

**QUESTIONS AND COMMENTS MUST BE SUBMITTED NO LATER THAN 11:00 A.M.
(CT)September 24, 2021.**

REQUIRED SIGNATURE PAGE FOR SUBMITTALS

This page, signed by an authorized officer of your Company, must accompany your submittal as the cover page.

I, the undersigned, having carefully examined the Request for Qualifications, propose to furnish services in accordance therewith as set forth in the attached submittal.

I hereby certify that this submittal is genuine and not a sham or collusive submittal, or made in the interests or on behalf of any person not therein named; and I have not directly or indirectly induced or solicited any Submitter or supplier on the above work to put in a sham submittal or any person or corporation to refrain from submitting a submittal; and that I have not in any manner sought by collusion to secure to myself an advantage over any other Submitter(s) or person(s).

In order to induce the Sheriff to consider this submittal, the Submitter irrevocably waives any existing rights which it may have, by contract or otherwise, to require another person or corporation to refrain from submitting a submittal to or performing work or providing supplies to St. John the Baptist Parish Sheriff Office, and Submitter further promises that it will not in the future directly or indirectly induce or solicit any person or corporation to refrain from submitting a bid or submittal to or from performing work or providing supplies to St. John the Baptist Parish Sheriff Office.

Please type or print legibly the information below.

Submitter hereby acknowledges receipt of the RFQ and agrees to Terms and Conditions set forth in this RFQ.


SUBMITTER INFORMATION

Firm Name: MSMM Engineering, LLC

Address: 4508 Clearview Pkwy City/State/Zip: Metairie, LA 70006

Phone No.: 504-570-6098 Fax No.: _____

AUTHORIZATION TO SUBMIT (must be signed):

By: 	<u>9/27/2021</u>	<u>Manish Mardia, P.E.</u>
Signature	Offer Date	Printed

Primary Contact Person (If other than above):

Name: Manish Mardia, P.E. Phone No: 504-559-1897 Fax No: _____

Title: President Email Address: mmardia@msmmeng.com

If this submittal is being submitted on behalf of an agent/broker, please complete section below:

Submitted on behalf of: _____

Phone No: _____ Fax No: _____

E-mail Address: _____

GENERAL TERMS AND CONDITIONS

1.0 RFQ Process

- 1.1 This RFQ is subject to all applicable state and local laws, including the Louisiana Code of Governmental Ethics.
- 1.2 RFQ's, associated documents and addenda may be obtained from the Sheriff's Office at 1801 W. Airline Hwy., LaPlace, LA 70068 or by downloading from the Parish's website at www.stjohnsheriff.org or CentralAuctionhouse at www.centrauctionhouse.com. Electronic submittals will be accepted only on www.centrauctionhouse.com.
- 1.3 Written addenda to the RFQ may be issued to provide clarification, corrections, or to answer questions. It is the Company's responsibility to periodically check either Sheriff's Office website, or CentralAuctionhouse for addenda that may be issued to implement changes or clarifications to the RFQ, prior to due date. **Checking the Parish website is HIGHLY recommended.**
- 1.4 The Sheriff's Office reserves the right to request additional information to clarify submittals. The Sheriff's Office shall determine the appropriate means of clarification: telephone, e-mail, letter, or oral interviews.
- 1.5 Questions and comments regarding this Submittal must be submitted in writing to St. John the Baptist Parish Sheriff Office, ATTN: Chief Civil Deputy, Jeff Clement, via e-mail to jeff.clement@stjohnsheriff.org no later than 11:00 A.M. on September 24, 2021.

2.0 Submission of Submittal

- 2.1 Submittals shall be addressed to St. John the Baptist Parish Sheriff Office and delivered to the receptionist located in the St. John the Baptist Parish Sheriff Office, 1801 West Airline Hwy., LaPlace, LA no later than **September 27, 2021 at 9:45 A.M. Local Time. Submittal package must be submitted in a sealed envelope or package clearly marked with the Submitter's name and address, and "Emergency Request for Qualifications (RFQ) Hurricane Ida Disaster Recovery Damage Assessment and A/E Services"**
- 2.2 Each Submitter shall provide a submittal package based on the designated point evaluation scoring criteria. The submittal shall provide clear and sufficient information to enable the selection committee to evaluate the responsiveness and quality of the submittal. The Selection/Scoring Criteria (Exhibit B) will be used to evaluate all submittals received. Failure to provide all required information with the exception of scope of work that does not pertain to your Company, including the "Required Signature Page for Submittals" may be cause for rejection of the submittal as non-responsive.
- 2.3 Submitter shall submit either one (1) hard copy and one (1) electronic copy delivered to the St. John the Baptist Parish Sheriff Office, or one (1) electronic copy submitted through the central bidding website of submittal by the date and time specified. Failure to submit the required number of copies may result in finding of non-responsive. Original should be clearly marked.
- 2.4 The Parish will not be responsible for submissions forwarded through the U.S. Postal Service or any delivery service if lost in transit at any time before submission opening, or if hand-delivered to the incorrect location.
- 2.5 Submittals submitted by facsimile (FAX) or e-mail will not be accepted. Any submittal received after **September 27, 2021 at 9:45 A.M. Local Time** will be deemed unresponsive and will be returned to Submitter unopened.

3.0 Pre-Submittal Conference

None

4.0 Opening

Submitters will be read publicly at **10:00 A.M. Local Time on September 27, 2021** at the St. John the Baptist Parish Sheriff Office, 1801 W. Airline Highway, LaPlace, LA 70068.

5.0 Public Disclosure

It is understood and agreed upon by the Submitter in submitting that the Sheriff has the right to withhold all information regarding this procurement until after contract award, including but not limited to: the number received; competitive technical information; competitive price information; and the Sheriff's evaluation concerns about competing submittals. Information releasable after award is subject to the disclosure requirements of the Louisiana Public Records Act. Submitter specifically waives any claims against Parish related to the disclosure of any materials if made under a public records request.

6.0 Sheriff Commitment

6.1 Sheriff shall have the right to reject or accept any Submittal or offer, or any part thereof (i.e., any component of any proposed solution) for any reason whatsoever and to accept other than the lowest offer, at its sole discretion.

6.2 This RFQ does not commit the Sheriff's Office to award, nor does it commit the Sheriff's Office to pay any costs incurred in the submission of the Submittal, or in making necessary studies or designs for the preparation thereof, nor procure or contract for services or supplies. Further, no reimbursable cost may be incurred in anticipation of a contract award.

6.3 The Sheriff's Office reserves the right to terminate this RFQ at any time prior to contract execution.

6.4 No prior, current, or post-award verbal conversation or agreement(s) with any officer, agent, or employee of the Sheriff shall affect or modify any terms or obligations of this RFQ, or any contract resulting from this procurement.

6.5 The Sheriff's Office reserves the right to revise any part of the RFQ by issuing an addendum to the RFQ at any time in accordance with relevant Louisiana Revised Statutes. Issuance of this RFQ in no way constitutes a commitment by the Sheriff's Office to award a contract. The Sheriff's Office reserves the right to accept or reject, in whole or part, all Submittals submitted, and/or cancel this announcement if it is determined to be in the Sheriff's Office best interest. All materials submitted in response to this announcement become the property of the Sheriff's Office, and selection or rejection of a submittal does not affect this right.

7.0 Late, Modified, or Withdrawn Submittals

7.1 Any submittal received after the exact time specified for receipt will not be considered.

7.2 No modification of a submittal, except a modification resulting from the Sheriff's request for "best and final offer," will be accepted.

7.3 No Submitter may withdraw his/her submittal within forty-five (45) days after the actual date of opening thereof.

8.0 Evaluation and Selection

- 8.1 Objective - The purpose is to evaluate all submittals with the ultimate interest of entering into an agreement with that Submitter determined to be most advantageous to St. John the Baptist Parish Sheriff's Office.
- 8.2 Evaluation - The St. John the Baptist Parish Sheriff's Office will evaluate qualifications and submittals received in response to an RFQ. The Sheriff's Office reserves the right to request additional information and clarification of any information submitted.
- 8.3 Evaluation criteria have been established to determine which Submitter will best contribute to the overall goals of the Sheriff's Office. These criteria are detailed in Exhibit B (Selection/Scoring Criteria) which is attached hereto and made a part hereof.
- 8.4 Recommendation and Selection - As part of the negotiation process, the Sheriff's Office reserves the right to negotiate with the successful Company. This award will be made to the most responsible Submitter whose submittal is determined in writing to be most advantageous to the Sheriff's Office, based on the scoring criteria set forth in this document. The Sheriff's Office also reserves the right to reject any and all submittals.

9.0 Terms

The contract shall be for a three (3) year period beginning with execution of the contract and ending thirty-six (36) months thereafter. The contract may be renewed one (1) time for two (2) years.

10.1 Insurance

Submitter shall obtain, pay for and keep in force, at its own expense, minimum insurance effective in all localities where Submitter may perform the work hereunder, with such carriers as shall be acceptable to the Sheriff's Office:

- A. **Statutory Workman's Compensation** covering all state and local requirements and Employer's Liability Insurance covering all persons employed by Submitter in connection with this agreement.

The limits for "A" above shall be not less than:

1. Employer's liability limits of \$1,000,000/\$1,000,000/\$1,000,000
2. Some contracts may require USL&H or maritime coverage. This should be verified with Insurance Department/Legal Dept.
3. No excluded classes of owners/officers or employees shall be allowed on Council's premises

WAIVER OF SUBROGATION in favor of St. John the Baptist Parish Sheriff Office should be indicated on certificate.

- B. **Commercial General Liability**, including:

1. Contractual liability assumed by this agreement
2. Owner's and Submitter's Protective Liability (if Submitter is a General Submitter) may be required.
3. Personal and advertising liability
4. Completed operations
5. Medical payments

The limits for "B" above shall not be less than:

1. \$1,000,000 each occurrence limit
2. \$2,000,000 general aggregate limit
3. \$1,000,000 products/completed operations aggregate limit
4. \$1,000,000 personal and advertising injury limit

5. \$50,000 fire damage limit
6. \$5,000 medical expense limit (desirable but not mandatory)

St. John the Baptist Parish Sheriff Office will be NAMED as additional insured and WAIVER OF SUBROGATION in favor of St. John the Baptist Parish Sheriff Office should be indicated on certificate.

Some contracts may require Protection and Indemnity coverage. This should be verified with Insurance Department/Legal Dept.

- C. **Comprehensive Automobile Liability** covering all owned, hired and other non-owned vehicles of the Company.

The limits for "C" above shall not be less than:

1. \$15,000/\$20,000BI/\$25,000 PD

St. John the Baptist Parish Sheriff Office will be NAMED as additional insured and WAIVER OF SUBROGATION in favor of St. John the Baptist Parish Sheriff Office shall be included on certificate.

OTHER SPECIFIC COVERAGE RELATED TO THE TASK BEING PERFORMED MAY BE REQUIRED.

All required insurance certificates shall be submitted to the Chief Civil Deputy prior to commencement of work. Submitter shall maintain insurance in full force and effect during the entire period of performance of work. All policies must have a thirty (30) day non-cancellation clause giving the Sheriff thirty (30) days prior written notice in the event a policy is changed or canceled.

- D. **Professional Liability Insurance** covering the Wrongful Acts of those professional firms and individuals performing services for St. John the Baptist Parish Sheriff Office. Certain classifications of service providers will be required to provide evidence of Professional Liability Insurance. Examples of these providers include but are not limited to: Professional Engineers, Architects, Land Surveyors, Attorneys, and IT Submitters.

The limits for "D" above shall not be less than: \$1,000,000 CSL

WAIVER OF SUBROGATION in favor of St. John the Baptist Parish Sheriff Office shall be included on the Certificate.

OTHER SPECIFIC COVERAGE RELATED TO THE TASK BEING PERFORMED MAY BE REQUIRED.

All required insurance certificates shall be submitted to the Chief Civil Deputy prior to commencement of work. Submitter shall maintain insurance in full force and effect during the entire period of performance of work. All policies must have a thirty (30) day non-cancellation clause giving the Parish thirty (30) days prior written notice in the event a policy is changed or canceled.

11.1 Submittals Required upon Provisional Award

Failure to provide the following documentation within the time period specified may be cause for the provisional award to be voided and the submittal to be rejected as non-responsive:

- Insurance Requirements as specified in Section 9.0, if not currently on file
- A current, fully executed Taxpayer Identification Number (W-9 form)
- A current St. John the Baptist Parish Occupational License, if applicable.
- Attestation, Non-Solicitation, and E-Verify Forms

12.0 Invoices

Itemized invoices for payment of these services shall be submitted to St. John the Baptist Parish Sheriff Office for approval and payment.

13.0 Hold Harmless

To the fullest extent permitted by law, Submitter shall indemnify, hold harmless, and defend the Parish Council and all of its Agents and Employees, from and against all claims, damages, losses and expenses, including but not limited to attorney's fees, arising out of or resulting from performance of the work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including loss of use resulting therefrom, but only to the extent caused in whole or in part by negligent acts or omissions of Company.

14.0 Non-assignability

No Submitter shall assign any interest in this contract by assignment, transfer, or novation, without prior written consent of the Parish. This provision shall not be construed to prohibit the Submitter from assigning his bank, trust company, or other financial institution any money due or to become due from approved contracts without such prior written consent. Notice of any such assignment or transfer shall be furnished promptly to the Sheriff's Office.

15.0 Exclusions

Pursuant to Louisiana Revised Statute 38:2227, Submitter must certify that he has not been convicted of or has not entered into a plea of guilty or nolo contendere to public bribery, corrupt influencing, extortion, money laundering or their equivalent Federal crimes. Submitter must further certify that he has not been convicted of or has not entered into a plea of guilty or nolo contendere to theft, identify theft, theft of a business record, false accounting, issuing worthless checks, bank fraud, forgery; Submitters' misapplication of payments, malfeasance in office, or their equivalent Federal crimes within the five (5) years prior to submitting the submittal.

16.0 Disclosure

Submitter must disclose whether it provides services or pays commissions to any employee or elected official of St. John the Baptist Parish. If so, Submitter must disclose to whom services are provided and/or commissions are paid. Both positive and negative responses must be submitted.

17.0 Termination for Cause and Convenience

Proposer acknowledges this contract contains termination provisions including the manner in which termination shall be affected and the basis for settlement. In addition, such provisions shall describe conditions for termination due to fault and for termination due to circumstances outside the proposer's control.

18.0 Severability Clause

If any one or more of the provisions contained in this Agreement shall, for any reasons, be held to be invalid, illegal or unenforceable, in whole or in part, such invalidity, illegality, or unenforceability shall not affect any other provisions of this Agreement, and in such an event, this Agreement shall be construed as if such invalid, illegal, or unenforceable provisions had never been contained herein.

19.0 Venue

This Agreement shall be governed by the laws of the State of Louisiana. Proper venue for any lawsuit arising under the terms of this Agreement shall be the 40th Judicial District Court, St. John the Baptist Parish, and any appropriate appellate court therefrom. Proposer hereby agrees and consents to personal and/or in rem jurisdiction of the trial and appropriate appellate courts.

20.0 Discrimination Clause

The Engineer agrees to abide by the requirements of the following as applicable: Title VI of the Civil Rights Act of 1964 and Title VII of the Civil Rights Act of 1964, as amended by the Equal Employment Opportunity Act of 1972, Federal Executive Order 11246 as amended, the Rehabilitation Act of 1973, as amended, the Vietnam Era Veteran's Readjustment Assistance Act of 1974, Title IX of the Education Amendments of 1972, the Age Discrimination Act of 1975, the Fair Housing Act of 1968 as amended, and Proposer agrees to abide by the requirements of the Americans with Disabilities Act of 1990.

21.0 Equal Employment Opportunity

During the performance of this contract, the contractor agrees to abide by 41 C.F.R. Part 60-1.4(b).

22.0 Davis Bacon

Not Applicable for FEMA Public Assistance Grants.

23.0 Copeland Anti-Kickback Act

Not Applicable for FEMA Public Assistance Grants.

24.0 Contract Work Hours and Safety Standards Act

The regulation at 29 C.F.R. § 5.5(b) provides contract clause language concerning compliance with the Contract Work Hours and Safety Standards Act.

Compliance with the Contract Work Hours and Safety Standards Act.

(1) *Overtime requirements.* No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) *Violation; liability for unpaid wages; liquidated damages.* In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of \$27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.

