Louisiana Public Services Commission RFP 24-06, Docket U-36625, Entergy Louisiana, LLC, ex parte. Application for Approval of the Entergy Future Ready Resilience Plan (Phase 1)

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Due: Monday, July 22, 2024

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July 22, 2024

Kimberly N. O'Brian
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Louisiana Public Service Commission
602 North Fifth Street (Galvez Building) (70802)
P.O. Box 91154
Baton Rouge, LA 70821-9154

Subject: RFP 24-06, Docket U-36625, Entergy Louisiana, LLC, ex parte.
Application for approval of the Entergy Future Ready Resilience Plan
(Phase 1)

Dear Ms. O'Brian and Ms. Bowman:

Barowka and Bonura Engineers and Consultants, L.L.C. (BBEC), is an engineering and computer consulting firm specializing in civil and environmental engineering, construction management, and grant pursuit and administration with 27 years of experience working on public and private utilities. We appreciate the opportunity to submit this Proposal to provide engineering services to assist the Commission Staff in its monitoring and review of Entergy Louisiana's implementation of resilience projects approved by the Commission in Order No. U-36625. BBEC has partnered with GEC, Inc. (GEC) who will be supporting BBEC as needed, in all aspects of the project.

Established in 1986, GEC has grown into a firm offering comprehensive, multidisciplinary project planning, design, and implementation services for public and private clients nationwide. The diverse resources of the company include design and construction engineering, economic analysis, environmental and ecological sciences, and GIS applications who commit to producing high quality planning and design documents on time and within budget in keeping with the special needs of our clients so they can meet their objectives in a timely and efficient manner.

We extensively reviewed Docket U-36625 and the laws, rulemakings, and jurisdictional issues of the Louisiana Public Service Commission and fully understand the scope of Representation requested in RFP 24-06.

Once again, we sincerely appreciate the opportunity to submit this Proposal to the Louisiana Public Services Commission, and we look forward to serving you.

Very truly yours,

Jeffrey Bonura, P.E.
Sole Member

SUMMARY

The Louisiana Public Service Commission (Commission or LPSC) issued a Request for Proposals (RFP) 24-06 to assist Commission Staff in its monitoring and review of Entergy Louisiana's (ELL or "the Company") implementation of resilience projects approved by the Commission in Order No. U-36625.The scope of services outlined in RFP 24-06 includes, but is not limited to:

1. Review project data regarding implementation of projects within the Resilience Plan at regular intervals throughout implementation but no less than quarterly.
2. Meet with ELL's implementation team to discuss said data.
3. Review pre-construction general design standards, flood mitigation specifications, and wind-loading specifications of projects within the Resilience Plan.
4. Conduct pre-construction reviews and submit any questions or concerns to ELL.
5. Conduct periodic field inspections of a subset of projects within the Resilience Plan.
6. Review reports filed by ELL after any Major Event Days (as defined by the Institute of Electrical and Electronics Engineers 1366-2012 standard).
7. Participate in meetings and/or calls – as necessary – with Commissioners or Commission Staff regarding the ongoing implementation monitoring.
8. Be available to speak at a B&E – when requested – to provide an update on the ongoing implementation monitoring.
9. Assist Commission Staff in any discrepancies, issues, or concerns that may arise associated with ELL's implementation of the projects within the Resilience Plan.

BBEC appreciates the opportunity to submit this proposal responding to RFP 24-06 to assist the Commission Staff as needed and will demonstrate in the following proposal that the BBEC Team not only meets the requirements of RFP 24-06; but, that the BBEC Team is the best project team for the job.

RFP 24-06 established minimum requirements. We believe we need to demonstrate that the BBEC Team meets the minimum requirements before the remainder of our response to RFP 24-06 is considered. We meet the minimum requirements established in the RFP 24-06 as follows:

Practical experience in the field of public utility:

Since 1997, BBEC has been performing all aspects of utility engineering projects including, but not limited to site assessments, design, cost estimation, regulatory compliance, construction management, and inspection for Private Utilities regulated by the Louisiana Department of Health (LDH) and Department of Environmental Quality. We have performed these services for the last 27 years for public utilities owned by public entities. The overall cost of the projects designed or managed by BBEC exceeds $1 billion.

For the last several years, BBEC has been performing those same engineering services for public utilities through a privately owned utility company, for a fee in excess of $4.2M, which is regulated by the Commission, the same as the work being requested in this RFP.

This work involves collaboration with various stakeholders, including engineers, contractors, and local, state, and federal regulatory agencies, to ensure the successful implementation of utility systems.

BBEC has a strong track record and a wide range of expertise in various utility-related engineering services. Our experience with both private and public utilities, combined with our focus on

regulatory compliance and project coordination, positions us well for handling complex engineering challenges.

Similar experience before this or other regulatory agencies, in addition to the applicant's knowledge and experience regarding Louisiana ratemaking standards and regulatory law.

BBEC has built a solid reputation over the past 27 years by providing engineering services to various regulatory agencies, demonstrating our commitment to compliance and excellence. Our extensive experience includes working with:

- Louisiana Public Service Commission
- Louisiana Department of Health
- Louisiana Department of Environmental Quality
- Governor's Office of Homeland Security and Emergency Preparedness
- Louisiana Department of Transportation and Development
- State Historic Preservation Office
- U.S. Army Corps of Engineers
- Louisiana Department of Natural Resources

Our ongoing work with Central States Water Resources (construction value ~ $40 million) is currently regulated by the Commission, underscoring our continued adherence to regulatory standards and our capability to manage complex utility projects.

This extensive background ensures that BBEC is well-equipped to handle the requirements of this RFP, bringing a wealth of knowledge and proven results to the table.

Applicants shall be qualified and prepared to render expert testimony regarding the topics in this RFP at B&E. Applicants shall also have a working knowledge of LPSC rulemakings and jurisdictional issues, and have, at a minimum, knowledge of:

1. **Commission Order No. U-36625, and all requirements associated with monitoring contained therein.**

   Commission Order No. U-36625 is a published document that provides a general description of the projects anticipated for hardening. BBEC fully understands the Commission's authority to regulate ELL. We understand that ELL has the ability to recover its costs related to this program, including the cost of this proposal, through its Resilience Program Rider (Rider). As part of the Rider, there is a Pole Performance Metric that gets triggered after a single event that qualifies for a Federal Disaster and other numerical conditions are met.

   The Pole Performance Metric reviews the performance of the hardened facilities and provides penalties to ELL for failures if certain conditions are met. Our role, if selected, would be to develop the necessary reporting to assess the performance of the hardened facilities and inform the Commission and ELL of the results.

   The Rider provides a detailed methodology for ELL's cost recovery plan; and a sample reporting document.

2. **Familiarity with just and reasonable costs and prudent investments associated with providing reliable and quality service as recommended by NARUC.**

   The BBEC Team has in-depth knowledge and experience with developing and reviewing cost estimates for utility projects, including for those projects for investor-owned utilities in Louisiana. We adhere to national cost estimating standards such as those provided by the Association for the Advancement of Cost Engineering (AACE) using the NARUC cost codes to prepare "fair and reasonable" construction cost estimates. Our team also provides extensive construction expertise to augment and ground-truth cost estimating, scheduling, and constructability review activities.

3. **A detailed understanding of the major functional areas of a regulated electric utility, particularly an investor owned.**

   In the United States there are three kinds of utilities: investor-owned utilities, publicly owned utilities, and member-owned or cooperative utilities.

   An investor-owned utility is a *for-profit company* that provides electrical services to their clients and customers. Investor-owned utilities participate in a process referred to as resource planning. Whenever an investor-owned utility proposes a new plan for improvements by building infrastructure or contracting for power, the public utility commission reviews the plan to determine whether it is justifiable as the most cost-effective approach to provide reliable and robust electricity. By this process, the commission attempts to keep rates at affordable levels for the customers, often referred to as ratepayers.

   Alternately, a publicly owned utility is a *not-for-profit* entity owned by the taxpayers themselves and usually operates as a sector of a city, state, or federal government organization. Should this be operated by a local city government, then oftentimes these publicly owned utilities are referred to as "municipal utilities," or "munis". In contrast, the publicly owned utilities are managed by governing boards or councils, while investor-owned utilities are regulated by public utility commissions.

   Finally, the cooperative utility, also known as an electric co-op, is defined as a not-for-profit private provider of power and is owned by its customers and the people served. Co-op utilities are traditionally governed by elected boards and tend to supply rural areas, unlike the larger investor-owned utilities that serve metropolitan and urban centers.

   All of these electrical utilities are organized into three distinct areas of operation: generation, transmission, and distribution. In general, electricity is traditionally produced by generators using mechanical energy obtained from steam using nuclear, coal or natural gas heat, water kinetics at dams, or wind energy. These methods are realized at generating stations or power plants and is the first part of the system grid.

   Once generated the electricity is prepared for transmission as the second part, and this requires transformers to step up the voltage for efficient transmission to regions away from the generating stations locale. Tall towers support high voltage transmission lines that carry electricity over long distances stretching from the generating facility locations to all areas of demand. Transmission itself starts a series or sequence of various substations along the route that extract the power off of the transmission line and change the high

voltages into sub-transmission values, so that distributions into regional areas and ultimately neighborhoods may be accomplished.

Finally, this massive grid of wiring finds its way to a distribution substation that further reduces the voltage from the high-voltage transmission or sub-transmission values into lower voltages suitable for the local distribution system of an area. Distribution substations are generally located closer to the consumers. From the distribution substation, electricity is transferred to distribution lines that cover much shorter spans. These lower-voltage distribution lines carry electricity to neighborhoods on shorter wire spans between wooden poles or in underground ducts. Transformers located on distribution poles, on surface concrete pads, or in small underground vaults further step down the voltage before the electricity is ultimately delivered to homes and businesses.

It is obvious that there are many components for the creation and distribution of electrical power to awaiting consumers. As a result, there are many places where improvements can be made to the infrastructure to increase resiliency, reliability, robustness, and survivability. These decisions must be based on the most likely areal threats, hazards, and failure mechanisms for any given location. There is no one magic improvement, but a series of technical possibilities to be considered. These possibilities must be evaluated as to their technical merit, ease of implementation, schedules and timeframes, costs incurred and the return on the investment, especially as that relates to both quality of service and downtime while the changes are being implemented. The time for the improvements must be done when the system is operating well and not done during restoration when a devastating event has ruined the infrastructure. When the infrastructure breaks down from those scenarios, immediate and emergency power restoration for customers is paramount, without the expectation of greater delays associated with a new infrastructure design and its implementation.

4. **MISO tariffs, rules and planning processes, generally, and specifically related to resource adequacy planning processes and use of zonal resource credits.**

Before a utility company can sell electrical power, it must either produce its own electricity or purchase it from other power plants or other power supply resources. The Federal Energy Regulatory Commission (FERC) maintains control over the wholesale procurement of electricity between power suppliers and utilities. In the United States there are organized markets for wholesale electricity sales also with FERC oversight.

There are several territories where regional transmission organizations (RTO) or independent system operator (ISO) operate and supervise the electric transmission grid. These RTOs and ISOs essentially manage the daily electricity transmission needs, plan for the future needs of the electric power system in territorial areas, and manage the wholesale electricity markets. There are several FERC-regulated RTOs/ISOs existing in the United States with the Midcontinent ISO (MISO) entity involved in Louisiana. MISO manages the electric grid for all or part of 15 states including Montana, North Dakota, South Dakota, Minnesota, Iowa, Wisconsin, Michigan, Indiana, Illinois, Missouri, Kentucky, Arkansas, Mississippi, Louisiana, Texas plus the Canadian province of Manitoba.
There are basic types of electric energy markets common to each RTO/ISO. MISO has, a daily day-ahead market, a real-time energy market, and an annual generation capacity market. The day-ahead and real-time markets are used to trade energy and a handful of other products like ancillary services to maintain reliability. The capacity market is a once-

per-year auction in which utilities can trade credits for megawatts of generation capacity to make sure they all have enough available to serve their load.

The day-ahead electric energy market, is where the RTO/ISO schedules electricity production to meet forecasted demand one day in advance. Obviously, supply and demand forecasts for electricity are affected by many factors, such as weather and climate conditions, seasons of the year, unexpected facility outages, scheduled plant maintenance, and the day of the week, comparing workdays to weekends.

The day-ahead approach gives power plants the important time to schedule, commit, and start production changes and while acquiring and arranging for fuel services. It also provides the RTO/ISO with the time to prepare for electric transmission line issues such as overloading that can lead to physical damage and push safety limits on the ability to move more power. The majority of energy market transactions are typically of the day-ahead type, rather than in the second market type, the real-time market.

The real-time electric energy market allows the RTO/ISO to adjust to short-term system conditions, frequently between 5 and 15 minutes. These differences can be caused by sudden outages of power plants, sudden demands for electricity because of changing weather conditions, or levels of congestion or overloading on specific electric transmission lines routes. Attempting to stop a deficiency of energy in real-time, the RTO seeks electricity for immediate real time delivery from power suppliers that have the ability to increase their current supply.

In addition to the day-ahead and real-time electric energy markets, MISO also has a centralized capacity market. A capacity market aims to increase grid reliability by seeking commitments from power suppliers to meet future electricity needs. Instead of paying the power suppliers directly for the energy they produce, a capacity market pays a power plant or other resource for its ability to produce power should it be required.

Lastly, there are also markets for what is known as ancillary services. These are specific products that help the power grid remain reliably operating. These products can include energy reserves when the need for energy is most urgent, voltage support, and all other products that meet the technical needs of the power grid.

Overall, the purpose of these electricity markets is to facilitate the reliable and efficient allocation of power production and transmission. These electricity markets also serve a variety of functions in RTO/ISO areas such as:

a) Cost Recovery. These markets basically allow power plants and power resources to recover their operating costs and to earn a reasonable profit and remain financially viable, so that they will want to stay in the business of providing electricity

b) Resource Allocation Function. Based on supply-and-demand principles, electricity markets set prices. This can indicate that a certain territory needs more power resources, that particular types of power resources are more profitable, or that it may be time for an inefficient or cost-ineffective power plant be decommissioned. An objective of the electricity markets has been to increase good investments and make beneficial shut-down decisions.

c) Reliability Function. The prices set by these electricity markets are intended to provide enough viable power resources so that the reliable and efficient transmission of electricity can be maintained, while avoiding disruptions in service.

d) Technology Integration. The markets can help promote the integration of power resources and synergize emerging generation technologies, alternate energy sources, artificial information and software modeling, better resilient and survivable methodologies, electrical storage techniques and demand response management.

e) Competition. The market allows competition among the key power assets to ensure consumers receive the lowest-cost power consistent with the system's requirements. Safeguards and management oversight need to be provided. However, as with all competition, safeguards must be implemented to guarantee that competition is fair and that reasonable rates result.

Within MISO are Local Resource Zones (LRZ) and these are simply geographic areas where power assets exist. Each of these zones and assets have values of Installed Capacity and Unforced Capacity. Installed Capacity or ICAP is defined as a power value in megawatts based on the summer net-dependable capability of a unit and within the capacity interconnection right limits of the bus and grid to which it is connected. Unforced Capacity or UCAP is defined as the installed capacity rated at summer conditions that is not, on average, experiencing a forced outage or forced de-rating.

Ultimately, a Zonal Resource Credit or ZRC can be developed which is a unit of deliverable UCAP, qualified by MISO, located in a specific LRZ and is the unit of measure for resources participating in the Planning Resource Auction or PRA. Market participants who own their Planning Resources must convert their UCAP into a ZRC by demonstrating the ability to deliver power in order to participate in the PRA. Market participants can demonstrate deliverability by guaranteed or dedicated interconnection services. The idea of the ZRC promotes trading in the marketplace by providing certainty of the value of deliverable capacity and the proximity of a physical location within the LRZ.

Market Participants (MPs) who desire to transfer their ZRC to another MP may do so through a Zonal Resource Credit Transaction as a Planning Resource entry. Once all required information is entered and the transaction submitted, the Market Participant acquiring the ZRCs must access and approve the pending transaction to complete the transaction. After approval by MISO Resource Adequacy, the ZRCs will be available in the acquiring MPs portfolio. Transactions may occur at any time during a Planning Year.

Clearly this is a complicated process and requires much oversight and understanding as to the entities involved. The fair and equitable trading and selling of power services must all be done within the legal guidelines, tariffs, rules, and regulations that have been set forth.

5. **Applicants must be, or have on staff, a licensed engineer. Such engineer shall be licensed and in good standing with all applicable engineering licensing and certification boards.**

Mr. Jeffrey Bonura, PE, (BBEC), is actively licensed through the Louisiana Professional Engineering and Land Surveying Board via license number PE.0026368 in Civil Engineering. BBEC is actively licensed through the Louisiana Professional Engineering

and Land Surveying Board via license number EF.0002141. BBEC is in good standing with the Louisiana Secretary of State.

Our Project Team members include Ms. Kim D. Jovanovich, PE, Mr. John Louis Amador, M.S.E.E., PE, and Mr. Michael Chiasson, PE, all of whom possess electrical engineering licenses in Louisiana. The BBEC Project team has many other engineers, including electrical, civil, chemical, and structural engineers available to assist on the project. For ease in developing and documenting reports, we will utilize tablet computers and develop a project specific application to automate reports and photograph gathering and filing.

6. **Applicants must be able to provide technical advice regarding industry standards and widely accepted industry practices regarding transmission grids, and maintenance thereof, as outlined in the RFP.**

   As noted in the resumes provided, the BBEC Team has several Louisiana licensed electrical engineers experienced in power transmission grids, including the maintenance thereof.

7. **Consideration will be given for experience and knowledge of transmission system standards, as well as utility regulation and cost allocation methodologies**

   Our licensed electrical engineers are qualified and experienced with current transmission systems.

   Our cost estimates prepared for our current investor-owned utility client follow the NARUC cost codes. So, we are experienced with utility regulation and cost allocation methodologies, as well.

Having demonstrated that we meet the minimum requirements of RFP 24-06, our response to RFP 24-06 is summarized as follows:

- **Section 1 – Proposal Summary.** Demonstrates compliance with the minimum requirements and provides an outline and brief summary of the remainder of the proposal.
- **Section 2 - Outline of Plan of Action for This Scope of Representation.** The BBEC Team anticipates setting up a team of experienced professionals to accomplish the work, including:
  - Program Manager – to maintain a coordinate program and an informed LPSC and ELL, and to ensure that proper communication protocol is followed
  - Engineers – as required, to insure appropriate design standards are utilized and met, to insure that the work conforms to the design standards, and to organize and manage the field inspections
  - Certified Floodplain Manager(s) – to ensure that the new facilities address floodplain and storm surge concerns
  - Accountant – to track the costs and ensure that the cost comply with LPSC's regulations
  - Inspectors and Other Support Staff – to gather and assist the management staff in filing and presenting the project documentation

- **Section 3 – Professional Firm Resume.** Section 3 shows how the BBEC Team's companies and staff qualifications and experience meet and exceed the requirements of the specific scope items outline throughout RFP 24-06.
- **Section 4 –** Estimate of Cost. RFP 24-06 established a scope of services to be performed for a period of 6 years. We estimate our spending to be as follows:

Lateral Hardening	$12,464,474.88
Transmission Hardening	$412,251.04
Substation Roof Hardening	$522,351.04
Substation Flood Mitigation	$164,251.04
Major Event Days Reporting (per event)	$182,791.04
Direct Costs (Mileage and per Diem)	$97,796.08
Total Budget	**$13,843,915.12**

We estimate that while the ELL spending plan in Docket U-36625 shows a lower spending in the initial year, our initial year spending will include much of the initial engineering reviews related to general design standards, flood mitigation requirements, wind-loading specifications, and other pre-construction design standards and activities.

COST ESTIMATE

We propose a total not to exceed fee of $13,843,915.12 (spending about $2.3 million per year) as broken down in Exhibit__. Our fee estimate was developed as follows:

a. **Site Inspections** – We estimate that the pre-construction efforts will be repetitive with respect to the requirements of general design standards, permitting, right-of-way access, etc. We believe the multitude of lateral hardening projects scattered throughout the State will require about 6 inspectors to adequately perform the site visits and develop the site visit reports. We intend to have an engineer and support staff to schedule the inspections, manage the inspectors in their efforts, and make sure the data is collected, stored, and utilized as need. We estimate that the inspection effort will be significant for the first four years in accordance with the spending schedule provided in Docket U-36625, with the fifth year tapering off. We estimated some inspection time for the sixth year to allow for inspections of any trailing projects that were delayed for some reason. Certainly, unused time will not be billed. We estimated minimal certified floodplain manager time in the event a floodplain matter arises.

b. **Transmission Hardening –** There will be some pre-construction effort required to establish design standards related to the transmission hardening. Design standards will be developed by ELL and reviewed by us. Construction plans will be reviewed by us, as well. Our estimate provides the necessary time needed to make periodic inspections of the facilities under construction. We estimated minimal certified floodplain manager time in the event a floodplain matter arises.

c. **Substation Roof Hardening** – Substation roof hardening will be reviewed in a similar fashion as the Transmission Hardening. Additional inspection time is estimated to perform periodic construction inspections and a completion inspection, as well We estimated minimal certified floodplain manager time in the event a floodplain matter arises.

d. **Substation Flood Mitigation** – The flood mitigation projects can include various methods to mitigate flooding of the substations. The discussion of design standards will address the options of flood mitigation. The various methods of mitigation have their own specific design standards. The detailed design effort will determine the need for other

considerations such as permitting and right-of-way acquisition. As with the other major construction items, site periodic inspections and a completion inspection will be made.

e. **Major Events Report Review** – In the event of a Major Event Day (as defined by IEEE), additional efforts are necessary to develop an outline of the affected area, make the necessary inspections of the facilities within the outline, and develop and present a report of the findings. We estimated 100 miles of travel per day per inspector.
f. **Mileage and Per Diem** – With the projects scattered across the State, we proposed to bill project related mileage at the then federal rate. Similarly, we propose to bill per diem charges at the then federal rate, too. We estimated that the per diem charges would be needed for about 20% of the site inspections; but those charges would be assessed only when incurred.

Each of the above parts of the project have time reserved for an accountant. In addition to the tracking of project costs, the semi-annual filings for the Rider rate redetermination require detailed cost tracking. The services of an accountant are available to track costs in the required format throughout the project.

Each of the cost items proposed are based on our understanding of the scope or representation is or could be. If selected, we would work with the Commission and its Staff to establish the true project scope of representation and bill hourly according to the following hourly rates:

Principal	$350.00
Program Manager	$300.00
Superviser-Engineer	$290.00
Engineer, PE	$210.00
Engineer Intern	$130.00
Certified Floodplain Manager	$160.00
Compliance Specialist	$160.00
Accountant	$180.00
Inspector	$100.00
Clerical	$102.43

Mileage and per diem charges are proposed at the then federal applicable charges.

PLAN OF ACTION FOR SCOPE

The information provided in the RFP 24-06 indicates that some of the work may have begun; but may have not been put into service. Initially, BBEC would coordinate with the Commission and ELL to determine where construction is complete to establish what efforts, if any, would be performed on the completed work. Simultaneously, we would coordinate with the Commission and ELL to obtain the design standards utilized for the wind hardening of the transmission facilities, as we understand that those facilities are scheduled to begin in 2024, as well. The BBEC Team has experienced structural and electrical engineers in wind load requirements and design and transmission systems necessary to verify compliance of ELL's efforts with the required codes, and if needed, review the actual designs to verify that the designs meet the required wind loads. We plan to accomplish the scope of representation in accordance with RFP 24-06 as follows:

1. **Review project data regarding implementation of projects within Resilience Plan at regular intervals throughout implementation but no less than quarterly.**

   With literally thousands of projects throughout Louisiana, the BBEC Team will develop a simple Geographic Information System (GIS) mapping and database system to assist in tracking the various projects in the various locations. The mapping can be detailed (ie. location by location) or general (ie. parish by parish) to suit the needs of the Commission. We propose to provide a project engineer, accountant, and program manager, and the necessary support staff to adequately review the project data and advise the Commission of progress, or the lack there of; projects costs, indicating overruns and underruns; and project issues, with potential resolutions in place or recommended.

   A major function of the project data review is maintaining a exceptional filing system to maintain the project records and make them readily available to the Commission. BBEC has been maintaining orderly project files for projects and programs costing hundreds of millions of dollars since Hurricane Katrina hit in 2005. We've been using third party document management systems and the simple on-line file servers (ie. OneDrive or Box) for over 20 years. The benefit of the third part document management system is it facilitates sharing, access from the desktop and over the web, and having an established routine automatic backup of the data. An initial step in the project would be to develop a files system which best suits the Commission.

2. **Meet with ELL's implementation team to discuss said data.**

   The BBEC Team understands that continuous communication with our client is crucial for successful coordination of the project. The BBEC Team will coordinate with ELL to meet and discuss the data and to determine any key participants that need to be in attendance. The BBEC Team will prepare the agenda, data, and any presentation, as necessary.

   During the meeting, The BBEC Team will provide progress updates, identify any issues, recommend corrective measures, where needed, and invite input from ELL. Once the next step actions are clear, The BBEC Team will track action items and continue to provide ELL with progress all throughout the project with formal meetings being done quarterly, at minimum. Given the quantity of projects, meetings may be held monthly to address

roughly one-fourth of the projects so that each project receives the minimum quarterly review.

With our digital tracking, mapping and file management systems, all of our data can be shared with the Commission and ELL. Specific data can be shared with ELL such that ELL can follow our tracking and reporting and identify items requiring addressing real-time, instead of waiting for the quarterly meeting allowing potential problems to fester while waiting for the next scheduled meeting.

3. **Review pre-construction general design standards, flood mitigation specifications, and wind loading specifications of projects with the Resilience Plan.**

The BBEC Team has the necessary professional staff needed to review and make relevant comments to the lateral, transmission, substation control house upgrades, and flood mitigation projects. Resumes of our key personnel are provided. Our reviews may include:

- **Lateral Improvements**. Lateral improvements reviews may include reviews regarding location (horizontal or vertical), materials of construction, network looping, capacity, access, and other factors. We understand that the project list refers to the projects as "Lateral Hardening – Rebuild", "Distribution Feeder Hardening", and "Lateral Hardening – OH to UG", and did not see in the project any networking improvements to improve the network such that major customers could receive power from multiple sources.
  Other import aspects to the lateral repair effort are the maintenance of traffic flow and avoiding impeding the drainage systems. The BBEC Team has substantial experience in developing and working with traffic control plans and drainage systems. Work along the roadways need varied traffic control plans to adequately route the traffic around the work. And some cases may require coordination with the local parish, city, or town officials as well. Similarly, many utility lines run near or in drainage ditches and canals. It's important to avoid impeding drainage flow so the local jurisdiction is not negatively impacted, causing costly rework, unhappy local residents or officials, and potential liability for ELL.
- **Transmission Improvements.** Transmission improvements described in Docket U-36625 primarily refers to "transmission rebuild" with a scope of upgrading structures to a minimum established wind loading. We possess the necessary electrical engineers and structural engineers to review the proposed projects and ensure that the appropriate codes and standards are incorporated into the design and construction of the project.
- **Substation Control House Upgrades.** The scope of the substation control house upgrades is referred to in the Docket U-36625 project list as the design of the control house roof to a certain wind loading. The BBEC Team has sufficient structural engineers knowledgeable in the local and international building codes to establish the required wind loading and review the projects to make sure the improvements are suitable to meet the desired conditions. While the scope refers to "roof upgrades", our engineers fully understand that the wind loads applied to the roof will have to be supported by the vertical members and foundation. If necessary, our engineers will comment on everything necessary. Considering many of the structures are located in flood hazard areas, if desired, our flood plain personnel can review the control house

upgrades projects, too, for compliance with the required floodplain management codes and standards, too.

- **Flood Mitigation Projects.** In Docket U-36625, flood mitigation projects are listed as "design flood mitigation for substation to prevent storm surge flooding". Methods to prevent storm surge flooding could be waterproofing the facilities, surrounding the facility with levees or floodwalls, relocation, or elevation. Our floodplain professionals are vastly experienced in working in the coastal parishes in Louisiana dealing with storm surge impacted projects. They are experienced in working with engineers and project owners in developing cost effective options to mitigate flood damage, including addressing access to the facilities as part of the projects.

  Other important components to the general design standards review is the aspects of permitting and right-of-way access. Much of the work occurs in coastal Louisiana, often requiring coastal use permits. It is also expected that there will be work on LaDOTD roadway and highway rights-of-way that require coordination

4. **Conduct pre-construction reviews and submit any questions or concerns to ELL.**

   The prior section of conducting pre-construction reviews of general design standards, flood mitigation specifications, and wind loading specifications is the precursor to the pre-construction reviews of ELL's plans and specifications for its intended construction projects. The BBEC Team has sufficient electrical and structural engineers to ensure that each set of plans and specifications meet with required codes and industry standards. The BBEC Team has exceptional flood mitigation professionals to ensure that each ELL project is adequately planned for resiliency, especially during the times of high-water caused by rainstorms and storm surge. Finally, the BBEC Team has the necessary program and project management staff to manage the effort needed to properly represent the commission as required by RFP 24-06.

   Another important aspect to performing preconstruction reviews of construction documents is providing clear comments and documenting the submittals, comments, and responses addressing the comments. BBEC Team staff have been performing program management services for over 30 years, including developing and maintaining schedules, GIS mapping and databases, conducting design standards and construction documents review, permitting, and right-of-way compliance and acquisition.

   The projects that require the most permitting and right-of-way considerations are the flood mitigation projects. Those projects will likely require ground disturbing activities triggering the need for coastal use and possible US Army Corps of Engineers wetlands permit. The added resilience by elevation may require additional property to allow for stairs or elevated drives. Similarly, leveeing the substation areas may require additional property for the levees or other water retaining structures.

5. **Conduct periodic site field inspections of a subset of projects within the Resilience Plan.**

   With literally thousands of project sites to consider, organization is paramount. With a basic GIS map and database, inspections can be managed and monitored so that projects in the same part of the state can be inspected at the same time, and those inspection

records stored in an organized manner to know when the last inspection was held and when the next inspection is needed. We expect that the lateral hardening will occur soon and fairly quickly, so a team of inspectors managed by an experienced engineer established while the pre-construction general design standards and construction documents reviews take place. We propose to utilize 6 field inspectors to cover the lateral projects and will maintain close contact with the Commission to make sure 6 inspectors is the appropriate level of staffing for the task.

As the larger transmission structure and substation hardening and flood mitigation projects move to construction, additional inspectors will be added to the program, if needed. The smaller lateral projects require only 1 or 2 inspections; the larger transmission structure and substation hardening and flood mitigation projects require multiple inspections, and with more details to be reviewed. In either case, when conflicts or other issues arise that require potential deviations for the agreed upon standards, the engineering staff will make site visits to quickly resolve any issues and avoid impeding the project and its schedule.

6. **Review reports filed by ELL after any Major Event Days (as defined by the Institute of Electrical and Electronic Engineers 1366-2012 standard).**

   We understand that within 3 months following all Major Event Days and defined by IEEE, we will deliver a report to the Commission providing a summary of the performance of the assets installed as part of the Grid Hardening Program. Having detailed records of the progress of the projects is important to know which facilities were hardened prior to the Major Event Day so that an accurate report can be delivered. The same GIS and filed documentation developed as part of the program will be provided as part of the report, as well as the performance of the hardening improvements. Simple before and after photos of the facilities will speak volumes for the benefits of the program or help develop further improvements to the systems.

7. **Participate in meetings and/or calls – as necessary – with Commissioners or Commission Staff regarding the ongoing implementation monitoring.**

   The BBEC Team members will certainly meet and hold calls with the Commission and its staff as necessary to address Commission questions and concerns and provide intermediate updates as necessary. The BBEC Team Program Manager will be the preferred point of contact for the BBEC Team, since the Program Manager will have knowledge of all projects within the program. If there is a need for specific information beyond the knowledge of the Program Manager, individual technical experts will be included in the communications to the satisfaction of the Commission.

8. **Be available to speak at a B&E – when requested – to provide an update on the ongoing implementation monitoring.**

   The BBEC Team is available and capable of presenting project progress and other information in any format desired by the Commission. We are capable of developing the maps, charts, tables, and schedules necessary to adequately inform the Commission of progress on any phase of the program. Our staff will be prepared to address the Commission's questions and concerns; and will promptly follow-up on any concern needing further explanation or clarification.

9. **Assist Commission Staff in any discrepancies, issues, or concerns that may arise associated with ELL's implementation of the projects within the Resilience Plan.**

   The BBEC Team will be available to the Commission Staff as needed. We have offices in Metairie and Baton Rouge, Louisiana, and we utilize video conferencing applications such as Zoom and Microsoft Teams in our day-to-day operations, which applications close the distance gap greatly. Our GIS, database, and file management systems are accessible from the web, so we can provide the Commission Staff with our work products and files as they are gathered and developed.

What follows are resumes of key staff.

Jeffrey Bonura, PE

Principal / Supervisor - Engineer

Education
B.S., Civil Engineering, Tulane University, 1991

License
Civil Engineer, State of Louisiana, License No. 26368, Issued:1995

Professional Affiliations
- American Council of Engineering Companies of Louisiana
- American Public Works Association
- American Society of Civil Engineers
- Louisiana Engineering Society

Experience Highlights
Jeffrey Bonura, P.E. is the sole Member in the firm of Barowka and Bonura Engineers and Consultants, L.L.C. Mr. Bonura began his career in 1988 and since that time has worked as a project engineer, project manager and program manager on municipal, commercial, institutional, and industrial projects. For about 10 years, Mr. Bonura worked for an international engineering firm focused on water and wastewater projects only.

