to determine if they had been compacted to the minimum levels required by the project's specifications;
• review of concrete mix designs intended for use on the project;
• inspection of nearly 4,3000 cubic yards of concrete placed for street panels, curbs and gutters, driveways, and sidewalks; and
• compressive testing of more than 600 concrete cylinders made in association with the above inspection.

Eustis Engineering's personnel worked nearly 1,500 hours on the project. Quality control of our technician's reports was completed prior to issuing daily inspection reports digitally through the MetaField system.</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>03/2021 (A)</td><td>Unknown</td><td>$69,000</td></tr>
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<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>State of Louisiana
Department of Transportation and Development
Fortune Road Pavement Preservation
Youngsville, Louisiana
LaDOTD Contract No. 4400023717
S.P. No. H.012868
F.A.P. No. H012868
Eustis Engineering Project No. L0585

Contact Information:
State of Louisiana, Department of Transportation and Development Through
Domingue, Szabo & Associates, Inc.
105 Asma Boulevard, Suite 305
Lafayette, Louisiana 70508
Kevin Domingue, P.E. @ 337-232-5182</td><td colspan="2">The project consists of road reconstruction on Fortune Road in Lafayette Parish, Louisiana, covering a stretch of road approximately 5,900 feet in length. The scope of the field exploration and testing was developed by Eustis Engineering L.L.C. to meet the State of Louisiana, Department of Transportation and Development (LaDOTD) requirements. Eustis Engineering's role thus far on this project has included the drilling of seven soil test borings in conjunction with coring the existing pavements to evaluate existing pavement components and subgrade subsoil conditions and stratification, and to obtain samples of the various substrata. The soil borings were augmented by the performance of dynamic cone penetration tests (DCPTs) to further evaluate the subsoils. The sampling and testing were conducted to depths of approximately 8 to 9 feet. Soil mechanics laboratory tests were performed on samples obtained from the borings and included visual classification, index testing, and grain-size curves. Based on the soil borings, laboratory tests, and DCPTs, recommendations were made regarding estimated modulus of subgrade reaction (k), California Bearing Ratio (CBR) values, and resilient modulus of the subgrade soils for pavement design.

The seasonally adjusted Annual Average Daily Traffic was utilized by the design team to assess the pavement requirements. In addition, engineering analyses have been performed to assess the existing pavements and consider alternatives for overlay and/or reconstruction of the pavement sections. General recommendations regarding site preparation and drainage as well as construction recommendations in accordance with the Louisiana Standard Specifications for Roads and Bridges (LSSRB), 2016 edition, have also been provided.</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>07/2023 (A)</td><td>Unknown</td><td>$27,780</td></tr>
</table>

PROJECT NO. 09		
Project Name, Location, and Owner's Contact Information:	**Nature of Firm's Responsibility:**	
State of Louisiana **Department of Transportation and Development** **I-10 and I-12 College Drive Flyover Ramp** **Design-Build Project** **East Baton Rouge Parish, Louisiana** **S.P. No. H.013897** **F.A.P. No. H013897** **Boh Portion 20274-026** **Eustis Engineering Project No. B0646** **Contact Information:** State of Louisiana, Department of Transportation and Development Through G.E.C., Inc. 8282 Goodwood Boulevard Baton Rouge, Louisiana 70806 Sherry LeBas, P.E. @ 225-612-4107	This ongoing project includes a variety of interchange improvements to I-10 West and College Drive including a flyover ramp exit to College Drive in advance of the I-10 and I-12 West merge; a modified exit from I-12 West to College Drive; and a parallel, separated at-grade ramp along I-10 West to the existing College Drive Interchange. Eustis Engineering L.L.C. completed an exploration of the site to supplement available data comprising ten undisturbed borings, eight cone penetration tests, and fourteen auger or direct push borings. Soil mechanics laboratory tests performed on collected samples consisted of natural water content, unit weight, one-point unconsolidated undrained triaxial compression shear, Atterberg liquid limits and plastic limits, grain size sieve analyses, hydrometer analyses, and one-dimensional consolidation tests. These data were published in a GEOT-01 Geotechnical Exploration Data Report that was reviewed by the State of Louisiana, Department of Transportation and Development (LaDOTD) to confirm compliance with their design requirements. The design services included developing separate geotechnical design reports for each of seven major project features, specifically a sound barrier/noise-wall; the roadway (mainline and exit ramps); the Ward Creek Bridge widening; the I-10 Westbound Bridge over I-12, including driven piles and drilled shafts; retaining and/or Mechanically Stabilized Earth (MSE) walls at modified bridge abutments; box culverts or flumes for site drainage; high mast lighting, Intelligent Transportation Systems (ITS); and other miscellaneous features. GEOT-09 is the design report for the roadway. This report included evaluation of temporary and permanent asphaltic concrete pavements as well as temporary and permanent Portland Cement Concrete pavements. The LaDOTD provided reviews of draft and final reports and verified design standards were met. Separate reports were issued for evaluation of temporary and permanent slopes along existing drainage features adjacent to the roadway. We are also participating in weekly progress meetings with the project design team and with the project stakeholders. Design review meetings are conducted as part of the quality review process. Construction is currently ongoing.	
Completion Date (Actual or Estimated)	**Estimated Cost:**	
	Entire Project:	**Work for Which Firm Was Responsible:**
12/2024 (E)	Unknown	$601,000 (To date)