(3) *Withholding for unpaid wages and liquidated damages.* The PARISH shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other

federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

25.0 Rights to inventions made under a contract or agreement

Not Applicable for FEMA Public Assistance Grants

26.1 Clean Air Act

1. The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.
2. The contractor agrees to report each violation to the PARISH and understands and agrees that the PARISH will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
3. The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.

27.1 Federal Water Pollution Control Act

1. The contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.
2. The contractor agrees to report each violation to the PARISH and understands and agrees that the PARISH will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
3. The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.

28.1 Suspension and Debarment

- (1) This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).
- (2) The contractor must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.
- (3) This certification is a material representation of fact relied upon by the parish. If it is later determined that the contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to the PARISH, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.

(4) The bidder or proposer agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2

C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions. a. Standard. Each tier certifies to the tier above that it will not and has not used Federal appropriated

29.1 Procurement of Recovered Materials

i. In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired—

1. Competitively within a timeframe providing for compliance with the contract performance schedule;
2. Meeting contract performance requirements; or
3. At a reasonable price.

ii. Information about this requirement, along with the list of EPA- designated items, is available at EPA's Comprehensive Procurement Guidelines web site,

<https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program>.

iii. The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.”

30.0 Access to Records

The Contractor agrees to provide the TPCG, the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.

The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

The Contractor agrees to provide the FEMA Administrator or his authorized representatives access to construction or other work sites pertaining to the work being completed under the contract.

In compliance with the Disaster Recovery Act of 2018, the TPCG and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States

31.0 DHS Seal, Logo and Flags

The contractor shall not use the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval.

32.0 Changes

No additional changes, enhancements, or modifications to any contract resulting from this RFQ shall be made without the prior approval of TPCG. Any modifications to the provisions of this contract shall be in writing, signed by all parties and approved the required authorities.

Changes to the contract include any change in compensation; beginning/ ending date of the contract; scope of work; and/or Contractor change through the Assignment of Contract process. Any such changes, once approved, will result in the issuance of an amendment to the contract.

33.0 Compliance with Federal Law, Regulations, and Executive Orders

This is an acknowledgement that FEMA financial assistance will be used to fund and/or reimburse the Sheriff's Office for any costs incurred under this agreement. The Contractor will comply with all

applicable Federal law, regulations, executive orders, FEMA policies, procedures, and directives.

34.0 No Obligation by Federal Government

The Federal Government is not a party to this contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract.

35.0 Program Fraud and False or Fraudulent Statements or Related Acts

The Contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to the Contractor's actions pertaining to this contract.

CORPORATE RESOLUTION AND CERTIFICATE OF AUTHORITY

EXCERPT FROM MINUTES OF MEETING OF THE BOARD OF DIRECTORS OF MSMM ENGINEERING, LLC

At the meeting of directors of **MSMM ENGINEERING, LLC** incorporated, duly noticed and held on **September 1, 2021**, a quorum being there, present, on motion duly made and seconded, it was resolved, that **Manish Mardia** be and is hereby appointed, constituted and designated as agent and attorney-in fact of the corporation with full power and authority to act on behalf of this corporation in all negotiations, bidding, concerns and transactions with any and all public and private entities or any of its agencies, departments, employees or agents, including but not limited to, the execution of all bids, proposals, papers, documents, affidavits, bonds, sureties, contracts and acts and to receive and receipt therefore, all purchase orders and notices issued pursuant to the provisions on any such bid, proposal, or contract, this corporation hereby ratifying, approving, confirming and accepting each and every such act performed by said agent and attorney-in-fact.

I hereby certify the foregoing to be a true and correct copy of an excerpt of the minutes of the above dated meeting of the board of directors of said corporation, and the same has not been revoked or rescinded.



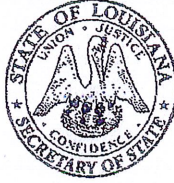
SECRETARY

September 1, 2021

DATE

Tom Schedler
SECRETARY OF STATE

State of Louisiana
Secretary of State



COMMERCIAL DIVISION
225.925.4704

07/11/2011

Administrative Services

225.932.5317 Fax

Corporations

225.932.5314 Fax

Uniform Commercial Code

225.932.5318 Fax

MANISH MARDIA
232 CANE BAYOU LANE
KENNER, LA 70065

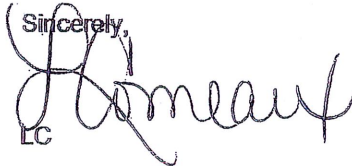
DEAR MR. MARDIA

MSMM ENGINEERING LLC

It has been a pleasure to approve and place on file your articles of organization. The appropriate evidence is attached for your files.

Payment of the filing fee is acknowledged by this letter.

Online filing options are available if changes are necessary to your registration or you need to file an annual report. Please visit our website at GeauxBiz.com for your future business needs.

Sincerely,

LC

Tom Schedler
SECRETARY OF STATE

State of Louisiana
Secretary of State



July 11, 2011

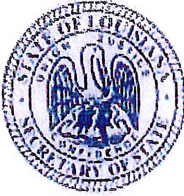
COMMERCIAL DIVISION
225.925.4704

Administrative Services
225.932.5317 Fax
Corporations
225.932.5314 Fax
Uniform Commercial Code
225.932.5318 Fax

The attached document of MSMM ENGINEERING LLC was received and filed on July 11, 2011.

LC 40556770K

Tom Schedler
Secretary of State



ARTICLES OF ORGANIZATION

(R.S. 12:1301)

Domestic Limited Liability Company
Enclose \$75.00 filing fee
Make remittance payable to
Secretary of State
Do not send cash

Return to: Commercial Division
P. O. Box 94125
Baton Rouge, LA 70804-9125
Phone (225) 925-4704
Web Site: www.sos.louisiana.gov

STATE OF Louisiana

PARISH/COUNTY OF Jefferson

1. The name of this limited liability company is : MSMM Engineering LLC

2. This company is formed for the purpose of: (check one)

☒ Engaging in any lawful activity for which limited liability companies may be formed.

☐ _____
(use for limiting activity)

3. The duration of this limited liability company is : (may be perpetual) perpetual

4. Other provisions: _____

Signatures: _____

On this 30 day of June, 2011, before me, personally appeared

Manish Mardia, to me known to be the person described in and who

executed the foregoing instrument, and acknowledged that he/she executed it as his/her free act and deed.

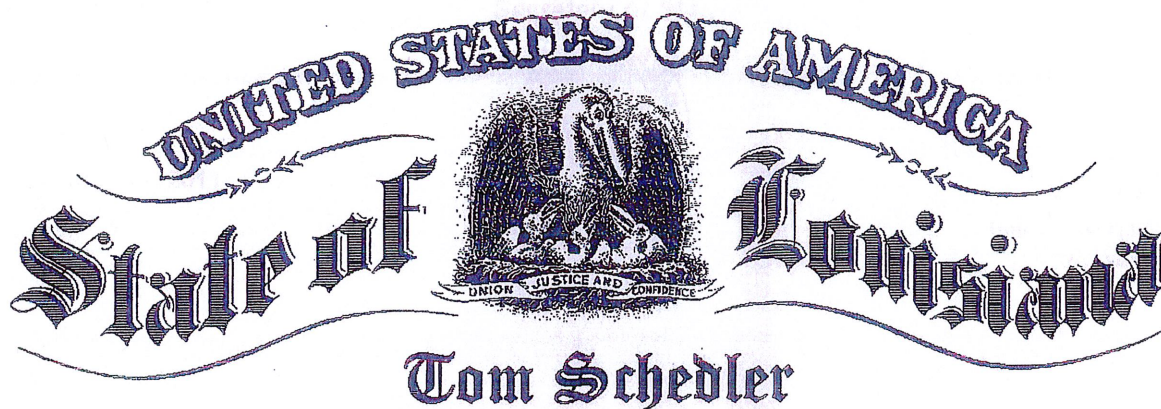
NOTARY NAME MUST BE TYPED OR PRINTED WITH NOTARY #

Stacy L Bragg
Notary Signature



STACY L. BRAGG
Notary Public
State of Louisiana
Notary ID # 89123

My Commission is for Life
(See instructions on back)



Tom Schedler
SECRETARY OF STATE

As Secretary of State of the State of Louisiana, I do hereby Certify that

a copy of the Articles of Organization and Initial Report of

MSMM ENGINEERING LLC

Domiciled at KENNER, LOUISIANA,

Was filed and recorded in this Office on July 11, 2011,

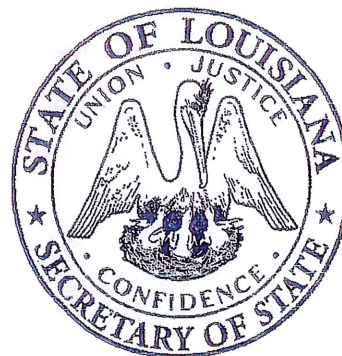
And all fees having been paid as required by law, the limited liability company is authorized to transact business in this State, subject to the restrictions imposed by law, including the provisions of R.S. Title 12, Chapter 22.

In testimony whereof, I have hereunto set my hand and caused the Seal of my Office to be affixed at the City of Baton Rouge on,

July 11, 2011

Secretary of State

LC 40556770K



Certificate ID: 10182653#JHH62

To validate this certificate, visit the following web site, go to **Commercial Division, Certificate Validation**, then follow the instructions displayed.
www.sos.louisiana.gov

Louisiana Professional Engineering and Land Surveying Board

Hereby Certifies that

MSMM Engineering, Inc.

*has complied with the regulation of this Board and is authorized
to provide or to offer to provide engineering services in the State of
Louisiana contingent upon payment of the annual renewal fee.*

Baton Rouge, Louisiana · 08/15/2011



License Number 4896

Ali Mustafa

Chairman

[Signature]

Secretary


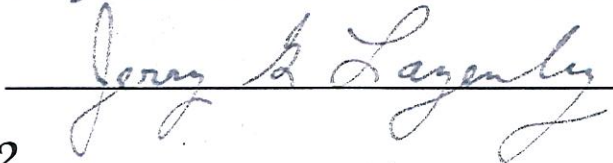
The Louisiana State Board of Registration for Professional Engineers and Land Surveyors

Hereby Certifies that
Manish Mardia

*has qualified before this Board in accordance with law and his name
has been inscribed upon the list of registered Professional Engineers. He
is thereby entitled to practice in the State of Louisiana the profession of
Environmental Engineering
contingent upon payment of the annual license fee provided by law.*



Baton Rouge, La. July 13, 1999


Chairman

Secretary

Registration No. 28482

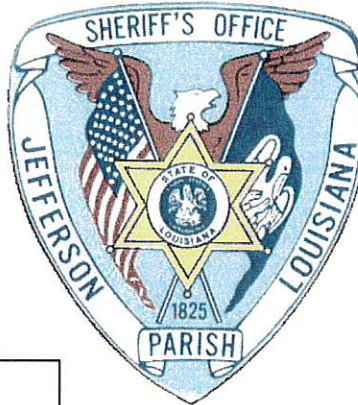
FOR PUBLIC DISPLAY - NOT TRANSFERABLE

ISSUED BY

SHERIFF AND EX-OFFICIO TAX COLLECTOR-JEFFERSON PARISH, LOUISIANA

2021 Occupational License Tax

MSMM ENGINEERING LLC
4508 CLEARVIEW PKWY #2
METAIRIE LA 70006



License # **376776376**

Account # **11454669**

Location Address

4508 CLEARVIEW PKWY #2
METAIRIE, LA

Business Class 541330
Engineering Services

License Class 1794
Licensed Professional Services

Tax	Interest	Penalty	Other	Total	Payment
\$1,100.00	\$0.00	\$0.00	\$0.00	\$1,100.00	\$1,100.00

JOSEPH P. LOPINTO, III
SHERIFF & TAX COLLECTOR

Gregory A. Ruppert, Director
Bureau of Revenue and Taxation

Pursuant to Jefferson Parish Code of Ordinances Chapter 35, Article VI, Section 35-153, the issuance of this occupational license to the person or firm named hereon is a receipt for payment of said tax and entitles the recipient to operate a business at the location shown, provided said business is operated within the confines of the application thereof, and does not violate any parish or state criminal, health, or zoning laws. This license will expire December 31, 2021.

RENEWAL APPLICATIONS ARE DUE PRIOR TO MARCH 1.



January 21, 2021
MSMM ENGINEERING LLC,
4620 South Carrollton Ave.
Suite 220
New Orleans, La 70119

UPDATED LETTER

Dear Mr. Mardia,

We have received your firm's disadvantaged business enterprise annual affidavit. Based on the information which you provided we have concluded that your firm continues to meet the eligibility requirements of our program and remains certified for only the following specific work categories that fall under the listed NAICS codes:

NC541330	Engineering Services
NC541349	Drafting Services
NC541350	Building Inspection Services
NC541611	Administrative Management and General Management Consulting Services
NC541620	Environmental Consulting Services
NC541690	Other Scientific and Technical Consulting Services
C03	Drafting
C05	Structural Engineering
C09	Civil Engineering
C20	Environmental Impact Assessments
C22	Environmental Engineering
C74	Construction Management

Please note that per the federal regulations, suppliers only receive 60% goal credit towards the materials they provide. Also note that A Louisiana Contractor's License is required by any contractor performing work in excess of \$50,000 with the exception of electrical, mechanical and plumbing which are required to have a license if work is in excess of \$10,000. You may contact the State Licensing Board for Contractors at (225) 765-2301 for more information. Your firm's certification will be recognized by all participants of the Louisiana Unified Certification Program. This includes all entities receiving federal transportation funding within the boundaries of our state.

Due to recent changes in the Federal Regulations which govern our DBE program, firms which have been certified will no longer have an expiration date, however you will be required to submit an annual affidavit with all supporting documents stating that your firm continues to meet the eligibility requirements of the program. This form will be sent to you approximately 4 weeks prior to your anniversary date (**January 15, 2022**). You must notify our office immediately, regarding any changes which affect the social and economic disadvantage, size, ownership or control of your firm.



We reserve the right to withdraw this certification, if at any time, it is determined that DBE certification was knowingly obtained by the submission of false, misleading or incorrect data. We, further reserve the right to request additional information and/or conduct an on-site visit at any time during your certification period.

If we can be of further assistance, please do not hesitate to contact us at (504) 827-8362.

Sincerely yours,

A handwritten signature in blue ink, reading "Keziah L. Cawthorne".

Keziah L. Cawthorne
DBE Compliance Officer

cc: File

EXHIBIT A

Scope of Work

SCOPE

St. John the Baptist Parish Sheriff Office suffered extensive damage to their public buildings, contents, and other facilities infrastructure resulting from Hurricane Ida and needs disaster recovery damage assessment and architectural and engineering services. The Sheriff wishes to hereby solicit the submittal of Requests for Qualifications (RFQs) from firms interested in and qualified to fulfill these professional services.

Disaster Recovery Damage Assessment and A/E Services

1. Coordinate and conduct damage assessments and prepare FEMA Project Worksheets for roads and bridges, water control facilities, public buildings and contents, public utilities, parks, recreational and other facilities infrastructure.
2. Devise plan documents for future wind-driven rain protection.
3. Prepare, review and update construction plans and specifications as needed.
4. Develop quality assurance monitoring plan.
5. Prepare and review project schedule.
6. Monitor and assist in coordination of project phasing.
7. Data collection management including performing quality control/quality assurance on all photographs and location data collected in the field. Photos of all roads and bridges, water control facilities, public buildings and contents, public utilities, parks, recreational and other facilities infrastructure assessed will be required.
8. Observe construction activities, attend pre-construction meetings, review change order requests, assist in resolving field questions, including:
 - a. Review construction program in to avoid delays, expedite construction, and preclude claims.
 - b. Monitor and document construction activities, including without limitation; construction progress, consultant and construction contractor personnel, equipment, and work performed; material quantities in-place by actual measurement and calculation; traffic control and site safety procedures; quality test; the application of work forces; the conformance of the work to the construction contractor's schedule and timely prosecution of the work; and the construction of required corrections and testing.
 - i. Attend pre-construction meeting and prepare meeting agenda and minutes.
 - ii. Provide field inspectors experienced for public buildings and contents, and other facilities infrastructure construction to be present at the project site when construction work is being performed.
 - iii. Prepare and submit daily inspection reports and weekly progress reports to provide construction progress data.
 - iv. Assist in review of CPM schedule.