His professional engineering experience includes the design, project management, and construction administration of a broad range of projects including water and wastewater treatment plant design and operation and maintenance management, landfill leachate collection and treatment, water transmission, wastewater collection, and stormwater management. He also has substantial experience in roadway and drainage planning, design, and construction management for civil and structural engineering projects. Mr. Bonura's grant management experience includes project formulation, cost estimation, fund accounting, and pursuit of a broad range of federally funded grants.

Mr. Bonura continues to serve as Program Manager for other various roadway, drainage projects, and civil infrastructure projects throughout South Louisiana. Over the years, Mr. Bonura has become familiar with resolving construction-related problems such as public relations, client satisfaction and change order negotiations. Mr. Bonura also has experience with litigation with residents due to contractor activities, litigation with the contractor to resolve claims and other disputes, and litigation with bonding companies to complete the work of a defaulted contractor.

Mr. Bonura has performed engineering services for over $200 million in Public Works projects including sewer, water treatment plant expansion and improvements projects along the Mississippi River in Southeast Louisiana, hydrologic and hydraulic modeling of drainage basins and sewer, water, and storm sewer systems. His responsibilities include work plan preparation, budgeting, cost control, and monitoring, team supervision, engineering design, permitting and construction management.

Mr. Bonura's experience related to water projects includes design and construction administration of raw water intake pumping and piping systems, chemical feed systems, flow metering, sedimentation basins, filtration systems, disinfection, taste and odor control systems, finished water pumping and distribution, and waste sludge pumping and discharge systems, and work on or crossing the Mississippi River Levee associated with the aforementioned utilities. Mr. Bonura's experience includes managing the multimillion-dollar multidisciplinary water treatment facility

improvement project from inception to completion, including start-up and debugging of SCADA operations.

Mr. Bonura's experience with developing master plans also include planning for city of parish-wide improvements of drainage pump stations, sewerage collection systems, and water treatment and distribution systems. Mr. Bonura also has experience with developing funding sources, local and federal, for major public works type programs.

Key Projects

PROGRAM MANAGEMENT

Program Management Services to the Department of Public Works (2003 Contract), St. Bernard Parish, LA

Mr. Bonura served as Program Manager for the debris removal effort in St. Bernard, Louisiana since its inception 3 days after Katrina hit Louisiana, lead all aspects of debris removal for St. Bernard, including preparing the initial FEMA documents, clearing of ROWs, cleaning of debris from ROWs and drainage facilities, clearing of debris from private property, permitting temporary debris storage and reduction sites (TDSRS), evaluation and approval of reduction methods, contractor oversight, management of contractor and storm damaged facilities, coordination with local and federal agencies, pursuing reimbursement for the applicant, and all other aspects associated with the debris removal project.

The scope of BBEC's work is to provide engineering services to assist St. Bernard (Parish) in managing from inception through construction various public works projects. As program manager, Mr. Bonura generally performed the following tasks:

- Assist the Parish with developing scope of services for projects for advertisement for professional services.
- Assist the Parish in review of agreements for professional services for each project and make recommendations for adjustments or acceptance.
- Develop maintenance specifications and prepare bid documents for maintenance projects if requested by the CONTRACT MANAGER.
- Review bids and/or make recommendations on the selection of maintenance contractors; and administer the projects through construction.
- Prepare design and construction schedules and enforce that the schedules are followed.
- Monitor and provide status reports to Administration for each design and construction project.
- Provide Resident Project Representation for all projects outlined in the Program Manager's Scope.
- Attend Public Meetings and prepare meeting records on each project.
- Assist Parish in resolving technical questions during design and construction and make recommendations.
- Review all requests for payments from outside consultants and contractors under the Program.
- Assist with the coordination of public utility relocations, adjustments, and other utility-related issues.
- Attend Council meetings when matters relating to the Program are to be discussed by the Council.

Program Management Services to the Louisiana Land Trust, Baton Rouge, LA, 01/2009-12/2016

Mr. Bonura provided program management services to assist the Louisiana Land Trust, as a member of the demolition management team, in managing from inception through construction about $70 million in various demolition projects. BBEC generally performed the following tasks:

- Assist the Louisiana Land Trust with developing scope of services for projects for advertisement for structure demolition and slab removal.
- Assist the Parish in reviewing agreements for structure demolition and slab removal for each project and make recommendations for adjustments or acceptance.
- Review bids and/or make recommendations on the selection of structure demolition and slab removal contractors; and administer the projects through construction.
- Prepare design and construction schedules and ensure that the schedules are followed.
- Coordinate the demolition projects with other non-LLT public and private construction contracts to avoid conflicts and minimize disruption to local traffic.
- Monitor and provide status reports to the Executive Director for the Louisiana Land Trust for each structure demolition and slab removal project.
- Provide Resident Project Representation for all projects outlined in the Demolition Management Team's Scope.
- Attend Public Meetings and prepare meeting records on each project.
- Assist the Louisiana Land Trust in resolving technical questions during design and construction and make recommendations.
- Review all requests for payments from outside consultants and contractors under the Program.
- Assist with the coordination of public utility disconnections and other utility-related issues.

In addition to the general project management functions listed above, Mr. Bonura managed the following project specific tasks:

- Abatement, Structure Demolition and Slab Removal – BBEC prepared 20 different sets of bid documents for the abatement, structure demolition and slab removal of approximately 4,000 Louisiana Land Trust properties within St. Bernard Parish and 500 Louisiana Land Trust properties within Orleans Parish and is currently administering the construction contracts for those bid packages.
- Database Management – BBEC created and maintained a project database that tracked and maintained records for demolition, complaints, damages, and invoices. In conjunction with its electronic document management (DM) system, the database has been able to track all project documents associated with each contract and property. The database is web accessible.
- Document Management - Since all work is funded by Community Development Block Grant (CDBG) funds, contract procurement, record keeping, and accurate accounting are paramount. BBEC maintains all its project files digitally so that files are easily stored at multiple locations for safe keeping and transferred so that copies can be readily available for interested state and federal agencies during project implementation and project close-out.

Road Bond Parish-Wide Improvement Program (Public Works Project No. 98-026-RBI), Jefferson Parish, LA, 04/1998-08/2006

Mr. Bonura coordinated several road construction projects between Jefferson Parish and the design consultants as a member of the Jefferson Parish Roads Program Management Team, ensuring timely progress of the projects and maintaining the quality and standards of the work, maintaining computerized project schedules and an on-line reporting system for all projects in the program.

- Mounes Street Extension SPN # 93-052-RBI
- Terry Parkway Improvements SPN # 98-029-RBI
- Whitney Avenue Canal Improvements (Stumpf Boulevard To Belle Chasse Highway) SPN # 98-030-RBI
- Whitney Ave Improvements. (Westbank Expressway to Stumpf Blvd.) SPN # 98-031-RBI
- Destrehan Avenue Extension (Keithway Dr. to Lafitte-Larose Hwy, Surcharge) SPN # 98-034-RBI
- West Metairie/North Lester Intersection Improvements SPN # 98-044-RBI
- West Metairie/Houma Boulevard U-Turn SPN # 98-045-RBI
- West Metairie/Severn Ave. Improvements SPN # 98-043-RBI
- New Rivet Blvd SPN # 98-056-RBI
- Power Blvd Improvements (I-10 to W. Esplanade) SPN # 92-038-RBI

Wastewater Capital Improvements Program, Baton Rouge, LA

Mr. Bonura served as a program management project engineer under the $290 Capital Improvements Project for the City/Parish of Baton Rouge, Louisiana. Mr. Bonura's responsibilities included preparation of the overall schedule of the program, detailed plan review during the design phase of various projects, and document tracking during the construction phase. Primavera Project Planner software and others were used in the scheduling process. Mr. Bonura developed a computer database to track correspondence between the contractor, design consultant, and the project owner to ensure that all documents were routed and responded to timely and properly. Form letters were issued to entities several days before a response was considered late to prompt the required action before a potential delay could occur or be claimed to occur.

Wastewater Improvements Program, Great Houston, TX, 1997

Mr. Bonura worked as a design consultant under the $3.3 billion sewer capital improvements program in Houston, Texas on 4 projects averaging $4 million each in construction value. As project engineer, Mr. Bonura was required for each project to:

- Maintain a project schedule
- Hold a detailed quality management plan (QMP) meeting at the beginning of each project
- Prepare project reports such as Alternative Analysis Reports, Selection of Alternative Reports, Preliminary Engineering Reports, Final Engineering Reports, and Cost Analysis Reports
- Present some of the above mentioned reports to a Value Engineering Team to justify the proposed project expenditures
- Present each of the above mentioned reports to a technical review committee (TRC) including representatives from the owner's engineering staff, the owner's operations staff, and various disciplines of the program manager who as a committee would approve the project for construction or cancel the project from the program (All of Mr. Bonura's projects went to construction.)
- Utilize program standard plans and specifications to prepare detailed construction plans and specifications
- Attend progress meetings throughout the course of each project to maintain each project's tight schedule

Mr. Bonura served as Project Engineer for the Market Street (29.75 MGD), Scott Street (15.3 MGD), Velasco (13.0 MGD) and Fairway Area (12.3 MGD) lift station and force main projects. Various phases of the projects included project functional description, selection of alternatives, alternative analysis, preliminary design, and final design phases. Mr. Bonura was required to

present each of the projects to a technical review board consisting of City personnel and third party technical consultants (a value engineering board) for approval to proceed to final design and construction. All projects have been successfully been completed through construction.

UTILITY PROJECT ENGINEERING

The projects listed demonstrate Mr. Bonura's vast experience with the design and construction of various utility projects for public and investor-owned utilities:

Cleary Improvements (Veterans Blvd. to West Esplanade Avenue) (Council District 5), Jefferson Parish, LA, 11/2017-11/2021

Mr. Bonura served as Design Engineer and Supervising Professional for this project which consisted of the reconstruction of Cleary Avenue between Veterans Boulevard and West Esplanade Avenue and includes drainage improvements.

The improvements included removing and replacing approximately 4,000 linear feet of four-lane concrete street (2 travel lanes, 2 parking lanes) with curbs; removing and replacing adjoining concrete sidewalks, drives, and ADA ramps; installation of new sub-surface drainage; installation of new outfall pipe crossing W. Esplanade Avenue and discharging into W. Esplanade Avenue Canal; installation of new outfall pipe crossing Veterans Blvd. and discharging into Veterans Blvd. Canal (Canal No. 3); the replacement of all water mains crossing Cleary Avenue and West Esplanade Avenue in the project area; and coordination with private utilities for their respective utility relocations.

The scope of work also included traffic phasing, allowing the contractor to work on one lane at a time. When working on the parking lanes, the 2-way traffic was maintained. When working in the travel lanes, only 1-way traffic was allowed.

Mr. Bonura managed the resident inspection such that one inspector was provided for the full 2-year construction duration, and additional inspectors were provided when the work required it. The construction contract ran over the original contract time. The contractor paid the inspection cost overrun through liquidated damages.

Westbank Mississippi River Bike Trail, Around Avondale Shipyard (2017-059-RBP), Jefferson Parish, LA, 05/2018-Present

Mr. Bonura is the supervising professional over the project, providing day to day input for the implementation of the project. BBEC is currently working on detailed plans and specifications for the construction of the 2.5 mile bike path, part of which is on the top of the Mississippi River levee and the balance of which in on the shoulders of two state highways. A key component to BBEC's designs on the levee section is to maintain the integrity of the levee and while constructing the base and asphalt bike path section with a limited width of top of levee. For the state highway portion of the project, part of the project has asphalt shoulders in place, therefore only pavement markings and signage are required. In other locations, roadway widening and required subsurface drainage is necessary to install the bicycle travel lanes.

BBEC developed a hydraulic and hydrologic model to drain a 220-acre area. BBEC designed the drainage for the area, which includes a series of canals with 48-inch and double 48-inch culverts.

BBEC is currently coordinating its work with the LDOTD, the West Jefferson Levee District, the USACE through the levee district, and Union Pacific Railroad to obtain the necessary permits to

perform the project. BBEC is also working with Jefferson Parish to determine the required right-of-way (ROW) so it could be acquired from the adjacent property owner(s).

Once the design is complete, BBEC will perform bidding services, construction administration services, and resident inspection services for the construction project.

West Napoleon Avenue Improvements, Cleary Avenue to Severn Avenue, (LA DOTD Project No. 742-07-0088), Jefferson Parish, LA, 02/2003-08/2005

Mr. Bonura performed design and construction administration services on this $13 million TIMED roadway and drainage project, which consisted of about 3,800 l.f. of four-lane concrete roadway divided by a new 30-foot wide concrete u-channel. Mr. Bonura coordinated with the private utility companies to relocate (or work around) natural gas pipelines and power and communication lines, overhead and buried, and coordinated construction and connection to public utilities (water and sewer) as well. Mr. Bonura reviewed and made recommendations regarding substitute materials and construction methods and monitored the contractors' accelerated operations that reduced the construction contract time from two and a half years to one and a half years.

Gloria Drive Pump Station, Project No. 20-2022A, Lafitte Area Independent Levee District Drainage, Town of Jean Lafitte, LA, 05/2020-Present

Mr. Bonura is serving as Supervising Engineer for this project for Design Engineering Services for the Gloria Drive Pump Station Improvement Project which consists of expanding the existing pump station by doubling its capacity from 45 cfs to 90 cfs.

The existing pump station has one pump on a pile supported structure, adjacent to an existing levee. The existing pump discharge pipe runs through the levee, discharging on the other side. On the pump station side, the levee is supported by a timber bulkhead, part of which has deteriorated over time. When constructed, the levee project provided for a second pipe penetration in anticipation of this project. The pump station has an existing stand-by generator, which was appropriately sized for the single pump.

Project Worksheet 20824 – Storm Drains, Jean Lafitte Parkway Drainage Line Repairs/Replacement, St. Bernard Parish, LA, 06/2014-11/2019

Mr. Bonura assisted the Parish in securing funding; and managed as supervising professional the design, bidding, and construction services for repairs. The project included the complete replacement of about 4,200 linear feet of 72-inch to 96-inch drain-pipe, with drainage structures and smaller lateral lines to collect stormwater from existing roadway catch basins. The project also included the replacement of roadway intersections where the drain line crosses streets. The project bid was $3.9 million. BBEC performed all design, bidding, and is performing the construction services for the project. In addition to the normal design services, Mr. Bonura obtained a Coastal Use Permit determination, and USACE wetlands permit determination, and a SLFPA-E (regional levee district) permit for the project.

Boutte Drainage Improvements, St. Charles Parish, LA, 09/2002-05/2004

Mr. Bonura performed all engineering tasks for the project consisting of about 1,500 linear feet of 24-inch drainage pipe along US Highway 90 in Boutte. Included is provision of additional catch basins and manholes, traffic maintenance, roadway restoration, and re-grading of existing channels. TR-55 (computer model) was used to determine the watershed's runoff. Hydraulic calculations were performed by hand. The estimated construction cost is $274,000.

Ames Boulevard Roadside Drainage Improvements, Jefferson Parish, LA, 01/2004-12/2005

Mr. Bonura performed runoff calculations and designed drainage improvements for a two-mile segment of Ames Boulevard on the West Bank of Jefferson Parish. Mr. Bonura prepared construction drawings for the project in less than three weeks utilizing the Parish's standard details, and the Parish's GIS maps for plan sheets, and coordinated the work with the Parish, private utilities, and the annual contractor constructing the project. The total project cost is about $800,000.

RR176 – St. Roch Group North Group A (PMOI), City of New Orleans, LA, 10/2019-Present
As Supervising Engineer, Mr. Bonura is overseeing the assessment of the damages along the streets contained in this project. He is currently performing design services for FEMA-eligible street repairs in the area south of I-610, north of the Florida Ave. canal, east of N. Broad St., and west of Elysian Fields Ave. The scope of work for each street varies and includes the following types of work: replacement of sidewalks and driveways, incidental road repairs determined by FEMA, and full replacement of roadway section and subsurface sewer, water, and/or drainage. He used DOTD's HYDRWIN software to design all drainage improvements in the project area. Mr. Bonura is also designing the roadways receiving full pavement replacement and subsurface utility relocations/improvements and creating plans for the construction of the proposed work. The project contains 39 streets with a cost estimate of $6,054,030.68.

RR177 – St. Roch Group North Group B (FRC), City of New Orleans, LA, 10/2019-Present
As Supervising Engineer, Mr. Bonura is overseeing the assessment of the damages along the streets contained in this project. He is currently performing design services for FEMA-eligible street repairs in the area south of I-610, north of the Florida Ave. canal, east of Elysian Fields Ave., and west of St. Roch Ave. The scope of work for each street varies and includes the following types of work: replacement of sidewalks and driveways, incidental road repairs determined by FEMA, and full replacement of roadway section and subsurface sewer, water, and/or drainage. He used DOTD's HYDRWIN software to design all drainage improvements in the project area. Mr. Bonura is also designing the roadways receiving full pavement replacement and subsurface utility relocations/improvements and creating plans for the construction of the proposed work. The project contains 33 streets with a cost estimate of $6,161,483.33.

RR178 – St. Roch Group North Group C (FRC), City of New Orleans, LA, 10/2019-Present
As Supervising Engineer, Mr. Bonura is overseeing the assessment of the damages along the streets contained in this project. He is currently performing design services for FEMA-eligible street repairs in the south of I-610, north of the Florida Ave. canal, east of St Roch Ave., and west of the Peoples Ave. canal. The scope of work for each street varies and includes the following types of work: replacement of sidewalks and driveways, incidental road repairs determined by FEMA, and full replacement of roadway section and subsurface sewer, water, and/or drainage. He used DOTD's HYDRWIN software to design all drainage improvements in the project area. Mr. Bonura is also designing the roadways receiving full pavement replacement and subsurface utility relocations/improvements and creating plans for the construction of the proposed work. The project contains 48 streets with a cost estimate of $5,485,357.95.

Woodmere Boulevard Panel Replacement, State Project No. H.012884, JP Project No. 2017-061-RBP, Jefferson Parish, LA, 08/2019-Present
Mr. Bonura is currently project engineer for the over 10,000 square yard pavement patching project, responsible for all construction engineering tasks, including project start-up, partial and final pay estimates, change orders, inspector review and oversight, project budget management, shop drawing review, and coordinating the work with LADOTD and Jefferson Parish. BBEC provided LADOTD certified inspectors through the duration of the project.

Lakefront Pedestrian Path (Suburban Canal to Causeway), State Project No. H.011780, JP Project No. 2015-010-RB, Jefferson Parish, LA, 07/2019-Present
Mr. Bonura is currently serving as Project Engineer for the project, which includes about 6,000 square yards of aggregate base, excavation for the base, 1,150 tons of superpave asphalt, and related sod, seeding and embankment in Jefferson Parish, Louisiana. As project engineer, Mr. Bonura maintains and develops the project documents in Site Manager, and review payroll in DOTD's other AASHTO Ware applications.

Ames Boulevard Rehabilitation, West Bank Expressway to Happy Street, (Public Works Project No. 2013-033-RB) (DOTD No. H.01179), Jefferson Parish, LA, 11/2015-Present
Mr. Bonura is serving as the Supervising Professional for this project which includes all necessary professional design services in connection with the project defined as follows: Mill existing asphalt pavement over existing concrete roadway; replace damaged concrete roadway panels, associated underlying base course, and concrete curb as necessary; clean and seal existing concrete joints; overlay existing concrete roadway with new asphalt; adjust existing public utility facilities (water, sewer, drainage) as necessary to match finished roadway grades and comply with current ADA guidelines; and install permanent striping.

As this project is eligible for federal construction funds as part of the Federal Aid Urban System Program, all work shall be performed in accordance with Louisiana Department of Transportation and Development (LA DOTD) guidelines which includes development of existing and proposed drainage maps with associated hydraulic computations, and all design work shall be subject to review by the LA DOTD.

BBEC completed the Preliminary Phase of this project coordinating all topographic surveys and other investigations, preparing a program of borings and other soil investigations, plotting information obtained from surveyor on plan, preparing preliminary layouts and sketches to develop design criteria, and preparing a preliminary cost estimate.

Nearing the end of the Design Phase, BBEC prepared detailed construction plans and technical specifications in accordance with LA DOTD criteria and submitted 90% plans for LDOTD review. These plans include locations of all utilities affected, and ownership and taking lines of rights-of-way where required. BBEC will also prepare permits for submission to and approval of local, state and federal authorities.

Read Blvd. East Group C, Capital Improvement Program, Project No. 2016-RR146. PW No. 21032, City of New Orleans, LA, 03/2017-Present
Mr. Bonura is serving as the Supervising Professional providing Construction Administration and Resident Inspection Services for the Read Blvd. East Group C project which includes all necessary professional design services in connection with the project defined as replacement of roadway pavement, with base replacement, complete with curbs; replacement of sidewalks and drive aprons; subsurface drainage, water, and sanitary sewer installation; and adjustments as required at driveways, at intersecting streets, and at project termini to provide for positive flow of water towards catch basins.

BBEC completed the Design and Bidding Phases of this project; and, the project is currently being constructed. The bid price was $3,282,480.53.

Wastewater Improvement Program, St. Charles Parish, LA
As Project Engineer on the lift station and force main portion of the project, Mr. Bonura provided design and drafting oversight, for the preliminary design report preparation, and oversight of sub-

consultants. Mr. Bonura completed the project through the preliminary design report submittal before changing employment. The project included the construction of six new sewer pumping stations and about 200,000 linear feet of sewer force main ranging from 6 inch to 24-inch diameter pipe, including modeling of the system, work along DOTD rights-of-way, consideration of various methods of construction, but allowing for the installation of isolation valves for pipeline maintenance.

Sewerage Capital Improvements Program, Jefferson Parish, LA, 1993-1999

Mr. Bonura served as Project Manager, Project Engineer, and/or Construction Manager for over twenty sewerage collection system projects which included over 150 sanitary sewers, force mains, and rehabilitation or new lift stations. The sanitary sewers ranged from 8-inches to 30-inches; the force mains ranged from 4-inches to 24-inches; and the lift stations ranged from less than 1 MGD to 18 MGD. Mr. Bonura assisted the Parish in evaluating and correcting special collection system problems throughout the Parish as they arose, such as repairing existing 78-inch prestressed concrete cylinder pipe and lining existing sanitary sewers to be used as force mains. Often the proposed sewer facilities were in direct conflict with existing water lines. Mr. Bonura coordinated with the Water and Sewer Department to either adjust the water or sewer facilities as necessary to the satisfaction of all parties. Projects implemented by Mr. Bonura include:

- Jefferson Parish Sewerage Capital Improvements Program - Lift Station Contract 5511
- Jefferson Parish Sewerage Capital Improvements Program - Lift station Contract 5512
- Jefferson Parish Sewerage Capital Improvements Program - Lift station Contract 5553
- Jefferson Parish Sewerage Capital Improvements Program - Lift station Contract 5554
- Jefferson Parish Sewerage Capital Improvements Program – Force Main Contract 5555
- Jefferson Parish Sewerage Capital Improvements Program - Lift station Contract 5556
- Jefferson Parish Sewerage Capital Improvements Program - Lift station Contract 5559
- Jefferson Parish Sewerage Capital Improvements Program - Lift station Contract 5560
- Jefferson Parish Sewerage Capital Improvements Program – Force Main and Gravity Sewer Contract 5561
- Jefferson Parish Sewerage Capital Improvements Program - Lift Station and Force Main Contract 5562

Eden Isles Water Main Repair, St. Tammany Parish, 07/2020-Present

Mr. Bonura is serving as Supervising Engineer for this project which consists of crossing a 400’ wide waterway with a 10-inch potable water line in Slidell, Louisiana. The projects includes connecting to existing water lines on both sides of the new pipe, including valves and flushing units; and, working alongside and crossing a concrete bulkhead and high voltage power lines. BBEC’s role included:

- Design directional drilling the main about 700 feet
- Coordinating with Cleco Power to locate and establish temporary power shut-downs so the work could be performed safely
- Work with a local contractor to locate the existing conflicts, including the high voltage Cleco Power lines
- Communicating with and assist in securing the required servitudes and easements from the property owners on both sides of the waterway
- Apply for and secure the required LDH, Parish, and Coastal Use Permits
- Perform services during bidding

The project is expected to cost $350,000. The project is currently under construction.

West Bank Water Distribution Improvements, Jefferson Parish, LA, 1999

Mr. Bonura was Project Engineer for Westbank Water Distribution Improvements Jefferson Parish Project. The project included a water valve and hydrant replacement project, a water line replacement feasibility study, and a new water line construction project along Nicole Blvd. Mr. Bonura prepared plans and specifications for the valve and hydrant project, and managed the project through construction, prepared the feasibility study for the submittal, and performed the preliminary engineering efforts for the Nicole Blvd. waterline but changed employment before the design was completed.

Emergency Water Point Repairs, St. Bernard Parish, LA, 2005

Numerous water lines and hydrants were damaged by Katrina. BBEC developed plans and specifications for a unit price contract to repair the water distribution system, handled the project through bidding, and performed construction administration and resident inspection services through completion of the project. BBEC also assisted the Parish and FEMA in developing the project worksheet and preparing requests for reimbursement for the Parish.

ENVIRONMENTAL

Louisiana Land Trust Demolition Program, St. Bernard Parish, LA, 01/2009-06/2013

Mr. Bonura was instrumental in compliance with the EPA's requirements for stormwater erosion control prevention by providing daily inspections and weekly compliance reporting. Mr. Bonura provided information to LDEQ to show its compliance with its storm water preventions plan and permits.

Mr. Bonura coordinated with LDEQ for regulatory compliance for the abatement of structures and slabs included in the Louisiana Land Trust's residential demolition and slab removal program. BBEC provided contract management services as well as an accredited asbestos inspector to ensure that the Contractor was in full compliance with the LDEQ Air Quality Emissions Standards and LDEQ's protocol for the recycling of slabs resulting from the demolition of Hurricane Katrina damaged structures.

Kim D. Jovanovich, PE

Principal Engineer, Electrical

Education
B.S., Electrical Engineering, Tulane University, 1972
M.S., Telecommunications, University of Southern Mississippi, 1978
Studies in Electro-Optics

License
Electrical Engineer, State of Louisiana, License No. 16923, Issued: 1978

Professional Affiliations
Louisiana Engineering Society
Institute of Electrical & Electronic Engineers (IEEE) – Lifetime Member
IEEE Communications Society
IEEE Lightwave Technology Society
Illumination Engineering Society of North America (IESNA)
Eta Kappa Nu Honor Fraternity
Tau Beta Pi Engineering Fraternity – Eminent Engineer

Experience Highlights
Over 49 years of engineering experience and professional practice as a licensed electrical engineer in the design, construction, evaluation, and educational instruction of complex electronic and electro-optic systems including telecommunications, sensing, networking, data acquisition, collection and reporting, and illumination systems. Also have business management, administrative, financial, project, and technical management experience for large engineering projects, engineering departments, technical businesses, and entire research and development facilities. Telecommunications experience has special emphasis in the areas of network design, HF, UHF, radar, microwave, satellite, and laser/optical fiber transmission including site surveys and propagation computations, performance predictions, atmospheric attenuation modeling and includes SCADA system infrastructures and knowledge of IEC 61850. Circuit design experience includes digital satellite modems, speech encoders, clock recovery circuits, microwave transmitters and receivers, laser/LED drivers and optical receivers for fiber optic/free-space data transmission, and LED drivers for illumination systems.

Optical communications activities include laser and LED-based free-space system modeling, design, and implementation, in addition to both multimode and single mode fiber optic applications, including experience with the design and specification of fiber optic networks for metropolitan applications, SONET systems, cellular operations, and long-haul undersea telecommunications systems. Designed and implemented numerous fiber optic-based sensors for both industrial and military applications for damage control, propulsion control and monitoring, and intrusion detection. Knowledge of fiber optic distributed temperature sensors for power cable fault monitoring and pipeline measurements. Extensive experience with remote source lighting design, software modeling, and applications, lens designs for optical transmission, Bragg grating technology, machine vision techniques, transmission of optical power over fiber optics for conversion to electrical power, transmission of illumination energy over fiber optics, development of new efficient optical fibers for illumination transmission, coupling technology for improving lamp-to-fiber optic energy collection, LIDAR applications, and designing/performing test procedures for the definitive evaluations of illumination devices with respect to various sets of military and commercial requirements. Performed theoretical feasibility studies and investigative

analysis in all of these areas and presented the findings in oral presentations, technical proposals, invited panels, refereed conference papers and presentations.

Additionally, served as subject matter expert for several WWL radio interviews on electrical infrastructure issues post Hurricane Ida relative to Florida with Hurricane Ivan, and WDSU TV interviews relative to the Sewerage and Water Board needs for 25Hz power.

Key Projects

UNIVERSITY OF NEW ORLEANS, 5/2012-Present

New Orleans, LA. Professor of Practice, Associate Dean of Engineering, Assistant Dean of Engineering, Chevron USA Professor of Electrical Engineering

- Co-Principal investigator for a multi-year DOD-funded Gulf Coast Regional Maritime Center project to develop and design optical sensors for temperature, gas detection, flooding, flame presence, torque, thrust, and measurement of electrical power quality and circuit breaker status for US naval combatants. System was installed on USS Ross as functional prototype.
- Co- Principal investigator on an Entergy and EPRI project to use optical fibers to monitor the pollution buildup on high voltage porcelain insulators capable of causing arcover.
- Co-Principal investigator for the design of a power module suite that attaches to composite ship bulkheads with Avondale and Mississippi State University.
- Co-Principal investigator for a UNOCITY project to design and develop an in-wall outlet box UPS supporting point-of-sale terminals.
- Co-Principal investigator for a DOD project to design and develop an eye-tracking system for determining the tiredness and sleep potential of ambulance drivers, pilots, and air traffic controllers.
- Directed numerous UNO projects as primary engineering faculty advisor (some noteworthy projects not all inclusive):
    - Atmospheric laser communications demonstration system
    - Laser musical instruments
    - Fiber optic end face quality relationship to bit error rates in high speed systems
    - Continuous-Flow Wastewater Electrodisinfection Unit Using Direct Current
    - Vortex-shedding fiber optic flow sensor for Entergy water intakes.
    - Paraffin-fueled rocket engine developed and tested at NASA Stennis
    - Spectroscopy of potentially malignant skin moles
    - Fiber optic stethoscope

OMNI TECHNOLOGIES, INC., 09/1994-05/2012

New Orleans/Slidell, LA. President and CEO –

- Written and prepared 15 SBIR/STTR project proposals for NASA and DOD. Seven funded as Phase 1 and two through Phase 2.
- Designed and developed remote source lighting projects using optical fibers for Northrop-Grumman Ship Systems – Ingalls Operations.
- Designed and developed remote source lighting projects using LEDs for Northrop-Grumman Ship Systems – Ingalls Operations. Developed port and starboard navigation lights for the DDG-1000.
- Designed and developed LED-based fluorescent light replacements for interior passageways of naval combatants with Ingalls Shipbuilding.
- Designed and installed a state-of-the-art illumination test, calibration, and measurement laboratory at Ingalls Shipbuilding.
- Developed a means of detecting the health of marsh grass using measured ratios at appropriate wavelengths in response to the BP oil spill.

- Developed a unique pulse-oxygen measurement system in association with Children's Hospital New Orleans for MRI-compatible measurement of oxygen saturation and pulse rate for neo-natal children.
- Chief optical engineer for a major Gulf-of-Mexico fiber optic communication ring at the continental shelf for PetroComm with beach crossings at Freeport, Texas and Port Fourchon, Louisiana.
- Chief optical engineer for a major African fiber optic communication ring at the Congo River canyon for RT Casey extending from Luanda, Angola to Cabinda, Angola.
- Chief optical engineer for the City of Ketchikan Public Utilities (KPU) and RT Casey performing a desktop study, subsea route survey, and subsequent engineering for the deployment of a subsea fiber optic cable between Ketchikan, Alaska and Prince Rupert, British Columbia, Canada.
- Designed a fiber optic distributed temperature sensing of power cables for an undersea system for Prince Edward Island.
- Designed and investigated the use of high-speed optical networks in SCADA systems for substation control with UNOCITY for an Entergy sponsored project.
- Designed and investigated the use of high-speed optical systems for weapon systems and networking aboard US Navy combatants. Developed mil-qualified products for splicing and connectorization of optical fibers aboard naval vessels.
- Managed the development and testing of specialized acoustic sensors and arrays for Los Angeles class attack submarines.
- Designed, developed, and delivered an automated fiber optic testing system to Boeing Aircraft in support of the French NATO AWACS airframe.
- Designed, developed and delivered to NASA a 19 km IEEE-488 "firewire" link using advanced "bridging" methods and fiber optics in support of space engine testing at Stennis Space Center, Mississippi. NASA awarded a Space Act award for the project's success.
- Designed, built, and produced data collection buoys for the Naval Oceanographic Office and the National Data Buoy Office of NOAA.s.