<table>
<tr><th colspan="3">PROJECT NO. 10</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>City of Kenner
Power Boulevard Median Improvements
West Esplanade Avenue to Vintage Drive
Kenner, Louisiana
S.P. No. H.011779
F.A.P. No. H011779
City of Kenner P.W. No. 2014-001B-CIP
Eustis Engineering Project No. 25176

Contact Information:
City of Kenner Through
Design Engineering, Inc.
3330 West Esplanade Avenue, Suite 205
Metairie, Louisiana 70002
Brett Liuzza, P.E. @ 504-836-2155</td><td colspan="2">The City of Kenner planned for improvements to the Power Boulevard Median, located from its intersection with West Esplanade Avenue to the bridge at Vintage Drive. This improvement effort is set to include a multi-use pedestrian concrete path, subsurface drainage, and a pedestrian bridge. Design Engineering, Inc. (DEI), asked Eustis Engineering L.L.C. to perform material sampling, soil testing in the field, concrete inspection and cylinder pickup, and submittal reviews.

In April 2024, Eustis Engineering performed dynamic pile tests (DPTs) on two monitor piles for the subject project at the request of DEI. The scope of service included the performance of DPTs during initial installation (end-of drive, EOD) and restrike DPTs on Pile Nos. 1A and 2H, as well as signal matching CAPWAP® analyses on a select blow from each DPT. Each DPT was performed using Eustis Engineering's Pile Driving Analyzer®(PDA).

The tested piles included two 55-ft long, 14-in. square, precast concrete piles, installed vertically with an ICE® I-19 hammer. The DPTs were performed to evaluate each pile's ultimate compressive capacity at the time of testing. The piles were monitored while being driven between 6 and 10 inches for the restrikes.

For the DPTs performed on the piles, two sets of PDA instruments were attached to opposite sides of each pile, approximately 2.5 to 3.0 feet below the pile butts. Each set of gauges consists of a strain transducer and an accelerometer. The PDA can monitor a wide variety of quantities during pile driving. Evaluations derived from these drives include installation efficiencey, pile integrity, driving stresses, static load capacity, and ultimate capacity.

Eustis Engineering has also begun concrete inspection and sampling. Vibration monitoring is also being performed as required for the project.</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>09/2024 (E)</td><td>Unknown</td><td>$30,700 (To date)</td></tr>
</table>

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, approximately 165 of which focused on street projects, pavements, and similar 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 pavement and infrastructure projects is varied and extensive.

Eustis Engineering's design teams evaluate pavement subgrades and provide recommended pavement component thicknesses for rigid and flexible pavements, including permeable, pervious, and impervious systems. We also evaluate pavement materials and mix designs. Our evaluation of bearing capacity considers the excavation depth, base preparation, and utility diameter. 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.

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 and tiltmeters
- 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 penetrometer 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.

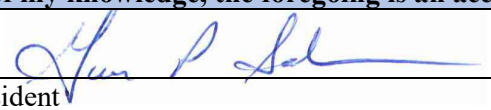
Piling services include the inspection of various types of piles, logging these piles, and performance of pile load tests with calibrated equipment. Load test results are, in turn, interpreted and reported by a registered engineer on our staff.

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:** 8 July 2024