- v. Review and make recommendations as to submittals, shop drawings, samples, substitute materials and equipment, and value engineering proposals.
- vi. Reject non-conforming work and materials.
- vii. Evaluate, track, and recommend responses to the construction contractor's requests for information and interpreting plans and specifications for the project.
- viii. Evaluate and maintain field records, and other documentation and data required.
- ix. Evaluate and maintain field records, and other documentation and data required.
- x. Review request for changes to the contract from the engineer and/or contractor and monitor the development and processing of billings and change orders.
- xi. Prepare resolution for change order for execution by Sheriff and monitor execution of same.
- xii. Review monthly progress payment requests.
- xiii. Participate in final acceptance walk through and prepare resolution for acceptance of the project.
- xiv. Review final payment and record drawing(s).
- xv. Monitor schedule compliance.
- xvi. Assist in project acceptance and development of punch list and walk-through prior to recommendation of acceptance.
- xvii. Assist in transfer of job-related files to the Sheriff.
- xviii. Assist in post-construction review.
- xix. Appearances before special boards or public hearings.

QUALIFICATIONS

Minimum Personnel Requirements of this RFQ is as follows:

1. At least one professional civil engineer registered in the State of LA shall have a minimum of ten years of experience in Hurricane Disaster Recovery A/E Services and Damage Assessment.
2. At least one professional electrical engineer registered in the State of LA shall have a minimum of ten years of experience in working on public infrastructure.
3. At least one professional land surveyor registered in the State of LA shall have a minimum of ten years of experience in surveying public infrastructure and subsurface utility engineering.
4. At least one licensed professional architect shall have a minimum of ten years experience in public building and facilities infrastructure.
5. Proposed personnel shall have the ability to prepare damage assessments and FEMA project worksheets related to public infrastructure.
6. Proposed personnel shall have the ability to perform detailed cost estimating related to damage assessment, mitigation, resilience and flood proofing for public infrastructure.

Recommended Experience:

- Experience delivering Hurricane Disaster Recovery A/E services and Damage Assessment infrastructure projects.
- Experience working on public infrastructure in St. John the Baptist Parish.

DELIVERABLES

- All Damage Assessment documentation and photographs.
- All information will be captured in an electronic database approved by the PARISH to include GIS file updates and asset IDs.
- Plans and specifications for projects as needed.
- All documentation related to construction activities resulting from damage assessments.

COMPENSATION

Compensation for the requested services will be based on project fund source requirements.

The Parish reserves the right to determine method of payment.

All fees shall be negotiated with consultant by appropriate Parish Department personnel and shall be mutually agreeable to both parties.

All costs associated with the project shall be subject to St. John the Baptist Parish Sheriff Office review and Parish President's approval.

SCORING

The following criteria listed will be used to evaluate each firm submitting a Statement of Qualifications:

- Key Personnel Qualifications and Experience
- Relevant Experience and References
- Understanding of Project/Familiarity
- Agency Project Experience
- Current Workload

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:	
Name & Title:	
<p style="text-align: center;">Manish Mardia, P.E. Principal</p>	
Project Assignment:	
<p style="text-align: center;">Sr Construction Manager</p>	
Name of Firm with which associated:	
	
Years' experience with this Firm:	
<p style="text-align: center;">10 (2011)</p>	
Education: Degree(s)/Year/Specialization:	
<p style="text-align: center;">M.S. in Civil Engineering, Louisiana State University B.S. in Civil Engineering, 1990, University of Jodhpur</p>	
Active registration: Year first registered/discipline:	
<p style="text-align: center;">Year First Registered: 1999 Discipline: <u>Environmental</u> State: <u>Louisiana</u> License No.: <u>28482</u> <i>Also registered in Mississippi (18522)</i></p>	
Other experiences and qualifications relevant to the proposed Project:	
<p>Manish Mardia is a registered professional civil and environmental engineer; and is the President of MSMM Engineering, LLC. He is an experienced engineering manager and principal with twenty-six (26) years of experience in managing and designing public works projects for Jefferson Parish, municipalities in the greater New Orleans area, and the United States Army Corps of Engineers (USACE). His experience includes drainage pump station evaluation and design, drainage evaluation, hydraulic modeling, levee design, T-wall design, roadway, and utility design.</p> <p>Mr. Mardia has worked <i>on more than 200 projects for various departments of Jefferson Parish</i>. These projects were successfully completed on time and schedule. Projects Mr. Mardia has designed and provided quality control on range from Master Plan Development, Drainage Pump Station Evaluation and Design, Drainage Evaluation and Modeling, Infiltration and Inflow Evaluation and Project Alternative Development; Water Treatment and Collection; Wastewater Collection, Distribution and Treatment; Street and Roadways Design; and Landfill Design and Permitting.</p> <p><u>Jefferson Parish Watershed Master Planning, Jefferson Parish, LA</u></p> <p>Through the Federal Silver Jackets Program at the USACE New Orleans District, MSMM is completing a detailed hydraulic analysis and watershed master planning document for Jefferson Parish. Utilizing the parish's existing SWMM models, MSMM adjusted input parameters for rising sea levels, changing storm patterns as projected in the NOAA Atlas 14 rain models, and changing development plans as projected in</p>	

the Jefferson Parish future land use plan. The output from this modeling effort was then quantified in terms of water surface elevation changes.

Utilizing modeling results, FEMA CRS guidance criteria, Jefferson Parish planning studies, input from the parish, and MSMM broad experience from previous drainage and flood studies; a series of recommended watershed management strategies were developed. These recommendations ranged from proposed implementation of standard low impact development principles, such as use of permeable pavements and bio-swales, to specific unique recommendations for Jefferson Parish watershed management regarding pump maintenance considerations, generation capacity and levee resiliency planning.

Mr. Mardia was the Quality Control Manager for this effort. He reviewed modeling outputs, the draft master plan document and compared the project deliverables with the scope of the task order and the needs of Jefferson Parish.

Coventry Court Drainage Evaluation Feasibility Report, Jefferson Parish, LA

In early 2017, following repetitive street flooding in the Coventry Court area of River Ridge, MSMM Engineering worked with the Jefferson Parish District 2 office to propose a solution to the flooding issues in the area. The MSMM engineering team identified several potential options that could be evaluated. In 2018, the Jefferson Parish Council tasked our staff with developing a multi-phase feasibility report to evaluate several drainage solutions in the area.

As part of the Coventry Court evaluation, the Jefferson Parish drainage department requested that MSMM investigate and determine the feasibility of providing improved drainage. The investigation consisted of the following:

- Evaluation Phase/Data Review – collection and analysis of existing information
- Field Reconnaissance and Preliminary Survey – collection of relevant field information
- Model Runs and Calibration – updated the HEC-RAS model with the area's data for 10-year, 50-year and 100-year storm events.
- Cost Estimating of Multiple Alternatives – provided detailed cost breakouts consisting of vendor furnished pricing data for materials
- Development of a Prioritized List of Recommendations – the alternatives developed were prioritized based on our engineering recommendations.

MSMM is the only entity to envision and develop the Coventry Court drainage pump station concept. The final report was completed in less than 6 months, and the final recommendation is to design a new drainage pump station on a vacant parcel owned by the parish between Coventry Court and Lee Court, westerly of Jefferson Highway. This 90 cfs (120 cfs ultimate) pump station with a 48' open cut discharge forcemain placed down Colonial Heights Road and over the Mississippi River levee. Other project features consist of a discharge dolphin in the Mississippi River and upsizing of the Jefferson Highway drainage crossings and downstream conveyance. This recommended alternative provides the greatest pumping capacity while requiring the least amount of permanent drainage servitudes.

Mr. Mardia was responsible for the overall QA/QC on this project. He worked with the administration and Councilman's office to identify a tangible project that would not only reduce drainage impacts in this River

Ridge neighborhood by completing a master drainage plan document and identifying an alternative that could fit within the available Parish funding.

Woodlake Estates/Seton Park Subdivision Drainage Pump Station, Jefferson Parish, LA

MSMM was tasked by the Jefferson Parish council to evaluate drainage pump station alternatives to solve the issue of long-term flooding in within the Woodlake and Seton Park neighborhoods within the City of Kenner. In 2018, MSMM completed a feasibility study that developed multiple drainage pump station alternatives which bypass the capacity limitations of the canals and alleviate stormwater flooding in the area. At the completion of the feasibility report, the following alternatives were identified:

- A new drainage pump station at the corner of Canal 17 and Canal 7 (west end of Joe Yenni Blvd.), a discharge forcemain westwards, with a discharge basin in the West Return Canal.
- A new drainage pump station at the northeast corner of Vintage Drive and Platt Street on Canal 17, a discharge forcemain westwards, with a discharge basin in the West Return Canal.
- A new inline drainage pump station at or near the corner of Canal 17 and Canal 7 with discharge into the canals and also with a discharge forcemain westwards to a discharge basin in the West Return Canal

Mr. Mardia provided the program management for the feasibility study. He led the team through the evaluation process that was based on the following considerations: Constructability, Hydraulic Modeling, Property Availability, Permit Concerns and Cost. The team decided that the inline station was the best solution, as it directly benefits the Woodlake Estates and Seton Park subdivisions as the 120 cfs pump station will be the new outlet, therefore no longer relying on the canal system. Following selection of the preferred alternative and final compilation of the report; MSMM submitted the final report to the Jefferson Parish drainage department and council in 2018, and were approved to develop an application to the DOTD Statewide Flood Control program for disaster assistance. The statewide flood control application was submitted in 2018; MSMM is currently awaiting the construction funding to initiate design.

New Orleans International Airport Drainage Pump Station, Kenner, LA.

MSMM recently completed full engineering design services for a new 600 cfs drainage pump station and for all landside drainage, as part of constructing the new airport terminal at the New Orleans International airport. The \$45 million of drainage mitigation design involved successfully delivering a true multi-disciplinary effort spanning civil, structural, electrical, mechanical and environmental engineering, hydraulic modeling (HEC-HMS and HEC-RAS), architectural services, cost estimating, environmental permitting, drafting (CAD, Civil 3D, REVIT, GIS), and agency coordination (USACE, CPRA, EJLD, SLFPA-E, LDNR, Entergy, City of New Orleans, City of Kenner, and Jefferson Parish). The station was designed to contain four 150 cfs pumps with 900 HP motors.

As part of the pump station design, MSMM tasks required successfully negotiating the challenge of discharging stormwater over a hurricane protection flood wall. Project tasks included: Coordinating with USACE to obtain approval to run more than 4,000 ft. of steel discharge pipes over the floodwall (required Section 408 permitting), developing detailed structural design calculations, design and drafting for several structural elements including sheet pile cutoff walls, sheet pile TRS system, scour protection, a reinforced

box culvert; as well as, coordination and permitting with the levee board and CPRA to secure the crucial clearances.

The landside drainage design effort required continuous close coordination with the program management team and design team to coordinate roadway drainage, terminal and apron design. This required extreme flexibility and adaptability to incorporate numerous changes to other designs into the drainage design via multiple hydraulic modeling exercises, and multiple pipe networking and sizing. More than 5 miles of drainage piping (size range of 15" to 72" diameter), open channels and box culverts were designed to route stormwater flow from the terminal to the discharge points.

Mr. Mardia served as the Program Manager for the project. His duties included: handling the sensitive issue of operation and control of the pump station. This sensitivity of this subject became apparent due to the separate and unique demands of multiple entities – Jefferson Parish, City of Kenner, and the airport. Mr. Mardia's vast experience with local drainage work, decades of relationships with local administrations and public works directors, and intimate knowledge of the Jefferson Parish drainage system was utilized to establish a path forward that was agreed to by all agencies. Mr. Mardia was responsible for ensuring the design produced by the MSMM team were in compliance with the Design Quality Review Plan, and met regularly with the client to ensure the MSMM design was consistent with the overall airport effort.

Clearview Drainage Pump Station, St. Peter's Ditch Improvements – Phase 4, Jefferson Parish, LA.

MSMM engineering staff provided complete design services for a 220 cfs drainage pump station located within the DOTD Right-of-Way of the Clearview Parkway/Earhart Expressway interchange. The goal of this pump station was to pump stormwater runoff from the existing detention pond network, over Cross Canal, and discharge directly into the improved St. Peter's Ditch (box culvert). The project required multiple disciplines including civil, structural, electrical and mechanical engineering, as well as, cost estimating and drafting (CAD). The pump station structure contained three 75 cfs vertical lift pumps with 250 HP motors and several hundred feet of 36" discharge piping. Additional features of the project included a pile supported reinforced concrete structure, sheetpile intake area, trash rake with conveyor, conditioned control building, generator, traffic detour plan, discharge pipe aerial canal crossing, utility relocations, and other related improvements.


Mr. Mardia was the program manager, he led the overall design effort and worked with Parish officials to identify the initial problem, making the design and implementation of this project a reality.

Statewide Flood Control Program Grant Drainage Improvements, Kenner, LA

LDOTD's Statewide Flood Control Program grant funding was utilized to undertake stormwater drainage system improvements to two neighborhoods (University City and Audubon Place Subdivisions). The estimated project cost was \$4.57 million, with a grant amount of \$2.7 million. The project was conducted from beginning to conclusion, which included preparing the grant pre-application package, coordinating with the City and LDOTD staff, conducting hydraulic and hydrologic analyses (HYDRWIN and SWMM), communicating with LDOTD experts on the project's feasibility and technical merit, conducting multiple site visits with LDOTD experts and project staff to clarify project features, existing drainage infrastructure, and facilitating continuous communication with the City's elected representatives about the status of grant process. Through the course of this project, excellent working relationship was forged with LDOTD's

SWFCP staff and experts. Significant coordination was required with LDOTD staff due to the unique drainage conditions in the New Orleans area and due to the SWMM models of the city's previous drainage master plan work required to be re-analyzed with LDOTD's HYDRWIN software. The project involved (i) installation of new subsurface drainage pipes and inlets along three city streets; (ii) upgrading of existing drainage features with larger subsurface pipes, inlets, and outfall pipe along three other city streets. The subsurface pipes ranged in size from small 18" diameter circular pipes to large 54"x88" arch pipes. Adjustment of sanitary sewer house connections, and numerous pavement restoration tasks were included in this project, as well. During this project continuous coordination with the DPW staff was required. Most of the drainage improvements under this project were derived from previously completed Master Drainage Plan, the new improvements were compared with the Master Drainage Plan to ensure that no conflicts arise.