OMNICRON TELECOMMUNICATIONS, 08/1991-08/1994

Metairie, LA. Technical Director –

- Chief optical and telecommunications engineer for Freeport McMoRan Main Pass 299 sulphur mine in the Gulf of Mexico.
- Chief engineer for First National Bank of Commerce clearing house/division/branch/ ATM wide area network for entire Louisiana operations.
- Chief engineer for the development and deployment of a packet radio system supporting sailing casino operations and ATM machines for both First National Bank of Commerce and Hibernia bank. This included the design and delivery of a mobile van for ATM machines for remote events, such as Super Bowls and College Bowls, and Jazz Festivals.
- Engineered the fiber optic infrastructure design for Shell Auger platform in the Gulf of Mexico with CPU, Inc.
- Developed and conducted nationwide training/certifications for Belden Cable and Fiber Optics.
- Designed, managed, and installed an upgraded telephone/networking systems for Entergy location at 300 West Bank Expressway.
- Fiber optic infrastructure design and installation for such companies as Conoco-Phillips refinery, Marathon Oil refinery, Murphy Oil refinery, Mobil refinery, Exxon refinery, and Archer Daniel Midland (ADM).

NAVAL RESEARCH LAB, 08/1990-07/1991

NASA Stennis Space Center, MS. Staff Electro-Optics Engineer –
Designed, specified, and established fiber optic laboratory for NRL.
Principal researcher on development of undersea optical cables
Developed fiber optic sensing programs for chemical warfare agent detection.
Developed fiber optic sensing programs.
Project management of various research projects for classified operations.

LITTON DATA SYSTEMS, 03/1980-08/1990

New Orleans/Slidell, LA. Director of Fiber Optics Research and Development –
Managed the entire facility with respect to technical direction, fiscal management, personnel, and marketing.
Projects were US Navy funded, and internal Litton corporate research funded.
Projects included:
- Design and development of fiber optic lighting for naval combatants (DDGs, CGs, LHDs)
- Design and development of covert atmospheric laser communications systems for between ships at sea when RF communications was not allowed.
- Design and development of fiber optic microphones and propulsion control systems
- Design and development of fiber optic illumination systems supporting covert night vision operations.
- Managed the design of the optical communications segment of an air defense system for the country of Saudi Arabia.

COMPUTER SCIENCES CORPORATION, 05/1977-12/1978, 11/1979-03/1980,

NASA Stennis Space Center, MS. Sr. Telecommunications Engineer –
Applied and built the first Minimum Shift Keying (MSK) modulation system to overcome the communication limitations of the GOES satellite.
Designed and built a system to transmit EKGs from NASA Stennis Space Center to a hospital in Hattiesburg, MS. Actress Nichelle Nichols from Star Trek served as the patient for the test. was the
Lead designer of the Water Resources Data Center - a nationwide data collection network for the US Army Corps of Engineers.
Managed a project to design an instrumentation system that monitored and collected various mechanical parameters when two locomotives were experimentally crashed head-on at 60 mph.

Many Heymann, PE

Vice President, Greater New Orleans Operations

Education
B.S., Chemical Engineering, 2002

License
Civil Engineer, State of Louisiana, License No. 35554, Issued: 2010

Experience Highlights
Mr. Heymann has been a Civil Engineer for over 20 years and is responsible for the design and oversight of roadway projects, drainage projects, water distribution projects, sewer system projects, and construction projects. His experience includes the development of cost estimates, quantity calculations, drainage design, geometric design, erosion control, maintenance-of-traffic, grading plans, preparation of construction documents, and construction management.

Key Projects
H.010673 / US90Z, HARVEY CANAL TUNNEL REHABILITATION, 06/2023-Present
Jefferson Parish, Louisiana. Project Engineer - Mr. Heymann oversees engineering and inspection services (CE&I) staff for the Harvey Canal Tunnel Rehabilitation Project.

BOURBON STREET REHABILITATION (PHASES 1 AND 2), CITY OF NEW ORLEANS, 2017-2021
New Orleans, LA. Project Director - Mr. Heymann provided design services and oversight for the repair and rehabilitation of eight (8) blocks of Bourbon Street including underground infrastructure from Canal Street to Dumaine St. Scope of work included coordinating and sequencing construction after engaging the City of New Orleans, Department of Public Works, Sewerage and Water Board of New Orleans, Entergy, AT&T and Cox. Because many of the existing utilities (electrical duct banks) are well over 100 years old, the work for this project included upsizing the existing storm water collection system, replacing the existing water lines, repairing the existing sewer lines, replacing, and improving the existing low-pressure gas lines, replacing the existing underground electrical conduits, and replacing the existing roadway pavement, brick sidewalks and granite curbs.

ENTERGY NEW ORLEANS (ENO), DRAINAGE AND POLE INSTALLATION
New Orleans, La. Project Director- Provided scoping, CCTV, Design, and Construction Administration for the installation of drain lines and pole installation/relocation on Orleans Avenue from Rocheblave Street to Claiborne Avenue. The project included installation of new sidewalks and driveways.

STATE PROJECT 700-26-0289, HAZARD MITIGATION PLAN FOR THE SEWERAGE & WATER BOARD OF NEW ORLEANS, SEWERAGE & WATER BOARD OF NEW ORLEANS OFFICE OF EMERGENCY MANAGEMENT AND THE ENVIRONMENTAL AFFAIRS DIVISION
New Orleans, LA. Project Engineer - Mr. Heymann was Project Engineer providing a Hazard Mitigation Plan to include vulnerability analysis and hazards to critical facilities, identifying repetitive losses and how to reduce those losses and decrease the response time to a natural or man-made hazards. The purpose of the Plan is also to integrate Hazard Mitigation strategies into the day-to-day activities and programs of the Sewerage and Water Board of New Orleans (S&WB). The plan was prepared to meet the Disaster Mitigation Act of 2000 (DMA 2000) requirements in order to maintain the S&WB's eligibility for the Federal Emergency Management Agency (FEMA) Pre-Disaster Mitigation (PDM) and Hazard Mitigation Grant Programs (HMGP).

WATER SYSTEM PIPELINE ASSESSMENT AND NEAR TERM (5-YEAR) PLAN, N-Y ASSOCIATES, 2021-2022

Jefferson Parish, LA. Project Principal – Mr. Heymann was Project Principal for the assessment of Jefferson Parish's existing water system to develop and provide a 5-year plan defining critical areas requiring replacement within the Parish's water system. The scope of work consists of evaluating and determining problem areas within the Parish's water system through interviews with Parish workers, GIS records, and existing water models received from the Parish. Once a full assessment has been completed, we developed a prioritized list of probable water main failures which include both transmission and distribution mains. Additional analysis was completed to provide Jefferson Parish with rough orders of magnitude associated with the construction cost to replace the assessed mains recommended for replacement and a written report documented the years in which mains should be replaced.

CATAOUATCHE LAND PROJECT, CATAOUATCHE LEVEE BASIN

Jefferson Parish, LA. Project Engineer – Master 404 Services for 9500+acres which includes hydraulic & hydrodynamic modeling, storm surge modeling, wetland delineations, soil identification, plant identification, base flood elevations, topographical interpolation/LIDAR, borrow pit coordination with USACE, geotechnical data analysis, coordination with USACE HTRW studies, coordination with cultural resource studies, coordination with I-49 studies, coordination with FEMA PW drainage surveys, coordination with Churchill Technology Park development, coordination with KB Home development, coordination with TPC and Marrero Land & Improvement Association, Ltd.

LOYOLA INTERCHANGE OVS, LADOTD, 2019-2023

Kenner, LA. Project Principal – Mr. Heymann provided oversight and assisting in plan review of all contractors and utility companies as part of the project. The scope of work also included providing residential inspection during the construction phase of the project.

TUNNEL INSPECTION AND REPAIR/REHABILITATION, LADOTD, 2015-2023

New Orleans, LA. Engineer - This project involved repair/rehabilitation plan preparation for the Houma, Harvey, and Belle Chasse Tunnels. These tunnels were originally constructed in the late 1950s. A visual inspection of the structural, geotechnical, mechanical, and electrical components of the tunnels was performed. Additionally, responsible for non-destructive testing of the structural and geotechnical components, evaluating the defects during testing, as well as preparing plans and specifications for each tunnel repairs and rehabilitation.

H.003931 / CALCASIEU RIVER BRIDGE OWNER ADVISORY SERVICES, 2022-2023

Calcasieu Parish, LA. Project Director - For the preparation of Technical Provisions for the Public-Private Partnership (P3) project, Mr. Heymann’s project responsibilities included oversight and review of Technical Provisions for multiple sections including Utility Relocations, Drainage, Bike/Ped. Facilities and Roadway; as well as review of the ITS and Electrical - Bridge Lighting sections. Work done for previous firm.

H.011670 / OWNER VERIFICATION SERVICES, I-10/LOYOLA INTERCHANGE DESIGN-BUILD, 2019-Present

Jefferson Parish, LA. Engineer - Mr. Heymann provided oversight and conducted plan design reviews of all utility designs as part of the Design-Build project. Plan Reviews also included Temporary Traffic Control Plan Reviews submitted by the Design-Build Contractor.

Elizabeth Guiza, PE

Senior Manager of Engineering – Metairie Division

Education
B.S., Civil Engineering, University of Mississippi, 2010

License
Civil Engineer, State of Louisiana, License No. 39531, Issued: 2015

Experience Highlights
Ms. Guiza provides engineering support for a range of projects including civil/site developments, tunnel inspection, tunnel rehabilitation, gravity stormwater systems, water systems, sewer systems, and roadway construction. Ms. Guiza is experienced in the development of cost estimates, quantity calculations, drainage design, retention pond design, stormwater management plans, geometric design, erosion control, canal bank stabilization, maintenance-of-traffic, preparation of specifications, and construction management.

Key Projects
H.010673 / US90Z, HARVEY CANAL TUNNEL REHABILITATION, 06/2023-Present
Jefferson Parish, Louisiana. Project Engineer - Ms. Guiza serves as Project Engineer responsible for the engineering and inspection services (CE&I) of the Harvey Canal Tunnel Rehabilitation Project. She manages inspection staff working to oversee the contractor's construction operations to ensure that all work is performed in accordance with the plans and specifications and using approved materials. For unforseen conditions which may require field engineering, Ms. Guiza provides design services.

BOURBON STREET REHABILITATION, CITY OF NEW ORLEANS
New Orleans, LA. Engineer - Because many of the existing utilities (electrical duct banks) are well over 100 years old, the work for this project included upsizing the existing drain lines, replacing the existing water lines, repairing the existing sewer lines, replacing, and improving the existing low-pressure gas lines, replacing the existing underground electrical conduits, and replacing the existing pavement

ENTERGY NEW ORLEANS (ENO), DRAINAGE AND POLE INSTALLATION
New Orleans, La. Project Manager- Provided scoping, CCTV, Design, and Construction Administration for the installation of drain lines and pole installation/relocation on Orleans Avenue from Rocheblave Street to Claiborne Avenue. The project included installation of new sidewalks and driveways.

TUNNEL INSPECTION AND REPAIR/REHABILITATION, LADOTD, 2015-2023
New Orleans, LA. Engineer - This project involved repair/rehabilitation plan preparation for the Houma, Harvey, and Belle Chasse Tunnels. These tunnels were originally constructed in the late 1950s. Ms. Guiza performed a visual inspection of the structural, geotechnical, mechanical, and electrical components of the tunnels. Additionally, responsible for non-destructive testing of the structural and geotechnical components, evaluating the defects during testing, as well as preparing plans and specifications for each tunnel repairs and rehabilitation. Ms. Guiza was manager for writing the inspection specifications for LADOTD Tunnels and is a Certified NTIS Tunnel Inspector.

HARVEY TUNNEL LIGHTING REPLACEMENT, LADOTD
Jefferson Parish, LA. Project Manager - Ms. Guiza performed professional design services for the LADOTD to replace the tunnel lighting of the Harvey Tunnel, including a new emergency life

safety lighting system, lighting control system and an upgraded tunnel lighting system in accordance with current codes and standards. Design plans include the full replacement of luminaires, raceways, wiring, approach portal light poles, electrical panelboards, an uninterruptible power supply (UPS) for emergency lighting and new fire life safety directional signage. The design also accommodated for structural repairs and ventilation upgrades associated with the new electrical equipment. Pre-design tasks included laser scanning of the existing facilities; non-destructive and destructive testing to evaluate the condition of the existing elements.

STATE PROJECT 700-26-0289, HAZARD MITIGATION PLAN FOR THE SEWERAGE & WATER BOARD OF NEW ORLEANS, SEWERAGE & WATER BOARD OF NEW ORLEANS OFFICE OF EMERGENCY MANAGEMENT AND THE ENVIRONMENTAL AFFAIRS DIVISION
New Orleans, LA. Engineer Intern - Mr. Heymann was Project Engineer providing a Hazard Mitigation Plan to include vulnerability analysis and hazards to critical facilities, identifying repetitive losses and how to reduce those losses and decrease the response time to a natural or man-made hazards. The purpose of the Plan is also to integrate Hazard Mitigation strategies into the day-to-day activities and programs of the Sewerage and Water Board of New Orleans (S&WB). The plan was prepared to meet the Disaster Mitigation Act of 2000 (DMA 2000) requirements in order to maintain the S&WB's eligibility for the Federal Emergency Management Agency (FEMA) Pre-Disaster Mitigation (PDM) and Hazard Mitigation Grant Programs (HMGP).

John J. Housey, Jr., PE

Engineer, PE / Civil/Structural

Education
M.S., Structural Engineering, Tulane University, New Orleans, LA 1965
B.S., Civil Engineering, Tulane University, New Orleans, LA, 1964

License
Civil Engineer, Louisiana License No. 0010596

Professional Affiliations
- American Council of Engineering Companies of Louisiana
- American Public Works Association
- Louisiana Association of Professional Engineers and Land Surveyors
- American Society of Civil Engineers
- Louisiana Engineering Society
- Former Chairman of Structures Committee

Awards
- Outstanding Engineer of the Year, New Orleans Branch of Civil Engineers
- The Outstanding and Exemplary Leadership as Chairman Structures Committee, 2005-2006

Experience Highlights
Mr. Housey has been working as an engineer in the public works industry for over 57 years. His experience includes bridges, buildings, roadways, and utility (water, sewer, and drainage) construction. He has substantial experience in project management, steel building detailing, bridges, barges and parts for offshore platforms. As a steel fabricator, Mr. Housey oversaw the fabrication of steel buildings, steel bridges (stationary and movable), barges, various parts of offshore platforms including girders, piling and legs, floor and wall framing, various parts of ships including bulkheads and framing members. Over the past 57 years, he has been responsible for the design of crane runways, spreader bars, lifting frames, and hydraulic jacking of heavy structures and barges.

Mr. Housey managed the construction of over $100 million in asphaltic concrete (AC) and Portland cement concrete (PCC) roadways funded by FEMA Public Assistance Grants. He has intimate knowledge in how various site conditions affect the construction and performance of the roadways, as well as how to maintain the necessary documentation to comply with the funding federal programs.

Mr. Housey is a past Board Member and President of the Southern Association of Steel Fabrication. He served as a member on AISC committee regarding quality control. As a member and past Chairman of the ASCE/SEI Structures Committee in New Orleans for several years, he is familiar with the design of bridges, buildings and residential structures. He is familiar with fabrication specifications of API, AWS, AREA, AISC and ABS.

Key Projects
Widening / Stabilization of Congressman Hebert, Creely, and Bluebird Canals, St. Bernard Parish, LA, 01/2015-Present

The project includes increasing the capacity and improving the stability of Congressman Hebert, Creely, and Bluebird Canals, that consists of 11,600 linear feet of open canal and culverts ranging from 4-feet bottom width to 16-feet bottom width channels. Mr. Housey coordinated with St. Bernard Parish, Lake Borgne Basin Levee District, and the Louisiana Department of Transportation and Development to obtain information regarding the existing drainage plan. BBEC established the design cross sections for the channels, which included concrete u-channels, concrete box culverts, and round and arched pipe, and concrete lined trapezoidal sections, depending on the availability of land and other conditions. Mr. Housey is designing 2,500 linear feet of large diameter reinforced concrete pipe box culverts, and U-channels for the project.

Design of Access Ways and Ladders at Drainage Pump Stations; Project No. 2014-022-DR, Jefferson Parish, LA, 11/2014-11/2019
Mr. Housey prepared cost estimates and designed ladders, stairs, and elevated walkways in 16 drainage pump stations to connect elevated structures and allow personnel to access the top of structures within Jefferson Parish. Design included analysis and details to retrofit new items to existing structures. The projects included the design of access ways and ladders at various drainage pump stations on the Eastbank and Westbank of Jefferson Parish identified as follows: Project I: Bonnabel, Elmwood, Estelle No. 1, Estelle No. 2, Hero, Lake Cataouche No. 2 and Westminster. Project II: Suburban, Duncan and Planters. Project III: Parish Line, Ames, Bayou Segnette, Mount Kennedy, Westwego No. 2 and Whitney-Barataria. Mr. Housey performed Design services for Projects II and III and Design, Bidding, Construction Management, Resident Inspection and As-built services for Project I.

Eden Isles Subdivision Drinking Water Systems Disinfection Improvements, St. Tammany Parish, LA, 12/2020-Present
Mr. Housey assisted with the design of the elevated chemical building and secured the necessary permits from St. Tammany Parish, The Louisiana Department of Health, and the Louisiana Fire Marshal.

East Bank Water Treatment Plant Improvements, Jefferson Parish, LA, 12/2016-Present
As Project Manager, Mr. Housey supervises and coordinates drainage and process piping for both the Laboratory and the P4 Plant. He attends progress design meetings with other disciplines and field visits as required to locate existing utilities and prepares specifications and required design calculations. Design includes calculations for pressure piping flow, thrusts and supports, also drainage requirements and system design. Mr. Housey is also supervising the structural design of the 82’ x 34’ remote pump station structure, including super structure and foundation.

Acadiana Water and Sewer, Lafayette, LA., 01/2021-Present
Mr. Housey designed the required structural repairs due to corrosion including structural steel repairs to the tanks and frame, painting of existing steel, provision of access stairs, walkways, and safety rails.

Lower 45 Evacuation Route Basin, Lafitte Tidal Protection, Lafitte Area Independent District, LA, 05/2018-Present
As Project Manager, Mr. Housey is providing design alignment and earthen levee.

Repair of Venice Marina, Plaquemines Parish, LA, 2013-2015
Mr. Housey designed the Venice Marina project located in Plaquemines Parish in Venice, Louisiana. The project consisted of repairs to the damages of the Venice Marina caused by Hurricane Isaac.

Repair of Buras Marina, Plaquemines Parish, LA, 2013-2015

Mr. Housey designed the Buras Marina project located in Plaquemines Parish in Buras, Louisiana. The project consists of repairs of the damages to the Buras Marina caused by Hurricane Isaac.

Engineering Services for the Four-Year Road Maintenance Program, St. Charles Parish, LA, 01/2019-09/2020

Mr. Housey was project engineer for the construction of asphalt patches and mill/overlay on 12 streets in the Parish. The work consisted of 20,000 square yards of mill and overlay work, 1200 tons of full depth asphalt pavement patching, and related traffic control and connections to existing driveways. Mr. Housey was responsible for all construction administration and resident inspection activities, including project start-up, coordination with Parish and testing lab, shop drawing reviews, contractor pay estimates, change orders, complaint and conflict resolution, acceptance, and contract closeout. Mr. Housey also provided guidance and oversight to the resident inspector.

Hurricane Katrina Roadway Restoration, St. Bernard Parish, LA, 05/2011-08/2017

Mr. Housey was BBEC's on-site engineer who provided Construction Administration services and Supervised Resident Inspectors of this FEMA PA funded project for over $100 Million in roadway and drainage repair for 436 streets. Mr. Housey developed plans and construction cost estimates as well as managed the construction of facility repairs. He reviewed contractor submittals for conformity, resolved construction issues and led field progress meetings. Mr. Housey coordinated with the Contractor, Parish, and inspectors to troubleshoot issues in the field, resolved neighbor complaints, interpreted design specs to maintain the quality and standards of the work, and ensured that the work was satisfactorily completed. Mr. Housey reviewed all test reports for conformity to specifications, performed substantial and final completion walk-throughs for acceptance, reviewed as-builts for work completed, and reviewed contractor's monthly invoices and quantities. The project lasted 11 years and consisted of up to 18 construction inspectors at one time.

Private Residential Structure Elevation Project, Statewide (HMGP Project), 10/2012-02/2014

The project included performing plan review for grant compliance and some technical aspects of the elevation of residential structures throughout south Louisiana. The project also included performing periodic inspections of the construction work to verify compliance with the project plans. Mr. Housey was responsible for providing professional engineering, program management, construction monitoring, observation of construction methods, code enforcement compliance, and general monitoring technical assistance services in association with construction contractors elevating and/or reconstructing residential structures for eligible construction activities through the Hazard Mitigation Grant Program (HMGP).

Madan Kamboj, PE

Engineer, PE / Civil/Structural

Education

M.S., Civil Engineering: Structures/Soil Mechanics, Tulane University, 1978
B.S., Civil Engineering, Punjab Engineering College, Affiliated with Punjab University, 1967

License

Civil Engineer, Louisiana License No. 0016196

Professional Affiliations and Awards

- ASCE Lifetime Membership: Awarded life-time membership after 35 years of continued membership.
- Member ASCE Structural Committee, attend regular seminars at Louisiana State University.
- Honorable Mention, for Design of 3000 car garage, at New Orleans International Airport by International Municipal Parking Congress 1989.
- ACI Louisiana Chapter: Vice President, Secretary & Treasurer, 1986-1990, A.C.I. National member since 1984; Louisiana Engineering Society member since 1982.

Experience Highlights

Mr. Kamboj has more than 43 years of experience performing project design, construction administration, and project monitoring for general civil projects including drainage, utilities, streets, highways and bridges, buildings, water and sewer treatment plants, multi-story parking garages; airport taxiways, traffic separation facilities, bike paths, and overhead pedestrian walkways at high traffic intersections.

Mr. Kamboj has successfully attended a course in “Highway Capacity Manual” at New York Polytechnical. He led a team of Engineers and Cost Estimators for conducting line and grade studies for North South Expressway in Northern Louisiana which eventually became Interstate 49. This project included Hydraulic Design of culverts, pavement type analysis, intersection geometry and cost estimates for each projected alignment analysis. Mr. Kamboj designed twelve (12) miles of US-61 four lane highway in Wilkinson County, Mississippi for MDOT. He evaluated geometrical design, profile and grades, intersection layout, culvert analysis and cost estimation for construction. Mr. Kamboj designed city streets for C.J. Peete including geometry, pavement, design, intersection improvements, redesigning utilities (e.g. water, sewer, gas) and drainage improvements. The cost of street improvements was $24M.

Key Projects

Gloria Drive Pump Station, Project No. 20-2022A, Lafitte Area Independent Levee District Drainage, Town of Jean Lafitte, LA., 02/2021 – Present

Mr. Kamboj is providing Structural and Foundation design of Gloria Drive Pumping Station and approximately 70 Ft. long Steel Sheet Pile wall supported by ASTM D25 Timber Piles. The Pump Station design incorporates designing foundations supported by 14”X 14” PPC Piles, Concrete Base Level, Middle Level and Roof Slabs, Concrete Enclosure Walls & Structural Supports for Pump Station Screens. The present Generator Structure will be enlarged and strengthen ally to accommodate new electrical equipment.

Laplace Water Intake Pump Station and Pre-Treatment Facility, St. John the Baptist Parish, LA, 08/2022-Present

Mississippi Riverside Pump Station &Transfer Pump Station

Mr. Kamboj is designing the layout of the pump station, plan and typical sections, roof structure, wind analysis and seismic category determination, structural framing. He is performing foundation design, selection of driven piles, wave analysis and barge collision forces to superstructure and substructure.

Waskey Bridge from Pump station at The River to Mississippi River Levee (850 Ft. Length)

Mr. Kamboj is designing plan & typical sections, railing for vehicle impact, precast concrete panels for structure, precast bent design and selection of foundation and driven piles for all load transfer to the underlying soils.

Eden Isles Water System GAC Filter Improvements, Eden Isles, LA, 05/2022-Present

Mr. Kamboj is performing structural and foundation design for 50 Ft. x 35 Ft. x 23 Ft. high steel building with type B steel deck, wide flange beams and columns designed for 150 MPH wind loads. The floor slab was reinforced with concrete and beam and 7 Ft. above the existing ground, and the foundations were cast-in-place concrete auger cast piles.

Eden Isles WWTP Flow Equalization Improvements, Eden Isles, LA, 05/2022-Present

Mr. Kamboj is performing structural and foundation design for 28 Ft. x 28 Ft. x 16 Ft. high concrete storage tank with concrete beams and columns designed for 150 MPH wind loads. The deck slab was reinforced concrete, the foundations were cast in place concrete piles and treated timber piles supporting spread footings were used for supporting 4 bar screen concrete slab system.

Diversified Water Well Pretreatment System, Madisonville, LA, 06/2023-Present

This project includes new potable water treatment improvements at the Diversified Well site in Madisonville, LA for the St. Tammany Parish Department of Utilities. This project includes new greensand filtration units for iron and manganese removal, metal and CMU building to house the filters, chemical storage, and personnel offices, and water piping on site. As part of this project, Mr. Kamboj performed the structural analysis and structural design for the steel building, concrete masonry building, and concrete foundation for this project. Mr. Kamboj developed the technical specifications for the project including all building structural components, materials, and accessories.

RR176 – St. Roch Group North Group A (PMOI), City of New Orleans, LA, 10/2019-Present

Mr. Kamboj is currently performing design services for FEMA-eligible street repairs in the area south of I-610, north of the Florida Ave. canal, east of N. Broad St., and west of Elysian Fields Ave. The scope of work for each street varies and includes the following types of work: replacement of sidewalks and driveways, incidental road repairs determined by FEMA, and full replacement of roadway section and subsurface sewer, water, and/or drainage. He is also assisting with the design of roadways receiving full pavement replacement and subsurface utility relocations/improvements and creating plans for the construction of the proposed work. The project contains 39 streets with a cost estimate of $6,054,030.68.

RR177 – St. Roch Group North Group B (FRC), City of New Orleans, LA, 10/2019-Present

Mr. Kamboj is currently performing design services for FEMA-eligible street repairs in the area south of I-610, north of the Florida Ave. canal, east of Elysian Fields Ave., and west of St. Roch Ave. The scope of work for each street varies and includes the following types of work: replacement of sidewalks and driveways, incidental road repairs determined by FEMA, and full replacement of roadway section and subsurface sewer, water, and/or drainage. He is also

assisting with the design of the roadways receiving full pavement replacement and subsurface utility relocations/improvements and creating plans for the construction of the proposed work. The project contains 33 streets with a cost estimate of $6,161,483.33.

RR178 – St. Roch Group North Group C (FRC), City of New Orleans, LA, 10/2019-Present
Mr. Kamboj is currently performing design services for FEMA-eligible street repairs in the south of I-610, north of the Florida Ave. canal, east of St Roch Ave., and west of the Peoples Ave. canal. The scope of work for each street varies and includes the following types of work: replacement of sidewalks and driveways, incidental road repairs determined by FEMA, and full replacement of roadway section and subsurface sewer, water, and/or drainage. He is also assisting with the design of the roadways receiving full pavement replacement and subsurface utility relocations/improvements and creating plans for the construction of the proposed work. The project contains 48 streets with a cost estimate of $5,485,357.95.

Matthew Hahn, PE

Engineer, PE / Civil

Education
B.S., Civil Engineering (Cum Laude), University of New Orleans, 2016

License
Civil Engineer, State of Louisiana, License No. 44796

Professional Affiliations
- Member, American Society of Civil Engineers (ASCE)

Software
- AutoCAD and Civil 3D
- HEC-HMS & HEC-RAS
- WaterCAD & WaterGEMS

Experience Highlights
Mr. Hahn has over eight (8) years of experience in the field of civil and consulting engineering with a strong background in water resources, civil/site design, project management, and land surveying. His vast knowledge includes but is not limited to design and hydraulic modeling of water distribution systems, hydrologic modeling and drainage design, sewerage and wastewater treatment, site development and planning, structural design, public speaking, topographic land surveying, boundary surveying, floor elevation surveying, earthwork balancing and site grading, recreation facilities/athletic fields, public bid process, permitting, and construction administration and management.

Key Projects
Avenue E Drainage Improvements, Jefferson Parish, LA, 02/2023-Present
As project manager, Mr. Hahn developed the drawings, specifications, and quantity estimates for subsurface drainage improvements along four (4) residential streets in Old Metairie. This project includes the installation of a new subsurface drainage trunk line along Avenue E and new drainage laterals along connecting side streets to improve drainage in the area. Mr. Hahn developed the engineering design and plans for new 48" and 36" RCP subsurface drain lines and incidental sewer, water, and roadway improvements.

Hill Heights Drainage Improvements – Phase 1, Project No. P190802, Ordinance No. 22-3-14, St. Charles Parish, LA, 04/2022 – 06/2023
Mr. Hahn managed the engineering and design of drainage improvements at the Hill Heights Canal in the Ormond Estates Subdivision on the east bank of St. Charles Parish. The project included the removal and replacement of the existing steel sheet pile wall along the east bank of the Canal with a new sheet pile wall with steel waler and cap plate. The new sheet pile wall is approximately 200 linear feet with 30-ft long steel sheet piles. The project included structural backfill behind the protected side of the wall, canal cleaning and grading, and drainage canal slope grading. As part of this project, Mr. Hahn provided technical engineering assistance during the bidding and construction phases of the project.

U.S. Highway 51 Drainage Improvements, Town of Amite, LA, 02/2021-08/2021
As Project Manager, Mr. Hahn used EPA SWMM software to complete a drainage assessment of a 1-mile segment of U.S. Highway 51 in Amite City, LA. Mr. Hahn developed conceptual design

of drainage improvements, sidewalk improvements, and developed cost estimates and a report of findings.

CN Railroad Culverts in Ormond, Project No. P200801, Ordinance No. 20-9-5, St. Charles Parish, LA, 04/2022 – Present
As a project engineer, Mr. Hahn is developing the plans, specifications, and cost estimates for this project which includes the construction of several new drainage culverts crossing and/or adjacent to the CN railroad in Destrehan, St. Charles Parish, LA. Mr. Hahn is also preparing the CN Railroad permitting documents for the new drainage improvements.

Woodpark Waterline Relocation, Myrtle Grove, LA, 06/2016-01/2020
Mr. Hahn assisted with development of the plans and specifications for construction of over 2,000 feet of new 12" potable water main, including fire hydrants, valves, and service connections in the Woodpark community in Myrtle Grove, LA, in conjunction with design of new floodwall improvements performed by the U.S. Army Corps of Engineers.

Amite Water System Improvements, Town of Amite, LA, 05/2016-04/2022
As Project Manager, Mr. Hahn developed cost estimates, plans and specifications for construction of over 15,000 feet of new 6" potable water main, including fire hydrants, valves, and 130 service connections. Mr. Hahn also conducted field visits and construction phase services.

Foulks Lane and City Barn Water Tanks, Town of Amite, LA, 05/2018-05/2021
Mr. Hahn designed improvements for elevated steel potable water tanks in the Town of Amite City, LA. Mr. Hahn prepared cost estimates, and developed plans and specifications for this project.

Eden Isles Water System GAC Filter Improvements, Eden Isles, LA, 05/2022-Present
As a project engineer, Mr. Hahn developed the plans, specifications, and cost estimates for this project. The client is Central States Water Resources (CSWR). This project includes new potable water treatment improvements, including new granular activated carbon (GAC) water filter units, steel building to house the filters, chemical feed piping and storage, and water piping on site. As part of this project, Mr. Hahn provided technical engineering assistance during project bidding and construction.

Water & Wastewater Utilities, Multiple Parishes, LA, 04/2022-Present
Mr. Hahn provided technical and field assistance for this project, which includes investigation, evaluation, and assessment of existing wastewater and water systems to be procured by the client. Mr. Hahn performed site investigations of individual treatment facilities, collection, and distribution systems to assess structural conditions, equipment operation, evidence of process issues, and overall general operational conditions. Mr. Hahn also assisted with development of evaluation and assessment reports.

Eden Isles WWTP Flow Equalization Improvements, Eden Isles, LA, 05/2022-Present
As a project engineer, Mr. Hahn is developing the plans, specifications, and cost estimates for this project. The client is Central States Water Resources (CSWR). Mr. Hahn is designing improvements to the existing extended aeration wastewater treatment plant in Eden Isles, including a new flow equalization basin for managing sewage flows, improvements to the aeration blower units, and improvements to the tertiary sand filter unit.

TESI Wastewater Treatment Sites, Multiple Parishes, LA, 05/2023-Present

As a project Engineer, Mr. Hahn is developing plans and specifications for improvements at various Central States Water Resources (CSWR) wastewater treatment plants including Eureka Heights and Willowdale sewer plants located in Terrebonne Parish; Cypress Village wastewater plant in Assumption Parish; and The Woodlands wastewater plant in Rapides Parish. Mr. Hahn is designing the rehabilitation and repair work for the extended aeration treatment plant including but not limited to new aeration piping and diffusers, return sludge lines, new blowers, structural tank repairs, chlorine contact tank repairs, access platform repairs, and access road improvements. Mr. Hahn attends regularly scheduled meetings with the client (CSWR) to discuss the projects.

Venice Port Complex Bulkheads, Plaquemines Parish, LA, 11/2019-02/2022
Mr. Hahn performed structural computations of a steel sheet-pile retaining wall as part of design of bulkhead improvements at the Venice Port Complex in Venice, LA. Mr. Hahn also performed a lateral earth pressure assessment in conjunction with this work.

Phillips 66 Alliance Refinery Floodwall Assessment, Plaquemines Parish, LA, 01/2022-04/2022
Mr. Hahn provided technical and field support in conjunction with an assessment of sheet-pile floodwalls at the Alliance Refinery in Belle Chasse, LA. Mr. Hahn conducted site visits, field measurements and surveying, and developed a report of findings.

Animal Shelter Building Assessment, Plaquemines Parish, LA, 05/2018-05/2021
Mr. Hahn performed floor elevation surveys of the Plaquemines Parish Animal Shelter in Belle Chasse, LA, in conjunction with assessment of building settlement. Mr. Hahn also assisted with development of building rehabilitation alternatives.

Jump Basin Road Improvements, Venice, LA, 06/2021-04/2022
Mr. Hahn developed conceptual designs of new roadway improvements of Jump Basin Road located near the Venice Port Complex in Venice, LA. in Jefferson Parish, LA. Mr. Hahn performed surveying work, design and cost estimating as part of this project.

Kevin Forschler, PE

Engineer PE, Civil

Education
B.S., Civil Engineering, Louisiana State University, 2014

License
Civil Engineer, Louisiana License No. 44546

Experience Highlights
Mr. Forschler is currently working on projects for Jefferson Parish, the City of New Orleans, St. Bernard Parish, St. Tammany Parish, and Lafayette. The projects he is working on involve roadway restoration, drainage modeling and design, water transmission main replacement, off-system bridges, walkway design, lift station design, and water and wastewater treatment. Mr. Forschler has worked on multiple FEMA Public Assistance funded projects that involved rehabilitating Katrina damaged roadways in both St. Bernard Parish and the City of New Orleans. He has also worked on numerous other roadway and drainage projects in the neighboring communities. Mr. Forschler has utilized Autodesk Storm and Sanitary Analysis and SWMM modeling programs to develop drainage models for multiple areas in Jefferson Parish, including certain sections of Waggaman, the Avondale/Bridge City area, and the Bissonet Plaza neighborhood. In addition to drainage modeling, Mr. Forschler also has experience using the HYDRWIN application to design drainage systems for roadways.

Mr. Forschler has experience working with various municipalities, coordinating with other entities such as the levee districts, LADOTD, and railway companies to resolve conflicts and ensure that proposed designs meet the entities' guidelines.

Key Projects
East Bank Master Drainage Plan, Jefferson Parish, LA, 04/2023-Present
Mr. Forschler is currently managing the project team during the update of the existing conditions SWMM model to include improvements from multiple drainage projects that have been completed recently. He also worked with the Jefferson Parish Drainage Department to define criteria to establish which areas included in the updated SWMM model show signs of significant flooding. During each project task, Mr. Forschler is performing QA/QC on all revisions to the SWMM model to assure that the results simulated in the model are as accurate as possible.

Avondale/Bridge City Drainage Evaluation (Area between the Mississippi River and the Union Pacific Railroad, from Huey P. Long Bridge to Avondale Garden Road), Jefferson Parish, LA, 04/2021-Present
Mr. Forschler developed a surveying scope to gather pertinent topographic information for the project and managed the surveyor for the Parish while they conducted the survey. Mr. Forschler developed a hydraulic and hydrologic model using SWMM v.5 of the Project Area between the Mississippi River and the Union Pacific Railroad, from the Huey P. Long Bridge to Avondale Garden Road. Using the model simulation, he developed various alternatives for drainage improvements in the area. He also created a hydrologic and hydraulic report presenting the findings from the model simulation and cost estimates for each of the drainage improvement alternatives.

Craig Avenue Drainage Improvements, Public Works Project No. 2019-022-DR, Jefferson Parish, LA, 05/2020-Present

Mr. Forschler assisted with the development of plans for the addition of new drain line on this road. The project contains the area of Craig Ave. from Kawanee Ave. to Gillen St. The scope of the project includes the installation of a new trunk line, connecting the lateral drain lines to the new trunk line, and the removal and replacement of existing water mains and isolation valves and concrete roadway. Mr. Forschler helped in the design of the proposed drain line, determining the correct vertical and horizontal alignment to avoid conflicts with existing utilities. He also designed the vertical profile for the proposed roadway repairs.

Bissonet Plaza Master Drainage Plan (A/E Project No. 20-1708), Jefferson Parish, LA, 05/2018-05/2021

Mr. Forschler met with Jefferson Parish personnel to identify and discuss flood prone streets within the study area. He worked with a CAD technician to develop a map highlighting these flood prone areas and utilized Jefferson Parish GIS and Autodesk Storm and Sanitary Analysis software to create an accurate drainage model of the project area. The drainage model provided analysis of the area's interior drainage system for a 10-year storm event. Mr. Forschler ran the Parish's existing East Bank drainage model in SWMM to determine the discharge water surface elevation of the project.

Braithwaite to White Ditch Levee Improvements (Public Works Project No. 09-01-04A, 09-01-04D), Plaquemines Parish, LA, 08/2015-06/2018

Mr. Forschler provided inspection services to complete QAQC for some of the work performed by the contractor on this project. The project consisted of clearing and grubbing, earthen levee degrading to +2', Installation of high strength geotextile fabric, install of levee embankment at a 1 on 3 slope to a +12.5', Steel sheet pile driving, and construction of an aggregate roadway to access the project.

Westbank Mississippi River Bike Trail, Around Avondale Shipyard, (2017-059-RBP), Jefferson Parish, LA, 05/2018-Present

Mr. Forschler is developing plans and specifications for the construction of a bike path around the Avondale Shipyard area. The project contains the area of River Rd. from east of Avondale shipyard to LA 18 and the stretch of LA-18 up until the existing bike path access ramp west of the shipyard. The project includes the installation of a bike path on top of the levee, restriping existing shoulder to be repurposed as a bike path, widening the road to allow for bike travel, and addition of subsurface drainage in areas indicated by Jefferson Parish. Mr. Forschler is also currently developing the necessary details to cross active railroads at 3 locations and working with the railroad company and LDOTD to obtain construction permits.

Robert Reed, PE, CFM

Civil Engineer/Program Manager, CFM

Education
B.S., Civil Engineering, Louisiana State University, 1992

License
Civil Engineer, State of Louisiana, License No. 27410, Issued: 1997

Experience Highlights
Mr. Reed is a professional engineer in civil engineering with experience in the design of levees (new and enlargements), drainage structures, roadways, and subdivisions. He also has experience in Geographic Information Systems (GIS) technical analysis involving utilities distribution systems, environmental impact assessments, and municipal and military infrastructure. Training: HEC-RAS, HEC-RAS Unsteady Flow.

Key Projects
ROAD TRANSFER PROGRAM MANAGEMENT, 2014-Present
Statewide, LA. Program Manager: Mr. Reed has managed LADOTD's Road Transfer Program since February 2014 and is stationed at LADOTD Headquarters. His duties as Program Manager include coordinating with the Districts and Entities, calculate and update the 40 year maintenance values and Right-Sizing the State System document, calculate the "road transfer credit" values of the state routes, draft Resolutions to be adopted by the local governments, draft Intergovernmental Cooperative Endeavor Agreements to be executed by the DOTD Secretary and presiding Mayor/President, track projects to repair state routes for transfer and projects using the Entity's road transfer credit, coordinate with the Districts and Project Management to budget the program, provide monthly reports on agreement, transfer and project status, conduct bi-weekly meetings, and coordinate with DOTD GIS to revise and review Parish Right-Sizing maps published to the internet. As of April 2019, GEC has earned a 4.9 rating out of 5 for our work on this program. (S.P. No. 4400004740)

HYDROLOGIC RESTORATION OF THE AMITE RIVER DIVERSION CANAL (PO-142); LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY (CPRA), 2010-2016
Livingston Parish, LA. Civil Engineer: Mr. Reed designed construction plans and specifications for the restoration of 3,000 acres of wetland adjacent to the Amite River Diversion Canal (ARDC). One set of plans and specifications are for three cuts in the existing spoil banks with connected conveyance channels to allow water to flow naturally in and out of the restoration area; and, also the disposal of the dredge material while maintaining the connectivity without impeding the conveyance of flow. Another set of plans and specifications are for the replanting the restoration area. Cost: $107,000

PREPARATION OF DESIGN REPORT AND PLANS AND SPECIFICATIONS FOR THE FRONTING PROTECTION AT DUNCAN PUMP STATION, USACE, NEW ORLEANS DISTRICT, 10/2006-03/2015
Jefferson Parish, LA. Civil Engineer: This contract included the design of pile founded gate bays at the end of the pump station discharge tubes to allow foreclosure with sluice gates and butterfly valves during a hurricane event. The work also included the design of approximately 2,000 linear feet of pile founded T-wall for flood protection. Cost: $1,652,591

SOUTH SLIDELL LEVEE – PHASE II LEVEE SEGMENT 04 AND SCHNEIDER CANAL PUMP STATION FRONTING PROTECTION, 2016-2018

St. Tammany Parish, LA. Civil Engineer: Mr. Reed was project manager and designed construction plans and specifications for the two (2) segments in the South Slidell Levee system that will protect the city of Slidell from a 100-yr (1% annual occurrence) storm surge. Levee Segment 04 is a short section connecting to the existing Segment 03, and will eventually tie to a floodwall once the entire system is in place. Levee Segment 02B is a gated fronting protection structure protecting the Schneider Canal Pump Station. The original project was to tie T-walls to the pump station and raise the level of protection from elevation 8 to elevation 15, but analysis showed the pump station did not meet current USACE HSDRRS standards with the new hydraulic design loads and a gated structure across the discharge canal was the preferred plan. The fronting protection consists of six (6) 8ft x 8ft sluice gates with electric actuators and a 14 ft roadway / bridge deck along the protected side of the structure to provide continuous access along the protection system.

HURRICANE PROTECTION SYSTEMS AT NOV-16 WEST BANK RIVER LEVEE, PHASE II EMPIRE TO BURAS (U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS DISTRICT), 2009-2010

Buras, LA. Civil Engineer: Mr. Reed designed right-of-way plans for 6.6 miles of levee enlargement/stabilization and Highway relocation in Lower Plaquemines Parish adjacent to the Empire Lock. The project consisted of three separate sets of plans and specifications for construction funding. The right-of-way plans had to incorporate real estate and levee access easements acquired during Task Force Guardian and detailed additional right-of-way and construction easements required for the removal of existing I-wall, levee enlargement, and deep soils mixing operations.

ALEXANDRIA, LOUISIANA TO THE GULF OF MEXICO – CHATLIN LAKE CANAL FEASIBILITY STUDY – HYDROLOGIC & HYDRAULIC ENGINEERING, 2005-2009

Statewide, LA. H&H Engineer: Led the team performing H&H analysis of existing conditions along Chatlin Lake Canal. Responsible for developing alternatives to improve drainage and reduce flooding in the city of Alexandria, Louisiana and the surrounding area. The alternatives include pumping and gravity drainage from Chatlin Lake Canal to the upper and lower pools of Lock and Dam 2 on the Red River. Analysis performed using data from InRoads survey cross sections, LiDAR, National Land Cover Dataset, NRCS SSURGO Soil Survey and calibrated models to USACE, USGA, local Police Jury gages, and field observations. Software used to perform analysis includes InRoads, HEC-HMS, RAS and GeoRAS. Coordinated with the City of Alexandria, Gravity Drainage District and LADOTD on current, future, and proposed drainage improvements for inclusion in the models. Supervised development of floodplain delineations, water surface profile tables, and stage-area tables used for economic analysis. Prime interface with the client especially in the area of quality control. Established and built in quality standards and also set up product QA/QC controls. Cost: $305,004

Keith Rebello, Ph.D., PE

Senior Civil/Structural Engineer

Education
B.S., Civil Engineering, 1983
M.S., Civil Engineering, 1986
Ph.D., Civil Engineering, 1990

License
Civil Engineer, State of Louisiana, License No. 24937, Issued: 1992

Experience Highlights
Dr. Rebello has 30 years of structural engineering experience following his research work on non-linear deformation behavior of pre-stressed concrete bridges. He has designed and managed a variety of structural projects involving complex interstate and highway bridges (new, replacement, rehabilitation and widening), retaining walls, noise walls, buildings, water and wastewater treatment facilities, hurricane protection systems & hydraulic structures. He has experience in rating of bridges in accordance with LADOTD and AASHTO MBE requirements and performed ratings using AASHTOWare Bridge Rating (Virtis) software and finite element analysis.

Key Projects
LAKE PONTCHARTRAIN, LA AND VICINITY, HURRICANE PROTECTION PROJECT LPV 17.2, BRIDGE ABUTMENT AND FLOODWALL TIE-INS AT CAUSEWAY BRIDGE, 07/2009-06/2012
Jefferson Parish, LA. Structural QA - Dr. Rebello performed bridge and structural design in the final phases of this project which included 1200 'of new NB and SB elevated bridge structures from 6th street to foot of existing bridge with 40-foot-high structure mounted light fixtures. Design consisted of slab spans & Type III PPC girder spans. Design also included a floodwall (T-wall) at existing levee crossing grade.

GNOEC, INSPECTION OF THE CAUSEWAY BRIDGE AND APPROACHES
Jefferson and St Tammany Parishes, LA. Load Rating Structural Engineer - Dr. Rebello is the primary Load Rating Structural Engineer on this project. Federal Law 39 FR 10430 requires that all bridges on public roads be inspected and rated in accordance with National Bridge Inspection Standards (NBIS), 23 CFR Part 650, Subpart C. As Consulting Engineer for the Greater New Orleans Expressway Commission (GNOEC), GEC is responsible for the NBIS inspection and load rating for all GNOEC owned bridges. Dr. Rebello has performed superstructure ratings for double-leaf steel Bascule Spans, prestressed concrete box girder spans, prestressed concrete monolithic girder and slab spans, and, composite steel girder and concrete deck spans on the GNOEC owned system. GEC has conducted the inspections in accordance with the NBIS, utilizing the American Association of State Highway Transportation Officials (AASHTO) Manual for Bridge Evaluation, AASHTO Manual for Bridge Element Inspection and Louisiana Department of Transportation and Development (LADOTD) Pontis Inspection Manual requirements. (Ongoing)

GNOEC, EMERGENCY RESPONSE AND DAMAGE ASSESSMENT AS CONSULTING ENGINEER
Lake Pontchartrain, LA. Structural Engineer: GEC has performed the Emergency Response and Damage Assessments of the Lake Pontchartrain Causeway Bridge, Approaches, and associated facilities. GEC has response to nearly every type of natural and man-made emergency that caused damage to the GNOEC facilities and operations. These emergencies have included: hurricanes, vessel collisions, vehicular collisions, mechanical and electrical failures, and lightning

strikes. GEC staff is on site within hours of any event, assessing damages and directing emergency efforts to keep the GNOEC's vital facilities operating for the general public. (Ongoing)

FRONTING PROTECTION AT DUNCAN PUMPING STATION, 2009

Jefferson Parish, LA. Structural Engineer - Dr. Rebello performed structural design calculations for T-walls, swing gate and fronting protection. The Duncan Canal Pump Station is located in Jefferson Parish on the drainage basin's East Bank of the Mississippi River. The project is to provide fronting protection across the entire width of the pumping discharge area. The designs consist of a combination of gate monolith and T-wall monoliths.

NEW MADRID FLOODWAY PUMP STATION DRAINAGE STRUCTURES, 2002

New Madrid Floodway, MO. Structural Engineer - Project consisted of a large pumping station for the Memphis District, U.S. Army Corps of Engineers, located in a zone of high seismicity. The pump station housed three (3) 225,000 GPM vertical pumps. Dr. Rebello was responsible for providing the strength and stability design for intake and outtake culvert sections, intake walls, 58'-0" tall outlet structure with operational gates, and a 65'-0" wide mass concrete stilling basin. Seismic design was performed using the Mononobe-Okabe analysis method.

DMS SUPPORTS FOR GNOEC PROJECT DMS – 429, 04/2015-09/2018

St Tammany and Jefferson Parishes, LA. Structural Engineer - Dr. Rebello designed supports for Dynamic Message Signs on the Crossovers on the Lake Pontchartrain Causeway as well as on the East and West Approaches to the Causeway. The supports consist of a steel framed structure anchored to concrete blocks with anchor bolts and base plates. The concrete blocks are in turn anchored to the Crossover without damaging or overstressing the existing structure. Additionally, he designed supports for Camera Poles on the Crossovers. Designs were in conformance with "AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals". Dr. Rebello also reviewed shop drawings and calculations prepared by the camera pole manufacturer.

GNOEC PROJECT UPGRADE CCTV SYSTEM – 207, 09/2021-Present

St Tammany and Jefferson Parishes, LA. Structural Engineer - Dr. Rebello designed a special steel bracket support for a 40'-0" tall camera pole. The steel bracket was attached to the end of a bridge bent on the south end of the southbound Lake Pontchartrain Causeway Bridge. He obtained loads from the camera pole by applying guidance given in "AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals". He designed anchorage of the support to the bent to avoid all bent cap reinforcement using post-installed anchor rods. He reviewed shop drawings and calculations prepared by the camera pole manufacturer. Additionally, Dr. Rebello designed a drilled shaft foundation with anchors provided by the manufacturer to support a ground-mounted light pole.

4400002746 RETAINER CONTRACT FOR ELECTRICAL SERVICES, 10/2012-10-2018

Statewide, LA. Structural Engineer - Dr. Rebello provided lighting systems support designs for the various projects included in this contract. He reviewed manufacturer provided shop drawings and calculations.

4400011354 RETAINER CONTRACT FOR ELECTRICAL SERVICES, 07/2019-Present

Statewide, LA. Structural Engineer - Dr. Rebello is currently supervising design and designing supports in accordance with "AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals" for Interchange and Navigation Lighting on task orders included in this retainer contract.

Varaprasad Venkata, PE

Senior Civil/Structural Engineer

Education
B.S., Civil Engineering, 1992
M.S., Structural Engineering, 1995

License
Structural Engineer, State of Louisiana, License No. 40594, Issued: 2016

Experience Highlights
Mr. Venkata has 27 years of structural engineering experience involving highway bridges, low & high mast light pole supports, highway sign supports, hurricane protection systems, water treatment and distribution facilities, and industrial structures. He has provided design services for state agencies inclusive of FHWA funding, tolling commissions, as well as non-state entities and private industry. His design experience includes AASHTO structural sign supports for highway signs, traffic signal supports, camera pole platforms and supports, DMS sign supports and main platforms, and low and high mast light pole attachments and foundations. His bridge design experience includes the widening of existing structures and new structures for highly congested interstates and major highways, which includes, but not limited to, the design of pile bents, column bents, PSC girders, concrete deck, and steel girders.

Key Projects
H.013897 / I-10 & I-12 COLLEGE DR. FLYOVER RAMP DESIGN-BUILD PROJECT, 2/2020-Present
East Baton Rouge Parish, LA. Primary Bridge Engineer - Mr. Venkata is the Primary Bridge Engineer for the I-10 & I-12 College Dr. Flyover Design-Build Project. He designed and supervised the design of concrete girder spans for the Flyover and concrete decks for both the Flyover and Ward Creek Bridge. Additionally, Mr. Venkata designed and supervised plan development for all Substructures, Median Barriers, and Moment Slabs on the project. Currently, he is working on developing plans for the phased replacement of deck joints on the Ward Creek Bridge, to ensure maintenance of 5 lanes of traffic on I-10 westbound. Mr. Venkata also analyzed and designed the median barriers to support structure mount low mast poles. He designed foundations for ground mount high and low mast pole support foundations and reviewed shop drawings and pole design calculations submittals. (02/20-Present)

LAKE PONTCHARTRAIN, LA AND VICINITY, HURRICANE PROTECTION PROJECT LPV 17.2, BRIDGE ABUTMENT AND FLOODWALL TIE-INS AT CAUSEWAY BRIDGE, 07/2009-06/2012
Metairie, LA. Structural Engineer - Mr. Venkata performed final structural design of widened portion of abutments for both North/Southbound bridges and pile founded inverted T-type floodwall (194 feet) and tie-ins to the existing levees for Causeway Bridge at South Shore. This reach consists of levees, floodwalls, crib walls, Causeway Boulevard and other miscellaneous access points. The designs shall bring the hurricane protection to the Phase II 100-year level. The professional services required of GEC included detailed engineering and design (E&D), preparation of a Design Report (DR), preparation of plans and specifications (P&S), and E&D support during advertisement.

LA 1 – LEEVILLE TO GOLDEN MEADOW: PHASE 2A & PHASE 2E (WIDENING AND NEW BRIDGE), 04/2013-12/2017

Lafourche Parish, LA. Structural Engineer - Varaprasad served on a team responsible for rating existing bridge, design of the widening of an existing bridge and the design and construction of a new bridge. The widened portion of the bridge consists of pre-stressed concrete Type III girder spans & two new spans consists of new LG girders. Varaprasad performed design of pile bents, column bents, AASHTO and LG type PSC girders, concrete deck, and pile supported elevated concrete foundation maintenance platform for relocated and new 60' camera pole in accordance with AASHTO LRFD Bridge design specifications. Also designed structural sign supports for highway signs and luminaries according to AASHTO and LADOTD BDEM. Performed structural design for ladder system connecting the platform to the bridge deck in accordance with AASHTO and LADOTD standard specifications. Services included design, development of plans & specs. (S.P. No. H.011207 & H.011239)

4400011354, H.013442.6 / IDIQ CONTRACT FOR ELECTRICAL STATEWIDE - I-10, CROWDER BOULEVARD INTERSTATE LIGHTING, 10/2020-12/2020
New Orleans, LA. Structural Engineer - Mr. Venkata provided structural design of light pole supports foundations and RFI responses during construction.

4400011354, H.013617.6 / IDIQ CONTRACT FOR ELECTRICAL STATEWIDE - I-10, I-610E INTERCHANGE LIGHTING, TASK ORDER NO. 1, 05/2021-12/2022
New Orleans, LA. Structural Engineer - Mr. Venkata provided the structural design of high mast and low mast light pole supports foundations. Also, reviewed shop drawings for light poles.

LADOTD, ELECTRICAL RETAINER, 2019-Present
Statewide, LA. Structural Engineer: Mr. Venkata performs structural design as needed, which has consisted of design of light poles (steel and aluminum) supports, structural components, ground-mounted light pole foundations (low and high, including anchor bolts, base plates, concrete components, and drilled shafts), and structure-mounted light pole attachments (barrier mounted, concrete blisters, steel brackets, and concrete anchors) in accordance with AASHTO standard specifications. (S.P. No. 4400011354)

BATON ROUGE TO NEW ORLEANS - ITS - TIM PHASE 1, 03/2009-12/2009
St Charles, LA. Structural Engineer - Mr. Venkata performed structural design for the pile bent mounted camera poles steel support brackets, control cabinet support platforms (steel), and anchor bolts in accordance with AASHTO "Structural Supports for Highway Signs, Luminaries, and Traffic Signals", ASCE -07 (Wind loading), ACI – 318 (Anchor bolts) and LADOTD Bridge Design Manual. (S.P. No. 737-99-0799)

Michael Chiasson, PE

Senior Electrical Engineer

Education
B.S., Electrical Engineering, Louisiana State University, 1973

License
Electrical Engineer, State of Louisiana, License No. 17978, Issued:1979

Professional Affiliations
The Institute of Electrical & Electronics Engineers (IEEE): Power Engineering Society
Instrument Society of America (ISA)

Experience Highlights
Mr. Chiasson has over 40 years of experience in the design and development of process control and related systems. At GEC Mr. Chiasson has completed designs for several waste water lift stations and drainage pumping stations. At Dow Chemical, he was responsible for the preparation of plans and specifications (design and development) of process control engineering projects, from plans and specifications to final construction inspection. Other duties include reverse engineering the manufactured systems to understand how to modify the instruments for computer control and data collection. Calculations, field inspections, data collection, and report preparation were also parts of these projects. Mr. Chiasson is experienced with modeling, digital data filtering and simulation of control systems using tools in Excel and other 1st and 2nd order modeling techniques. He is also well versed in Fortran, Visual Basic, Microsoft Word, and Microsoft Excel.

Mr. Chiasson has experience with instrument technologies such as thermocouples, RTDs, mass flow controllers, densitometers, gas chromatographs, computer interfacing with motor starters, block valves and control valves. Mr. Chiasson's experience also includes tuning control loops and designing feed forward control loops with non-linear feed forward control.

Key Projects
CMAR SEGMENT 1 H.004100, 09/2022-Present
Baton Rouge, LA. Electrical Engineer - Mr. Chiasson is involved in the QA/QC validation of the various sections of lighting for the roadway.

H.013897 / I-10 & I-12 COLLEGE DRIVE FLYOVER RAMP DESIGN-BUILD, 03/2021-Present
Baton Rouge, LA. Electrical Engineer - Mr. Chiasson has performed photometric and lighting layout design, sequence of construction, schedule analysis, and quality control review for the GEC/Boh Bros. team. GEC is responsible for engineering and design quality control services as necessary to complete the design and construction for the I-10 & I-12 College Dr Flyover Ramp Design-Build Project which consists generally of highway and bridge design and engineering services.

H.003074 / I-10 WIDENING, WILLIAMS TO VETERANS BLVD, 08/2018-Present
New Orleans, LA. Electrical Designer - Mr. Chiasson was involved in roadway lighting design and provided QA/QC on this project. GEC Electrical is responsible for preparing a feasibility study for the lighting within the project limits that will be affected by the widening of the I-10 in this area. This includes a total length of 2 miles of widening and three interchanges, all of which will need revisions to the lighting systems as well as significant coordination with the FAA for the lighting design.

RETAINER NO. 44-10428, H.004774.5/H.007300.6 / KANSAS LANE – GARRETT RD CONNECTOR, 09/2017-01/2020
Ouachita Parish, LA. Electrical Engineer - Mr. Chiasson was involved in the QA/QC checking of all the drawings.

RETAINER NO. 44-11354, H.014552.5 / I-49, LA 31 INTERCHANGE LIGHTING (OPELOUSAS), TASK ORDER NO. 2
Opelousas, LA. Electrical Engineer - Mr. Chiasson was involved in the QA/QC checking of all the drawings. (ongoing)

LADOTD, RETAINER CONTRACT FOR ELECTRICAL SERVICES, 2012-2018
Statewide, LA. Electrical Engineer - This retainer contract included two pilot projects to install the first two LADOTD interstate lighting systems using LED high mast and LED low mast roadway lighting. Various lighting was included on these contracts including high-mast, low-mast, underpass, navigation, and aviation. There was a total of 21 task orders executed under this contract.

JEFFERSON PARISH DRAINAGE PUMP STATION UPGRADES—COUSINS PUMPING STATIONS 1, 2, AND 3, HARVEY PUMPING STATION, WHITNEY PUMPING STATION, BAYOU SEGNETTE PUMPING STATION, AND ELMWOOD PUMPING STATION, 2009-2012
Jefferson Parish, LA. Electrical Engineer - The projects involved automating both diesel and electric powered pumps to remove drainage water to prevent neighborhood flooding. The automation included sufficient remote controls so that pumps could be operated from either inside the pump station or from a “safe house” location. The requirement meant adding additional instrumentation to diesel and electric pumps so that the pumps could be started, stopped or RPM variance as needed. Project included adding instrumentation to monitor both the inlet and outlet water levels near pumping stations. The project also included adding generator capacity to assure pumping stations could run regardless of Utility power.

STORMPROOFING FOR COUSINS AND ELMWOOD PUMP STATIONS
Jefferson Parish, LA. Project Engineer: The project includes preparation of electrical plans and specifications for installation of redundant emergency generators, automation of five diesel engine driven pumps and ancillary systems, installation of a CCTV camera system and various improvements to electrical systems to provide protection from flood and wind damage. SCADA automation design included control of fuel systems, vacuum priming systems, compressed air systems, trash raking systems as well as sensors for monitoring pressure, RPM, fluid level, temperature, and motor current. Monitoring and control interface will be via HMI touch screen panels in each pump station and in the site safehouse.

GREATER NEW ORLEANS EXPRESSWAY COMMISSION, BASCULE CONTROL SYSTEM REPLACEMENT AND UPGRADE, 2012
Metairie, LA. Electrical Engineer - The project involved replacing an obsolete PLC control computer with a modern supported PLC. The bascule bridge consisted of four independently controlled bridge leafs operating as an interconnected system. Additionally, all wiring and electrical panels below 480 VAC was replaced. The new system was converted to support touch screen type operator control panels. The control system was upgraded to have redundant leaf angle controls. The bridge lighting system was replaced to correct a NEC violation that was discovered in the old bridge.

PLAQUEMINES PARISH SCADA SYSTEM, 2013-2014
Plaquemines Parish, LA. Electrical Engineer - This project was to design a parish wide SCADA system to allow remote monitoring of all pump stations that are involved in storm proofing. Additionally, the system must be capable of being expanded to monitor lift stations and waste

water treatment stations. The system was designed to use a standard Input panel which with a little change of software would be able to monitor the variety of pumps stations, lift station and waste water treatment plants.

CAUSEWAY BASCULE BRIDGE CONTROL SYSTEM REPLACEMENT, 2012-2014

Jefferson Parish, LA. Electrical Engineer - Design a replacement control system to allow operator control of the Bascule Bridge system on the Causeway bridge near the north shore. The project involved replacing the existing PLC control system which is no longer supported with a new modern PLC bridge control system. The Control system must retrain all mechanical interlocks as well as operating procedural interlocks. Many older components were replaced with more modern equivalents. The roadway lighting system was also replaced to make it meet current NEC requirements. Additionally, as part of this project a user manual was created for the operators. The user manual also includes diagnostic and repair procedures.

CONTROL SYSTEM FOR CHEMICAL AND BIOLOGICAL PROCESS CONTROL SYSTEMS, DOW CHEMICAL, 1976-2008

Plaquemine, LA. Electrical Engineer - These projects included understanding the existing control system in order to upgrade/replace the control system. It was necessary to include data gathering from Gas Chromatagraphs and to facilitate operator entered data into the control system. Additionally, the process control systems had to monitor the process reactor for thermal runaways and snuff the thermal runaway out as fast as possible. All control system had to meet the recommendations of the HAZOP analysis of the process.

I-10 ATCHAFALAYA EMERGENCY CROSSINGS (H.011476), 1976-2008, 04/2015-10/2017

Ramah/Henderson, LA. Electrical Engineer – Mr. Chiasson prepared Supplemental EA, Plans, Specifications & Estimates (PS&E) and CRES for remote operation/rehabilitation of barrier gates on emergency crossovers for elevated section of I-10 between Ramah and Henderson. This task included detailing the integration of additional crossover locations (at multiple LADOTD TMC locations) for providing LADOTD staff with status and control information concerning the gate system. Network design included connections to existing fiber optic backbone. Mr. Chiasson designed the control system and network.

TERRACE STREET DRAINAGE PUMP STATION RENOVATIONS, 2016-Present

Baton Rouge, LA. Project Engineer - Project included hydrologic and hydraulic analyses of the upper reaches of the Corporation Canal Watershed and an evaluation of the existing pumping equipment and canal control intake structure. This project involved the replacement of the existing four (4) 84,000 GPM pumps with new vertical turbine pumps and replacing the existing diesel engine drivers with 1,250 HP horizontal electric motors. The project also included replacing the adjusting Corporation Canal intake weir structure with a permanent concrete weir control structure. Mr. Chiasson was responsible for the control system for the pump motors and general project implementation.

LAKESHORE VILLAGES & OAK HARBOR EAST UTILITY WATER TREATMENT PLANT EXPANSION, 2019-Present

St. Tammany Parish, LA. Electrical Engineer - Includes design of improvements to the Lakeshore Estates development, including adding 450,000 gallon/day (GPD) capacity to the existing 500,000 GPD wastewater treatment plant. The expansion project included a 450,000 GPD extended aeration treatment plant, tertiary filter system, chlorination system, yard piping, and site work. GEC's design of wastewater pumping system consists of ten pumping stations serving 2,950 homes, 600 apartments, and additional commercial development. Planned pump station capacities range from 100 to 480 GPM.

CONTRACT 6249 HMGP RETROFIT POWER DISTRIBUTION NETWORK, 2019

New Orleans, LA. Lead Electrical Engineer - The design build project consisted of installing two new power feeders in existing duct bank (approximately 45,000’ of cable) and replacing eight existing power feeders in both new and existing duct bank (approx

Thomas Coerver Jr., PE

Senior Electrical Engineer

Education
B.S., Electrical Engineering, Louisiana State University, 1980
MBA, Management Information Systems, Louisiana State University, 1990

License
Electrical & Computer Engineer, State of Louisiana, License No. 30722, Issued:2003

Experience Highlights
Mr. Coerver has experience in engineering and planning for utilities distribution systems, automatic test systems, and navigation and flood control projects. He also has over 20 years of experience with computers using several operating systems for GIS design, implementation, and analysis; computer aided design and drafting; database design and analysis; and internet publishing. His most recent projects at GEC involved electrical power distribution systems, roadway and bridge lighting, fiber optic communication systems, and wireless and landline communication systems. Design duties include preparation of plans and specifications, Quality Control and Quality Assurance (QC/QA) review, calculations, data collection, and report preparation. Construction Engineering and Inspection (CE&I) duties include review of shop drawing and equipment submittals, respond to request for information, review/prepare as-built drawings, review payment applications, and perform periodic inspection and final system acceptance.