Mr. Mardia served as the quality control manager for this project. He coordinated the drainage evaluation and design with DOTD, and reviewed the final P&S.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:	
Name & Title:	
	Jim Wilson, P.E. Civil Engineer
Project Assignment:	
	Sr Construction Manager
Name of Firm with which associated:	
	
Years' experience with this Firm:	
	8 (2013)
Education: Degree(s)/Year/Specialization:	
	B.S. in Civil Engineering, 1988, Michigan Technological University
Active registration: Year first registered/discipline:	
	Year First Registered: 1992 Discipline: <u>Civil</u> State: <u>Louisiana</u> License No.: <u>35456</u> <i>Also registered in Michigan (38800)</i>
Other experiences and qualifications relevant to the proposed Project:	
<p>Mr. Wilson is a senior civil/drainage engineer with over 25 years of experience in the public sector, successfully designing and managing drainage, roadway, sewerage, waterline, and site development projects in multiple jurisdictions of south Louisiana. Recently (between 2014 and 2019), Mr. Wilson designed and performed construction management for seven (7) drainage/pump station projects (Sauvé Road, Coventry Court feasibility analysis, New Orleans International Airport Drainage Pump Station, Sena Drive, Harahan Pump to the River, Hoey's Basin Pump to the River, and University City & Audubon Place Subdivisions), seven (7) roadway projects (Manhattan Boulevard, Lapalco Boulevard, Aubry Street, West End Neighborhood, Little Woods Neighborhood, Plum Orchard Neighborhood, and City Park neighborhood), five (5) sewer lift stations projects (Kennedy Heights, Hillaryville, East Baton Rouge, Chetta Drive, and Cooper/Wilber), and two (2) site improvement projects (Government Complex, and NOLA Motorsports Park), all in south Louisiana.</p> <p>Mr. Wilson was the designer of record for the Sauvé Road drainage pump station. He was also the civil engineer tasked with developing the alternatives for the Coventry Court project. Mr. Wilson has extensive design experience developing drainage improvement projects in Jefferson Parish. He is intimately familiar with the characteristics, existing infrastructure, and design practices required by Jefferson Parish. As a result of designing multiple projects in this area within a short period of time, Mr. Wilson has developed excellent working relationship with many of the local authorities having jurisdiction (AHJ) over the features, utilities, properties, and regulatory requirements in Jefferson Parish.</p>	
<p><u>Kenner Drainage Master Plan Development, Kenner, LA</u></p> <p>MSMM was responsible for updating the Kenner Drainage Master Plan through a combination of hydraulic modeling and alternatives analysis. As part of developing the Kenner Master Drainage plan project, our</p>	

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Jim Wilson, P.E. Civil Engineer
<p>staff characterized the drainage system via field inspections and Hydraulic Modeling utilizing the EPA SWWM. MSMM personnel were previously involved in developing drainage planning documents, inclusive of the City of Kenner Drainage Master Plan completed in April of 2010. Several of the projects identified in that plan were subsequently constructed. However, several drainage projects remained so this report was developed to prioritize recommended subsurface drainage improvement projects on a Council District based by identifying ten (10) highest priority project in each Council District.</p> <p>At the completion of this analysis, the City of Kenner received a compiled report that identified the highest priority projects, along with cost estimates, maps, and recommended drainage piping information. The recommended pipe sizing was based on a ten (10) year storm design standard. The Hydraulic Modeling for this Master Plan update was completed in a similar format to recent Hydraulic Modeling changes performed by Jefferson Parish. The result is a list of drainage projects that can compete for available funding.</p> <p>Mr. Wilson was the lead civil engineer on the project. He developed the project alternatives based on the modeling outputs, completed cost estimates for the alternatives and met with Kenner officials to explain the expected benefits from each alternative.</p> <p><u>Coventry Court Drainage Evaluation Feasibility Report, Jefferson Parish, LA</u></p> <p>In early 2017 and following repetitive street flooding in the Coventry Court area of River Ridge, MSMM Engineering worked with the Jefferson Parish District 2 office to propose a solution to the flooding issues in the area. The MSMM engineering team identified several potential options that could be evaluated, and in 2018 the Jefferson Parish Council tasked our staff with developing a multi-phase feasibility report to evaluate several drainage solutions in the area.</p> <p>As part of the Coventry Court evaluation, the Jefferson Parish drainage department requested that MSMM investigate and determine the feasibility of providing improved drainage. The investigation consisted of the following:</p> <ul style="list-style-type: none">- Evaluation Phase/Data Review – collection and analysis of existing information- Field Reconnaissance and Preliminary Survey – collection of relevant field information- Model Runs and Calibration – updated the HEC-RAS model with the area’s data for 10-year, 50-year and 100-year storm events.- Cost Estimating of Multiple Alternatives – provided detailed cost breakouts consisting of vendor furnished pricing data for materials- Development of a Prioritized List of Recommendations – the alternatives developed were prioritized based on our engineering recommendations. <p>MSMM is the only entity to envision and develop the Coventry Court drainage pump station concept. The final report was completed in less than 6 months, and the final recommendation is to design a new drainage pump station on a vacant parcel owned by the parish between Coventry Court and Lee Court, westerly of</p>

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Jim Wilson, P.E. Civil Engineer
<p>Jefferson Highway. This 90 cfs (120 cfs ultimate) pump station with a 48' open cut discharge forcemain placed down Colonial Heights Road and over the Mississippi River levee. Other project features consist of a discharge dolphin in the Mississippi River and upsizing of the Jefferson Highway drainage crossings and downstream conveyance. This recommended alternative provides the greatest pumping capacity, while requiring the least amount of permanent drainage servitudes.</p> <p>Mr. Wilson was the lead civil engineer for the project, he was tasked with working with the hydraulic modeler to develop project alternatives. The alternative developed by Mr. Wilson, and recommended for implementation for this project, consists of a 90 CFS pump station placed in the vacant Parish owned parcel between Coventry Court and Lee Court on the river side of Jefferson Highway. The pump station wet well and valve vault are sized to house four (4) pumps and valves for the ultimate pumping capacity of 120 CFS, but only three (3) pumps and valves would be installed initially as Levee View Drive and Hennessey Court would be considered a future service area. The pump station intake will be two 54" gravity sewer lines running parallel to Jefferson Highway and a 72" gravity sewer coming into the wet well from Jefferson Highway. The pump station would utilize three pumps with a single 48" forcemain to discharge storm water over the Mississippi River levee and into the river. The forcemain will be approximately 2,600 linear feet and terminate into a discharge dolphin structure in the Mississippi River. Mr. Wilson has provided conceptual plans for the entire project, outlined the permitting requirements and made sure the design aligns with the requirements for the Sauvé Road pump station layout.</p> <p><u>Sauvé Road Drainage Improvements, Jefferson Parish, LA.</u></p> <p>Mr. Wilson performed 100% of the planning, engineering phase services and construction phase services for the construction of a drainage pump station in the Sauvé Road neighborhood of Jefferson Parish, LA. Through a collaboration between the USACE New Orleans District and Jefferson Parish, the project resulted in the design and construction of a 60 cfs (27,000 gpm) drainage pumping station, 2600 linear feet of 30" and 36" discharge forcemains and 60" gravity drainage. At the time of construction, the project was considered a major accomplishment for the neighborhood, as the area was heavily flooded following Hurricane Katrina and subsequent storm events. To this date, this project has been viewed as one of the most successful post Katrina storm risk reduction measures constructed in Jefferson Parish, as the flooding impact on the neighborhood has been greatly diminished.</p> <p>Design and construction administration for subsurface drainage improvements to the Sauve Road and Jefferson Highway area consisting of the construction of a 40 cfs drainage pump station and force main discharging into the Mississippi River. The project also consisted of gravity line installations, any street work, and utility adjustments necessitated by the work.</p> <p><u>Aubry St. CDBG 10-year Storm Drainage Improvement and Roadway Construction, New Orleans, LA</u></p>

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Jim Wilson, P.E. Civil Engineer
<p>Mr. Wilson was the designer of record for the design of drainage and concrete road reconstruction of Aubry Street in the Gentilly neighborhood of New Orleans. The project length is approximately 1,400 linear feet, a four-block design that serves as major thoroughfare during the annual Jazz Festival. Project details are as follows: Concrete Roadway Reconstruction, drainage design to meet a 10-year storm event, relocation of existing utilities, development of bid documentation, cost estimates, construction management, and resident inspection services.</p> <p>Mr. Wilson started his design in April of 2016, and the City of New Orleans requested an expedited design to allow the street to be open for the 2017 Jazz Festival. This was successfully designed and bid documentation was completed in time, as the construction finished in April of 2017, and the street was opened for the 2017 Jazz Festival.</p> <p><u>Statewide Flood Control Program Grant Drainage Improvements, Kenner, LA</u></p> <p>LDOTD's Statewide Flood Control Program grant funding was utilized to undertake stormwater drainage system improvements to two neighborhoods (University City and Audubon Place Subdivisions) in the city. The estimated project cost was \$4.57 million, with a grant amount of \$2.7 million. The project included preparing the grant pre-application package, coordinating with the City and LDOTD staff, conducting hydraulic and hydrologic analyses (HYDRWIN and SWMM), communicating with LDOTD experts on the project's feasibility and technical merit, conducting multiple site visits with LDOTD experts and project staff to clarify project features and existing drainage infrastructure, and facilitating continuous communication with the City's elected representatives about the status of grant process. Significant coordination was required with LDOTD staff due to the unique drainage conditions in the New Orleans area and due to the SWMM models of the city's previous drainage master plan work required to be re-analyzed with LDOTD's HYDRWIN software. The project involved (i) installation of new subsurface drainage pipes and inlets along three city streets; (ii) upgrading of existing drainage features with larger subsurface pipes, inlets, and outfall pipe along three other city streets. The subsurface pipes ranged in size from small 18" diameter circular pipes to large 54"x88" arch pipes. Adjustment of sanitary sewer house connections, and numerous pavement restoration tasks were included in this project as well. During this project continuous coordination with the DPW staff was required. Most of the drainage improvements under this project were derived from previously completed Master Drainage Plan, the new improvements were compared with the Master Drainage Plan to ensure that no conflicts arise.</p> <p>Mr. Wilson was the designer of record for the project. He worked with officials from DOTD and the City of Kenner during the design and construction phase of this project.</p> <p><u>New Orleans International Airport Drainage Pump Station, Kenner, LA.</u></p> <p>MSMM recently completed full engineering design services for a new 600 cfs drainage pump station and for all landside drainage, as part of constructing the new airport terminal at the New Orleans International airport. The \$45 million of drainage mitigation design involved successfully delivering a true multi-</p>

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Jim Wilson, P.E. Civil Engineer
<p>disciplinary effort spanning civil, structural, electrical, mechanical and environmental engineering, hydraulic modeling (HEC-HMS and HEC-RAS), architectural services, cost estimating, environmental permitting, drafting (CAD, Civil 3D, REVIT, GIS), and agency coordination (USACE, CPRA, EJLD, SLFPA-E, LDNR, Entergy, City of New Orleans, City of Kenner, and Jefferson Parish). The station was designed to contain four 150 cfs pumps with 900 HP motors.</p> <p>As part of the pump station design, MSMM tasks required successfully negotiating the challenge of discharging stormwater over a hurricane protection flood wall. Project tasks included: Coordinating with USACE to obtain approval to run more than 4,000 ft. of steel discharge pipes over the floodwall (required Section 408 permitting), developing detailed structural design calculations, design and drafting for several structural elements including sheet pile cutoff walls, sheet pile TRS system, scour protection, a reinforced box culvert; as well as, coordination and permitting with the levee board and CPRA to secure the crucial clearances.</p> <p>The landside drainage design effort required continuous close coordination with the program management team and design team to coordinate roadway drainage, terminal and apron design. This required extreme flexibility and adaptability to incorporate numerous changes to other designs into the drainage design via multiple hydraulic modeling exercises, and multiple pipe networking and sizing. More than 5 miles of drainage piping (size range of 15" to 72" diameter), open channels and box culverts were designed to route stormwater flow from the terminal to the discharge points.</p> <p>Mr. Wilson is the designer of record and engineering manager for the design of this pump station. He successfully led a multi-disciplinary team of design engineers, provided shop drawing review, and engineering during construction.</p>

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:	
Name & Title:	Scott Chehardy, P.E. Civil Engineer
Project Assignment:	Sr Construction Manager
Name of Firm with which associated:	
Years' experience with this Firm:	6 (2015)
Education: Degree(s)/Year/Specialization:	B.S. in Civil Engineering, 1994, University of Southwestern LA
Active registration: Year first registered/discipline:	Year First Registered: 1998 Discipline: <u>Civil</u> State: <u>Louisiana</u> License No.: <u>28532</u>
Other experiences and qualifications relevant to the proposed Project:	
<p>Mr. Chehardy has over two decades of civil design and hydraulic evaluation experience working on projects in Jefferson Parish. He has successfully completed the development of plans and specifications for pump stations and forcemains, roadways and bridges, levees and floodwalls, canals, and box culverts. He has been an integral part of the design efforts for several recent drainage pump station projects completed in Jefferson Parish, inclusive of the new 600 cfs drainage pump station at the New Orleans International Airport, improvements to Pump #4 at the Parish Line Pump Station, development of the new 22 cfs Clearview drainage pump station, and has been instrumental in helping identify conflicting utilities, running hydraulic calculations, and resizing subsurface drainage infrastructure during the development of the Coventry Court drainage pump station evaluation report. Mr. Chehardy's responsibilities have included project management, design, construction management, quality control, and permitting.</p> <p><u>South Kenner Pump to the River Feasibility Report, Kenner, LA</u></p> <p>MSMM provided key modeling and coordination roles for developing the South Kenner Pump to the River Feasibility Study. Examining the feasibility of the project gave our engineering staff the opportunity to assist Parish leadership in advancing a concept which has been considered a "no-go" strategy in previous studies. Utilizing a knowledge base of the storm drain system and the canal-pump station system that has been developed through years of working with Kenner and the Parish on drainage problems in the area, MSMM was able to leverage their knowledge base and analytical skills to develop a plan that resurrected the Pump to the River (PTR) concept as a viable strategy for decreasing flood stages over a broad area of Kenner and unincorporated Jefferson Parish.</p> <p>The modeling effort for this study involved analysis of the South Kenner EPA SWMM model and performing hydrology and hydraulic analyses utilizing the HEC-HMS and HEC-RAS models approved by FEMA and the Army Corps of Engineers. These models were used to identify runoff volume and storm flood stages expected</p>	

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Scott Chehardy, P.E. Civil Engineer
<p>in the watershed of the Duncan Canal and Soniat Canal. The Harahan Pump-to-the-River system was added to the HEC-RAS “Jefferson East Bank HSDRRS Project Model” so the model would reflect the projected pump conditions that would exist when the Kenner PTR system would be brought online. Rigorous modeling efforts culminated in the finding that a significant area of flooding could be reduced by extending the conveyance system to the larger reach of the Duncan Canal. In terms of value as measured by the cost of canal and pump station per of volume of water removed from the system, the PTR system was found to provide significant economies because of the short distance of conveyance to the river when compared to the long distance and multiple constrictions involved in conveyance to Lake Ponchartrain.</p> <p>Mr. Chehardy worked with the hydraulic modeling team to develop meaningful alternatives that would address the issues identified in the model. He also helped to develop the final modeling report, and developed cost estimates for each of the identified alternatives.</p> <p><u>Woodlake Estates/Seton Park Subdivision Drainage Pump Station, Jefferson Parish, LA</u></p> <p>MSMM was tasked by the Jefferson Parish council to evaluate drainage pump station alternatives to solve the issue of long-term flooding in within the Woodlake and Seton Park neighborhoods within the City of Kenner. In 2018, MSMM completed a feasibility study that developed multiple drainage pump station alternatives which bypass the capacity limitations of the canals and alleviate stormwater flooding in the area. At the completion of the feasibility report, the following alternatives were identified:</p> <ul style="list-style-type: none">- A new drainage pump station at the corner of Canal 17 and Canal 7 (west end of Joe Yenni Blvd.), a discharge forcemain westwards, with a discharge basin in the West Return Canal.- A new drainage pump station at the northeast corner of Vintage Drive and Platt Street on Canal 17, a discharge forcemain westwards, with a discharge basin in the West Return Canal.- A new inline drainage pump station at or near the corner of Canal 17 and Canal 7 with discharge into the canals and with a discharge forcemain westwards to a discharge basin in the West Return Canal <p>Mr. Chehardy was the lead civil engineer for the project. His responsibilities included working with the hydraulic modeler to develop the pump station alternatives, working with pump manufacturers to properly size pumps for the conceptual design, developing cost estimates, and working on properly siting the alternatives. He was instrumental in deciding that the inline station was the best solution for the Parish, as it directly benefits the Woodlake Estates and Seton Park subdivisions. The 120 cfs pump station will be the new outlet, therefore no longer relying on the canal system. Following selection of the preferred alternative and final compilation of the report, MSMM submitted the final report to the Jefferson Parish drainage department and council in 2018; this was approved to develop an application to the DOTD Statewide Flood Control program for disaster assistance. Mr. Chehardy created and submitted the application in 2018, and MSMM is currently awaiting the construction funding to initiate design.</p> <p><u>Clearview Drainage Pump Station, St. Peter’s Ditch Improvements – Phase 4, Jefferson Parish, LA.</u></p>


KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Scott Chehardy, P.E. Civil Engineer
<p>MSMM engineering staff provided complete design services for a 220 cfs drainage pump station located within the DOTD Right-of-Way of the Clearview Parkway/Earhart Expressway interchange. The goal of this pump station was to pump stormwater runoff from the existing detention pond network, over Cross Canal, and discharge directly into the improved St. Peter's Ditch (box culvert). The project required multiple disciplines including civil, structural, electrical and mechanical engineering, as well as, cost estimating and drafting (CAD). The pump station structure contained three 75 cfs vertical lift pumps with 250 HP motors and several hundred feet of 36" discharge piping. Additional features of the project included a pile supported reinforced concrete structure, sheetpile intake area, trash rake with conveyor, conditioned control building, generator, traffic detour plan, discharge pipe aerial canal crossing, utility relocations, and other related improvements.</p> <p>Mr. Chehardy was the designer of record for the project; he prepared hydraulic pump calculations, designed the pumps, discharge piping, pump station structure, intake and site layouts, coordinated the design effort between all disciplines, developed quantity and cost estimates.</p> <p><u>Harahan Drainage Pump to the River, Jefferson Parish, LA.</u></p> <p>The project elements included a 700 ft. long suction canal, a 1,200 cfs pumping station, three 9,000 ft. long 84 inch diameter discharge pipes to the Mississippi River levee, Mississippi River levee crossing of discharge pipes, reinforced concrete discharge basin in Mississippi River, physical modeling, and surge analysis for the system. Mr. Chehardy was the lead Civil Engineer who prepared the Detailed Design Report (DDR) for the 625-foot long buried box culvert intake canal, 27,000-feet of 84" diameter discharge piping, levee structure crossing and discharge basin in the Mississippi River. The DDR was a comprehensive document that reviewed options and made final decisions for all aspects of the project, including 30% design drawings for the entire \$100+ million pump to the river project except the drainage pump station. The final project was divided into 6 phases.</p> <p>Mr. Chehardy prepared the final design and provided construction services for three of those phases which covered the discharge basin, levee crossing and 22,000-feet of 84" pipe. The projects required coordination with the Corps of Engineers, Entergy, East Jefferson Levee District, Jefferson Parish, City of Harahan, South Louisiana Flood Protection Authority LADOTD and the Coast Guard. In addition to the main features discussed, the project also included relocation of several Entergy transmission towers, numerous utility relocations, roadway design, traffic control plan for phased construction across Jefferson Highway, design of two small pump stations to drain the large pipes when not in use and cathodic protection.</p> <p><u>Jefferson Parish, Soniat Canal Drainage Improvements</u></p> <p>This was a federally funded project under the Southeast Louisiana Urban Flood Control (SELA) program that was co-funded by Jefferson Parish and the Corps of Engineers. The project involved improving drainage along the major north-south running drainage canal in Jefferson Parish via hydraulic studies, DDRs, design, geotechnical investigations, preparation of plans and specifications, construction management, and resident inspection. In the northern reaches, the canal capacity was increased from 3,000 to 5,200 cfs from Canal No.</p>

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Scott Chehardy, P.E. Civil Engineer
<p>3 to West Napoleon Avenue. This involved designs for u-shaped concrete flumes, utility relocations, bridges, and sheet piling transitions. The estimated final construction cost was approximately \$155 million.</p> <p>Due to the size and complexity of the project, as well as, its location within heavy traffic areas and dense urban residential areas, this project was divided into seven separate bid packages as identified below:</p> <ol style="list-style-type: none">1. <i>Canal No. 3 to Veterans Memorial Boulevard</i> – approx. 750 ft in length, lined with concrete flume2. <i>Veterans Memorial Boulevard vehicular bridge replacement</i> – approx. 300 ft in length with three box culverts (each 18'H x 36'W)3. <i>Veterans Memorial Boulevard to West Napoleon Boulevard</i> – approx. 3,500 ft total length, lined with concrete flume4. <i>West Napoleon Avenue vehicular bridge replacement</i> – approx. 400 ft in length5. <i>West Napoleon Avenue to Lynette Drive</i> – approx. 1,100 ft long, lined with concrete flume.6. <i>Lynette Drive to Lester Street</i> – approx. 2,900 ft long, lined with concrete flume.7. <i>West Metairie Avenue to Lester Ave and Crossing</i> – approx. 400 ft long lined with concrete flume, rip rap transition and new vehicular bridge. <p>Mr. Chehardy was the designer or record for multiple phases of this project. He was responsible for designing all civil elements of the project, for coordination with Parish officials, permitting, and engineering during construction.</p> <p><u>New Orleans International Airport Drainage Pump Station, Kenner, LA</u></p> <p>Complete design services for a new 600 cfs stormwater drainage pump station and for all landside drainage as part of constructing a new airport terminal in the New Orleans International airport. The pump station will add 600 cfs of capacity to Jefferson Parish east bank's current capacity of 19,935 cfs. Project accomplishments included envisioning, assessing and designing this important addition to the region's flood protection abilities, delivering on a true multi-disciplinary effort spanning civil, structural, electrical, mechanical and environmental engineering, hydraulic modeling (HECHMS and HEC-RAS), architectural services, cost estimating, environmental permitting, drafting (CAD, Civil 3D, REVIT, GIS), and agency coordination (COE, CPRA, EJLD, SLFPA-E, LDNR, Entergy, City of New Orleans, City of Kenner, and Jefferson Parish). The station was designed to contain four 150 cfs pumps with 900 HP motors and 60" discharge pipes of more than 4,000 ft. combined run.</p> <p>The structural design involved slab and piles for station, generator, fuel tanks and control building, sheet pile cutoff walls, temporary steel sheet pile TRS system, removal and replacement of floodwall monolith and scour protection, buttress, pipe bents, cofferdam, walers, intake channel, reinforced concrete box culvert, discharge pipe supports, pipe sleeves in floodwall, and discharge basin in West Return Canal.</p>

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Scott Chehardy, P.E. Civil Engineer
Mr. Chehardy conducted hydraulic calculations, designed pumps and forcemain, developed quantity and cost estimates, reviewed shop drawings, observed manufacture, testing of pump station automated bar screens, and responded to multiple requests for information (RFI).

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:	
Name & Title:	David S. Shulman, CCM
Project Assignment:	Sr Construction Manager
Name of Firm with which associated:	
Years' experience with this Firm:	1
Education: Degree(s)/Year/Specialization:	BS, Construction Management MINOR Business Administration, Louisiana State University 2009
Active registration: Year first registered/discipline:	
Other experiences and qualifications relevant to the proposed Project:	
<p>Mr. Shulman as part of the \$2.4 billion FEMA Joint Infrastructure Program with the City of New Orleans and the S&WB, Mr. Shulman has been responsible for: Hiring and managing a growing team of construction project managers, project managers, program analysts, administrative assistants, and project manager supervisors; providing administrative and constructability technical oversight of project development to ensure project quality, schedule, and budget are met; developing and leading new construction administration communication and documentation tools and protocols for organization-wide implementation; conceptualizing and developing solutions for project issue resolution; providing documentation for design and construction quality assurance; preparation and presentation of program and project status reports; managing contracts, budgets and claims in support of program management activities; performing cost reasonableness analyses for contractor change order requests; conducting progress meetings; preparing field work directives; reviewing daily reports prepared by inspectors; reviewing record drawing provided by contractors; processing submittals, RFIs and other project documentation; reviewing and approving consultant and construction pay applications; updating program schedules and budgets; ensuring maintenance of and providing federal grant program documentation; responsible for close communication and coordination with CNO Department of Public Works and CNO Public Outreach teams, including the New Orleans City Council; managing consultant design engineers and project inspectors during design, construction, and closeout phases; and ensuring all internal and external stakeholders are kept informed of all project progress, problems, and resolutions.</p> <p>Relevant projects Mr. Shulman has worked on over the years include:</p> <p><u>Florida Avenue Canal Phases II/III</u> Construction of over 2500LF of reinforced concrete flume and box culvert, including timber, concrete, and H-Pile installation foundation jet grouting, sheet pile installation, and temporary retaining structure construction;</p>	

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
David S. Shulman, CCM
large-diameter water transmission and sewer force main relocations; water distribution, sewer collection, drainage, gas, electrical, and communication utility relocations; maintenance and diversion of storm water; and roadway reconstruction.
<u>Orleans Parish Stormproofing of Drainage Pump Station No. 7 & N.O. S&WB Power Complex</u> Extensive masonry building modifications and enhancements with a complex, 12-megawatt backup power generation system installation for added hurricane protection. Included historic masonry reinforcement and injection grouting, full roof system replacement, window and door replacements, and flood proofing.
<u>Joint Infrastructure Recovery Request (JIRR)</u> Massive capital improvement program for the City of New Orleans and the S&WB to replace damaged water, sewer, drainage, and roadway infrastructure across all of Orleans Parish as part of the 2012 settlement reached between FEMA, the City of New Orleans, and the S&WB of New Orleans. Includes more than 200 individual projects ranging in construction value from \$1 million to over \$30 million on an accelerated timeline for completion.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:	
Name & Title:	
	Joshua Carson Project Manager
Project Assignment:	
	Sr Construction Manager
Name of Firm with which associated:	
	
Years' experience with this Firm:	
	6 (2014)
Education: Degree(s)/Year/Specialization:	
	B.S. in Biology, 2007, Baldwin-Wallace University M.S. in Environmental Policy, 2011, Johns Hopkins University
Active registration: Year first registered/discipline:	
Other experiences and qualifications relevant to the proposed Project:	
<p>Mr. Carson worked as an in-house consultant and Project Manager for the Corps of Engineers (New Orleans District) on multiple Federal projects including storm risk reduction, navigation, coastal restoration and recreation. Mr. Carson's role at the New Orleans District was to manage projects from project initiation through the planning and construction phases. Mr. Carson's position responsibilities included tasks typical of a project manager, such as, briefing senior level personnel, managing project delivery team members to execute project milestones, and relaying critical project information to sponsors, interested parties and the public. He was tasked for meeting legislative and organizational deadlines and to deliver projects on-time and under budget. Mr. Carson executed multiple environmental projects while at the Corps, including projects that required extensive environmental permitting and NEPA clearances.</p> <p>At MSMM, Mr. Carson has served as a project manager and environmental permitting coordinator. He is a responsible for being a liaison between the clients, engineering teams, and is often tasked with briefing the public or client about the project design. Mr. Carson serves as the lead project manager for all MSMM tasks completed in Jefferson Parish.</p> <p><u>Coventry Court Drainage Evaluation Feasibility Report, Jefferson Parish, LA</u></p> <p>In early 2017, following repetitive street flooding in the Coventry Court area of River Ridge, MSMM Engineering worked with the Jefferson Parish District 2 office to propose a solution to the flooding issues in the area. The MSMM engineering team identified several potential options that could be evaluated. In 2018, the Jefferson Parish Council tasked our staff with developing a multi-phase feasibility report to evaluate several drainage solutions in the area.</p> <p>As part of the Coventry Court evaluation, the Jefferson Parish drainage department requested that MSMM investigate and determine the feasibility of providing improved drainage. The investigation consisted of the following:</p>	

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Joshua Carson Project Manager
<ul style="list-style-type: none">- Evaluation Phase/Data Review – collection and analysis of existing information- Field Reconnaissance and Preliminary Survey – collection of relevant field information- Model Runs and Calibration – updated the HEC-RAS model with the area’s data for 10-year, 50-year and 100-year storm events.- Cost Estimating of Multiple Alternatives – provided detailed cost breakouts consisting of vendor furnished pricing data for materials- Development of a Prioritized List of Recommendations – the alternatives developed were prioritized based on our engineering recommendations. <p>MSMM is the only entity to envision and develop the Coventry Court drainage pump station concept. The final report was completed in less than 6 months, and the final recommendation is to design a new drainage pump station on a vacant parcel owned by the parish between Coventry Court and Lee Court, westerly of Jefferson Highway. This 90 cfs (120 cfs ultimate) pump station with a 48’ open cut discharge forcemain placed down Colonial Heights Road and over the Mississippi River levee. Other project features consist of a discharge dolphin in the Mississippi River and upsizing of the Jefferson Highway drainage crossings and downstream conveyance. This recommended alternative provides the greatest pumping capacity while requiring the least amount of permanent drainage servitudes.</p> <p>Mr. Carson was instrumental in working with the councilman’s office to understand the flooding issues plaguing the Coventry Court area. He worked with the councilman’s office to gain an understanding of the project focus and goals. He worked with the MSMM engineering team to relay the intended results of the feasibility study. He was involved in reviewing and briefing the results of the feasibility study; working with the councilman’s office to finalize siting of the intended pump station on Parish owned land.</p> <p><u>Woodlake Estates/Seton Park Subdivision Drainage Pump Station, Jefferson Parish, LA</u></p> <p>MSMM was tasked by the Jefferson Parish council to evaluate drainage pump station alternatives to solve the issue of long-term flooding in within the Woodlake and Seton Park neighborhoods within the City of Kenner. In 2018, MSMM completed a feasibility study that developed multiple drainage pump station alternatives which bypass the capacity limitations of the canals and alleviate stormwater flooding in the area. At the completion of the feasibility report, the following alternatives were identified:</p> <ul style="list-style-type: none">- A new drainage pump station at the corner of Canal 17 and Canal 7 (west end of Joe Yenni Blvd.), a discharge forcemain westwards, with a discharge basin in the West Return Canal.- A new drainage pump station at the northeast corner of Vintage Drive and Platt Street on Canal 17, a discharge forcemain westwards, with a discharge basin in the West Return Canal.- A new inline drainage pump station at or near the corner of Canal 17 and Canal 7 with discharge into the canals and also with a discharge forcemain westwards to a discharge basin in the West Return Canal

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Joshua Carson Project Manager
<p>Mr. Carson was involved in working with the Councilman's office to develop the concept of providing a drainage pump station in the Woodlake/Seton Park area. Mr. Carson was tasked with leading the feasibility study, for briefing the project alternatives and preferred plan. Mr. Carson also oversaw the development of the application for the Statewide Flood control program.</p> <p><u>Cow Bayou Drainage Pump Station Complex, Orange, TX</u></p> <p>MSMM is currently designing an 8,190 cfs drainage pump station in Orange County Texas as part of the Sabine Pass to Galveston Bay Texas Coastal Storm Risk Management and Ecosystem Restoration project. MSMM is responsible for all design activities for the features of work associated with the Sabine to Galveston, Cow Bayou Complex. The Cow Bayou Complex includes the design efforts for tie-in levee's, transition floodwall tying the floodwall into the levee section, multiple T-wall monoliths (both straight and P.I. monoliths), Drainage Structures (sluice gate structures & culverts through the floodwall) that are used to maintain flows of existing bayous, horizontal and vertical lift gates, a sector gate monolith for navigational traffic, and the 8190 cfs pumping station. This project is being designed for the USACE New Orleans and Galveston Districts. MSMM was hand selected by USACE to design this project, based on recent drainage pump station design experience in the greater New Orleans area.</p> <p>Mr. Carson is the lead project manager for the MSMM tasks associated with this project. He is responsible for working with the USACE PDT to determine scope and schedule, for managing the MSMM engineering team, and for the development of briefing materials to senior leaders at USACE and the non-Federal partners.</p>

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:	
Name & Title:	
	Chris Mills, EIT Engineer Intern
Project Assignment:	
	Jr Construction Manager
Name of Firm with which associated:	
	
Years' experience with this Firm:	
	2 (2019)
Education: Degree(s)/Year/Specialization:	
	B.S. in Civil Engineering, 2019, Louisiana State University
Active registration: Year first registered/discipline:	
	Year First Registered: 2019 Discipline: <u>Civil</u> State: <u>Louisiana</u> License No.: <u>34186</u>
Other experiences and qualifications relevant to the proposed Project:	
<p>Chris Mills is an EIT at MSMM where her performs a wide variety of design and hydraulic evaluations for public works project in Orleans and Jefferson Parish. Mr. Wills also performs various field services, inclusive of collecting survey data, manhole location data, GIS data and provides construction administration services for various construction projects.</p> <p><u>Kenner Drainage Master Plan Development, Kenner, LA</u></p> <p>MSMM was responsible for updating the Kenner Drainage Master Plan through a combination of hydraulic modeling and alternatives analysis. As part of developing the Kenner Master Drainage plan project, our staff characterized the drainage system via field inspections and Hydraulic Modeling utilizing the EPA SWWM. MSMM personnel were previously involved in developing drainage planning documents, inclusive of the City of Kenner Drainage Master Plan completed in April of 2010. Several of the projects identified in that plan were subsequently constructed. However, several drainage projects remained so this report was developed to prioritize recommended subsurface drainage improvement projects on a Council District based by identifying ten (10) highest priority project in each Council District.</p> <p>At the completion of this analysis, the City of Kenner received a compiled report that identified the highest priority projects, along with cost estimates, maps, and recommended drainage piping information. The recommended pipe sizing was based on a ten (10) year storm design standard. The Hydraulic Modeling for this Master Plan update was completed in a similar format to recent Hydraulic Modeling changes performed by Jefferson Parish.</p>	