His computer skills include: MicroStation and AutoCAD Computer Aided Design and Drafting (CADD) software; Intergraph Modular Geographic Information Systems Environment (MGE) vector-based GIS software (Windows NT, UNIX and DOS platforms), Intergraph; Modular Geographic Information Systems Analyst (MGA) software, Intergraph GeoMedia and GeoWebMap GIS and Internet Map Publishing software, Intergraph IRAS/C image processing software, and Intergraph Interplot plot rendering and management software; Oracle, dBASE, and Microsoft Access Relational Database Management System (RDBMS) software; Structured Query Language (SQL) Database Query Language

Key Projects
H.011670 / OWNER VERIFICATION SERVICES, I-10/LOYOLA INTERCHANGE DESIGN-BUILD, 07/2019-Present
Jefferson Parish, LA. Lighting Review - GEC is the Owner Verification Firm (OVF) for this Design-Build project which includes the CE&I, right-of-way acquisition, and utility relocation. As LADOTD's OV representative, GEC is responsible for the acceptance of the work and materials in order to ensure contract compliance. Mr. Coerver reviewed the lighting plans for LADOTD in the design phase.

PRIEN LAKE MAIN SPAN RE-DECK (LADOTD RETAINER #4400002746, T.O. #H.010916), 06/2015-Present
Lake Charles, LA. Electrical Designer: Mr. Coerver designed roadway lighting for this project under the signing engineer. Project limits include the I-210 Bridge over Prien Lake and the I-210 / Cove Lane Interchange. Project makeup consists of the following types of roadway lighting standards: 12 ground mount low mast and 50 barrier mount low mast. GEC provided design services under 2 Task Orders and will provide CE&I under a third. In addition, lighting control and power distribution and system protection is included.

ALMONASTER AVENUE BRIDGE AND APPROACHES (H.004698/H.007250), 2015-2017

Jefferson Parish, LA. Electrical Designer: Mr. Coerver designed roadway lighting for this project under the signing engineer. Project limits are from the east and west approaches for the bridge over the Industrial Canal (approximately .25 miles along Almonaster Ave.). GEC was responsible for design and construction services for the bridge and electrical systems. Project consisted of replacing the existing bridge with a rolling leaf bridge to support the roadway and railroad in accordance with all relevant standards.

SEWERAGE AND WATER BOARD OF NEW ORLEANS, CONTRACT 6249 – HMGP RETROFIT POWER DISTRIBUTION NETWORK, FEEDER 404, 2018-2019

New Orleans, Louisiana. Electrical Engineer of Record - Design build project involving the replacement of an existing underground 15kV, 600 MCM, distribution feeder with new, 750 kcmil distribution feeder. Underground feeder consists of over 8000' of three conductor cable spanning multiple in-ground pullboxes. GEC served as a subcontractor to Grady Crawford Construction Company.

HOUMA TUNNEL LIGHTING (LADOTD, PROJECT NO. H.001496), 2011-2012

Houma, LA. Electrical Engineer - Project limits are from the east and west approaches for the tunnel under the Intracoastal Waterway (approximately 0.5 miles along LA-3040). GEC is responsible for design and construction services. Project Makeup consists of replacing existing lighting system with IP66 rated tunnel lighting in accordance with IESNA/ANSI RP-22 as well as low mast roadway lighting on the approaches in accordance with IESNA/ANSI RP-8. Services include design, development of plans and specifications, and CE&I as required.

GNOEC PREVENTATIVE MAINTENANCE

Jefferson and St Tammany Parishes, LA. Electrical Engineer - GEC has an on-going retainer contract, begun in 1991, to serve as the Consulting Engineer for the Greater New Orleans Expressway Commission (GNOEC), Lake Pontchartrain Causeway, in accordance with the GNOEC General Bond Resolution. The GNOEC is responsible for constructing, maintaining, repairing and operating the 24-mile dual span bridge causeway and requisite approaches, across Lake Pontchartrain connecting Jefferson and St. Tammany Parishes. GEC has provided support to GNOEC Maintenance Forces and performed Preventative Maintenance on the systems located on the Lake Pontchartrain Causeway and associated facilities. Systems in need of maintenance include: High Voltage Electrical Transmission, Marine Radar, Variable Message Sign & Call Boxes, North Channel Bascule Control and Mechanical, Fiber Optic Communications and Computer Network, Phone, Automated Toll Collection and CCTV Surveillance Cameras. (Ongoing)

Mickey Prattini Jr., PE

Engineer, PE, Electrical

Education
B.S., Electrical Engineering, 2004

License
Electrical & Computer Engineer, State of Louisiana, License No. 35993, Issued: 2011

Experience Highlights
Mr. Prattini's more than 19 years of electrical design experience includes lighting design and quality control, wastewater treatment facilities and lift stations, multiple pump motor installations in hazardous (classified) locations, generator installation projects, and multiple government (municipal and transportation) projects. Mr. Prattini is experienced with NFPA standards required by electrical projects. He has consistently managed client and stakeholder relations along with design challenges to produce quality deliverables in line with the project's delivery schedule. He has been a Society of Fire Protection Engineers (SFPE) member since 2017.

Key Projects
H.013897 / I-10 & I-12 COLLEGE DR. FLYOVER RAMP DESIGN-BUILD PROJECT, 02/2020-Present
East Baton Rouge Parish, LA. Engineer of Record - Mr. Prattini has provided photometric and lighting design review and quality control review for the GEC/Boh Bros. team. GEC is responsible for engineering and design quality control services as necessary to complete the design and construction for the I-10 & I-12 College Dr. Flyover Ramp Design-Build Project.

H.004100.5 / I-10 CMAR, LA 415 TO ESSEN LANE ON I-10 AND I-12, 09/2020-Present
West and East Baton Rouge Parishes, LA. Electrical Engineer of Record - Mr. Prattini completed an enhancement lighting study for Segment 1 of the project to incorporate aesthetic lighting at the City Park Lake Bridge and emphasize the Greenway path from the Expressway Park to the bridge. Though the CMAR project is currently in design, Mr. Prattini is currently overseeing and collaborating on the design of the enhancement, roadway, and walkway lighting.

H.011670 / OWNER VERIFICATION SERVICES, I-10/LOYOLA INTERCHANGE DESIGN-BUILD, 07/2019-04/2024
Jefferson Parish, LA. Electrical Engineer - GEC is the Owner Verification Firm (OVF) for this Design-Build project which includes the CE&I, right-of-way acquisition, and utility relocation. As LADOTD's OV representative, GEC is responsible for the acceptance of the work and materials in order to ensure contract compliance. Mr. Prattini reviews design changes for roadway lighting. For the project's enhancement lighting features, he reviewed design team scope, manhour estimate, and design submittals.

RETAINER NO. 44-5267, H.003074.5 / WILLIAMS BLVD – VETERANS BLVD., ROUTE I-10, 04/2019-Present
Jefferson Parish, LA. Electrical Engineer of Record - Mr. Prattini is overseeing the photometrics, electrical calculations, and drawing development of the project, which includes a total length of 2 miles of widening and three interchanges, all of which will need revisions to the existing lighting systems as well as FAA coordination for the lighting design.

OAK HARBOR EAST UTILITY, LAKESHORE ESTATES 300K AND 450K WWTP EXPANSION, 06/2018-01/2021

Slidell, LA. Electrical Engineer of Record - Mr. Prattini designed the power distribution system for a 300,000 gallon per day WWTP system including generator standby power system, area lighting, and construction support. Immediately after construction completion of the 300K expansion, the design and construction of a 450,000 gallon per day WWTP system followed. Mr. Prattini designed the power distribution system for a 450,000 gallon per day WWTP system, and provided construction support engineering services (submittal review, RFI response, site visits, etc.) during the construction of both WWTP systems.

GNOEC, REPLACE THE DMS, 06/2015-09/2018

St Tammany and Jefferson Parishes, LA. Electrical Engineer of Record - The project provided for the removal and replacement of 15 Dynamic Messaging Sign (DMS) installations on the Lake Pontchartrain Causeway Bridge and approach roadway systems. Over 5,000' of fiber and 15,000'of underground conduit was installed to upgrade GNOEC's Northshore communications infrastructure. GEC identified unique opportunities to introduce system improvements for updating the traffic management system (hardware and software) placed on the overhead truss installed for the toll collection system. GEC identified unique opportunities to introduce system improvements that would have a direct impact on traffic management and the on-going effort to provide dynamic solutions. Cost: $3.2M

John Louis Amador, M.S.E.E., PE

Engineer, PE, Electrical

Education
B.S., Electrical Engineering, Louisiana State University, 1998
M.S., Electrical Engineering, Louisiana State University, 1998

License
Electrical Engineer, State of Louisiana, License No. 29007, Issued:2000

Professional Affiliations
The Institute of Electrical & Electronics Engineers (IEEE): Power Engineering Society
Industrial Applications Society
Communications Society

Service Awards
Cambridge Who's Who, 2010 Professional of the Year Representing the Engineering Industry.
2010 Strathmore Who's Who Lifetime Member.
2010 Shining Star Award for Providing Outstanding Customer Service, Shell-Geismar Plant, EO-2 Recycle Gas Compressor Driver Replacement Project.
Cambridge Who's Who, 2009 Professional of the Year Representing the Engineering Industry.
2008 Cambridge Who's Who Registry Listing for Excellence in Electrical Engineering.
2008 Shining Star Award for Providing Outstanding Customer Service, ConocoPhillips CD Emissions Reduction Project.
2007 Cambridge Who's Who Registry Listing for Excellence in Electrical Engineering.
1995 Certificate of Appreciation: Outstanding and Dedicated Service in the Maintenance of E.B.R. Buildings and the Office Paper Recycling Program

Experience Highlights
Mr. Amador is an experienced Senior Electrical/Project Engineer with more than 15 years of experience, including over 10 years of substation experience. This encompasses the semiconductor manufacturing, steel mills, chemicals, mining, energy, paper mills, critical facilities, and public works industries. His areas of responsibility include industrial micro grids, switchyards, industrial distribution substations, emergency/standby power systems, motor control, electrical power distribution, power systems analysis, protective relaying, power systems reliability, industrial auxiliary electrical systems, last mile communications infrastructure, electrical hazardous area classification, electrical equipment procurement, project engineering and construction support.

Mr. Amador has experience serving as Subject Matter Expert (Micro grids, Electrical Power Distribution, Power Systems Analysis, Power System Reliability, Last Mile Communications Infrastructure), Task Force Lead Electrical Engineer, Lead Electrical Engineer, Substation Electrical Engineer, Electrical Protection Engineer, Electrical Equipment Requisitioning Engineer, Electrical QA/QC Engineer, Electrical Completion Engineer, Project Manager (Electrical), Project Engineer (Electrical), Deputy Department Manager, Senior Electrical Designer/Drafter & Business LAN Administrator.

Key Projects
SOUTHEAST LOUISIANA (SELA) PUMP STATION #13, 01/2024-Present

Algiers, LA. Electrical Engineer of Record – Mr. Amador is providing electrical power and distribution design for the project to add three 600cfs pumps (approximately 3,000 HP each), standby power systems to the existing New Orleans Sewerage and Water Board (NOSWB) Pump Station 13.

CDI ENGINEERING SOLUTIONS

Various Locations. Senior Electrical Project Engineer E7 – Responsibilities: MV Distribution (13.8 kV, & 4160V), LV Distribution (480V, 208Y/120V, 125VDC), Distribution Transformers, Station 125 VDC Systems, and Industrial Substations (Regional and Unit Area); Codes/Standards/Regulations (e.g., IEEE, NEC, NESC, & NFPA). Assignment History (Key Assignments):

Nucor - NSLA DRI Plant: Substation No. 1 Grounding & Lightning Protection
SNF Flopam - Plaquemine Facility: Powder Loading Rail Expansion (P4)
IMTT: Avondale Arc Flash Study (Supervised); Geismar Arc Flash Study (Supervised); Gretna Arc Flash Study (Supervised); St. Rose Arc Flash Study (Supervised)
S K Siltron CSS: Phoenix Project - 30 MW 25 kV Service Line
Evonik - Reserve LA Facility: Flare Upgrade Project
Vertex-Mobile AL Task Force: Substation 2A Replacement - Prefabricated Substation Building (P4)

FORD BACON & DAVIS LLC, 03/2006-12/2006

Baton Rouge, LA. Senior Electrical Project Engineer E6 - Responsibilities: SKM (Arc Flash, Load Flow, Short Circuit, Coordination Studies & Motor Starting Studies), Electrical reliability calculations, MV Distribution (4160V & 2400V), LV Distribution (480V, 208Y/120V), Distribution Transformers, Electrical Equipment Procurement ,LV/MV Protection/Relaying, LV/MV motors, LV Variable Frequency Drives, LV Protection/Relaying, PWM UPS Systems, Area Classification, codes/standards/regulations (e.g. API, BICSI, EIA/TIA, IEEE, NEC, NESC, NFPA and CFR: Assistance in the development of Investment Proposals for electrically driven projects, Business case justification development for electrically driven projects, Air-Blown Fiber Optic Infrastructure, Building Audiovisual Requirements, Building LAN/WLAN Network Hardware Architecture/Infrastructure, Firewater Systems, Emergency Notification Systems, cable pulling calculations, cable slack calculations, and construction field support. Key Project Assignments Include the Following:

Motiva Convent Oil Refinery - Convent, Louisiana: Site Lead Electrical Engineer
Upgrade Firewater Supply for Pressure (Engineering Supervision)
Refinery Drainage Improvement (Construction Support)
SVA Convent Phase 2 (Construction Support)
Control House No. 1 UPS Replacement (P1 thru P3)
HGU Unit UPS Replacement (P1 thru P3)
H-Oil Unit UPS Replacement (P1 thru P3)
N & W Tank Farm Area & Street Lighting (P1 thru P3)
Control House No. 3 UPS Replacement (P1 thru P3)

FORD BACON & DAVIS LLC, 07/2000-01/2002

Baton Rouge, LA. Electrical Engineer E4 - Responsibilities: MV (13.8 KV) splices/cut-over, LV protection/relay coordination settings, LV Switchgear, LV Motor Control Center, Industrial/Commercial LV power distribution, LV pole-line distribution design, Lighting Systems, Cable pulling calculations, Engineered Equipment Procurement Area classification studies, Construction Bid Specifications, 3RD Party specialty contract management, PABX telephone

distribution, Plant Emergency Warning system, and Pedestrian access control system. Key Project Assignments Include the Following:

Atofina - Carville, Louisiana: Lead Electrical Engineer
AS-1501 Stripper System Debottleneck
Grace-Davison - Lake Charles, Louisiana: Electrical Engineer
Classic DA Plant
Shell Geismar Chemical Plant - Geismar, Louisiana: Electrical Engineer
Goal Venture Project

JACOBS ENGINEERING/WORLEY PARSONS, 06/1998-07/2000

Baton Rouge, LA. Electrical Specialist E3 - Responsibilities: EDSA Studies (e.g., short circuit studies, load flow studies & motor starting), LV/MV Distribution Equipment Specifications Development, LV/MV switchgear protective relaying schematics, LV Motor wiring diagrams/schematics, Commercial Power Distribution, Temporary Construction Power Design, Motor Witness inspection/testing, Cathodic Protection, Fire Alarm Systems, Building Security Systems, LAN Infrastructure, 3-D PDS Equipment Modeling, PDS Raceway software, CAD drafting. Key Project Assignments Include the Following:

BASF - Geismar, Louisiana: Electrical Engineer
EO Expansion Project - Geismar, LA
MDI-2 Grass Roots Plant Expansion Project - Geismar, LA
Condea-Vista: Aluminum Spray Dryer Project
Exxon - Baton Rouge, Louisiana: Electrical Engineer
Halobutyl Expansion Project
International Paper - Eastover, South Carolina: Electrical Engineer
Eastover Mill Cluster Rule Project
Microchip - Tempe, Arizona: Lead Electrical Engineer
T1 Area FAB Expansion (Assisting Electrical Engineer)
T2 Administration Building
T2 Parking Structure
Motorola MOS 12 - Chandler, Arizona: Lead Electrical Engineer
M Bldg. East Fab Gown Room
Union Carbide - Taft, Louisiana: Electrical Engineer
Olefins As-Built Project

Jonathan Puls, PE

Engineer, PE, Environmental

Education
B.S., Environmental Engineering, Louisiana State University, 2006
B.S., Civil Engineering, Louisiana State University, 1999

License
Civil Engineer, State of Louisiana, License No. 34739, Issued: 2009

Experience Highlights
Mr. Puls' experience includes civil, environmental, and coastal engineering. He has worked on a wide variety of projects ranging from ecosystem restoration, drought studies, permitting and compliance, non-point source runoff improvements, and construction management, including feasibility studies, environmental assessments, and environmental impact statements. He also has a background in natural stream design, cost estimating, risk analysis, incremental cost analysis, and network administration.

Key Projects
I-49 CONNECTOR (LAFAYETTE REGIONAL AIRPORT TO I-10/I-49/US 167 INTERCHANGE), 03/2022-Present
Lafayette, LA. Project Engineer – Mr. Puls developed and currently maintains the project schedule for the design phase of the I-49 Connector project in Lafayette. The project schedule is managed in Microsoft Project for over 500 individual tasks and 15 task categories. Mr. Puls continually evaluates and updates the schedule by tracking the progress and completion of tasks and coordinating with task leaders. Mr. Puls also evaluates the critical path to identify tasks causing schedule slippage and coordinates with the responsible parties. He presents the status of project tasks and overall schedule during weekly meetings with LADOTD management. Mr. Puls also evaluated floodplain impacts within rights-of-way required for the I-49 Connector in Lafayette. Working closely with project designers, he compared existing and proposed project features located within the 100-year floodplain to identify areas where floodplains would be impacted. The quantified findings and evaluation methods were presented for inclusion in SEIS documentation. (State Project No. 44-04128, H.004273.5)

I-10: LA 415 TO ESSEN LANE ON I-10 AND I-12, 09/2020-Present
Baton Rouge, Louisiana. Project Engineer - Mr. Puls assists with development and annual updates of the Project Management Plan (PMP), Initial Financial Plan (IFP), and Project Implementation Plan (PIP). This includes coordinating with project managers at LADOTD and GEC to provide updated budget projections, timelines, and project management documentation. (S.P. No. H.004100)

SOUTH PASS BIRD ISLAND PROJECT (MR-0172), 2022-2024
Plaquemines, LA. Project Manager – On behalf of CPRA, Mr. Puls acted as project manager to this coastal restoration project. He performed project oversight, managed construction administration, site reconnaissance, report preparation, and provided quality control of deliverables. Construction was completed in September 2023 and the Project Closeout Report was finalized and accepted in March 2024. $81,965

THIRD PARTY EIS FOR THE MID-BARATARIA SEDIMENT DIVERSION (MBSD), 2017-2022

Plaquemines Parish, LA. Environmental Engineer -- The Mid-Barataria Sediment Diversion will be the first major controlled sediment diversion reconnecting the Mississippi River with its delta. It is a cornerstone of Louisiana's Coast Master Plan and will provide sediment, water, and nutrients to the Barataria Basin to build land, maintain, and sustain wetlands. Mr. Puls currently serves as an Environmental Engineer for the development of the Environmental Impact Statement (EIS), required by the National Environmental Policy Act (NEPA) to evaluate the impact on human environments for the project. As part of the EIS process, significant public engagement is occurring and the final EIS will clearly and transparently describe the environmental effect of the proposed Mid-Barataria Sediment Diversion.

ST TAMMANY COASTAL PROTECTION PROJECT (PO-167), 2019-2021

St. Tammany Parish, LA. Project Manager and H&H Modeler – As project manager, Mr. Puls managed GEC's role in this St. Tammany Parish coastal protection study as a sub-contractor to Neel-Schaffer Inc. Mr. Puls performed HEC-HMS and HEC-RAS modeling to estimate the pumping capacity requirements for multiple design storms under proposed conditions within 10 watersheds and eight proposed pump stations within and near Slidell, Louisiana. Drainage area characteristics were evaluated before developing a unit hydrograph and the unsteady state model was developed to estimate water surface elevations for various storm frequencies. Pumping recommendations and modeling results were provided in a pump station requirement report. Mr. Puls also managed the development of a levee data assessment report that provided evaluations and comparisons of ADCIRC/SWAN modeled levee heights obtained from USACE and CLARA model results obtained from CPRA.

NINETY-WEST PARK; CITY OF GRAND ISLE,

Grand Isle, LA. Project and Cost Engineer -- Mr. Puls served as a project and cost engineer on this non- point source runoff improvement project in Grand Isle, Louisiana. Mr. Puls helped plan, design, and implement Ninety- West Park, which is a learning exhibit and natural filtration system that removes non-point source stormwater runoff from a drainage canal and routes it through a vegetated swale to provide water quality improvements through bio-filtration. Project features include utilization of solar panels, pumping structures, settlement basins, grass pavers, and vegetative plantings. The Park will include learning exhibits and low-impact designs aimed at improving non-point source runoff, while providing educational opportunities for those that visit the Park. In 2010, Mr. Puls helped secure a non-forgivable loan from the EPA, by developing project plans and proposal information with LDEQ. Construction began in March 2017. Mr. Puls also provided construction management, which was completed in August 2017.

UPPER BERRYESSA CREEK FLOOD RISK MANAGEMENT PROJECT, 2016

Santa Clara County, CA. Cost Engineer – Mr. Puls produced a MCACES cost estimate, including cost narrative, for this flood risk management project in Santa Clara County, California. The project facilitated flood risk reduction through drainage channel modifications and the addition of drainage structures. Mr. Puls was responsible for the determination of a full design-level cost estimate and construction schedule along with all required submittal documentation. Mr. Puls also coordinated the estimate development process and cost reviews with multiple USACE districts and divisions, including Cost DX, the San Francisco District, and the Sacramento District. Mr. Puls provided responses and the appropriate revisions requested during the review process. The estimate received cost certification in April 201

Craig Comeaux, MPPA, CFM

Certified Floodplain Manager

Education
M.A., Public Policy and Administration, Northwestern University, 2023
B.S., Mathematics, Nicholls State University, 1996

Certifications
Certified Floodplain Manager (CFM), Issued 2015

Professional Affiliations
- Association of State Floodplain Managers
- Greater New Orleans Water Collaborative
- Louisiana Floodplain Management Association

Software
MS Office; PL/SQL Developer; OpenText eDOCS Document Management

Professional Development
FEMA Emergency Management Institute, Independent Study Program, 2006-2011; IS-00284: Using the Substantial Damage

Experience Highlights
Mr. Comeaux joined Barowka and Bonura Engineers and Consultants, L.L.C., in 2000. Since that time, Mr. Comeaux has successfully managed or been significantly involved in nearly 100 federal recovery projects in a program management capacity throughout South Louisiana. These projects involve FEMA Public Assistance Grants, FEMA Hazard Mitigation Grants, and U.S. Department of Housing and Urban Development Community Development Block Grants. Mr. Comeaux worked extensively in coordination with FEMA, GOHSEP, Office of Community Development, and local Parish groups to manage over $750 million in project funds, including oversight of project inspection.

In addition to program management, Mr. Comeaux has experience in grant management which includes project formulation, cost estimation, fund accounting, and closeout of a broad range of public assistance and hazard mitigation grants. Mr. Comeaux has experience as an educator and school administrator which includes conducting professional development and community outreach opportunities for employees, parents, students, and other constituent groups

Key Projects
Technical Assistance for Floodplain Management, Community Rating System, and Hazard Mitigation Related Services, (Project No. 0352), Jefferson Parish, LA, 01/2017-06/2020
Mr. Comeaux managed the 2016 Technical Assistance services contract with the Jefferson Parish Department of Floodplain Management and Hazard Mitigation. He worked with local officials to assist with Education and Outreach projects, activities to assist with meeting CRS points, edits and updates to flood maps, analysis of NFIP policies, and the planning process for the Parish's multi-jurisdictional Hazard Mitigation Plan.

In preparation for the Parish's CRS visit, Mr. Comeaux coordinated the review of Elevation Certificates, flood zone determination letters, preparation of required maps and table, and the review of various sections of the CRS manual to evaluate the Parish's compliance with meeting

the requirements. As part of the Parish's Hazard Mitigation Plan update, Mr. Comeaux coordinated the evaluation of critical facilities, the preparation of the Hazard Mitigation Plan Advisory Committee, the revision and development of hazard profiles, and the development of draft resolutions to be enacted by the various jurisdictions.

To assist the Parish with meeting its educational and outreach requirements in accordance with its Program for Public Information, Mr. Comeaux coordinated the design and publication of various public information media, including videos, brochures, websites, and vehicle decals and billboards.

Mr. Comeaux also assisted with the preparation and review of materials for the public meetings as required for the Hazard Mitigation Plan update. Mr. Comeaux attended several of the meetings while coordinating the activities with the responsible parties of the BBEC team.

FEMA Hazard Mitigation Program Services, St. John the Baptist Parish, LA, 05/2022-Present

Mr. Comeaux has managed this project since 2022. In his role, he has prepared the application for FMA Swift Current in fiscal year 2022. Mr. Comeaux has directly been involved in the application development of the following projects:

- St. John the Baptist Parish, FY23 FMA Elevation (132 properties) $26,456,577.00
- St. John the Baptist Parish, FY22 FMA Swift Current SD Elevation (1 property)..... .....$158,298.00
- St. John the Baptist Parish, FY22 FMA Swift Current SD Elevation (5 properties) $887,183.00
- St. John the Baptist Parish, FY22 FMA Swift Current Elevation (10 properties) $1,554,173.00

FEMA Hazard Mitigation Program Services, Restore Louisiana Resilient Communities Infrastructure Program, St. John the Baptist Parish, LA, 05/2022-Present

Within the framework of managing the allocations for St. John the Baptist Parish, Mr. Comeaux exhibited exceptional skills in maintaining working relationships with the Louisiana Office of Community Development Staff. His commitment to effective collaboration and open communication fostered a synergistic partnership between the local initiatives and the state-level offices. By ensuring a seamless flow of information, feedback, and updates, Craig contributed to the success of the Recovery Proposal and Public Comment meetings, aligning the efforts of the local and state entities. This collaborative approach not only adhered to the grant program requirements but also facilitated a more efficient and responsive implementation of resilience projects in St. John the Baptist Parish, reflecting Craig's dedication to fostering effective inter-agency relationships.

FEMA Public Assistance Grant and Program Management, Jefferson Parish, LA, 10/2021-Present

Mr. Comeaux has participated in this project since 2021. In his role, he has prepared the application for PA grants in the aftermath of Hurricane Ida. In addition, Mr. Comeaux currently assists the Parish in its efforts for Public Assistance program funding as a result of Hurricane Zeta. Mr. Comeaux also provides technical assistance services to the Public Safety Grants & Administration Department related to FEMA Public Assistance Insurance and Cost Analysis issues. He has also worked with the Jefferson Parish Department of Ecosystem and Coastal Management and the Department of Water to prepare a Building Resilient Infrastructure and

Communities grant subapplication for the Fiscal Year 2023 submission. Mr. Comeaux has been involved in the development of the following projects:

- Jefferson Parish BRIC 2023 Grand Isle Water Line Project $50,000,000.00
- Project # 672271 Grand Isle Library Building Project $700,362.90
- Project # 672861 East Bank Animal Shelter Project $216,000.00
- Project # 673136 VFD - Lafitte Barataria Crown Point Fire Truck Project $720,000.00
- Project # 673857 Fire Station NO. 11 Repair Project $675,000.00
- Project # 674336 Terrytown Golden Age Center $18,900.00
- Project # 674343 Pontiff Golden Age Center $10,296.00
- Project # 674955 Traffic Engineering Office $45,000.00
- Project # 674957 Traffic Engineering Sign Shop $51,898.50
- Project # 674972 Traffic Engineering Shop Contents Project $43,200.00
- Project # 674974 Traffic Engineering Trucks Project $38,352.60

FEMA FMA (Flood Mitigation Assistance) and BRIC (Building Resilient Infrastructure and Communities) Programs (2022 Contract), Terrebonne Parish, LA, 11/2022 - Present

As Project Manager, Mr. Comeaux develops and administers grant programs stemming from non-disaster grant opportunities for the Flood Mitigation Assistance and Building Resilient Infrastructure and Communities Grant Programs as well as the Hazard Mitigation Grant Program following declared disasters. The scope of services includes coordinating with the Parish the application for Infrastructure and Restoration grants that may include critical facility hardening, pump station improvements, coastal restoration and planning. Mr. Comeaux developed and submitted 20 applications on behalf of Terrebonne Parish Government for the HMGP 4611 Disaster following Hurricane Ida. In addition, he prepared five applications for the BRIC grant program. While some of the same projects were submitted under both programs, he worked with the Parish to prepare grant applications that specifically addressed the eligibility requirements of each program.

- Terrebonne Parish, FY 22 HMGP TLCD Saferoom $393,024.00
- Terrebonne Parish, FY 22 BRIC TLCD Saferoom $393,223.95
- Terrebonne Parish, FY 22 HMGP ADVANCED ASSISTANCE: TP Microgrid HUB and Portable Energy $412,885.00
- Terrebonne Parish, FY 22 HMGP ADVANCED ASSISTANCE: TP Downtown Culvert Replacement $525,000.00
- Terrebonne Parish, FY 22 HMGP ADVANCED ASSISTANCE: Microgrid Study for Various Locations within Terrebonne Parish $525,000.00
- Terrebonne Parish, FY 22 HMGP Hidalgo Drive Drainage Improvements $962,347.84
- Terrebonne Parish, FY 22 HMGP Terrebonne General Hospital Wind Retrofit $1,150,068.00
- Terrebonne Parish, FY 22 HMPG Terrebonne Parish North Treatment Plant Safe Room $1,216,728.00
- Terrebonne Parish, FY 22 HMGP Fletcher Community College Microgrid Installation $1,288,669.00
- Terrebonne Parish, FY 22 BRIC North Treatment Plant Safe House $1,447,750.00
- Terrebonne Parish, FY 22 FMA Project Scoping for Bayou Grand Caillou Pump Station $1,663,215.75.00
- Terrebonne Parish, FY 22 FMA Project Scoping for Houma Heights Drainage Improvements $1,663,215.75
- Terrebonne Parish, FY 22 FMA Project Scoping for Miter Gates $1,663,215.75

- Terrebonne Parish, FY 22 HMGP Generator Project for Critical Facilities .. $1,827,000.00
- Terrebonne Parish, FY 22 HMGP Houma Heights Drainage Improvements $1,857,721.00
- Terrebonne Parish, FY 22 HMGP Terrebonne Parish North Campus Safe Room $2,407,650.00
- Terrebonne Parish, FY 22 BRIC North Campus Public Works Safe Room . $2,411,650.00
- Terrebonne Parish, FY 22 HMGP Houma Fire Department Safe Room Construction..... $2,532,233.00
- Terrebonne Parish, FY 22 HMGP Bayou Cane Fire Department Safe Room Construction $3,798,349.00
- Terrebonne Parish, FY 22 HMPG Bayou Terrebonne/Bayou Cane Berm Project $6,393,492.00
- Terrebonne Parish, FY 22 HMGP Terrebonne Parish Courthouse Safe Room Construction $7,152,884.00
- Terrebonne Parish, FY 22 HMGP Bayou Terrebonne Mite Gate $7,282,877.00
- Terrebonne Parish, FY 22 HMGP Company Canal Miter Gate $7,282,877.00
- Terrebonne Parish, FY 22 HMGP Terrebonne Parish Health Center Wind Retrofits $8,183,643.00
- Terrebonne Parish, FY 22 BRIC Justice Complex Internal Saferoom $16,890,000.00
- Terrebonne Parish, FY 22 HMPG Terrebonne Parish Correctional Center/Safe Room/Flood Mitigation Relocation Project $47,686,579.00
- Terrebonne Parish, FY 22 BRIC Criminal Justice Center Safe Room Construction Project $48,653,049.85
- Terrebonne Parish, FY 22 HMGP Bayou Grand Caillou Pump Station $98,385,000.00

FEMA Hazard Mitigation Assistance (HMA) Programs (2021 Contract), Terrebonne Parish, LA, 08/2021 - Present

In his role, Mr. Comeaux has prepared and is managing grant applications submitted for the FMA and BRIC grants in the Fiscal Year 2021 cycle. Mr. Comeaux coordinated with Local and State representatives during the development and selection processes. Mr. Comeaux has directly been involved in the application development of the following project:

- Terrebonne Parish, FY 2021 Saferoom Construction $393,224.00

Project Management and Technical Services, 2020 Application Development, Terrebonne Parish, LA, 09/2020 - Present

In his role, Mr. Comeaux has prepared and is managing grant applications submitted for the FMA and BRIC grants in the Fiscal Year 2020 cycle. Mr. Comeaux coordinated with Local and State representatives during the development and selection processes. Mr. Comeaux has directly been involved in the application development of the following projects:

- Terrebonne Parish, FY 2020 FMA SRL Elevation..... $953,245.00
- Terrebonne Parish, FY 2020 FMA RL Elevation $179,412.00

Grant and Project Management Consulting Services for the RESTORE Act, Plaquemines Parish, LA, 09/2020-Present

Mr. Comeaux assists Plaquemines Parish by providing consultant services associated with grant writing, administration, technical support, application, monitoring and post-grant requirements of the Restore Act to Plaquemines Parish Government and all Treasury guidelines and federal grant

regulations and those additional grant consulting services required of the professional with the Restore Act as required by Plaquemines Parish Government and the U.S. Treasury. Mr. Comeaux has directly been involved in the application development, approval and/or management of the following projects:

- Bayou Eau Noire Ridge Restoration and Marsh Creation Phase 1 and 2 ... $3,254,150.13
- Bay Adams Headland Restoration and Marsh Creation Phase 1 ..... $1,222,250.00
- Eastbank Landbridge Project – Phoenix to Lake Leary Phase 1 ..... $500,000.00
- Multiyear Implementation Plan Update Assistance $100,000.00

Hazard Mitigation Grant Program Grant Administration Services, City of Zachary, LA, 02/2020-Present

Mr. Comeaux assists the City in preparing and submitting grant amendments for its generator project. The amendment consists of aligning the scope of projects to actual projects scheduled for completion by the City. Mr. Comeaux has directly been involved in the administration of the following project:

- City of Zachary, DR-4277 HMGP Generator $855,477.00

Application Development and/or Project Management of FEMA HMA Grant Programs Lafourche Parish, LA, 11/2019-Present

Mr. Comeaux assists the Parish in preparing and submitting grant applications for the Flood Mitigation Assistance (FMA) and Pre-Disaster Mitigation (PDM) grant programs. He has also been assisting the Parish with preparing and submitting grant applications to FEMA's new Building Resilient Infrastructure and Committees (BRIC) Grant Program. In his role, Mr. Comeaux assists the Parish in identifying projects that meet all grant requirements and works on the required Benefit Cost Analysis. Mr. Comeaux has been directly involved in the application development and approval of the following projects:

- Lafourche Parish, FY 2023 FMA Elevations $409,092.00
- Lafourche Parish, FY 2022 FMA SRL/RL Elevations $796,960.00
- Lafourche Parish, FY 2022 FMA Swift Current SRL Elevations $195,729.00
- Lafourche Parish, FY 2021 FMA SRL/RL Elevations $691,087.00
- Lafourche Parish, FY 2019 FMA SRL/RL Elevations $749,891.00

Project Management Services for the Implementation of FEMA – FMA-PJ-06-LA-2017-023, Lafourche Parish, LA, 05/2019-Present

Mr. Comeaux manages the grant for the elevation of seven projects in Lafourche Parish. Mr. Comeaux works with local officials to plan and prepare grant kickoff meetings, prepare grant required paperwork, and to process reimbursement requests and payment requests through GOHSEP. Mr. Comeaux also works with homeowners to assist with contractor selections and meeting all FMA grant requirements.

- Lafourche Parish, FY 2017 FMA Elevations $1,040,209.00

Project Management and Technical Services, 2018 Application Development, Terrebonne Parish, LA, 11/2018 - Present

In his role, Mr. Comeaux has prepared and is managing grant applications submitted for the FMA and PDM grants in the Fiscal Year 2017 and 2018 cycles. During the 2017 cycle, the Parish presented Mr. Comeaux with several projects to be evaluated for application development. After

reviewing the projects and the best available information concerning these projects, Mr. Comeaux determined the available projects would not get approved. However, in 2018, Mr. Comeaux was able to assist the Parish in identifying projects that had a better likelihood of being selected and prepared and submitted those applications. Mr. Comeaux coordinate with Local and State representatives during the development and selection processes. Mr. Comeaux has directly been involved in the application development and approval of the following projects:

- Terrebonne Parish, FY 18 FMA SRL Elevation.....$255,455.00
- Terrebonne Parish, FY18 PDM St. Louis Canal Road Drainage Improvements $1,779,298.00

Project Management Services for the Implementation of FEMA – FMA-PJ-06-LA-2016-003 Award, Lafourche Parish, LA, 07/2018-Present

Mr. Comeaux manages the grant for the elevation of eight projects in Lafourche Parish. Mr. Comeaux works with local officials to plan and prepare grant kickoff meetings, prepare grant required paperwork, and to process reimbursement requests and payment requests through GOHSEP. Mr. Comeaux also works with homeowners to assist with contractor selections and meeting all FMA grant requirements. One of the projects in this grant contained a CDBG-LMI component that Mr. Comeaux assisted the Parish with collecting and preparing the required documents. Mr. Comeaux also participated in and responded to requests for information in the program audit upon project completion.

- Lafourche Parish, FY 2016 Elevations.....$1,399,280.00

FEMA Hazard Mitigation Assistance Consultant (Project No. 2130-02035), City of New Orleans, LA, 08/2017-Present

Mr. Comeaux is currently the project manager for the City of New Orleans hazard mitigation assistance grants managed by the Office of Hazard Mitigation. Mr. Comeaux works with the City of New Orleans to prepare and submit applications for funding to FEMA's Hazard Mitigation Assistance (HMA) Programs, including but not limited to the Hazard Mitigation Grant Program (HMGP), Flood Mitigation Assistance (FMA) Grant Program, State Generator Program, and the Pre-Disaster Mitigation (PDM) Grant program. It is also the responsibility of Mr. Comeaux to implement the HMGP program for the City. Mr. Comeaux has also been involved in the preparation and review of Benefit Costs Analysis reports for Green Infrastructure projects for the City of New Orleans, including the Mirabeau Gardens Green Infrastructure, the Broadmoor Drainage Improvements project and the City Park Green Infrastructure projects. In this role, Mr. Comeaux has managed the collection of data necessary to calculate the benefit cost ratio and assisted in the preparation of the Benefit Costs Analysis and report for FEMA review. Mr. Comeaux has directly been involved in the approval and/or management of the following projects:

- FY23 FMA Elevation - Structures $12,161,763.00
- FY22 FMA Elevation - SRL Structures.....$1,351,521.00
- FY22 FMA Elevation - RL Structures.....$7,367,738.00
- FY22 FMA Elevation - Structures $2,116,962.00
- FY22 FMA Elevation - SRL Structures.....$379,552.00
- FY22 FMA Elevation – SRL/RL Structures $2,622,301.00
- FY22 FMA Elevation - Structures $1,306,568.00
- FY22 FMA Elevation - SRL Structures.....$142,987.00
- FY22 FMA Elevation - RL Structures.....$970,452.00
- FY22 FMA Elevation - Structures $881,286.00
- FY22 FMA Elevation - SRL Structures.....$5,484,501.00

- FY22 FMA Elevation – SRL/RL Structures $11,743,752.00
- FY22 FMA Elevation - Structures $3,571,161.00
- FY22 FMA Swift Current SRL Structure Elevation $834,258.00
- FY22 FMA Swift Current SRL Structure Elevation $3,142,140.00
- FY22 FMA Swift Current SRL Structure Elevation $607,059.00
- FY22 FMA Swift Current SRL Structure Elevation $2,536,585.00
- FY21 FMA SRL Structure Elevation $10,730,860.00
- FY21 FMA SRL/RL Structure Elevation $11,684,737.00
- FY21 FMA RL Reconstruction $205,835.00
- FY20 FMA SRL Structure Elevation $14,200,582.00
- FY20 FMA SRL Structure Reconstruction $475,151.00
- FY19 FMA Residential Historic Elevation $8,438,022.00
- FY19 FMA Residential Non-Historic Elevation $6,308,246.00
- FY18 1786 Statewide Generator Application $1,131,195.00
- FY18 FMA Residential Historic Elevation $4,227,236.00
- FY18 FMA Residential Non-Historic Elevation $4,172,098.39
- FY18 FMA Non-Residential Elevation $337,150.00
- FY18 SRL-PJ-06-LA-2012-009 ..... $1,792,928.00
- FY17 FMA Elevation (52 properties) $12,451,579.52
- FY 17 Multi-Jurisdictional Hazard Mitigation Plan Project $345,150.00
- FY 2013 FMA Elevation (36 properties) $7,410,818.00
- 1603/1607 HMGP (8 grant applications, 50+ properties) $21,349,250.00
- 1607 HMGP Mirabeau Gardens Stormwater Management and Flood Mitigation BCA $23,469,698.00
- 1603 HMGP Broadmoor Stormwater Drainage BCA $55,666,026.00
- 1603 HMGP City Park/Lakeview Drainage Project BCA $2,316,000.00
- 1603 HMGP St. Roch Drainage Project BCA $7,500,000.00

FEMA Public Assistance and Hazard Mitigation Program Services, St. Charles Parish, LA, 08/2017-Present

Mr. Comeaux has managed this project since 2017. In his role, he has prepared the application for FMA and PDM grants in the Fiscal Year 2017 cycle. In addition, Mr. Comeaux currently manages the Parish's efforts for Public Assistance program funding as a result of Hurricane Barry. Mr. Comeaux also provides technical assistance services to the Grants Department. Mr. Comeaux has directly been involved in the application development and approval of the following projects:

- St. Charles Parish, FY23 FMA Elevation (4 properties) $775,200.00
- St. Charles Parish, FY22 FMA Swift Current SRL Elevation (5 properties) $889,966.00
- St. Charles Parish, FY22 FMA Swift Current SRL Elevation (16 properties) $2,986,354.00
- St. Charles Parish, FY22 FMA Swift Current Elevation (4 properties) $598,280.00
- St. Charles Parish, FY21 FMA SRL Elevation (36 properties) $6,367,899.00
- St. Charles Parish, FY20 FMA SRL Elevation (34 properties) $6,055,422.00
- St. Charles Parish, FY19 FMA Elevation (31 properties) $5,605,602.00
- St. Charles Parish, FY17 FMA Elevation (11 properties) $1,606,584.00
- St. Charles Parish, FY17 Multi-Hazard Mitigation Plan Update $63,450.00.00

Hazard Mitigation Assistance, Elevation of Four (4) Residential Structures (HMGP # 1786-057-0007, Lafourche Parish, LA, 09/2016-Present

Mr. Comeaux manages the grant for the elevation of four projects in Lafourche Parish. Mr. Comeaux works with local officials to plan and prepare grant kickoff meetings, prepare grant required paperwork, and to process reimbursement requests and payment requests through

GOHSEP. Three of the projects in this grant contained a CDBG-LMI component that Mr. Comeaux assisted the Parish with collecting and preparing the required documents. Mr. Comeaux also participated in and responded to requests for information in the program audit upon project completion.

- Lafourche Parish, FY 2016 HMGP Elevations $621,376.00

Program Management 2014 Hazard Mitigation Assistance Grant Funding, Jefferson Parish, Louisiana (HMGP PROJECT), 04/2015-04/2019

Mr. Comeaux managed the 2014 Hazard Mitigation Assistance Grant for home elevation and reconstruction for Jefferson Parish. In his role as Project Manager, Mr. Comeaux planned and prepared for grant kickoff meetings hosted by Jefferson Parish. He worked with homeowners preparing grant required paperwork, contracts, and all other documentation required for grant application. Additionally, Mr. Comeaux worked closely with parish officials to prepare program guidance, forms, and processes to guarantee proper accounting and funding of home elevation and reconstruction project.

As Project Manager for elevation and reconstruction projects for Jefferson Parish, Mr. Comeaux coordinates activities between homeowners, contractors, construction management firm, and the parish. As part of the coordination process, Mr. Comeaux is responsible for reviewing contracts for grant compliance, preparing cost reasonable analysis for the work proposed, and applying for reimbursement for the funds allocated to each project. These projects resulted in approximately $12.6 million in federal grant funding to the parish in reimbursements.

Mr. Comeaux has been directly involved in the management of the following projects:

- Jefferson Parish, FY14, FMA Elevations $3,121,877.50
- Jefferson Parish, FY14, FMA Elevations $3,698,327.00
- Jefferson Parish, FY14, FMA Non-Residential Elevation $928,220.00
- Jefferson Parish, FY14, PDM Wind Retrofit Project $3,757,904.00
- Jefferson Parish, FY14, FMA Reconstruction $1,051,822.00

Louisiana Land Trust Demolition Program, Statewide, LA (CDBG PROJECT), 01/2009-06/2013

As Project Manager for demolition projects for the Louisiana Land Trust, Mr. Comeaux designed and managed the development of several databases utilized for the validation, tracking, accounting, and auditing of U.S. Department of Housing and Urban Development Community Development Block Grants (CDBG). As part of the auditing process, Mr. Comeaux worked with the Louisiana Legislative Auditors for validating work completed against contractor invoices. This has resulted in the processing of approximately $80 million of CDBG funds and the demolition and restoration of approximately 8600 sites.

Mr. Comeaux coordinated and managed contracts involved in the demolition of structures and the removal of slabs and all associated concrete from sites purchased by the Road Home Corporation following Hurricanes Katrina and Rita throughout south Louisiana. He conducted progress meetings with contractors and reviewed daily schedules and progress reports; managed the assignment of field personnel for all aspects of demolition and debris removal monitoring; coordinated progress meetings with Louisiana Land Trust and its agents in all matters pertaining to structure demolition and the removal of slabs and all associated concrete; and reviewed and monitored all reports and data received and transmitted to the Louisiana Land Trust for accounting

and progress reporting. Mr. Comeaux assisted with the coordination of LDEQ for compliance for the abatement of structures and slabs.

Thomas (Tom) J. Rodrigue, CFM

Certified Floodplain Manager

Education

U.S. Army Command and General Staff College Graduate. 1979-1982
Diploma, Business Administration/Traffic Management, Meadows-Draughon College, 1963

Certifications

Certified Floodplain Manager (CFM), Issued 2001

Awards

- The Rod Emmer Award by LFMA, 2018
- National Floodplain Manager of the Year by ASFPM, 2005

Experience Highlights

Mr. Rodrigue has over 23 years of experience as a Floodplain Manager and Hazard Mitigation Specialist for both Parish Government and the civilian sector as a consultant for a private company. Mr. Rodrigue became a Floodplain Manager in May of 2001 and became a Certified Floodplain Manager (CFM) through the Association of State Floodplain Managers (ASFPM) in April 2004. He has been involved in the FEMA Hazard Mitigation Grant Program (HMGP), Flood Mitigation Assistance (FMA) Program, Building Resilient Infrastructure and Community (BRIC) Program, and the Severe Repetitive Loss (SRL) grants.

Key Projects

Grant and Project Management FEMA Hazard Mitigation Assistance (HMA) Consultant, Terrebonne Parish, LA, 01/2020-Present

Mr. Rodrigue assists with identifying potential homeowner candidates for elevation of their structure for this application. He attended meetings to discuss the FEMA/Parish requirements and procedures and assisted with interviewing the interested homeowners. He conducted site visits to gather the necessary information and followed up with homeowner(s) to ensure the appropriate documents were completed and submitted for participation in the application.

Public Assistance Grant Administration, 2016 Louisiana Severe Storms, City of Baker, LA, 12/2019 - Present

Mr. Rodrigue was tasked by BBEC with formulating the Debris Management Plan for the City of Baker in Louisiana. This plan will stipulate the policies, procedures, and the responsibilities necessary to gather and dispose of all debris resulting from hurricanes, tropical storms, tornadoes, and any other natural disasters which may affect the City of Baker. Mr. Rodrigue possesses the knowledge and abilities to create this plan based on his past eighteen (18) years of experience in Emergency Management from Sep 1992-Dec 2010 for the Louisiana National Guard and Jefferson Parish, respectively. During the period Dec 2000-Dec 2010, Mr. Rodrigue served in a dual role as an Emergency Coordinator and the Floodplain Manager for Jefferson Parish.

Project Management Services for the Implementation of FEMA – FMA-PJ-06-LA-2017-023, Elevation of Seven (7) Structures), Lafourche Parish, LA, 05/2019-Present

Mr. Rodrigue attended initial meeting with homeowners who were interested in participating in this program. He created the project structure and land sketches for each of the seven structures in order to provide necessary information for contractors to submit the appropriate bid estimates

to complete these projects. Mr. Rodrigue also coordinated with homeowners to answer any questions or concerns on issues associated with the elevation process.

Project Management and Technical Services, 2018 Contract, Terrebonne Parish, LA 11/2018-Present

Mr. Rodrigue conducted one on one meetings with each homeowner interested in pursuing elevation of their structure under this grant. He guided them in the process of obtaining necessary bid estimates from contractors for their selection to accomplish the project. Mr. Rodrigue was also involved in the process of obtaining quotes for those structures requiring an American Disability Act (ADA) lift for individuals who obtained the required declaration from a physician on the need for these lifts.

FEMA Hazard Mitigation Assistance Consultant, New Orleans, LA (Project No. 2130-02035), 01/2017-Present

Mr. Rodrigue manages the individual projects from start to finish in conjunction with the elevation of Repetitive Loss structures covered by the National Flood Insurance Program (NFIP) and approved for mitigation by the Federal Emergency Management Agency (FEMA) as a result of mitigation grant requests submitted by the respective Parish through the Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP). He serves as the point of contact with the homeowners, Parish, and Contractor during the duration of the project. He advises on the budget, homeowner cost, and duplication of benefits (if applicable). Mr. Rodrigue issues Notice to Proceed upon receipt and completion of all required paperwork, attends meetings to review agreements, Engineer Design Plans and go over milestone expectations. Mr. Rodrigue develops a consolidated project "Dashboard" to track each property throughout the course of the project. He conducts visits to each property at the completion of all milestones to verify completion, take photographs, and compile a site visit report. Upon completion of each site, he is notified and a final site visit is conducted to verify elevation is at the correct height, and coordinate with the homeowner to ensure they are satisfied with the work so the completion certificate can be signed and the final payment can be processed. Throughout the project, Mr. Rodrigue provides problem resolution with the homeowner and contractor, as needed.

Letter of Map Revision Study and Application, (CCE#119-112), City of Covington, LA, 05/2019-03/2021

Mr. Rodrigue conducted a complete review and analysis of all Repetitive Loss (RL) and Severe Repetitive Loss (SRL) structures previously experienced in the City of Covington in conjunction with the submission of the LOMR application submitted to FEMA Region 6 for review and approval.

Technical Assistance for Floodplain Management, Community Rating System and Hazard Mitigation Related Services (Project No. 0352), Jefferson Parish, LA, 01/2017-06/2020

BBEC was tasked by Jefferson Parish to provide Technical Support in enhancing multiple programs that are critical to the Parish's standing with FEMA. One being the submission of the five-year update to the Hazard Mitigation Plan which is a FEMA requirement to ensure the Parish's eligibility to continue applying and receiving FEMA mitigation grant funding. The second initiative deals with the enhancement of the Community Rating System (CRS) rating for the Parish through the National Flood Insurance Program (NFIP) to a Class "5". This rating determines how high of a discount the homeowners in the Parish receive on their annual premiums for their respective Flood Insurance policies if they reside in a Special Flood Hazard Area (SFHA). Mr. Rodrigue was tasked by BBEC to assist the Parish and provide the requested Technical Support based on his previous employment with the Parish where he was instrumental in formulating the original Hazard Mitigation Plan for the Parish in his role as the Floodplain Manager and the Community

Rating System (CRS) Coordinator where he successfully increased the CRS rating from a Class "8" to a Class "6" during his tenure with the Parish. Through Mr. Rodrigues' efforts, Jefferson Parish was successful in improving their rating from a Class "6" to a Class "5" in May 2019. Note: This program has a descending class rating with "1" being the highest.

Project Management 2014 Hazard Mitigation Grant Funding, Jefferson Parish, LA, 03/2015-Present

Mr. Rodrigue managed the individual projects from start to finish in conjunction with the elevation of Repetitive Loss structures covered by the National Flood Insurance Program (NFIP) and approved for mitigation by the Federal Emergency Management Agency (FEMA) as a result of mitigation grant requests submitted by the respective Parish through the Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP). He served as the point of contact with the homeowners, Parish, and Contractor during the duration of the project. He advised on the budget, homeowner cost, and duplication of benefits (if applicable). Mr. Rodrigue issued Notice to Proceed upon receipt and completion of all required paperwork, attended meetings to review agreements, Engineer Design Plans and go over milestone expectations. Mr. Rodrigue developed a consolidated project "Dashboard" to track each property throughout the course of the project. He conducted visits to each property at the completion of all milestones to verify completion, take photographs, and compile a site visit report. Upon completion of each site, he was notified and a final site visit was conducted to verify elevation is at the correct height, and coordinated with the homeowner to ensure they were satisfied with the work so the completion certificate could be signed and the final payment could be processed. Throughout the project, Mr. Rodrigue provided problem resolution with the homeowner and contractor, as needed.

Elevation of Four (4) Residential Structures, Lafourche Parish, LA, (HMGP #1786-057-0007), 09/2016-Present

Mr. Rodrigue manages the individual projects from start to finish in conjunction with the elevation of Repetitive Loss structures covered by the National Flood Insurance Program (NFIP) and approved for mitigation by the Federal Emergency Management Agency (FEMA) as a result of mitigation grant requests submitted by the respective Parish through the Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP). He serves as the point of contact with the homeowners, Parish, and Contractor during the duration of the project. He advises on the budget, homeowner cost, and duplication of benefits (if applicable). Mr. Rodrigue issues Notice to Proceed upon receipt and completion of all required paperwork, attends meetings to review agreements, Engineer Design Plans and go over milestone expectations. Mr. Rodrigue develops a consolidated project "Dashboard" to track each property throughout the course of the project. He conducts visits to each property at the completion of all milestones to verify completion, take photographs, and compile a site visit report. Upon completion of each site, he is notified and a final site visit is conducted to verify elevation is at the correct height, and coordinate with the homeowner to ensure they are satisfied with the work so the completion certificate can be signed and the final payment can be processed. Throughout the project, Mr. Rodrigue provides problem resolution with the homeowner and contractor, as needed.

Flood Mitigation Assistance Grant, Elevation of eight (8) structures under SRL/RL Elevation Project, Lafourche Parish, LA, 07/2018-Present

Mr. Rodrigue manages the individual projects from start to finish in conjunction with the elevation of Repetitive Loss structures covered by the National Flood Insurance Program (NFIP) and approved for mitigation by the Federal Emergency Management Agency (FEMA) as a result of mitigation grant requests submitted by the respective Parish through the Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP). He serves as the point of contact with the homeowners, Parish, and Contractor during the duration of the project. He advises on

the budget, homeowner cost, and duplication of benefits (if applicable). Mr. Rodrigue issues Notice to Proceed upon receipt and completion of all required paperwork, attends meetings to review agreements, Engineer Design Plans and go over milestone expectations. Mr. Rodrigue develops a consolidated project "Dashboard" to track each property throughout the course of the project. He conducts visits to each property at the completion of all milestones to verify completion, take photographs, and compile a site visit report. Upon completion of each site, he is notified and a final site visit is conducted to verify elevation is at the correct height, and coordinate with the homeowner to ensure they are satisfied with the work so the completion certificate can be signed and the final payment can be processed. Throughout the project, Mr. Rodrigue provides problem resolution with the homeowner and contractor, as needed.

Pre-Monitoring of Emergency Storm Debris Removal, Debris Management Plan, Greater Lafourche Port Commission, LA, 8/2018-05/2019

Mr. Rodrigue was tasked by BBEC to formulate the Debris Management Plan for the Port Commission which consisted of three (3) entities at multiple locations. The Port Commission Administration Office in Cutoff, LA., Port Fouchon in Fouchon, LA., and the South Lafourche Leonard Miller Jr. Airport in Galliano, LA. The Plan stipulates the policies, procedures, and responsibilities necessary to gather and dispose of all debris resulting from Hurricanes, Tropical Storms, Tornadoes, and any other natural disasters which may occur and affect one or more of the above three (3) locations. Mr. Rodrigue possesses the knowledge and abilities to create this plan based on his past years of experience in Emergency Management from September 1992 through December 2010 for the Louisiana National Guard and Jefferson Parish, respectively. During the period December 2000 through December 2010, Mr. Rodrigue served in a dual role as an Emergency Coordinator and the Floodplain Manager for Jefferson Parish.

Grant Management Specialist/Consultant, 12/2010-05/2013

During the period Dec 2010-May 2013, Mr. Rodrigue was employed by Coastal Shoring, a private concern, which gave him the opportunity to operate at the other end of the mitigation spectrum in the elevation of structures. His duties and responsibilities consisted of the following aspects:

- Coordination with Parish contractor and respective homeowners for elevation of their structures upon their selection of Coastal Shoring to perform the project.
- Monitoring of project progression and advising Parish contractor of the status accordingly.
- Coordinating and establishing the request for periodic funding payments for work performed on these projects to include the submission of appropriate documentation required.
- Coordination with the State Hazard Mitigation Program through the State Office of Community Development for elevation of structures contracted with Coastal Shoring in the same manner previously mentioned for the Parish programs.

Floodplain Manager/CRS Coordinator, Jefferson Parish, LA, 12/2000-12/2010

Mr. Rodrigue's duties and responsibilities consisted of the following aspects:

- Supervision of the Parish contractor staff in administering all the mitigation programs to include the preparation and submission of the FEMA grant applications which produced the funding resources mentioned above as well as required periodic reports on these grants to the Governor's Office of Homeland Security/Emergency Preparedness (GOHSEP).
- Coordination with the Parish contractor concerning appropriate documentation to be maintained for execution of the grant all the way to closeout.

- Participation in all introductory meetings conducted by the Parish contractor with respective homeowners to explain the aspects of the program and the process for getting their project started.
- Coordination with Parish Contractor concerning any and all problem areas resulting from the projects, whether it be Parish requirements, FEMA requirements, or contractor issues.
- Reviewed and approved all periodic contractor payment requests for work performed forwarded from the Parish contractor prior to their transmission to the Parish Finance office for check payment to appropriate elevation contractors. This also included review and approval of all periodic payment requests from the Parish contractor for their performance of Program Management functions for the designated mitigation grants.
- Attended and conducted status meetings both with the Parish contractor and contractors performing the work, if necessary. These meetings also involved individual homeowners, when required.

The above actions resulted in the awarding of over $200M in HMGP grants from FEMA to include structures damaged as a result of Hurricane Katrina. Upon departing Parish employment in 2010, for another position, Mr. Rodrigue was responsible for mitigating over 1,100 structures for elevation and/or reconstruction.

Mr. Rodrigue was responsible for obtaining FEMA grants for a number of key drainage projects both on the Eastbank and Westbank of Jefferson Parish. Some of the key projects are listed below:

Eastbank:

- Midway Dr. (River Ridge)
- Cleary/Transcontinental Drs. (Metairie)
- Elmwood Corridor (Metairie)

Westbank:

- Maplewood Subdivision (Harvey)
- Oakwood (Terrytown/Gretna)

These projects represented approximately $50M in total project costs.

Community Rating System

Mr. Rodrigue's duties and responsibilities consisted of the following:

- Maintaining all necessary documentation required by the National Flood Insurance Program CRS manual to substantiate the appropriate CRS rating for the community.
- Coordination with all pertinent entities with Parish government to collect the required documentation (i.e. Public Works, Drainage, Environmental, Public Affairs, Library, Electronic Information Systems).
- Submission of required community documentation for the annual program recertification in October of each year.
- Presentation of required documentation for the 5-year on-site program review by the Insurance Servicing Office (ISO).

Cristina Wall, M.P.S., CFM

Certified Floodplain Manager

Education

M.S., Preservation Studies, Tulane University, New Orleans, LA, 2010
B.S., Architecture, Louisiana State University, Baton Rouge, LA, 2009

Software

MS Office; PL/SQL Develop; OpenText eDOCS
Document Management
FEMA GO
FEMA BCA Toolkit 6.0
Autodesk AutoCad
Adobe Suite (Photoshop, Illustrator, In Design)

Experience Highlights

Cristina Wall, M.P.S., CFM, is a seasoned Project Manager with a Certified Floodplain Manager designation, boasting an extensive background in leading and executing projects across a broad spectrum of industries. Her expertise is not limited to, but includes a strong focus on, the oversight, coordination, and inspection of home elevation, hazard mitigation, and technical assistance initiatives. Demonstrating a profound capability in conducting detailed site evaluations, Wall excels in the creation of exhaustive property documentation and the accurate completion of all necessary elevation compliance forms.

Key Projects

Grants Administration, St. John the Baptist Parish, LA, 05/2022-Present
Ms. Wall provided site inspection and construction support services related to the preparation of FMA applications that encompassed over one hundred and thirty properties, many of which were repetitive loss and severe repetitive loss properties. In a demanding and dynamic environment, she spearheaded the coordination with homeowners, devised and executed meticulous scheduling strategies, and upheld the highest standards of quality assurance across all property surveys. Her role was pivotal in guaranteeing that each property underwent a thorough research and survey process, successfully navigating tight deadlines to deliver exceptional results.

FEMA FMA and BRIC Application Development, Terrebonne Parish, 01/2024-Present
Ms. Wall played a critical role in the development of grant applications for FEMA's Flood Mitigation Assistance (FMA) and Building Resilient Infrastructure and Communities (BRIC) programs in Terrebonne Parish, applying her expertise to a diverse array of projects including bridge replacements and the implementation of microgrids for enhanced resilience during power disruptions. Her contributions were instrumental in securing funding to fortify the parish's infrastructure against future challenges.

Project Management, Jefferson Parish School Board, Jefferson, LA, 02/2024-Present
In her role with the Jefferson Parish School Board, Ms. Wall expertly managed the repair of over twenty schools in the Jefferson Parish Public School System, damaged by Hurricane Ida, showcasing her leadership in project coordination, documentation review, and directing architectural and engineering firms. As the owner's representative, she ensured the accuracy and processing of pay applications, conducted site visits, and facilitated communication between school leadership, construction, and architectural teams. Her responsibilities also extended to

performing due diligence on environmental safety, specifically asbestos and lead paint management, affirming her commitment to health and safety standards.

TESI, Consent Decree Support, Central States Water Resources, 01/2024-Present
In her role on the TESI, Consent Decree Support project for Central States Water Resources, Ms. Wall led the meticulous review of sewage treatment plant work orders, Discharge Monitoring Report (DMR) data, and other essential operational documentation. Her expertise was instrumental in evaluating the compliance of each sewage treatment facility under the consent decree, culminating in the development of comprehensive Sewage Treatment Plant (STP) reports for submission to the EPA and LDEQ. Collaborating closely with Central States Water Resources' operations managers, project managers, and engineers, she ensured adherence to all consent decree stipulations, showcasing her exceptional project management and regulatory compliance skills.

Chief Operating Officer, Hydra Force, LLC; Belle Chasse, LA.
Ms. Wall served as Chief Operating Officer for this multi-million-dollar company which produced hydraulically powered mobile equipment. She oversaw all aspects of business operations including project management, technician scheduling, quality control, estimating, customer relations, and the closeout of projects while successfully leading and managing a team of twenty-five employees. During her tenure, Ms. Wall also implemented a wide-ranging program of modernization and process efficiencies which optimized resources, improved customer service and increased profitability.

Project Manager II, MasTec Network Solutions; Metairie, LA.
Ms. Wall executed site surveys, scoped projects, and accurately estimated costs for LTE, AAV, and site modification projects, harnessing data-driven surveys to pinpoint deficiencies, and craft scopes of work aligned with project objectives and created construction schedules and assessed equipment needs to implement approved upgrades. She was also responsible for comprehensive financial forecasting and revenue tracking for assigned projects which required the generation of monthly and quarterly budgets, approval and scheduling of expenditures, rigorous evaluation, and analysis of cost-to-completion projections to ensure alignment with company standards for gross margins.

AutoCAD Designer/Manager, MasTec Network Solutions; Metairie, LA.
Ms. Wall identified equipment and layout challenges and actively assisted in troubleshooting equipment concerns, installation logistics, equipment requirements, and infrastructure upgrades. She also organized equipment installation efforts among technicians, coordinated site visits with clients and vendors, provided direction to subcontractors in conjunction with the project manager, and assisted in the development of streamlined procedures and robust contingencies to optimize overall project efficiency.

Harold Bodenheimer

Inspector

Education
A.S., 1979, Accounting. Phillips Junior College, 1979
Certificate, Construction Management, Delgado Community College, 1976

Military
United States Army, 1969-1975, Helicopter armament maintenance (45J20). Honorable discharge Rank E4 – Specialist 4th Class (3 years active and 3 years reserve)

Experience Highlights
Mr. Bodenheimer has over 48 years of experience in inspection and on-site monitoring including verifying compliance with plans, drawings, specifications, building codes, and other areas as directed by A&E. He maintains daily reports and as-builts, and verifies actual drawings, quantities and pay request. Mr. Bodenheimer's experience in this industry includes 20 + years as an on-site Resident Project Inspector on various public works projects along with 40 + years of combined experience working in a supervisory position while utilizing construction abilities, industry knowledge and leadership qualities to supervise operations and maintenance tasks.

Key Projects
Hartman Engineering, L.L.C., 1986-1991
Mr. Bodenheimer performed inspection services on Sauvé Road Pump Station, capacity 2 - 9,000 gpm pumps; River Ridge, LA. The construction included a 30" diameter pipe- 1,250 feet and a 36" diameter pipe- 1,300 feet HDPE pipe directional drilling from Jefferson Hwy. to Mississippi River, pipe crossover at top of levee with bypass asphalt maintenance road, tied-in a 30" diameter HDPE pipe from Hillings Ditch Pump Station to Sauvé Road Pump Station, installed embankment material to theoretical levee sections for pipe placement, reshaped levee slope from 4:1 to 5.5:1 after backfilling force main pipe was completed per plans on protected side of levee from toe of levee to pipe fittings top levee, demolished existing asphalt levee maintenance road and existing concrete slope pavement armor on river side of levee, constructed new top of levee asphalt pavement road by-pass drive and access ramp, all work over the levee and within 10 feet of the levee toes was performed and completed while stage of Mississippi River was below elevation +11.0, installed new concrete armor panels and pipe supports on river side of levee per design, restored upper bank of river with stone armor; placed embankment material as necessary for pipe cover, installed cathodic protection system on river bank, monitored all construction on concrete placement on levee armor, wet well and valve vault at pump station plant, installed steel structure "Dolphin" in Mississippi River for outfall pipe and discharge.