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Chris Mills, EIT Engineer Intern
Mr. Mills provided field data collection services on this project, collecting survey data for drainage inlets, manholes and street elevations. He also helped developed GIS graphics for the main report and was ultimately responsible for finalizing the report and submitting it to the client.
<u>Lower 9th Ward NW Group D (RR111) Neighborhood Design Project</u>
MSMM has been tasked with providing roadway design for approximately 16 blocks of this Lower 9th ward project. The project included mostly full depth replacement and waterline design. Other services included the development of drainage calculations and drainage features, the re-establishment of base course and new roadway on blocks fully covered with vegetative growth, and curb, gutter, roadway, sidewalk, and street surface improvements on a few blocks not requiring full reconstruction. Mr. Mills worked in conjunction with the lead engineer to develop line and grade analysis, plan and profile drawings, participation in field reviews and virtual plan-in-hand meetings, and coordination with CNO.
<u>Gentilly Terrace North Group B (RR052) Neighborhood Roadway Design</u>
MSMM has been tasked with providing roadway design for 8 streets of this Gentilly Terrace project as a subconsultant to PEC. The project included mostly full depth replacement and waterline design. Other services included the development of drainage calculations and drainage features, the re-establishment of base course and new roadway, and curb, gutter, roadway, sidewalk, and street surface improvements on a few blocks not requiring full reconstruction. Mr. Mills worked in conjunction with the lead civil engineer from PEC to help establish an acceptable full depth replacement of the roadway, establishment of utilities appropriate grade adjustments to street intersections, driveways, and sidewalks.
<u>Lower 9th Ward South Group E (RR115) Neighborhood Roadway Design</u>
MSMM has been tasked with providing full depth reconstruction roadway design for 20 blocks of this Lower 9th ward project. Design services included the development of drainage calculations and drainage features, the widening and addition of curbs on some streets, and full depth reconstruction inclusive of all utilities for most of the area. Mr. Mills worked in conjunction with the lead civil engineer to provide drainage modifications and improvements, and final grades compatible with adjacent properties to ensure positive flow of water toward designed catch basins.
<u>West End Group A (RR193) Neighborhood Roadway Design, New Orleans, LA</u>
MSMM Engineering was tasked by the City of New Orleans Department of Public Works to finalize the design and perform construction management of the West End Group A project. The project includes full depth reconstruction, patch, mill and overlay and incidental pavement repair inclusive of driveways, sidewalks, curbs, and manhole adjustments. Mr. Mills worked in conjunction with the lead civil engineer to revise the preliminary construction plans, update the project specifications and revise the cost estimate. He was also responsible for providing regular updates to the city concerning the progress of the requested design services.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:	
Name & Title:	
	Eric M. Curson GIS Specialist / CAD Drafter
Project Assignment:	
	Jr Construction Manager
Name of Firm with which associated:	
	
Years' experience with this Firm:	
	6 (2015)
Education: Degree(s)/Year/Specialization:	
	Some classes: Purdue University Southeast College of Technology
Active registration: Year first registered/discipline:	
	Completed "Introduction to ArcGIS I" ESRI certification (2008)
Other experiences and qualifications relevant to the proposed Project:	
<p>Eric Curson is a GIS Specialist, geospatial, and CAD manager at MSMM, where his project experience encompasses a variety of geospatial and software initiatives within the Federal and local market in southeast Louisiana. Mr. Curson has worked extensively on projects that require the use of ESRI ArcGIS and Microsoft SQL Server for Federal clients including the USACE New Orleans District. He has been instrumental in leading the GIS database creation and management for several MSMM projects including the Jefferson Parish I&I project, and the Chitimacha and Ascension Parish GIS planning tool initiatives. With a background in both CAD and GIS, Mr. Curson understands the similarities and differences between the two systems and has played an important role in working through any conversion issues that have arisen through the digitization and database creation process. As the lead drafter at MSMM, Mr. Curson has been instrumental in the development of project plans, working in conjunction with the engineering staff to finalize all submittals.</p> <p><u>Coventry Court Drainage Evaluation Feasibility Report, Jefferson Parish, LA</u></p> <p>In early 2017, following repetitive street flooding in the Coventry Court area of River Ridge, MSMM Engineering worked with the Jefferson Parish District 2 office to propose a solution to the flooding issues in the area. The MSMM engineering team identified several potential options that could be evaluated. In 2018, the Jefferson Parish Council tasked our staff with developing a multi-phase feasibility report to evaluate several drainage solutions in the area.</p> <p>As part of the Coventry Court evaluation, the Jefferson Parish drainage department requested that MSMM investigate and determine the feasibility of providing improved drainage. The investigation consisted of the following:</p> <ul style="list-style-type: none"> - Evaluation Phase/Data Review – collection and analysis of existing information 	

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Eric M. Curson GIS Specialist / CAD Drafter
<ul style="list-style-type: none">- Field Reconnaissance and Preliminary Survey – collection of relevant field information- Model Runs and Calibration – updated the HEC-RAS model with the area’s data for 10-year, 50-year and 100-year storm events.- Cost Estimating of Multiple Alternatives – provided detailed cost breakouts consisting of vendor furnished pricing data for materials- Development of a Prioritized List of Recommendations – the alternatives developed were prioritized based on our engineering recommendations. <p>MSMM is the only entity to envision and develop the Coventry Court drainage pump station concept. The final report was completed in less than 6 months, and the final recommendation is to design a new drainage pump station on a vacant parcel owned by the parish between Coventry Court and Lee Court, westerly of Jefferson Highway. This 90 cfs (120 cfs ultimate) pump station with a 48’ open cut discharge forcemain placed down Colonial Heights Road and over the Mississippi River levee. Other project features consist of a discharge dolphin in the Mississippi River and upsizing of the Jefferson Highway drainage crossings and downstream conveyance. This recommended alternative provides the greatest pumping capacity while requiring the least amount of permanent drainage servitudes.</p> <p>Mr. Curson worked with the civil and hydraulic engineering staff to develop GIS shapefiles for inclusion into the model. He also mobilized to the field identifying catch basins, inlets, manholes and other drainage features, which he grabbed coordinates for and uploaded into the model. Finally, Mr. Curson developed project alternatives in GIS and provided conceptual level design in CAD.</p> <p><u>Clearview Drainage Pump Station, St. Peter’s Ditch Improvements – Phase 4, Jefferson Parish, LA.</u></p> <p>MSMM engineering staff provided complete design services for a 220 cfs drainage pump station located within the DOTD Right-of-Way of the Clearview Parkway/Earhart Expressway interchange. The goal of this pump station was to pump stormwater runoff from the existing detention pond network, over Cross Canal, and discharge directly into the improved St. Peter’s Ditch (box culvert). The project required multiple disciplines including civil, structural, electrical and mechanical engineering, as well as, cost estimating and drafting (CAD). The pump station structure contained three 75 cfs vertical lift pumps with 250 HP motors and several hundred feet of 36” discharge piping. Additional features of the project included a pile supported reinforced concrete structure, sheetpile intake area, trash rake with conveyor, conditioned control building, generator, traffic detour plan, discharge pipe aerial canal crossing, utility relocations, and other related improvements.</p> <p>Mr. Curson was the lead CAD designer for the project. He worked with civil, structural, electrical and mechanical engineers to develop the project design and supply of all drawings.</p> <p><u>Woodlake Estates/Seton Park Subdivision Drainage Pump Station, Jefferson Parish, LA</u></p>

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Eric M. Curson GIS Specialist / CAD Drafter
<p>MSMM was tasked by the Jefferson Parish council to evaluate drainage pump station alternatives to solve the issue of long-term flooding in within the Woodlake and Seton Park neighborhoods within the City of Kenner. In 2018, MSMM completed a feasibility study that developed multiple drainage pump station alternatives which bypass the capacity limitations of the canals and alleviate stormwater flooding in the area. At the completion of the feasibility report, the following alternatives were identified:</p> <ul style="list-style-type: none">- A new drainage pump station at the corner of Canal 17 and Canal 7 (west end of Joe Yenni Blvd.), a discharge forcemain westwards, with a discharge basin in the West Return Canal.- A new drainage pump station at the northeast corner of Vintage Drive and Platt Street on Canal 17, a discharge forcemain westwards, with a discharge basin in the West Return Canal.- A new inline drainage pump station at or near the corner of Canal 17 and Canal 7 with discharge into the canals and also with a discharge forcemain westwards to a discharge basin in the West Return Canal <p>Mr. Curson worked with the civil and hydraulic engineering staff to develop GIS shapefiles for inclusion into the model. He also mobilized to the field identifying catch basins, inlets, manholes and other drainage features, which he grabbed coordinates for and uploaded into the model. Finally, Mr. Curson developed project alternatives in GIS and provided conceptual level design in CAD.</p> <p><u>Jefferson Parish Inflow & Infiltration System Modeling, Jefferson, LA</u></p> <p>MSMM modeled wastewater collection network piping involving 225 sewer pump stations, more than 8,000 sewer manholes, 200 miles of gravity piping, and 200 miles of forcemains. Field inspection of all modeled stations was performed to conduct pump tests and determine current station capacities. GPS surveys were conducted to determine exact coordinates of manholes and wet wells. The data was updated in the GIS database, which was then utilized in the InfoWorks modeling software to determine the network's reaction to various design storms, and to quantify inflow and infiltration (I&I) problems. The model results identified SSO areas that matched closely with known customer complaints, sewer overflow records, and knowledge of O&M staff. The model was subsequently utilized to test and optimize system improvements, which were utilized by local planning authorities for long term master planning.</p> <p>Mr. Curson was tasked with running the technical side of the program and routinely meets with GIS and Engineering personnel from Jefferson Parish to provide updates on data gaps/needs, priority projects and the potential for database improvements. He has been involved in the creating of this data set and database since before he was employed by MSMM. He continues to refine the data and database for planning use by Jefferson Parish.</p> <p><u>Soniat Canal Improvements (SELA), Jefferson Parish, LA.</u></p> <p>Federally funded project under the Southeast Louisiana Urban Flood Control (SELA) program that involved improving drainage along a major north-south running drainage canal via hydraulic studies, DDRs, design, geotechnical investigations, preparation of plans and specifications, construction management and resident</p>

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Eric M. Curson GIS Specialist / CAD Drafter
<p>inspection. This project increased the capacity of Soniat Canal from Canal No. 3 to West Metairie Avenue in Metairie, LA from 3,000 cfs to 5,200 cfs. This involved designs for U-shaped concrete flumes, utility relocations, and sheet piling transitions in seven separate bid packages:</p> <p><u>1.</u> Canal No. 3 to Veterans Memorial Boulevard –750’ in length, lined with concrete flume; <u>2.</u> Veterans Memorial Boulevard vehicular bridge replacement – 300’ in length with three box culverts (each 18’H x 36’W); <u>3.</u> Veterans Memorial Boulevard to West Napoleon Boulevard – 3,500’ total length, lined with concrete flume; <u>4.</u> West Napoleon Avenue vehicular bridge replacement – 400’ in length; <u>5.</u> West Napoleon Avenue to Lynette Drive – 1,100’ long; <u>6.</u> Lynette Drive to Lester Street – approx. 2,900’ long; <u>7.</u> Lester Street to West Metairie Avenue – approx. 450’ long with bridge replacement.</p> <p>Mr. Curson provided all drafting work for the features of this project. He also worked with the engineering staff to develop figures and diagrams to present to Parish personnel and the public.</p> <p><u>Avenue D Drainage Improvements, Jefferson Parish, LA.</u></p> <p>Design of a drainage project (funded in part by LADOTD Statewide Flood Control), in highly urbanized neighborhood, including the upgrade of approximately 20,000 lf of storm drainpipe (15” – 96”) and relocating approximately 10,000 lf of (6” – 48”) waterlines and 8” sanitary sewer. Entire road was reconstructed as part of the project. The Project was divided into six (6) phases generally described as follows:</p> <p>Phase I, Installation of 54”, 72” and 78”x122” arch pipe along 8th Street between Avenue C and Gaudet Drive, and 54” and 60” drain line along Allo Street between 6th Street and 8th Street. (Construction Complete) Phase II-A, Installation of 54”x88”, 72”, 62”x102” and 2 – 10’x7’ box culverts along Avenue D between the Westbank Expressway and 6th Street. (Construction Complete) Phase III, Installation of 54” and 60” drain line along Avenue A, 60” and 72” along Avenue C, and 48” and 54” along Gaudet Drive between 6th Street and 8th Street. (Construction on-going) Phase IV, Installation of 48” drain line along Allo Street and Avenue C between 4th Street and 6th Street. (Design on-going) Phase V, Installation of 42” and 48” drain line along Gaudet Drive and 48” and 54” along Avenue A between 4th Street and 6th Street. (Future Phase) Phase VI, Installation of 72” RCP on 7th Street between Avenue B and Avenue C.</p> <p>Mr. Curson provided all drafting services associated with the multiple phases of this project. He worked with multiple engineering personnel from various disciplines to draft and revise all drawings created for this project.</p>

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:**Name & Title:****David Bickford****Project Assignment:****Debris Monitor/Resident Inspector****Name of Firm with which associated:****Years' experience with this Firm:****5****Education: Degree(s)/Year/Specialization:****Active registration: Year first registered/discipline:****Other experiences and qualifications relevant to the proposed Project:**

Mr. David A. Bickford has been a Resident Inspector and CADD Technician since 1997. Having worked construction projects across Southeast Louisiana, he has a portfolio of construction inspection experience that spans DOTD and FHWA roadways, bridges, drainage projects, levees, floodwall, floodgates, pump stations and houses. Mr. Bickford has been inspecting jobs for the CNO DPW since 2016.

Relevant projects Mr. Bickford has worked on over the years include:

Little Woods Group A (RR100) Neighborhood Design, New Orleans, LA

MSMM was tasked by the City of New Orleans Department of Public Works to provide roadway design for the Little Woods neighborhood. Design included patch, mill, overlay, full depth reconstruction inclusive of new drainage infrastructure, establishment handicap ramps, curbs, and driveway and manhole adjustments. The design for the project was completed in July 2019. MSMM was also tasked with providing the Construction Management and Resident Inspection for the project. The construction is ongoing and expected to be completed by the winter of 2021. Fee: \$1.25M.

Role: Mr. Bickford is the lead inspector on the project. He is was for the daily oversight of the construction work, development of daily reports highlighting completed work. As the lead inspector, Mr. Bickford monitors the crew performing the full roadway replacement blocks of the project, but also supervises the inspectors providing the inspection of the patch, mill and overlay crews.

Lake Terrace and Oaks Group A (RR 069) Roadway Reconstruction, New Orleans, LA

As a subconsultant to Mott MacDonald, MSMM provided Resident Inspection and Construction Administration/Project Closeout for this Group A project in the Lake Terrace and Oaks neighborhood. Fee: \$ 249,000.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
David Bickford
<p>Role: Mr. Bickford was the replacement inspector on the job once Mr. Domingue was moved to the Bourbon Street project. Mr. Bickford provided daily inspection oversight, worked with the S&WB inspector to keep good track of construction quantities, and completed daily inspection reports that were provided to DPW monthly. Mr. Bickford also worked with the MSMM Engineering staff to have the contractor complete the Punch List items, As-Built Drawings, and Contract closeout.</p> <p><u>Reconstruction of Bourbon Street, New Orleans, LA</u></p> <p>MSMM provided resident inspection services as a subconsultant to Mott MacDonald for this highly visible and important project to fully restore the first 8 blocks of Bourbon Street between Canal and Dumaine. MSMM has continued to provide inspection services with the addition of work on St. Anne Street. Fee: \$615,000.</p> <p>Role: Mr. Bickford filled in as a temporary inspector for this job when the lead inspector Mr. John Domingue required a break, as the crews were working 7 days a week and sometimes in the middle of the night. Mr. Bickford provided daily inspection of the job and reported all construction activity to the Mott MacDonald engineers overseeing the construction administration. Due to the high profile of the project, he was also responsible for ensuring daily safety requirements were met, fencing was in place and the public was not at risk during the construction.</p>

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:**Name & Title:****David Bickford, Jr.****Project Assignment:****Debris Monitor/Resident Inspector****Name of Firm with which associated:****Years' experience with this Firm:****3****Education: Degree(s)/Year/Specialization:****Active registration: Year first registered/discipline:****Other experiences and qualifications relevant to the proposed Project:**

Mr. Bickford, Jr. has been a Resident Inspector since 2011. Mr. Bickford, Jr. started his career as a licensed surveyor before joining MSMM as a Resident Inspector. Having been trained by Senior Construction Inspectors at MSMM, Mr. Bickford has begun to put together a portfolio of construction inspection experience that spans roadways across multiple City of New Orleans neighborhoods. Mr. Bickford, Jr. has been inspecting jobs for the CNO DPW since 2017.

Relevant projects Mr. Bickford Jr. has worked on over the years include:

Little Woods Group A (RR100) Neighborhood Design, New Orleans, LA

MSMM was tasked by the CNO DPW to provide roadway design for the Little Woods neighborhood.

Design included patch, mill, overlay, full depth reconstruction inclusive of new drainage infrastructure, establishment handicap ramps, curbs, and driveway and manhole adjustments. Fee: \$1.25M

Role: Mr. Bickford, Jr. is an inspector on the project. His work consists of providing daily oversight of the construction work, development of daily reports highlighting completed work. Mr. Bickford, Jr. monitors the crew performing patch, mill and overlay, but also has assisted the inspection of the full roadway replacement blocks of the project.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
David Bickford, Jr.
<u>Reconstruction of Bourbon Street, New Orleans, LA</u>
MSMM provided resident inspection services as a subconsultant to Mott MacDonald for this highly visible and important project to fully restore the first 8 blocks of Bourbon Street between Canal and Dumaine. MSMM has continued to provide inspection services with the addition of work on St. Anne Street. Fee: \$615,000
Role: Mr. Bickford, Jr. filled in as a temporary inspector for this job when the lead inspector Mr. John Domingue required a break, as the crews were originally working 7 days a week. Mr. Bickford, Jr. provided daily inspection of the job and reported all construction activity to the Mott MacDonald engineers overseeing the construction administration.
<u>Lake Terrace and Oaks Group A (RR 069) Roadway Reconstruction, New Orleans, LA</u>
As a subconsultant to Mott MacDonald, MSMM provided Resident Inspection and Construction Administration/Project Closeout for this Group A project in the Lake Terrace and Oaks neighborhood. Fee: \$ 249,000.
Role: Mr. Bickford, Jr. was the replacement inspector on the job once Mr. Domingue was moved to the Bourbon Street project. David provided daily inspection oversight, worked with the S&WB inspector to keep track of construction quantities, and completed daily inspection reports that were provided to DPW monthly. Mr. Bickford also worked with the MSMM Engineering staff to have the contractor complete the Punch List items and Contract closeout.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Kenneth Bickford
Project Assignment:
Debris Monitor/Resident Inspector
Name of Firm with which associated:

Years' experience with this Firm:
3
Education: Degree(s)/Year/Specialization:
Active registration: Year first registered/discipline:
DOTD Embankment and Base Course Certified by U.S.A.C.E. in Construction Quality Management. Veriforce Certified OQ (Operator Qualification) in Excavating, Trenching, and Shoring. Veriforce Certified in CCT (Common Covered Tasks), CCT – 402, 403, 607, 618, 701, 703, 716, 906.
Other experiences and qualifications relevant to the proposed Project:
<p>As a resident inspector, Kenneth is responsible for monitoring construction methodologies, adhering to drawings and specifications, and tracking quantities for payment. Additionally, Mr. Bickford has provided inspection services for various types of roadways projects for the City of New Orleans.</p> <p>Relevant projects Mr. Bickford has worked on over the years include:</p> <p><u>Bourbon Street Reconstruction, New Orleans, LA</u></p> <p>MSMM provided resident inspection services as a subconsultant to Mott MacDonald for this highly visible and important project to fully restore the first 8 blocks of Bourbon Street between Canal and Dumaine. MSMM has continued to provide inspection services with the addition of work on St. Anne Street. Fee: \$615,000.</p> <p>Role: Mr. Bickford is responsible for the oversight of excavation, removal, and subsequent replacement of existing drain and water line infrastructure, as well as the construction of curbs, driveways, sidewalks (with ADA features) water mains, sewer and drain lines, and traffic control.</p>

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Kenneth Bickford
<p><u>Village De L’Est Group A (RR187), New Orleans, LA</u> MSMM provided resident inspection services as subconsultant to Stanley Consultants for this FEMA funded project that was completed in 2019. Fee: \$312,000 Role: Mr. Bickford was responsible for inspection of the roadwork which included excavation, milling, paving, curb construction, storm drain construction, and manhole construction.</p> <p><u>Lake Terrace and Oak Group A Roadway Repairs, New Orleans, LA</u> As a subconsultant to Mott MacDonald, MSMM provided Resident Inspection and Construction Administration/Project Closeout for this Group A project in the Lake Terrace and Oaks neighborhood. Fee: \$ 249,000. Role: Mr. Bickford was responsible for inspection for roadway and sidewalk replacement work in Lake Terrace and Lake Oaks subdivisions, including manhole and catch basin adjustment.</p>

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:**Name & Title:****John Domingue****Project Assignment:****Debris Monitor/Resident Inspector****Name of Firm with which associated:****Years' experience with this Firm:****7****Education: Degree(s)/Year/Specialization:****Active registration: Year first registered/discipline:****Other experiences and qualifications relevant to the proposed Project:**

Mr. Domingue has more than 20 years of experience in construction management, resident inspection, construction administration, resident project representation, site assessment, inspection, and quality control representation for construction projects in the Greater New Orleans area. He has provided inspections for infrastructure projects involving flood control, water resources, roads, bridges, water/wastewater, utility relocations and environmental projects such as marsh restoration. Mr. Domingue has worked closely with local government officials from the City of New Orleans DPW, City of Westwego, City of Gretna, and St. Tammany Parish during construction of these projects. For the past 5 years consecutively, he has provided Resident Inspection Services for CNO DPW projects.

Relevant projects Mr. Domingue has worked on over the years include:

Lower 9th Ward Northeast Group B (RR 104) Roadway Reconstruction, New Orleans, LA

MSMM is currently performing Resident Inspection services as a subconsultant to Neel-Schaffer on this full reconstruction project in the Lower 9th ward. MSMM is providing daily observation of the construction of CNO DPW items and providing daily construction quantities to Royal Engineering for input into their construction oversight software. Fee: \$ 252,000.

Role: Mr. Domingue provides the daily construction inspection services for this project. He is responsible for the daily oversight of site progress, daily reporting of site activities and the daily accounting and reporting of site quantities. Mr. Domingue is responsible for inspection of the DPW funded items for the project.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
John Domingue
<u>Reconstruction of Bourbon Street, New Orleans, LA</u> MSMM provided resident inspection services as a subconsultant to Mott MacDonald for this highly visible and important project to fully restore the first 8 blocks of Bourbon Street between Canal and Dumaine. MSMM has continued to provide inspection services with the addition of work on St. Anne Street. Fee: \$615,000. Role: Mr. Domingue was responsible for the daily oversight of the construction work, development of daily reports highlighting completed work, coordination with the City of New Orleans DPW and various other entities inclusive of Entergy and the Sewerage and Water Board, and the daily calculation of reporting of quantities.
<u>Hurricane Isaac CDBG Disaster Recovery Funding Drainage Construction, Lacombe, LA</u> MSMM provided Resident Inspection and HUD/Davis Bacon Act labor compliance for St. Tammany Parish on this CDBG project to construct the roadway and all utilities for the academic campus, a stormwater retention pond, and Cultural Arts District. Fee: \$ 435,000. Role: Mr. Domingue performed the construction management, resident inspection, monitoring of daily construction activities, reviewed project plans and specs, developed daily field reports, coordinated with project manager and project engineer on any problems encountered during construction, and completed HUD labor compliance interviews.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:**Name & Title:****Wagner Enrique****Project Assignment:****Debris Monitor/Resident Inspector****Name of Firm with which associated:****Years' experience with this Firm:****2****Education: Degree(s)/Year/Specialization:****Active registration: Year first registered/discipline:****Other experiences and qualifications relevant to the proposed Project:**

Mr. Enrique has been operating as a Resident Inspector for over a year now. His previous experience for almost 20 years was a CAD Drafter/Designer. Mr. Enrique has completed numerous civil plans for federal, state, and local government projects. He is well versed in coordinating with contractors, civil engineers, structural engineers, and architectural consultants on various project types, starting from concept layouts, through design, to complete civil plans and profiles, and various construction documents.

Relevant projects Mr. Enrique has worked on over the years include:

Little Woods Group A (RR100) Neighborhood Design, New Orleans, LA

MSMM Engineering was tasked by the City of New Orleans Department of Public Works to provide roadway design for the Little Woods neighborhood. Design included patch, mill, overlay, full depth reconstruction inclusive of new drainage infrastructure, establishment handicap ramps, curbs, and driveway and manhole adjustments. The design for the project was completed in July 2019, and construction is anticipated for completion in September 2021. Fee: \$1.25M

Role: Mr. Enrique is the inspector on this project. His daily responsibilities include daily onsite inspection activities, completing daily field reports

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Wagner Enrique
<p><u>Lower 9th Ward Northeast Group B (RR 104) Roadway Reconstruction, New Orleans, LA</u></p> <p>MSMM is currently performing Resident Inspection services as a subconsultant to Neel-Schaffer on this full reconstruction project in the Lower 9th ward. MSMM is providing daily observation of the construction of CNO DPW items and providing daily construction quantities to Royal Engineering for input into their construction oversight software. Fee: \$ 252,000.</p> <p>Role: Mr. Enrique oversaw oversight of project progress, daily reporting of site activities, and inspection of DPW funded items.</p> <p><u>Broadmoor Group A Street Repairs, New Orleans, LA</u></p> <p>As a subconsultant to Digital Engineering & Imaging, Inc., MSMM is responsible for providing inspection, reporting, and verification services for the Broadmoor Group A project. Fee: \$193,000</p> <p>Role: Mr. Enrique was responsible for daily construction progress of CNO DPW items and documentation of daily quantities.</p>

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:	
Name & Title:	
	Arthur Ian Growden, EIT Engineer Intern
Project Assignment:	
	Debris Monitor
Name of Firm with which associated:	
	
Years' experience with this Firm:	
	2 (2019)
Education: Degree(s)/Year/Specialization:	
	B.S. in Civil Engineering, 2020, U.N.O.
Active registration: Year first registered/discipline:	
	Year First Registered: 2021 Discipline: <u>Civil</u> State: <u>Louisiana</u> License No.: <u>35468</u>
Other experiences and qualifications relevant to the proposed Project:	
<p>Ian Growden is an EIT at MSMM where he performs wide-ranging services inclusive of CAD drafting, REVIT modeling, field services inclusive of survey and data collection, and the input of data for hydraulic models.</p> <p><u>Airport Taxiway G Extension, Kenner, LA</u></p> <p>MSMM provided extensive hydraulic modeling, engineering design and construction administration services for the extension of Taxiway Golf and Taxiway Bravo at the New Orleans International Airport. Taxiway G will serve the new terminal facility opened on the north side of the airport. In its current condition, Taxiway G does not extend to the Runway 11 threshold, and aircraft departing from Runway 11 are required to cross the active runway at Taxiway A to access Runway 11. Extending Taxiway G will provide much more efficient access to the Runway 11 threshold, and aircraft will no longer be required to cross an active runway in order to depart from Runway 11. Project design elements MSMM completed/assisted with included the following:</p> <ul style="list-style-type: none"> • Hydraulic Modeling – Design of the storm sewer system was based on the EPA SWMM methodology. Pipes were designed to flow full for the 5-year storm event and to provide one-foot freeboard below the inlet grate for the 10-year storm event for a free outfall condition. Some freeboard exceptions were made in the upper end of the storm sewer where the pipes to be employed by the system are existing and dual flow of storm sewer and ditch may occur along the vehicle service road. Feeboard exceptions will also occur in portions of the median area impounded by Taxiway G, Taxiway Ult. G2, Runway 11-29, and Taxiway Ult. G3 (now Taxiway A) where the existing ground and grates to remain in the system currently do not provide freeboard. Tailwater values at the canal outfalls were based on stage-frequency relationships extracted from the Parish HEC-RAS model. 	

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Arthur Ian Growden, EIT Engineer Intern
<p>•Drainage Design – Storm drainage design for the medians and infields, a culvert crossing for Taxiway B, channel stabilization design for Canal 15, and adjustments of the Airport Intake Canal to accommodate the vehicle service road relocation.</p> <p>The project was bid for construction in 2020 and is currently in construction. Mr. Growden is providing construction phase services including construction administration, pay application review and approval, change order processing and engineering during construction.</p> <p><u>Woodlake Drainage Pump Station Hydraulic Modeling and Preliminary Design</u></p> <p>The Woodland Estates & Seton Park subdivision areas are located at the confluence of Canal 7 and Canal 17 in Kenner. The current drainage system consists of an enclosed gravity storm sewer system that outlets at various locations in the canals. The distance the stormwater within the canal must travel before it is pumped is excessive (nearly 2 miles to the Duncan Canal Pump Station and 2.25 miles to the Parish Line Pump Station). Due to the excessive distance, the water within the canal typically backs up, creating an increased head situation where the gravity drainage pipes are unable to discharge as intended. This generates a backwater flow condition which causes repeated flooding in the area. Because of the existing conditions in the area, MSMM completed a drainage evaluation report that evaluated options for removing the backflow condition in this area.</p> <p>The subsurface drainage was modeled with the US EPA Storm Water Management Model (SWMM) and the canals and pump station utilized the River Analysis System (HEC-RAS) software. The HEC-RAS model conducted existing condition and other simulation under design storms of 10-year, 50-year and 100-year intensities. The resulting conditions were utilized for comparison purposes. The alternate iterations result in varying degrees of water surface lowering and flooding reduction. Extents of improvement projects, associated cost opinions, and required ancillary items such as right of way acquisitions, etc. were considered to select the most optimum combination which will provide the most flooding reduction. The modeling process indicated that both the subsurface drainage system and high-water elevations in the canal during a 10-year storm event are contributing to flooding issues in the project area. The recommendation was made to construct an in-line 120 cfs drainage pump station directly benefiting the two neighborhoods, as the pump station will be the new outlet, therefore no longer relying on the canal system. This alternative will indirectly benefit the entire area by removing the runoff created from these subdivisions from entering the canal system, therefore freeing up canal capacity from other areas.</p> <p>Mr. Growden was involved in developing detailed images for inclusion in the final modeling report. He was also involved in putting together the Statewide Flood Control Application and the Louisiana Watershed Initiative Application for this project. Recently he has been involved in collecting field information and properly citing the project within the park to provide the least amount of interruption to the neighborhood.</p>



PROJECT EXPERIENCE

Jefferson Parish Emergency Engineering Analysis of Sewer Pump Stations Damaged by Hurricane Katrina In the wake of Hurricane Katrina's devastation on August 29, 2005, Jefferson Parish suffered significant loss to its infrastructure. Continued operability of the sewer pump stations was one of the most lingering issues to hinder the recovery effort. Multiple MSMM employees were part of the team sought by the Parish to analyze its sewer lift stations for emergency power generation capabilities and requirements. The overall team assessed 490+ sewer lift stations to collect field data and determine (1) current emergency power generation and station operation capability in disaster events and (2) methods to equip the critical sewer lift stations with emergency power generation and full functionality in future disaster events. The final database was utilized by the team's electrical engineers and civil engineers to size emergency generators for critical stations, determine backup power outlet requirements for applicable stations, prepare rough sketches of site layouts, prepare hierarchy of service area stations for prioritized generator placement in cases of shared generators among multiple stations, and develop opinions of probable costs for the above actions.



Hurricane Damage Assessment and Mitigation Measures for Council District 4, Jefferson Parish, LA

\$1.2 Million project to raise essential drainage pump station equipment above anticipated surge elevation, extend engine exhaust stacks and increase fuel capacity at existing drainage pump stations.

Firm responsibility included design, construction management and resident inspection.



Design of FEMA Trailers, Multiple Locations, LA

MSMM personnel contracted with Shaw Environmental & Infrastructure to design trailer parks for residents who had lost their homes to Hurricane Katrina. The initial trailer parks had a rigorous design schedule of 5 days to complete construction documents. This included a sit-down review at 50% and 95% submittals with the program managers and USACE to perform plan review and generate comments in an expedited face to face manner. This design team did the Winn Dixie/Cultural Arts Center Site in New Orleans and Grand Isle State Park Site in Grand Isle

Emergency Damage Assessment of Infrastructure, City of Picayune, MS

Immediately following the devastation of Hurricane Katrina in August 2005, team members provided engineering expertise to conduct a comprehensive assessment of impacts of the storm to the City's wastewater infrastructure (93 lift stations and WWTP), City Hall and other public facilities. The infrastructure was assessed in detail with written and photographic records in the field followed by formal report preparation in the office. HEI conducted the emergency assessment per FEMA requirements to facilitate Federal cost reimbursement of approximately \$7 million.

City of Kenner Emergency Preliminary Engineering of Sewer Infrastructure Damaged Due to Hurricane Katrina

Following Hurricane Katrina, the City of Kenner suffered significant loss to its sewer infrastructure. The City was faced with the daunting task of returning the entire sewer system (two WWTP facilities and seventy-four lift stations) to an operating condition so that residents could be allowed to return to the area. Team members were involved with assisting the City to assess damage, develop repair costs and organize information in preparation and anticipation of reimbursement from the Federal Emergency Management Agency (FEMA) for many of the costs.