Pritchard Pump Station, Marrero, LA
Construction consisted of the erection of 14,000-gpm sewage pump lift station. Mr. Bodenheimer conducted on-site inspections of all phases of construction including piles and pile driving, paving structural concrete work, mechanical systems, electrical systems, as well as landscaping and finish work.

Cleary Improvements (Veterans Blvd. to West Esplanade Ave.) (Council District 5), Public -Works No. 2017-014-RBP, Jefferson Parish, LA, 06/2019-Present
Project consists of new underground drainage, catch basin, manholes, lateral RCP tie-ins, house sewer and water supply tie-ins, construction of completely new PPC roadway with curbs, drive aprons and sidewalks 4,500 linear feet by 40 feet wide. Mr. Bodenheimer is providing construction inspection services for the day to day installation of underground 2,500 linear feet of 48" RCPA,

42" RCPA, 36" RCPA drainage pipe work along with new 6" sewer line house connection, 3/4" water service and water meter adjustment, construction of two canal outfall tie-ins 36" RCP and 48" RCPA with slope pavement at W Esplanade canal, and removal and pour back 130 linear feet by 26.5' wide of concrete roadway east bound lane of W Esplanade Ave at Cleary Ave. Mr. Bodenheimer reviews monthly pay requests, concrete tickets, and quality and quantity of all materials used on project. Contract time 590 days.

Hurricane Katrina Damage Roadway Restoration, St. Bernard Parish, LA, 2009-2015
Mr. Bodenheimer was a Lead Field Technician/Construction Inspector on this $102M roadway and drainage improvement program consisting of 18 different construction contracts. Mr. Bodenheimer inspected asphaltic and Portland cement roadway removal and replacement. During construction, he inspected the exposed roadway base and made determinations of complete base and subbase replacement (based on the Engineer's criteria given). Mr. Bodenheimer also inspected complete installations of PVC, reinforced concrete, and corrugated steel pipe. He coordinated the work with the Owner's testing lab and inspected the testing services, too. Mr. Bodenheimer coordinated work among multiple construction crews, resolved utility conflicts, verified daily quantities and monthly quantities for billing, maintained project records and created punch-list and performed the final inspection for project acceptance.

Blair Drive, Job No. 157771, City of New Orleans, LA, 2018
As Resident Inspector, Mr. Bodenheimer reviewed compliance with project plans, materials and specifications. He inspected all phases of the road construction ensuring that all field testing was performed in accordance with the latest DOTD testing requirements. Mr. Bodenheimer coordinated work among multiple construction crews, resolved utility conflicts, verified daily quantities and monthly quantities for billing, maintained project records and created punch-list and performed the final inspection for project acceptance.

Lacour Monique Street, Job No. 157726, City of New Orleans, LA, 2018
As Resident Inspector, Mr. Bodenheimer reviewed compliance with project plans, materials and specifications. He inspected all phases of the road construction ensuring that all field testing was performed in accordance with the latest DOTD testing requirements. Mr. Bodenheimer coordinated work among multiple construction crews, resolved utility conflicts, verified daily quantities and monthly quantities for billing, maintained project records and created punch-list and performed the final inspection for project acceptance.

Curran Road, Job No. 156604, City of New Orleans, LA, 2017- 2018
As Resident Inspector, Mr. Bodenheimer reviewed compliance with project plans, materials and specifications. He inspected all phases of the road construction ensuring that all field testing was performed in accordance with the latest DOTD testing requirements. Mr. Bodenheimer coordinated work among multiple construction crews, resolved utility conflicts, verified daily quantities and monthly quantities for billing, maintained project records and created punch-list and performed the final inspection for project acceptance.

Various Locations, City of New Orleans, LA, 2017-2018
Mr. Bodenheimer inspected patch work completed at various locations in the City of New Orleans ensuring the work was completed as required by contract.

Pontchartrain Center, 2nd Phase Building & Pavement Expansion City of Kenner, LA
Mr. Bodenheimer oversaw construction review, pay request, quality control, coordination, and communication with testing laboratories, project architect and engineers, and the owner (City of Kenner). Construction consisted of 100,000-sq. ft. multi-level building, structural steel, concrete,

pilings, mechanical systems, electrical, systems, 3,000 feet of 8-inch water main, connections and fire hydrants, 5,500 feet of subsurface drainage, catch basin, conflict boxes, sewerage lift station and tie-in to existing utilities.

Sewer Capital Improvement Program, Jefferson Parish, LA
Mr. Bodenheimer conducted on-site inspections of all phases of constructing a 12,800' by 18" diameter force main pipeline.

Streets Improvements, Project No. 84-11-3, City of New Orleans, LA
Mr. Bodenheimer determined conditions of all public utilities within project boundary and recorded these conditions for post construction evaluation, verified pre-construction project drawing and plans for milling and asphalt overlay prior to bid.

Federal Emergency Management Agency Public Assistance Program Services, St. Charles Parish, LA, 09/2017-Present
Mr. Bodenheimer performed assessments for several damaged playgrounds caused by Hurricane Ida. He inspected damage to light poles and fixtures, fencing, batter's cage, team dug outs, playground gym equipment, and the shelter/field house, and documented the overall condition of the field.

FEMA Hazard Mitigation Assistance Consultant (Project No. 2130-02035), City of New Orleans, LA, 08/2017- Present
Mr. Bodenheimer performs assessments on homes for inclusion in the application for a FEMA hazard mitigation grant program. He obtains measurements for square footage and current elevation, and documents water connections, and gas and electric locations. He takes photos and sketches the structure documenting the measurements and locations of utilities. Mr. Bodenheimer checks the overall condition of the sites, including accommodations for ADA access, for Project Management use.

Grants Administration, St. John the Baptist Parish, LA, 06/2022-Present
Mr. Bodenheimer conducts site assessments for structures for inclusion in the application for a FEMA mitigation grant program. To date, he has inspected 58 structures for the program. He obtains measurements for square footage and current elevation, and documents water connections, and gas and electric locations. He takes photos and sketches the structure documenting the measurements and locations of utilities. Mr. Bodenheimer checks the overall condition of the sites for Project Management use.

FEMA Public Assistance Grant and Program Management, Jefferson Parish, LA, 10/2021-Present
Mr. Bodenheimer is performing assessments for damage to culverts, ditches, and roadways due to Hurricane Ida. He takes photos and measures the culverts length, and diameter and documents GPS and address for location. Mr. Bodenheimer acts as the on-site representative for walk through's with representatives from FEMA and Jefferson Parish and documents the verification of all sites measurements and conditions.

The Esplanade Mall, Director of Operations, City of Kenner, LA, 2006-2009
Mr. Bodenheimer directed and supervised all phases of the Mall operations including, engineering, maintenance, housekeeping, ground maintenance, landscaping, trash and garbage removal, crowd control, risk management, customer service, and security. Mr. Bodenheimer created operating budget and forecasted expenses and unbudgeted items, oversaw 184,000 sq. ft. of common area, located on 58 acres, along with 5,690 parking spaces. He managed all full

time employees, janitorial contractor, and interior and exterior landscaping contractors, handled all complaints and problems reported by employees, merchants, clients, and customers. Mr. Bodenheimer oversaw all phases of construction, renovations, space build out and demolition work, reviewed construction plans, documents and specifications, assisted GM and other managers with operations problems and requests, purchased all maintenance and housekeeping supplies and coded all invoices for payment. Mr. Bodenheimer coordinated all mall restoration due to damages caused by Hurricane Gustav and the reopening of the mall to the general public.

Pontchartrain Center, Director of Operations, City of Kenner, LA, 1991-2001
Mr. Bodenheimer directed and supervised all phases of the operation department, engineering, event coordination, maintenance, housekeeping, ground maintenance, event staffing, set-ups, conversions, and security, city police and firemen details, event services, shipping and receiving, crowd control, risk management and customer services, evaluated, investigated, analyzed and resolved all personnel problems and complaints with customer service. Mr. Bodenheimer assisted in the preparation and negotiation of all service agreements and conducted bi-monthly staff meetings to discuss past, present and upcoming events, procedures and problems. He developed and conducted monthly safety meetings, assisted Sales and Marketing Department in client/customer rental contracts and user agreements, created monthly and quarterly operations reports for General Manager, Corporate Office and City of Kenner. Mr. Bodenheimer prepared and monitored the annual operation departmental budget, developed an annual capital project budget, drafted specifications and bids through City of Kenner purchasing department for all fixtures, furniture and equipment during construction and after opening, and supervised all full-time employees, part-timers and event staff.

In 1998, Mr. Bodenheimer oversaw the addition to existing building 22,000-sq. ft. expansion including relocation of all existing underground drainage, plumbing and electric. He was responsible for the day-to-day construction, field reports, testing, pay request, quality contrao and coordination (Project Cost: $3,500,000).

In 1995, Mr. Bodenheimer oversaw the day to day construction of 350,000-sq. ft. parking lot expansion; asphalt paving, underground utilities, concrete curves and gutters . He reviewed all drawings and specifications, coordinated work schedules with general contractor, architects and engineers.

Lakeside Shopping Center, *Operations Manager,* Jefferson Parish, LA, 2001-2006
Mr. Bodenheimer directed and supervised all phases of the Mall Operations, engineering, maintenance, housekeeping, ground maintenance, landscaping, trash and garbage removal, crowd control, risk management, customer service, security and details, while maintaining 670,000 sq. ft. of Roof along with 120,000 sq. ft. of common area and 7 other buildings on 55 areas. Mr. Bodenheimer managed 28 full time employees, along with seasonal personnel, handled all complaints and problems reported by employees, merchants, clients and customers, oversaw all phases of construction, renovations, space build out and demolition work, purchased all maintenance and housekeeping supplies and coded all invoices. He reviewed construction plans, documents and specifications with the General Manager, and assisted other managers with operational problems at other properties, apartments, office buildings, and warehouses. Mr. Bodenheimer assisted with the coordination of mall restoration due to damages caused by Hurricane Katrina and the reopening of the mall to the general public.

Ethan Jones, EI

Engineer Intern, EI

Education
B.S., Civil Engineering, Louisiana State University, 2022

License
Engineer Intern, Louisiana License No. 0035192

Software
- AutoCAD and Civil 3D
- WaterGEMS
- SACS
- ArcGIS

Experience Highlights
Mr. Jones is a recent graduate from Louisiana State University where he obtained a Civil Engineering degree in May of 2022 and became an Engineer Intern in June of 2022. He is currently working on projects for Wastewater Treatment where he is gathering measurements and doing calculations to find velocity through pipes for the selection of pumps and creating plan sets for submittals. Mr. Jones has also done Grant Management where has visited sites to gather measurements for sketches and worked on volumetric cut and fill calculations for clearing residential canals in Lafitte. Mr. Jones has also worked on Roadway and Drainage projects where he has assisted with cost estimates for clients. Mr. Jones has used WaterGEMS to model and analyze water systems for St. Tammany Parish. Additionally, Mr. Jones worked on aeration analysis for Flow Eq Basins. Mr. Jones is currently working on raw water intake for St. John the Baptist Parish.

Key Projects
CN Railroad Culverts in Ormond, Project No. P200801, Ordinance No. 20-9-5, St. Charles Parish, LA, 06/2022 – Present
Mr. Jones worked on completing the cost estimate and making additions to the specifications for this project which includes the construction of several new drainage culverts crossing and/or adjacent to the CN railroad in Destrehan, St. Charles Parish, LA. Mr. Jones also assisted in preparing the CN Railroad permitting documents for the new drainage improvements.

Water & Wastewater Utilities, Multiple Parishes, LA, 06/2022-Present
Mr. Jones provided technical and field assistance for this project, which includes investigation, evaluation, and assessment of existing wastewater systems to be procured by the client. Mr. Jones assisted in the design for improvements to be made to the sites. Mr. Jones performed site investigations of individual treatment facilities, collection, and distribution systems to assess structural conditions, equipment operation, evidence of process issues, and overall general operational conditions.

Half Oak WWTP, (TESI Task Order), Lafourche, LA, 05/2024-Present
This job includes rehabilitation of the WWTP for the Half Oak Subdivision. Mr. Jones assisted in the drawings of the existing wastewater treatment plant and the improvements. The improvements identified are replacing surface aerator and anchors for the aerator; site repairs including aggregate drive improvements and fencing; installation of flow measurement facilities; excess sludge removal and disposal; replacement of lift station pumps; and the needed electrical

facilities to power the equipment and SCADA to allow for the monitoring of the facility's operation remotely. Working with the engineer to design improvements to address the damaged items and improve effluent quality to comply with current LDEQ regulations.

Town of Sterlington WWTP, Ouachita, LA, 02/2024-Present
The project includes making the needed improvements to an oxidation pond wastewater treatment facility due to age and regulatory compliance issues. Performed site visits and currently working with drafters to develop existing condition drawings for rehabilitation project. The improvements identified are replacing surface aerators and air piping; site repairs including aggregate drive improvements and fencing; installation of flow measurement facilities; excess sludge removal and disposal; replacement of lift station pumps; and the needed electrical facilities to power the equipment and SCADA to allow for the monitoring of the facility's operation remotely. Working with the engineer to design improvements to address the damaged items and improve effluent quality to comply with current LDEQ regulations.

Brier Lake Utilities, Inc. (WWTP), Lacombe, LA, 01/2024-Present
The project includes making the needed improvements to an oxidation pond wastewater treatment facility due to age and regulatory compliance issues. Mr. Jones completed the report, which detailed the descriptions of the existing conditions, the list of compliance violations, recommendations for improvements to be made, and cost of the improvements. Mr. Jones also compiled the Appendices for the submittal.

East St. Tammany Water Consolidation, 2022 Contract, St. Tammany Parish, LA, 08/2022-Present
This project includes development and analysis of a hydraulic model of water distribution systems in St. Tammany Parish, LA. As an Engineer Intern, Mr. Jones developed a hydraulic model to simulate existing conditions of the system in WaterGEMS. Mr. Jones performed calibration field testing of the water system by flow testing fire hydrants at selected locations in order to better calibrate the model. Mr. Jones assisted in the development of an engineering report of findings to supplement the hydraulic model and recommend improvements to the system.

Laplace Water Intake Pump Station and Pre-Treatment Facility, St. John the Baptist Parish, LA, 02/2023-Present
Mr. Jones is working on raw water intake for LaPlace where two alternatives are being considered. One on the river and one on the dry side of the levee. Mr. Jones is assisting in modeling the project, as well as selecting the pumps and pipe sizes to bring clean drinking water to the citizens of the Parish.

Water Hydraulic Modeling in East St. Tammany Parish, 2023 Contract No. 23-048, St. Tammany Parish, LA, 04/2023-Present
This project includes continuing the development of the East St. Tammany Cross Gates water model. The existing model will be combined with other subdivisions to consolidate the water distribution system. Mr. Jones performed calibration field testing of the water system to be added to the Cross Gates water model by flow testing fire hydrants at selected locations in order to better supplement the hydraulic model and recommend improvements to the system. Mr. Jones assisted in the development of an engineering report of findings to supplement the hydraulic model and recommend improvements to the system.

Water Hydraulic Modeling in West St. Tammany Parish, 2023 Contract No. 23-042, St. Tammany Parish, LA, 04/2023-Present

This project includes developing and analyzing a hydraulic model of water distribution systems in West St. Tammany Parish, LA for the Bedico Creek System and the Faubourg Water System. The system includes 14 wells, some of which will be taken out of service upon construction of the improvements. Other wells will be kept to provide water. Mr. Jones performed calibration field testing of the water system by flow testing fire hydrants at selected locations in order to better calibrate the model. Mr. Jones assisted in the development of an engineering report of findings to supplement the hydraulic model and recommend improvements to the system.

Diversified Water Well Pretreatment System, St. Tammany Parish, LA, 06/2023-Present
This project includes new potable water treatment improvements at the Diversified Well site in Madisonville, LA. This project includes new greensand filtration units for iron and manganese removal, metal and CMU building to house the filters, chemical storage, and personnel offices, and water piping in site. As part of this project, Mr. Jones assisted in the filter pilot study to assess water quality and scale-model filtration results for varying filtration media.

Egret Landing Subdivision – Phase 2 Improvements, Monroe, LA (Town of Sterlington Task Order), 03/2024-05/2024
This project includes improvements to the water distribution at the Egret Landing Subdivision – Phase 2 in Monroe, LA. The improvements include new automatic flushers and the addition of a chlorine analyzer. As part of this project, Mr. Jones completed made a site visit to examine the current condition of the distribution system and wrote the report on the current conditions of the distribution system.

Brier Lake Utilities, Inc. (WTP), Lacombe, LA, 01/2024-Present
The project includes making the needed improvements to an oxidation pond wastewater treatment facility due to age and regulatory compliance issues. Mr. Jones completed the report, which detailed the descriptions of the existing conditions, recommendations for improvements to be made, and the cost of the improvements. Mr. Jones also compiled the Appendices for the submittal.

FEMA Public Assistance Grant and Program Management, Jefferson Parish, LA, 06/2022-Present
Mr. Jones calculated dredge volume estimates for residential canals in Barataria near Jean Lafitte, LA by using Civil 3D and Excel. This project includes the processing of FEMA reimbursements, based on federal and state requirements and development of closeout documentation for the Parish of Jefferson. In addition to this Mr. Jones completed FEMAs Category G files and photo forms for Jefferson Parish Bus Stops.

FEMA 2021 Hazard Mitigation Consultant, City of New Orleans, LA, 07/2022 – Present
Mr. Jones completed site assessments and developed sketches from the measurements obtained in the field. Upon returning to the office, he prepared the sketches in an orderly manner to be given to the CAD Technician for a final drawing. This project includes the preparation and submittal of applications for funding to FEMA's Hazard Mitigation Assistance (HMA) Programs, including but not limited to the Hazard Mitigation Grant Program (HMGP), Flood Mitigation Assistance (FMA), the Pre-Disaster Mitigation Grant (PDM) Program, and the Building Resilient Infrastructure and Communities (BRIC) Grant Program on behalf of eligible residential National Flood Insurance program (NFIP) policyholders in Orleans Parish and the City of New Orleans and to manage and implement said program for the City.

FEMA Reimbursement for Hurricane Ida Damage, Grand Isle, LA, Jefferson Parish, LA, 10/2022 – Present

Mr. Jones assisted in developing a cost analysis for work completed to restore potable water to Grand Isle following Hurricane Ida. Mr. Jones organized the invoices, gathered data needed for the cost analysis, and formatted the invoices in an orderly fashion to develop the cost analysis.

RR176 – St. Roch Group North Group A (PMOI), City of New Orleans, LA, 06/2022-Present

Mr. Jones assisted in the creation of cost estimates to assure that the quantities that were on the submittals matched those of the cost estimate for FEMA-eligible road rehabilitation work as part of this project. This project includes assisting the City of New Orleans in assessment of the damage along the streets contained in this project, and providing design services for FEMA-eligible street repairs in the area south of I-610, north of the Florida Ave. canal, east of N. Broad St., and west of Elysian Fields Ave. The scope of work for each street varies and includes the following types of work: replacement of sidewalks and driveways, incidental road repairs determined by FEMA, and full replacement of roadway section and subsurface sewer, water, and/or drainage.

RR178 – St. Roch Group North Group C (FRC), City of New Orleans, LA, 06/2022-Present

Mr. Jones assisted in the creation of cost estimates to assure that the quantities that were on the submittals matched those of the cost estimate for FEMA-eligible road rehabilitation work as part of this project. This project includes assisting the City of New Orleans in assessment of the damage along the streets contained in this project, and providing design services for FEMA-eligible street repairs in the area south of I-610, north of the Florida Ave. canal, east of N. Broad St., and west of Elysian Fields Ave. The scope of work for each street varies and includes the following types of work: replacement of sidewalks and driveways, incidental road repairs determined by FEMA, and full replacement of roadway section and subsurface sewer, water, and/or drainage.

Ashton Bonura

Civil Engineering / Permitting

Education

B.S., Civil and Environmental Engineering, University of New Orleans, New Orleans, LA, 2022
B.S., General Business with an Entrepreneurship Minor, Louisiana State University, Baton Rouge, LA, 2020

Software

- AutoCAD
- AutoDesk Revit
- PCSWMM
- ArcGIS
- WaterCAD

Experience Highlights

Mr. Bonura is a recent graduate from the University of New Orleans where he obtained a Civil and Environmental Engineering degree in December 2022. He has assisted the licensed engineers within the company for several years prior to earning his degree. Mr. Bonura has worked on projects that involve water and wastewater treatment, lift station design, roadway rehabilitation and drainage improvements, and sanitary landfill permit renewals.

Key Projects

Beau Chene Wastewater Treatment Facility 01/2023-Present

The project includes making the needed improvements to an oxidation pond wastewater treatment facility due to age and regulatory compliance issues. Performed site visits and currently working with drafters to develop existing condition drawings for rehabilitation project. The improvements identified are replacing surface aerators and air piping; site repairs including aggregate drive improvements and fencing; installation of flow measurement facilities; excess sludge removal and disposal; replacement of lift station pumps; and the needed electrical facilities to power the equipment and SCADA to allow for the monitoring of the facility's operation remotely. Working with the engineer to design improvements to address the damaged items and improve effluent quality to comply with current LDEQ regulations.

Quiet Oaks Wastewater Treatment Plant 01/2023-Present

The project includes making the needed improvements to extended aeration wastewater treatment plant of steel construction due to age, corrosion, and regulatory compliance issues. Performed site visits and currently working with drafters to develop existing condition drawings for rehabilitation project. The improvements identified are replacing aerators, air piping, and diffusers; site repairs including aggregate drive improvements and fencing; structural steel member replacement; installation of a new trash screen system; installation of flow measurement facilities; painting; excess sludge removal and disposal; replacement of lift station pumps; and the needed electrical facilities to power the equipment and SCADA to allow for the monitoring of the facility's operation remotely. Working with the engineer to design improvements to address the damaged items and improve effluent quality to comply with current LDEQ regulations.

Dugas Wastewater Treatment Plant 01/2023-Present

The project includes making the needed improvements to an extended aeration wastewater treatment plant of steel construction due to age, corrosion, and regulatory compliance issues. Performed site visits and currently working with drafters to develop existing condition drawings

for rehabilitation project. The improvements identified are replacing aerators, air piping, and diffusers; site repairs including aggregate drive improvements and fencing; structural steel member replacement; installation of a new trash screen system; installation of flow measurement facilities; painting; excess sludge removal and disposal; replacement of lift station pumps; and the needed electrical facilities to power the equipment and SCADA to allow for the monitoring of the facility's operation remotely.
Working with the engineer to design improvements to address the damaged items and improve effluent quality to comply with current LDEQ regulations.

Highland Lakes Wastewater Treatment Plant 01/2023-Present

The project includes making the needed improvements to an extended aeration wastewater treatment plant of steel construction due to age, corrosion, and regulatory compliance issues. Performed site visits and currently working with drafters to develop existing condition drawings for rehabilitation project. The improvements identified are replacing aerators, air piping, and diffusers; site repairs including aggregate drive improvements and fencing; structural steel member replacement; installation of a new trash screen system; installation of flow measurement facilities; painting; excess sludge removal and disposal; replacement of lift station pumps; and the needed electrical facilities to power the equipment and SCADA to allow for the monitoring of the facility's operation remotely. Working with the engineer to design improvements to address the damaged items and improve effluent quality to comply with current LDEQ regulations.

Blue Ridge Point Wastewater Treatment Plant 02/2023-Present

The project includes making the needed improvements to an extended aeration wastewater treatment plant of steel construction due to age, corrosion, and regulatory compliance issues. Performed site visits and currently working with drafters to develop existing condition drawings for rehabilitation project. The improvements identified are replacing aerators, air piping, and diffusers; site repairs including aggregate drive improvements and fencing; structural steel member replacement; installation of a new trash screen system; installation of flow measurement facilities; painting; excess sludge removal and disposal; replacement of lift station pumps; and the needed electrical facilities to power the equipment and SCADA to allow for the monitoring of the facility's operation remotely. Working with the engineer to design improvements to address the damaged items and improve effluent quality to comply with current LDEQ regulations.

Oak Grove Wastewater Treatment Plant 01/2023-Present

The project includes making the needed improvements to an extended aeration wastewater treatment plant of steel construction due to age, corrosion, and regulatory compliance issues. Performed site visits and currently working with drafters to develop existing condition drawings for rehabilitation project. The improvements identified are replacing aerators, air piping, and diffusers; site repairs including aggregate drive improvements and fencing; structural steel member replacement; installation of a new trash screen system; installation of flow measurement facilities; painting; excess sludge removal and disposal; replacement of lift station pumps; and the needed electrical facilities to power the equipment and SCADA to allow for the monitoring of the facility's operation remotely. Working with the engineer to design improvements to address the damaged items and improve effluent quality to comply with current LDEQ regulations.

St. John Place Wastewater Treatment Plant 01/2023-Present

The project includes making the needed improvements to an extended aeration wastewater treatment plant of steel construction due to age, corrosion, and regulatory compliance issues. Performed site visits and currently working with drafters to develop existing condition drawings for rehabilitation project. The improvements identified are replacing aerators, air piping, and diffusers; site repairs including aggregate drive improvements and fencing; structural steel

member replacement; installation of a new trash screen system; installation of flow measurement facilities; painting; excess sludge removal and disposal; replacement of lift station pumps; and the needed electrical facilities to power the equipment and SCADA to allow for the monitoring of the facility's operation remotely. Working with the engineer to design improvements to address the damaged items and improve effluent quality to comply with current LDEQ regulations.

Willowdale Wastewater Treatment Plant 01/2023-Present

The project includes making the needed improvements to an extended aeration wastewater treatment plant of steel construction due to age, corrosion, and regulatory compliance issues. Performed site visits and currently working with drafters to develop existing condition drawings for rehabilitation project. The improvements identified are replacing aerators, air piping, and diffusers; site repairs including aggregate drive improvements and fencing; structural steel member replacement; installation of a new trash screen system; installation of flow measurement facilities; painting; excess sludge removal and disposal; replacement of lift station pumps; and the needed electrical facilities to power the equipment and SCADA to allow for the monitoring of the facility's operation remotely. Working with the engineer to design improvements to address the damaged items and improve effluent quality to comply with current LDEQ regulations.

Eureka Heights Wastewater Treatment Plant 01/2023-Present

The project includes making the needed improvements to an extended aeration wastewater treatment plant of steel construction due to age, corrosion, and regulatory compliance issues. Performed site visits and currently working with drafters to develop existing condition drawings for rehabilitation project. The improvements identified are replacing aerators, air piping, and diffusers; site repairs including aggregate drive improvements and fencing; structural steel member replacement; installation of a new trash screen system; installation of flow measurement facilities; painting; excess sludge removal and disposal; replacement of lift station pumps; and the needed electrical facilities to power the equipment and SCADA to allow for the monitoring of the facility's operation remotely. Working with the engineer to design improvements to address the damaged items and improve effluent quality to comply with current LDEQ regulations.

Mobile Estates Wastewater Treatment Plant 01/2023-Present

The project includes making the needed improvements to an extended aeration wastewater treatment plant of steel construction due to age, corrosion, and regulatory compliance issues. Performed site visits and currently working with drafters to develop existing condition drawings for rehabilitation project. The improvements identified are replacing aerators, air piping, and diffusers; site repairs including aggregate drive improvements and fencing; structural steel member replacement; installation of a new trash screen system; installation of flow measurement facilities; painting; excess sludge removal and disposal; replacement of lift station pumps; and the needed electrical facilities to power the equipment and SCADA to allow for the monitoring of the facility's operation remotely. Working with the engineer to design improvements to address the damaged items and improve effluent quality to comply with current LDEQ regulations.

Beaujolais Wastewater Treatment Facility 01/2023-Present

The project includes making the needed improvements to an approximately 30-year old 50,000 GPD oxidation pond wastewater treatment facility due to age and regulatory compliance issues. Performed site visits and currently working with drafters to develop existing condition drawings for rehabilitation project. The improvements identified are replacing surface aerators and air piping; site repairs including aggregate drive improvements and fencing; installation of flow measurement facilities; excess sludge removal and disposal; replacement of lift station pumps; and the needed electrical facilities to power the equipment and SCADA installation to allow for the monitoring of the facility's operation remotely. Working with the engineer to design

improvements to address the damaged items and improve effluent quality to comply with current LDEQ regulations.

Acadian Villa Wastewater Treatment Facility 12/2021-Present

The project includes making the needed improvements to an approximately 40-year-old 50,000 GPD oxidation pond wastewater treatment facility due to age and regulatory compliance issues. Performed site visits and currently working with drafters to develop existing condition drawings for rehabilitation project. The improvements identified are replacing surface aerators and air piping; site repairs including aggregate drive improvements and fencing; installation of flow measurement facilities; excess sludge removal and disposal; replacement of lift station pumps; and the needed electrical facilities to power the equipment and SCADA installation to allow for the monitoring of the facility's operation remotely. Working with the engineer to design improvements to address the damaged items and improve effluent quality to comply with current LDEQ regulations.

Crozier Heights Wastewater Treatment Plant 01/2023-Present

The project includes making the needed improvements to an extended aeration wastewater treatment plant of steel construction due to age, corrosion, and regulatory compliance issues. Performed site visits and currently working with drafters to develop existing condition drawings for rehabilitation project. The improvements identified are replacing aerators, air piping, and diffusers; site repairs including aggregate drive improvements and fencing; structural steel member replacement; installation of a new trash screen system; installation of flow measurement facilities; painting; excess sludge removal and disposal; replacement of lift station pumps; and the needed electrical facilities to power the equipment and SCADA to allow for the monitoring of the facility's operation remotely. Working with the engineer to design improvements to address the damaged items and improve effluent quality to comply with current LDEQ regulations.

Cypress Cove Wastewater Treatment Plant 03/2023-Present

The project includes making the needed improvements to an extended aeration wastewater treatment plant of steel construction due to age, corrosion, and regulatory compliance issues. Performed site visits and currently working with drafters to develop existing condition drawings for rehabilitation project. The improvements identified are replacing aerators, air piping, and diffusers; site repairs including aggregate drive improvements and fencing; structural steel member replacement; installation of a new trash screen system; installation of flow measurement facilities; painting; excess sludge removal and disposal; replacement of lift station pumps; and the needed electrical facilities to power the equipment and SCADA to allow for the monitoring of the facility's operation remotely. Working with the engineer to design improvements to address the damaged items and improve effluent quality to comply with current LDEQ regulations.

Midway Wastewater Treatment Plant 02/2023-Present

The project includes making the needed improvements to an extended aeration wastewater treatment plant of steel construction due to age, corrosion, and regulatory compliance issues. Performed site visits and currently working with drafters to develop existing condition drawings for rehabilitation project. The improvements identified are replacing aerators, air piping, and diffusers; site repairs including aggregate drive improvements and fencing; structural steel member replacement; installation of a new trash screen system; installation of flow measurement facilities; painting; excess sludge removal and disposal; replacement of lift station pumps; and the needed electrical facilities to power the equipment and SCADA to allow for the monitoring of the facility's operation remotely. Working with the engineer to design improvements to address the damaged items and improve effluent quality to comply with current LDEQ regulations.

Rebecca Plantation Wastewater Treatment Plant 01/2023-Present

The project includes making the needed improvements to an extended aeration wastewater treatment plant of steel construction due to age, corrosion, and regulatory compliance issues. Performed site visits and currently working with drafters to develop existing condition drawings for rehabilitation project. The improvements identified are replacing aerators, air piping, and diffusers; site repairs including aggregate drive improvements and fencing; structural steel member replacement; installation of a new trash screen system; installation of flow measurement facilities; painting; excess sludge removal and disposal; replacement of lift station pumps; and the needed electrical facilities to power the equipment and SCADA to allow for the monitoring of the facility's operation remotely. Working with the engineer to design improvements to address the damaged items and improve effluent quality to comply with current LDEQ regulations.

Rigolets Estates Wastewater Treatment Plant 04/2023-Present

The project includes making the needed improvements to an extended aeration wastewater treatment plant of steel construction due to age, corrosion, and regulatory compliance issues. Performed site visits and currently working with drafters to develop existing condition drawings for rehabilitation project. The improvements identified are replacing aerators, air piping, and diffusers; site repairs including aggregate drive improvements and fencing; structural steel member replacement; installation of a new trash screen system; installation of flow measurement facilities; painting; excess sludge removal and disposal; replacement of lift station pumps; and the needed electrical facilities to power the equipment and SCADA to allow for the monitoring of the facility's operation remotely. Working with the engineer to design improvements to address the damaged items and improve effluent quality to comply with current LDEQ regulations.

Suburban Estates Wastewater Treatment Plant 01/2023-Present

The project includes making the needed improvements to an extended aeration wastewater treatment plant of steel construction due to age, corrosion, and regulatory compliance issues. Performed site visits and currently working with drafters to develop existing condition drawings for rehabilitation project. The improvements identified are replacing aerators, air piping, and diffusers; site repairs including aggregate drive improvements and fencing; structural steel member replacement; installation of a new trash screen system; installation of flow measurement facilities; painting; excess sludge removal and disposal; replacement of lift station pumps; and the needed electrical facilities to power the equipment and SCADA to allow for the monitoring of the facility's operation remotely. Working with the engineer to design improvements to address the damaged items and improve effluent quality to comply with current LDEQ regulations.

Country Trails Wastewater Treatment Facility 01/2023-Present

The project includes making the needed improvements to an approximately 30-year old 25,000 GPD oxidation pond wastewater treatment facility due to age and regulatory compliance issues. Performed site visits and currently working with drafters to develop existing condition drawings for rehabilitation project. The improvements identified are replacing surface aerators and air piping; site repairs including aggregate drive improvements and fencing; installation of flow measurement facilities; excess sludge removal and disposal; replacement of lift station pumps; and the needed electrical facilities to power the equipment and SCADA installation to allow for the monitoring of the facility's operation remotely. Working with the engineer to design improvements to address the damaged items and improve effluent quality to comply with current LDEQ regulations.

Irish Bend Wastewater Treatment Facility 01/2021-Present

The project includes making the needed improvements to an approximately 40-year-old 50,000 GPD oxidation pond wastewater treatment facility due to age and regulatory compliance issues.

Performed site visits and currently working with drafters to develop existing condition drawings for rehabilitation project. The improvements identified are replacing surface aerators and air piping; site repairs including aggregate drive improvements and fencing; installation of flow measurement facilities; excess sludge removal and disposal; replacement of lift station pumps; and the needed electrical facilities to power the equipment and SCADA installation to allow for the monitoring of the facility's operation remotely. Working with the engineer to design improvements to address the damaged items and improve effluent quality to comply with current LDEQ regulations.

St. Agnes Wastewater Treatment Facility 01/2023-Present

The project includes making the needed improvements to an approximately 25-year old 50,000 GPD oxidation pond wastewater treatment facility due to age and regulatory compliance issues. Performed site visits and currently working with drafters to develop existing condition drawings for rehabilitation project. The improvements identified are replacing surface aerators and air piping; site repairs including aggregate drive improvements and fencing; installation of flow measurement facilities; excess sludge removal and disposal; replacement of lift station pumps; and the needed electrical facilities to power the equipment and SCADA installation to allow for the monitoring of the facility's operation remotely. Working with the engineer to design improvements to address the damaged items and improve effluent quality to comply with current LDEQ regulations.

Water Hydraulic Modeling in East St. Tammany Parish, 2023 Contract No. 23-048, St. Tammany Parish, LA, 04/2023-Present

St. Tammany Parish Government (Parish) retained Barowka and Bonura Engineers and Consultants (BBEC) to develop and analyze a computer model of existing potable water systems in Slidell, LA, as part of the Parish's East St. Tammany Water Consolidation Project Phase 2 (PPSL-VSF 23-19-5). This project has been phased into 3 tasks. The scope of Task 1 included development and calibration of an existing conditions model of the Cross Gates, Meadow Lake, and River Oaks water systems using WaterGEMS software. The model includes a detailed water distribution network including pipes, well pumps, storage tanks, valves, fittings, and fire hydrants, all based on site visits and information provided by St. Tammany Parish. Field testing was performed including fire hydrant flow and pressure tests to document system performance and calibrate and validate the water model to match field conditions. The existing conditions model was analyzed to determine water age/water quality, water pressure, and velocity parameters. Results of the model analysis and improvement recommendations were compiled in a report of findings. Task 2 of this project includes modeling and hydraulic analysis of the water system improvements, including two (2) new elevated storage tanks and several water main interconnections. Task 3 of this project includes updating, re-validating and calibrating the system model to reflect the water system improvements constructed.
Mr. Bonura assisted the key personnel in the development of an engineering report of findings to supplement the hydraulic model and recommend improvements to the system. Mr. Bonura also assisted in the field testing of fire hydrants to better calibrate the model.

Water Hydraulic Modeling in West St. Tammany Parish, 2023 Contract No. 23-042, St. Tammany Parish, LA, 04/2023-Present

St. Tammany Parish Government (Parish) retained Barowka and Bonura Engineers and Consultants (BBEC) to develop and analyze a computer model of existing potable water systems in West St. Tammany Parish, as part of the Parish's West St. Tammany Water Consolidation Project (PPSL-VSF 23-20-5). This project has been phased into 3 tasks. The scope of Task 1 included development and calibration of an existing conditions model of the Faubourg Coquille and Bedico Creek water systems using WaterGEMS software. The model includes a detailed

water distribution network including pipes, well pumps, storage tanks, valves, fittings, and fire hydrants, all based on site visits and information provided by St. Tammany Parish. Field testing was performed including fire hydrant flow and pressure tests to document system performance and calibrate and validate the water model to match field conditions. The existing conditions model was analyzed to determine water age/water quality, water pressure, and velocity parameters. Results of the model analysis and improvement recommendations were compiled in a report of findings. Task 2 of this project includes modeling and hydraulic analysis of the water system improvements, including water main improvements to interconnect the Faubourg Coquille and Bedico Creek systems, and interconnect the Bedico Creek system to the Fox Branch Subdivision. New elevated storage tanks at the Bedico Creek water system and other areas were also assessed. Task 3 of this project includes updating, re-validating and calibrating the system model to reflect the water system improvements constructed. Mr. Bonura assisted the key personnel in the development of an engineering report of findings to supplement the hydraulic model and recommend improvements to the system. Mr. Bonura also assisted in the field testing of fire hydrants to better calibrate the model.

Eden Isles Water Main Repair, St. Tammany Parish, LA, 05/2020-Present
The project included developing a hydraulic model of the distribution system to determine the impact of additional development on the overall distribution system. Mr. Bonura performed house counts and water demand calculations to develop a hydraulic model of the water distribution system using WaterCAD.

RR176 – St. Roch Group North Group A (PMOI), City of New Orleans, LA, 12/2019-Present
Mr. Bonura assisted on this project by reviewing the plans and creating quantity take-off for the construction cost estimate, addressed client comments, and worked with drafters and engineers for plan revisions. The project area consists of the streets in the area south of I-610, north of the Florida Ave. canal, east of N. Broad St., and west of Elysian Fields Ave. The scope of work for each street is either replacement of sidewalks and driveways, incidental road repairs determined by FEMA, or full replacement of roadway section and subsurface sewer, water, and/or drainage.

RR177 – St. Roch Group North Group B (FRC), City of New Orleans, LA, 12/2019-Present
Mr. Bonura assisted on this project by reviewing the plans and creating quantity take-off for the construction cost estimate, addressed client comments, and worked with drafters and engineers for plan revisions. The project area consists of the streets in the area south of I-610, north of the Florida Ave. canal, east of Elysian Fields Ave., and west of St. Roch Ave. The scope of work for each street is either replacement of sidewalks and driveways, incidental road repairs determined by FEMA, or full replacement of roadway section and subsurface sewer, water, and/or drainage.

RR178 – St. Roch Group North Group C (FRC), City of New Orleans, LA, 12/2019-Present
Mr. Bonura assisted on this project by reviewing the plans and creating quantity take-off for the construction cost estimate, addressed client comments, and worked with drafters and engineers for plan revisions. The project area consists of the streets in the area south of I-610, north of the Florida Ave. canal, east of St Roch Ave., and west of the Peoples Ave. canal. The scope of work for each street is either replacement of sidewalks and driveways, incidental road repairs determined by FEMA, or full replacement of roadway section and subsurface sewer, water, and/or drainage.

Westbank Mississippi River Bike Trail, Around Avondale Shipyard, (2017-059-RBP), Jefferson Parish, LA, 08/2019-Present
Mr. Bonura assisted on this project by reviewing the plans and creating quantity take-off for the construction cost estimate, addressed client comments, and worked with drafters and engineers

for plan revisions. The project contains the area of River Rd. from east of Avondale shipyard to LA 18 and the stretch of LA-18 up until the existing bike path access ramp west of the shipyard. The project includes the installation of a bike path on top of the levee, restriping existing shoulder to be repurposed as a bike path, widening the road to allow for bike travel, and addition of subsurface drainage in areas indicated by Jefferson Parish.

Cleary Improvements (Veterans Blvd. to West Esplanade Ave.) (Council District 5) Jefferson Parish, LA, Public Works No. 2017-014-RBP, 08/2019-06/2021

Mr. Bonura assisted on this project by reviewing the plans and creating quantity take-off for the construction cost estimate, addressed client comments, and worked with drafters and engineers for plan revisions. Mr. Bonura worked with the resident inspector to reviewed plans and field work to verify the work performed by the contractor to verify final contract quantities. The project contains the area of Cleary Ave. from Veterans Blvd. to W. Esplanade Ave. The repairs to be made include removing and replacing the existing concrete roadway, adding improvements to the subsurface drainage system, and relocating any utilities that were conflicts.

Woodmere Boulevard Panel Replacement, JP Project No. 2017-061-RBP, State Project No. H012884.6, Jefferson Parish, LA 05/2020-Present

Mr. Bonura assisted on this project by reviewing the plans and creating quantity take-off for the construction cost estimate, addressed client comments, and worked with drafters and engineers for plan revisions. Mr. Bonura worked with the resident inspector to review plans and field work to verify the work performed by the contractor to verify final contract quantities.

Grant Management Services for Federal and State Grants, Town of Jean Lafitte, LA, 10/2013-Present

BBEC is currently providing grant management services for the Town of Jean Lafitte and the Lafitte Area Independent Levee District project to close out almost $3.9M in FEMA Public Assistance Grants. Mr. Bonura also assisted in maintaining a master spreadsheet tracking status of RRF's and status of payments, and reviewed invoices for accuracy. Mr. Bonura worked with Town of Jean Lafitte employees to compile the necessary documents to justify work performed and funds obligated according to FEMA guidelines. Mr. Bonura utilized an electronic document management system to store project records.

FEMA Public Assistance Grant and Program Management, Jefferson Parish, LA, 10/2021-Present

This project includes the processing of FEMA reimbursements, based on federal and state requirements and development of closeout documentation. Mr. Bonura assisted the licensed engineers in Conducting comprehensive facility damage assessments for disaster damaged structures, contents, vehicles, pump stations, sewer lift stations, and other parish-owned facilities. Mr. Bonura generated maps in ArcGIS pro and other documentation to help maximize federal funding for this project which includes program management services to assists the Parish with the review and implementation of procurement policies, ensuring that all potential emergency contracts comply with federal requirements and guidelines set forth in the Public Assistance Program.

Michelle Cook

Clerical / Administration

Education

B.A., Marketing, Minor in Management, Southeastern Louisiana University, 1998

Experience Highlights

Mrs. Cook has over 28 years of supervisory experience with over 18 years of experience supervising the processing of document management for grant management, program management, demolition and debris removal, roadway restoration, engineering design, and construction management. Her supervision of these projects has allowed work to be completed in a timely manner with the ability to provide clients the information and data needed quickly and efficiently.

Since 2017, Mrs. Cook has played an integral part in serving as liaison between the BBEC Project Management team, our clients, and homeowners to discuss the application process and status and obtain and review all documentation received from homeowners for Hazard Mitigation projects in the City of New Orleans, Lafourche Parish, St. Charles Parish, St. John the Baptist Parish and Terrebonne Parish. In this role, Mrs. Cook has assisted with seeing an increasing number of participants in the applications BBEC prepares and submits. Mrs. Cook prepares all contracts and amendments and coordinates the processing and execution of them with the City/Parish. In addition, she played an integral role in serving as liaison with BBEC personnel, St. Bernard Parish personnel and homeowners for the Demolition and Debris removal projects from 2006-2016. Her work on these projects has proven to provide the needed documentation to meet FEMA policies to ensure reimbursements.

Key Projects

Demolition and Debris Removal, Demolition of Structures (Hurricanes Katrina and Rita), St. Bernard Parish, LA, 10/2006 – 06/2016

Mrs. Cook served as liaison with contractors, St Bernard Parish Administration, Federal Emergency Management Agency (FEMA), Environmental Protection Agency (EPA), Louisiana Department of Environmental Quality (LDEQ) and FEMA Historic Preservation Society (FHP) representatives for over 10 years. She discussed the demolition with homeowners on a daily basis and was responsible for all aspects of Data Management for over 30,000 properties and 10,000,000 database records resulting in over 8,100 completed demolitions. Mrs. Cook oversaw the processing of demolition files and issued daily assignments to support staff. She reviewed issues and provided problem resolution and worked with the Project Management team in all aspects of demolition. Mrs. Cook provided QA/QC review of invoicing and worked directly with the contractor to resolve issues. She supervised support staff that processed the scanning and data entry of all supporting documentation related to the demolition project to ensure work was completed efficiently. Mrs. Cook's effort was to ensure documentation review would prove to meet FEMA's policies and procedures were met to ensure FEMA funding reimbursement.

Program Management for Demolition and Debris Removal Projects, Asbestos Abatement, Phases I and II, (2006 Contract), St. Bernard Parish, LA, 2007-2013

Mrs. Cook served as liaison with contractors, St Bernard Parish Administration, Federal Emergency Management Agency (FEMA), Environmental Protection Agency (EPA), Louisiana Department of Environmental Quality (LDEQ) and FEMA Historic Preservation Society (FHP) representatives for this project. Mrs. Cook coordinated and tracked all structure and slab inspections, and the completion of the abatements. She reviewed paperwork for accuracy and completion and communicated and resolved all issues with completing inspections. Mrs. Cook's

effort was to ensure documentation review would prove to meet FEMA's policies and procedures were met for FEMA funding reimbursement.

Louisiana Land Trust, Demolition and Program Management Project (CDBG), Statewide, LA, 2009 - 2016
Mrs. Cook oversaw the processing of all files with supporting documentation of over 10,500 files resulting in over 8,900 completed demolitions for the structure, slab, and concrete removal for the Louisiana Land Trust Demolition Program. She coordinated the daily assignments for the clerical support staff ensuring work was being completed accurately and efficiently. She reviewed all potential issues and provided problem resolution and communicated issues to proper personnel, as needed, for resolution. Mrs. Cook worked directly with the IT team for necessary updates to the Louisiana Land Trust Demolition Tracking System and the Data Management Program to make tracking and reporting easy to manage. She reviewed exception reports for corrections needed or for submittal to prime for review. She worked with the SRPP Document Management Office for easy transference of completed files for storage, ensuring an accurate chain of custody and tracking in database system for easy location, as needed.

Slab Removal Program, St. Bernard Parish, Louisiana
Mrs. Cook supervised the data entry and scanning of the clerical support staff to ensure work is completed efficiently and prioritized work, as needed. She provided a QA/QC review of documentation received from St Bernard Parish Administration and addressed issues with right of entries, assessor's data and legal paperwork submitted by Parish residents.

Private Property Debris Removal, St. Bernard Parish, Louisiana
Mrs. Cook provided a QA/QC review of tickets and researched and resolved issues as needed for contractor invoicing.

Debris Removal Project, St. Bernard Parish, Louisiana
Mrs. Cook assisted with the preparation of work order issuance to contractors for debris removal of the right of way, and reviewed tickets with issues and made corrections, as needed, for contractor invoicing.

Disaster Relief, Gustav, Livingston Parish, Louisiana
Mrs. Cook oversaw the research and updating of debris and canal invoicing for the prime for submittal to FEMA.

FEMA Hazard Mitigation Grant Village Square Acquisition and Site Clearance, Phase I and II St. Bernard, LA
Mrs. Cook oversaw the scanning and data entry of all supporting documentation related to the Village Square slab and concrete removal project to ensure work was completed accurately and efficiently.

FEMA Hazard Mitigation Assistance Consultant (Project No. 2130-02035), Project Management for 2013 FMA Grant Funding, City of New Orleans, LA, 02/2017-Present
Mrs. Cook assists with the development of hazard mitigation grant applications for the City of New Orleans. In this role, Mrs. Cook works with homeowners to receive applications, flood insurance declaration pages, elevation certificates, and all other supporting documentation for the grant application. Mrs. Cook also assists with the processing of site inspection reports including the preparation of maps and photos that are included in the application. She enters and tracks data in BBEC's tracking system and follows up with homeowners when updated documentation is needed. Upon receipt of the needed documentation from the homeowners, she reviews them for completion, accuracy, and ownership verification and works to resolve issues. She also schedules and attends meetings and continues to communicate with the homeowners regarding the status

of the application. Mrs. Cook prepares all contracts and amendments and coordinates the processing and execution of them with the City of New Orleans. She updates all applicants as Vendors in the City of New Orleans BRASS system for payment processing. She works directly with the IT Department to implement changes and updates needed in the BBEC tracking system as the program progresses.

Project Management Services for Hazard Mitigation Grant, SRL/RL Elevation Project, Elevation of Four (4) Residential Structures (HMGP #1786-057-0007), Lafourche Parish, LA, 04/2017-Present

Mrs. Cook assists with processing paperwork from homeowners. She enters and tracks data in BBEC's tracking system and follows up with homeowners when updated documentation is needed.

Project Management Services for the Implementation of FEMA – FMA-PJ-06-LA-2016-003, Elevation of eight (8) structures under SRL/RL Elevation Project, Lafourche Parish, LA, 10/2018-Present

Mrs. Cook enters and tracks data in BBEC's tracking system and follows up with homeowners when updated documentation is needed.

Project Management and Technical Services, 2018 Contract, Terrebonne Parish, LA, 10/2018-Present

Mrs. Cook worked with homeowners to receive applications, flood insurance declaration pages, elevation certificates, and all other supporting documentation for the grant application. Mrs. Cook also assisted with the processing of site inspection reports including the preparation of maps and photos that were included in the application. She enters and tracks data in BBEC's tracking system and follows up with homeowners when updated documentation is needed. She also scheduled meetings and continues to communicate with the homeowners regarding the status of the application.

Federal Emergency Management Agency Public Assistance Program Services, St. Charles Parish, LA, 09/2017-Present

Mrs. Cook works with homeowners to receive applications, flood insurance declaration pages, elevation certificates, and all other supporting documentation for the grant application. Mrs. Cook also assisted with the processing of site inspection reports including the preparation of maps and photos that were included in the application. She enters and tracks data in BBEC's tracking system and follows up with homeowners when updated documentation is needed. She continues to communicate with the homeowners regarding the status of the application throughout the time of the application process. She develops contracts and works with the homeowners to and the Parish for execution of the contracts.

FEMA Hazard Mitigation Assistance (HMA) Programs (2020 Contract), Terrebonne Parish, LA, 10/2020-Present

Mrs. Cook received all incoming paperwork from the homeowners, reviewed for completion and processed them including updating data in the system and requesting corrected documentation from homeowners. She assisted homeowners with the completion of loss history request forms and submitted them to the NFIP. Mrs. Cook entered data in the system including loss history, elevation certificate data, and flood declaration page data. She continues to communicate with homeowners regarding the status of the application.

Grant Closeout for Federal Declared Disasters, 2014 Contract, FEMA Public Assistance Category A and B Projects, St. Bernard Parish, LA, 09/2014-Present

Mrs. Cook currently serves as Contract/Grant Administrator for the project to close out almost $500 million in FEMA Public Assistance Grants. She utilizes LouisianaPA.com to track projects, upload required documents, and locate needed documents. She assists with submitting project invoices for both consultants and contractors into LouisianaPA.com, works with St. Bernard Parish employees to compile the necessary documents to justify work performed and funds obligated according to FEMA guidelines, assists in resolving issues during reconciliation of grant close-out, reviews contracts and invoices to reconcile total project costs for completed projects, provides documentation to the Louisiana Legislative Auditors in an effort to speed up the closeout process, and utilizes electronic document management system to store project records.

Hurricane Katrina Roadway Restoration, St. Bernard Parish, Louisiana

Mrs. Cook oversaw the processing and tracking of FEMA assessments and eligibility determinations. She assisted in the preparation of work orders for submittal to St Bernard Parish Administration for execution. She prepared drawings for field inspectors to use for tracking quantities and work completed. Mrs. Cook oversaw the clerical support staff to ensure data entry and scanning work is being completed efficiently and provided problem resolution, as needed.

Lorry Gore

Clerical / Administration

Experience Highlights

Mrs. Gore joined Barowka and Bonura Engineers and Consultants, L.L.C., in 2006 as a Resident Inspector. Over the years, many of her duties included meeting with residents to identify disaster generated damage to their properties. Since that time, Ms. Gore has been moved to BBEC's main office as the full-time receptionist and administrative assistant to the Engineering Department. Ms. Gore has been a vital part of the public face of BBEC and has continued to provide excellent service to BBEC's staff, clients, and property owners.

Mrs. Gore has been providing customer service-related activities for Hazard Mitigation Grant Programs since 2015. She acts as liaison between homeowners and project managers to schedule meetings, obtains declaration pages for flood insurance from homeowners to remain current, maintains communication with homeowners regarding milestones and application status, and assists with the contractor reimbursement process. Mrs. Gore plays an integral role in ensuring all documentation is stored accurately for our projects.

Key Projects

Program Management 2014 Hazard Mitigation Assistance Grants, Jefferson Parish, LA (HMGP Project), 03/2015-07/2019

Mrs. Gore assisted with the 2014 Hazard Mitigation Assistance Grant for home elevation and reconstruction for Jefferson Parish. In her role as Customer Service Representative, Mrs. Gore acted as a liaison between homeowners and project managers to schedule and prepare grant kickoff meetings hosted by Jefferson Parish, notify homeowners about project milestones, and assisted in the contractor reimbursement process. She has worked with the project homeowners preparing grant required paperwork, contracts, and all other documentation required for grant application.

Project Management and Technical Services (2018 Contract), Terrebonne Parish, LA, 10/2018-Present

Mrs. Gore acted as liaison between homeowners and project managers to obtain documentation required to prepare and submit the application(s) and assisted with scheduling site visits for properties participating. She communicates with the homeowners regarding the status of the application(s) and ensures we have the current flood declaration page on file.

FEMA Hazard Mitigation Assistance Consultant (Project No. 2130-02035), Project Management for 2013 FMA Grant Funding, City of New Orleans, LA, 02/2017-Present

Mrs. Gore acts as liaison between homeowners and project managers to obtain documentation required to prepare and submit application(s) and assists with scheduling site visits for properties participating. She communicates with homeowners regarding the status of the application(s). Mrs. Gore serves as liaison to the Project Managers, Homeowners, and Contractors to prepare and schedule grant kickoff meetings hosted by the City of New Orleans. She communicates with the project homeowners obtaining and processing the required paperwork including current flood declaration pages, bid submissions, site plans, elevation certificates, milestone payment request, milestone construction observation reports, completion certificates, permits, contracts, plans, affidavits, sites photos, and withdrawal letters, if needed.

FEMA Hazard Mitigation Assistance (HMA) Programs (2020 Contract), Terrebonne Parish, LA, 10/2020-Present

Mrs. Gore prepares and mails outreach letters for Terrebonne Parish for potential participation in the Application submittals. Mrs. Gore acts as liaison between homeowners and project managers to obtain documentation required to prepare and submit the application(s) and assists with scheduling site visits for properties participating. She communicates with the homeowners regarding the status of the application(s) and ensures we have the current flood declaration pages on file through the completion of closeout.

Project Management Services for the Implementation of FEMA – FMA-PJ-06-LA-2016-003, Elevation of eight (8) structures under SRL/RL Elevation Project, Lafourche Parish, LA, 07/2018-Present

Mrs. Gore serves as liaison to the Project Managers, Homeowners, and Contractors to prepare and schedule grant kickoff meetings hosted by Lafourche Parish. She communicates with the project homeowners obtaining and processing the required paperwork including current flood declaration pages, bid submissions, site plans, elevation certificates, milestone payment request, milestone construction observation reports, completion certificates, permits, contracts, plans, affidavits, sites photos, and withdrawal letters, if needed.

Project Management Services for the Implementation of FEMA – FMA-PJ-06-LA-2017-023, Elevation of Seven (7) Structures), Lafourche Parish, LA, 05/2019-Present

Mrs. Gore serves as liaison to the Project Managers, Homeowners, and Contractors to prepare and schedule grant kickoff meetings hosted by Lafourche Parish. She communicates with the project homeowners obtaining and processing the required paperwork including current flood declaration pages, bid submissions, site plans, elevation certificates, milestone payment request, milestone construction observation reports, completion certificates, permits, contracts, plans, affidavits, sites photos, and withdrawal letters, if needed.

Project Management Services for Hazard Mitigation Grant, SRL/RL Elevation Project, Elevation of Four (4) Residential Structures (HMGP #1786-057-0007), Lafourche Parish, LA, 03/2017-Present

Mrs. Gore served as liaison to the Project Managers, Homeowners, and Contractors to prepare and schedule grant kickoff meetings hosted by Lafourche Parish. She communicates with the project homeowners obtaining and processing the required paperwork including current flood declaration pages, bid submissions, site plans, elevation certificates, milestone payment request, milestone construction observation reports, completion certificates, permits, contracts, plans, affidavits, sites photos, and withdrawal letters, if needed.

Application Development and/or Project Management of FEMA HMA Grant Programs, Lafourche Parish, LA, 11/2019-Present

Mrs. Gore prepared and mailed outreach letters for Lafourche Parish for potential participation in the Application submittals. She took incoming calls from homeowners, discussed the items needed for the application, and followed up with emailed information for review. She saved all incoming documentation from homeowners to a specially developed program so we can easily locate needed documents by property. She pulled assessors' data and maps for each individual address and continues to communicate with homeowners regarding the status of the application and collecting updated flood declaration pages.

FEMA Public Assistance/Hazard Mitigation Program Services, St. Charles Parish, LA, 09/2017-Present

Mrs. Gore prepares and mails outreach letters for St. Charles Parish for potential participation in the Application submittals. She takes incoming calls from homeowners, discussing the items needed for the application, and follows up with emailed information for review. She saves all

incoming documentation from homeowners to a specially developed program so we can easily locate needed documents by property. She pulls assessors' data and maps for each individual address and continues to communicate with homeowners regarding the status of the application and collecting updated flood declaration pages throughout the process until closeout is complete.

FEMA Public Assistance Grant and Program Management, Jefferson Parish, LA, 10/2021-Present

Mrs. Gore assists the grant management and project management team by organizing documentation and processing the paperwork into our document management system to ensure easy location of documents. She ensures accuracy while processing these documents so that searches are very efficient and save countless hours spent searching for files. BBEC has created an environment that gives our clients a complete set of tools to aid in the performance of their duties and Mrs. Gore has played an integral part in the success of this process.

Louisiana Public Services Commission RFP 24-06, Docket U-36625, Entergy Louisiana, LLC, ex parte. Application for Approval of the Entergy Future Ready Resilience Plan (Phase 1)

EXHIBIT 1 – COST PROPOSAL DETAIL

Barowka and Bonura
Engineers and Consultants, L.L.C.

in association with

GEC

Prepared by:
Barowka and Bonura
Engineers and Consultants, L.L.C.
209 Canal Street
Metairie, LA 70005
T: +1 (504) 828-0030
F: +1 (504) 828-8006

Louisiana Public Service Commission
RFP 24-06, Docket U-36625
Estimate of Costs
7/21/2024

	Rate	$350.00	$300.00	$290.00	$210.00	$130.00	$160.00	$160.00	$180.00	$100.00	$102.43	
Task / Labor Class		**Principal**	**Program Manager**	**Superviser-Engr (PE)**	**Engineer (PE)**	**Engineer Intern**	**Certified Floodplain Manager**	**Compliance Specialist**	**Accountant**	**Inspector**	**Clerical**	Sum
Years 1 - 4												
Project Data Review		2	20	8	40	20	8	20	120		20	
Meet with ELL to discuss data		4	8	4	4	2	0	8	8		20	
Resilience Plan Precon Review			4	4	8	0	0				20	
Preconstruction Review			8	8	8	12	0				20	
Site Field Inspections		2	8	2	8	32	0			880	20	932
Meetings		4	8	4	4	8	0	4	4		20	
Speak at B&E		4	4			2					8	
Assist Commission Staff			8	8	8				24			
		16	68	38	80	76	8	32	156	880	128	
		$5,600.00	$20,400.00	$11,020.00	$16,800.00	$9,880.00	$1,280.00	$5,120.00	$28,080.00	$88,000.00	$13,111.04	
									Monthly Budget for Years 1 - 4		$199,291.04	
Year 5												
Project Data Review		2	40	8	16	4	8	20	120		20	
Meet with ELL to discuss data		2	4	4	4			8	8		20	
Resilience Plan Precon Review			4	2	4	4					20	
Preconstruction Review			2	4	8	8					20	
Site Field Inspections		2	2	2	8	8				528	20	550
Meetings		4	8	4	4	2		4	4		20	
Speak at B&E		2	2			4					8	
Assist Commission Staff			4	4	4				40			
		12	66	28	48	30	8	32	172	528	128	
		$4,200.00	$19,800.00	$8,120.00	$10,080.00	$3,900.00	$1,280.00	$5,120.00	$30,960.00	$52,800.00	$13,111.04	
									Monthly Budget for Year 5		$149,371.04	
Year 6												
Project Data Review		4	40	8	16	4	8	20	20		20	
Meet with ELL to discuss data		4	4	4	4			8	8		20	
Resilience Plan Precon Review			4	2	4	4					20	
Preconstruction Review			2	4	8	8					20	
Site Field Inspections		4	2	2	8	8				88	20	112
Meetings		8	8	4	4	2		4	4		20	
Speak at B&E		4	4			4					8	
Assist Commission Staff			4	4	4				40			
		24	68	28	48	30	8	32	72	88	128	
		$8,400.00	$20,400.00	$8,120.00	$10,080.00	$3,900.00	$1,280.00	$5,120.00	$12,960.00	$8,800.00	$13,111.04	
									Monthly Budget for Year 6		$92,171.04	
Transmission Hardening (1120 Towers)												
Project Data Review		4	40	120	120	4	8	20	160		20	

Meet with ELL to discuss data	0	4	4	4				8		20	
Resilience Plan Precon Review		4	2	16	4					20	
Preconstruction Review		2	80	80	8					20	
Site Field Inspections	0	2	2	8	8				2112	20	2132
Meetings	4	8	4	4	2			4		20	
Speak at B&E	0	4	12	12	4					8	
Assist Commission Staff		4	4	4				40			
	8	68	228	248	30	8	20	212	2112	128	
	$2,800.00	$20,400.00	$66,120.00	$52,080.00	$3,900.00	$1,280.00	$3,200.00	$38,160.00	$211,200.00	$13,111.04	
										$412,251.04	
Substation Roof Hardening (24 Facilities)											
Project Data Review	4	192	48	96	48	96	20	120		20	
Meet with ELL to discuss data	4	16	16	4		2	8	8		20	
Resilience Plan Precon Review		4	16	4	4	2				20	
Preconstruction Review		2	48	192	96	96				20	
Site Field Inspections	4	2	2	96	8	24			2112	20	2248
Meetings	8	8	4	12	2	2	4	4		20	
Speak at B&E	4	4			4					8	
Assist Commission Staff		4	4	12				40			
	24	232	138	416	162	222	32	172	2112	128	
	$8,400.00	$69,600.00	$40,020.00	$87,360.00	$21,060.00	$35,520.00	$5,120.00	$30,960.00	$211,200.00	$13,111.04	
										$522,351.04	
Substation Flood Mitigation (7 Facilities)											
Project Data Review	2	56	14	14		56	20	28		20	
Meet with ELL to discuss data	2	4	4	4		8	8	8		20	
Resilience Plan Precon Review		4	2	4		16				20	
Preconstruction Review		2	4	8		56				20	
Site Field Inspections	2	4	2	8		28			528	20	572
Meetings	4	8	4	4		28	4	4		20	
Speak at B&E	4	4				4				8	
Assist Commission Staff		4	4	4		12		14			
	14	86	34	46	0	208	32	54	528	128	
	$4,900.00	$25,800.00	$9,860.00	$9,660.00	$0.00	$33,280.00	$5,120.00	$9,720.00	$52,800.00	$13,111.04	
										$164,251.04	
Major Event Days Report Review											
Project Data Review	0	24	20	40			20	24		20	
Meet with ELL to discuss data	4	8	8	8			8	8		20	
Resilience Plan Precon Review		4	0	0						20	
Preconstruction Review		0	0	0						20	
Site Field Inspections	4	0	4	8					1056	20	1072
Meetings	8	8	8	4			4	4		20	
Speak at B&E	4	4								8	
Assist Commission Staff		4	8	4				14			
	20	52	48	64	0	0	32	50	1056	128	
	$7,000.00	$15,600.00	$13,920.00	$13,440.00	$0.00	$0.00	$5,120.00	$9,000.00	$105,600.00	$13,111.04	
										$182,791.04	

Mileage and Perdiem

Mileage ($0.655/mile) assume 100 miles per day	$62,372.38	95225
Per Diem ($107 + $79) assume 20% rerquire overnight stay	$35,423.70	

Project Budget Summary:		**Cost umulative Total**
Year 1	$2,391,492.48	$2,391,492.48
Year 2	$2,391,492.48	$4,782,984.96
Year 3	$2,391,492.48	$7,174,477.44
Year 4	$2,391,492.48	$9,565,969.92
Year 5	$1,792,452.48	$11,358,422.40
Year 6	$1,106,052.48	$12,464,474.88
Transmission Hardening (1120 Towers)	$412,251.04	$12,876,725.92
Substation Roof Hardening (24 Facilities)	$522,351.04	$13,399,076.96
Substation Flood Mitigation (7 Facilities)	$164,251.04	$13,563,328.00
Major Event Days Report Review	$182,791.04	$13,746,119.04
Mileage and Per Diem Budget	$97,796.08	$13,843,915.12
		$2,307,319.19