St Bernard Parish, FEMA Emergency Lift Station Repair

In the wake of Hurricane Katrina's devastation on August 29, 2005, St. Bernard Parish suffered significant loss to its infrastructure. The residents were without the services of basic utilities such as water, sewer and power for many months or more following the landfall of the hurricane. Continued operability of the sewer pump stations was one of the most lingering issues to hinder this recovery effort.

Firm responsibility: MSMM personnel designed the repairs for eleven sewer lift stations. The team visited each site, documented pump station conditions, electrical service ratings, control panel conditions, stations that had flooded, control panels that had flooded and dry pits that had flooded. The repair costs specified in the FEMA project worksheets were analyzed and the cost estimates were updated to reflect more accurate costs that are being found in current repair projects. Once the updated cost estimates were approved, the stations were designed and MSMM personnel provided CM and RI services.



New Orleans International Airport Drainage Pump Station, Kenner, LA

MSMM recently completed full engineering design services for a new 600 cfs stormwater drainage pump station (four 150 cfs pumps, each 44" w/ 800 HP Driver) and for all landside drainage as part of constructing a new terminal at the New Orleans Airport.

Firm responsibility: Performed full engineering design services spanning civil, structural, electrical, mechanical and environmental engineering, hydraulic modeling (HEC-HMS and HEC-RAS), architectural services, cost estimating, environmental permitting, drafting (CAD, Civil 3D, REVIT, GIS), and agency coordination.



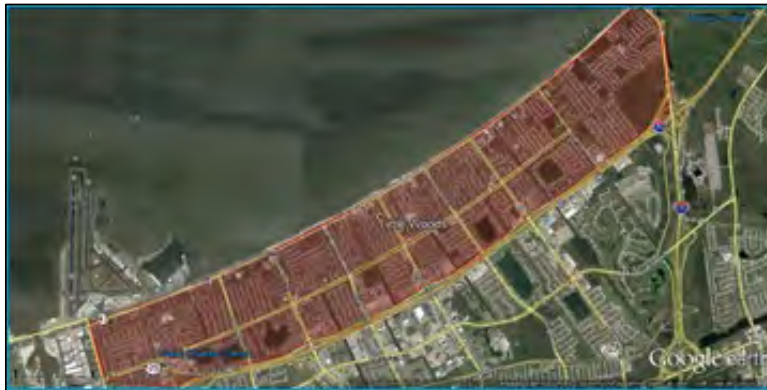
TITLE AND LOCATION <i>(City and State)</i>		YEAR COMPLETED	
Little Woods Neighborhood FEMA Recovery Roads Repair, New Orleans, LA		PROFESSIONAL SERVICES	CONSTRUCTION <i>(If applicable)</i>
		2019 (Expected)	2020 (Anticipated)
PROJECT OWNER	POINT OF CONTACT		TELEPHONE NUMBER
City of New Orleans Department of Public Works	Gabriel Morejon, Project Manager		(504) 658-8009
BRIEF DESCRIPTION OF PROJECT			

MSMM Engineering is currently performing 100% of the design and construction administration for the FEMA funded roadway repairs within the Little Woods neighborhood of New Orleans. The Little Woods neighborhood is the largest neighborhood within the City and the current estimated cost of the roadway, sewerage, water and drainage repairs is \$18M.

MSMM services for the project consist of engineering and design for multiple project features that fall within the boundaries of the Capital Improvement program. Features currently under design include roadway pavement mill and overlay, isolated patching, complete roadway replacement, ADA compliance ramps at intersections, traffic engineering for intersections, crosswalks, curb and gutter, adjustment and re-framing of manholes, and the design of brand new sub-surface utilities inclusive of sewerage lines, water lines and drainage infrastructure. MSMM is also tasked with keeping a robust cost estimating spreadsheet for FEMA approval. The spreadsheet is used to attach each design element to an approved damage in the FEMA Project Worksheet. Construction is estimated to start in April 2019 and MSMM will perform construction management and resident inspection services.

Professional Service Highlights

- 100% performed by MSMM
- Roadway Design For a Neighborhood - \$18M
- FEMA Cost Estimating Worksheet
- Sewer, Water and Drainage Design In Addition to Multiple Roadway Types
- Fee: \$1.3M



FIRM NAME	FIRM LOCATION (<i>City and State</i>)	ROLE
MSMM Engineering, LLC (Prime)	New Orleans, LA	Civil Design for Roadway Repairs/Replacement



TITLE AND LOCATION <i>(City and State)</i>		YEAR COMPLETED	
Lower 9 th Ward NW Group D (RR111) Neighborhood Design Project, New Orleans, LA		PROFESSIONAL SERVICES	CONSTRUCTION <i>(If applicable)</i>
		2020	2022 (anticipated)
PROJECT OWNER City of New Orleans – Department of Public Works	POINT OF CONTACT Brian Fontaine, Senior Project Manager, bfontaine@nola.gov		TELEPHONE NUMBER (504) 316-7697
BRIEF DESCRIPTION OF PROJECT			

MSMM is currently performing 100% of the design engineering services for this roadway reconstruction project in the Lower 9th Ward. The project consists of a 16-block grid of full roadway reconstruction with the addition of curbs. Design services completed by MSMM consist of roadway pavement with curbs, subsurface and surface drainage, water and sanitary sewer installation adjustments, adjustments to driveways, installation of ramps for the handicapped, final grades compatible with adjacent properties to ensure the positive flow of water toward catch basins, and compliance with the City's General Specifications for Street Paving.

Professional Service Highlights
<ul style="list-style-type: none"> - 100% performed by MSMM - Design to the City's General Specs for Roadway Paving - Full Depth Reconstruction - Sewer, Water and Drainage Design in Addition to Multiple Roadway Types - Fee: \$531,000

To date, MSMM has prepared and provided final construction plans, specifications, drawings, bid documents and construction cost estimates conforming with the City's plan-in hand comments. These plans were stamped by Mr. Jim Wilson, a Louisiana registered Civil Engineer. The next MSMM responsibilities will be attending and participating in a pre-bid and pre-construction conference and performing the required Construction

Management services. Construction of this project could start in the Spring of 2021 and be finalized in the Spring of 2022.



FIRM NAME	FIRM LOCATION (<i>City and State</i>)	ROLE
MSMM Engineering, LLC	New Orleans, LA	Prime - Civil Design for Roadway Repairs/Replacement



TITLE AND LOCATION (<i>City and State</i>)		YEAR COMPLETED	
Lower 9th Ward South Group E (RR115) Full Reconstruction Design Project, New Orleans, LA		PROFESSIONAL SERVICES 2020	CONSTRUCTION (<i>If applicable</i>) 2022 (anticipated)
PROJECT OWNER City of New Orleans – Department of Public Works	POINT OF CONTACT Mohanad Abdelfattah, Project Manager, mohanad.abdelfattah@nola.gov	TELEPHONE NUMBER (504) 316-7697	

BRIEF DESCRIPTION OF PROJECT

MSMM Engineering is currently performing 100% of the design services for this roadway reconstruction project in the Lower 9th Ward. The project consists of a 20 blocks of full roadway reconstruction and patch mill overlay with the addition of curbs.

Design engineering services completed by MSMM consist of roadway pavement with curbs, subsurface and surface drainage, water and sanitary sewer installation adjustments, adjustments to driveways, installation of ramps for the handicapped, final grades compatible with adjacent properties to ensure the positive flow of water toward catch basins, and compliance with the City's General Specifications for Street Paving.



To date, MSMM has prepared and provided final construction plans, specifications, drawings, bid documents and construction cost estimates conforming with the City's plan-in hand comments. These plans were stamped by Mr. Jim Wilson, a Louisiana registered Civil Engineer. MSMM is currently in the process of finalizing the submission of a USACE permit due to 3 blocks of the project falling within the required permitting distance from a Federal levee. Following the permitting process, MSMM will participate in the bidding phase, and we will provide Construction phase services. Construction of the project could start in the Spring of 2021 and be finalized in the Spring of 2022.

Project Highlights
<ul style="list-style-type: none"> - 100% performed by MSMM - Design to the City's General Specs for Roadway Paving - Full Depth Reconstruction - Sewer, Water and Drainage Design in Addition to Multiple Roadway Types - Fee: \$683,000

FIRM NAME	FIRM LOCATION (<i>City and State</i>)	ROLE
MSMM Engineering, LLC	New Orleans, LA	Prime - Civil Design for Roadway Repairs/Replacement



TITLE AND LOCATION (<i>City and State</i>)		YEAR COMPLETED	
New Orleans Drainage System Analysis New Orleans, LA		PROFESSIONAL SERVICES 2014	CONSTRUCTION (<i>If applicable</i>) NA
PROJECT OWNER City of New Orleans Public Works Department	POINT OF CONTACT James R. Kapesis Project Manager		TELEPHONE NUMBER (504) 329-9265

BRIEF DESCRIPTION OF PROJECT

MSMM is intimately familiar with a majority of the existing subsurface drain lines in New Orleans by virtue of performing field QA/QC (inspection, measurement, assessment, record keeping and reporting) of more than 1,700 segments and close to 250,000 linear feet (47 miles). This is a part of the city's drainage system engineering assessment project.

MSMM provided field monitoring, QA/QC, verification, recording and reporting of drainage system cleaning and televising activities throughout the City of New Orleans. MSMM crew engaged the CCTV operators on work performed, covered the work of multiple CCTV crews on a daily basis, measured selected line segments by wheel, and completed Field QA/QC reports for each line segment. The reports and image recording were completed on a daily basis and were submitted to the client on a weekly basis, while a monthly summary was provided as well. This work required close communication with the CCTV operators since multiple crews were operating on the same day and at different locations. As well, any Critical Damage item discovered during the work was recorded and reported to the client on an urgent basis. The purpose of this project is to determine if any Hurricane Katrina-related damage to the City's minor drainage system exists.



FIRM NAME	FIRM LOCATION (<i>City and State</i>)	ROLE
MSMM Engineering, LLC (Sub)	New Orleans, LA	Field QA/QC (Inspection, Measurement, Assessment, Record Keeping and Reporting)



TITLE AND LOCATION (City and State)		YEAR COMPLETED	
Periodic Inspections & Safety Analyses of Flood Control Structures – Levees, Dikes, Locks, and Dams, New Orleans, Louisiana		PROFESSIONAL SERVICES 2008-2014	CONSTRUCTION (If applicable) N/A
PROJECT OWNER	POINT OF CONTACT	TELEPHONE NUMBER	
USACE - New Orleans District	Richard Varuso, PhD, PE	(504) 862-2984	

BRIEF DESCRIPTION OF PROJECT

The USACE, New Orleans District, maintains and operates Flood Risk Management Structures that include Flood Control structures and miles of Flood Protection Levee & Dike systems in Southeastern Louisiana along the Mississippi River and the Gulf Coast. These systems comprise of Flood Water Diversion Structures, Locks, Sector Gates, Earthen Levees, Dikes and Dams. In existence for over 50 years, these structures are instrumented to observe and monitor various distresses that they are subjected to.



The objective of this scope was to review the as constructed design criteria of the systems, compare them with current Risk Based Design Criteria and report the deficiencies, perform Periodic Inspections of the systems including the Geotechnical, Hydrologic, Structural, Civil, Electrical & Mechanical aspects. The inspection reports list the findings by Priority of Risk of Failure.



Evaluation of the systems are based on (1) Surveyed Instrumentation Data (Settlement & Alignment Reference Markers, Piezometers, Scour, etc.), (2) Identifying long term and short term distresses, (3) Performing field inspections to document any observed distresses, and (4) Generate reports that include a Risk Based Analysis of Current versus As-built Design Criteria. The inspections help ensure operational integrity of the structures and also to identify the required maintenance and repairs to avoid partial or total failure. The necessary tasks to achieve the objective of this contract are described below.



MSMM engineering personnel, as part of an inspection team, were involved in the comprehensive periodic inspections on the following systems:

- 1) Locks: Berwick, Dupre, Bienvenue, Calcasieu, Calumet E&W, Port Allen, IHNC, Algiers, Harvey.*
- 2) Diversion Structures: Davis Pond Fresh Water & Pumping Station.*
- 3) Dams: Old River Complex (Low Sill, Auxiliary, Overbank).*
- 4) Levees, Dikes, Floodwalls (400 miles in all): Above Old River, Atchafalaya Basin, Metro New Orleans.*



Project Challenges

- " Accessibility of structures (by Foot, Boat, Specialized Vehicles).*
- " Gathering Survey Data of the Instrumentation.*
- " Evaluating Design Criteria with minimal available as-built information.*

FIRM NAME	FIRM LOCATION (City and State)	ROLE
MSMM Engineering, LLC	New Orleans, LA	Geotechnical; Structural; Cost Estimating



REFERENCES

- 1. Mark R. Wingate, P.E., Deputy District Engineer for Programs and Project Management (DPM) • US Army Corps of Engineers, New Orleans District • 504-862-2512**
- 2. Durund Elzey, Assistant Deputy District Engineer for Programs and Project Management (DPM) • US Army Corps of Engineers, New Orleans District • 504-862-1674**
- 3. Mark Drewes, P.E., Director of Public Works • Jefferson Parish • 1221 Elmwood Park Blvd., Ste. 904, Jefferson, LA. 70123 • 504-736-6783**
- 4. Walter Krygowski, Deputy Director and Chief Operations Officer • New Orleans International Airport • 504-303-7551**
- 5. Robert A. Tuner, Jr., Regional Director • Southeast Louisiana Flood Protection Authority East) • 504-280-2411**

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

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

***Jeffrey Bonura, P.E.
Principal***

Project Assignment:

Sr Construction Manager

Name of Firm with which associated:



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

Years' experience with this Firm:

25

Education: Degree(s)/Year/Specialization:

B.S. / 1991 / Civil Engineering

Active registration: Year first registered/discipline:

1995 / Civil

Other experience and qualifications relevant to the proposed Project:

Jeffrey Bonura, P.E. is a partner 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.

Mr. Bonura's experience related to drainage includes design of drain piping, box culverts, structures, pump stations, ditches and canal, detention systems, and managing the cleaning of debris from the systems. Mr. Bonura's experience includes developing hydrologic and hydraulic models for stormwater systems and developing master drainage plans for improvements based on the analysis.

Mr. Bonura's experience with developing master plans also include planning for city or 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.

Relevant projects Mr. Bonura has worked on over the years include:

H&H MODELING AND MASTER PLANNING OF DRAINAGE SYSTEMS

The projects listed demonstrate Mr. Bonura's vast experience with H&H models:

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. Bonura is serving as Supervising Engineer for this project where BBEC developed the topographical survey scope for the project and manages the surveyor for the Parish. BBEC is developing 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; and, developing various alternatives for improvements with cost estimates for the alternatives. BBEC will provide alternatives and associated cost estimates for improvements, including alternate channels to drain the Host Facility and rail yard area, alternatives to drain the Training Facility, potential locations for storage as an alternative to transmission, and alternatives to drain the Bridge City residential area.

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

Mr. Bonura served as the Supervising Engineer for this project where BBEC developed a hydrologic and hydraulic (H & H) model of a 180 acre residential (zoned R1) area in Jefferson Parish, Louisiana, said area bounded by Power Boulevard, Kawanee Avenue, West Esplanade Avenue, and the Elmwood Canal. BBEC developed a limited scope of services for the necessary topographical survey; provided oversight and reviewed the final topographic survey; developed the H & H model using third party software; coordinated the model with the Parish's own parish-wide H & H model; and provided the running model to others for evaluation of improvements.

Waggaman Drainage Master Plan (Project No. 2011-03-DR), Jefferson Parish, LA, 02/2013-01/2016

Mr. Bonura served as Supervising Engineer to perform a hydrologic study for three separate residential subdivisions in Waggaman, Louisiana: Waggaman, South Kenner, and Manor Lane. The Waggaman subdivision is bounded by River Road to the north, Live Oak Boulevard to the south, Saul's Canal to the west, and Dandelion Ditch to the east. South Kenner subdivision is bounded by River Road to the north, North Railroad Canal to the south, Saul's Canal to the east, and another subdivision to the west. The Manor Lane subdivision is bounded by River Road to the north, North Railroad Canal to the south, Latigue Road Ditch to the west, and Modern Farms Road Ditch to the east. BBEC used the Storm Water Management Model (SWMM) to evaluate the existing subsurface drainage capacities for each subdivision and to examine if the existing system was able handle a 10-year design storm. BBEC developed a hydrologic and hydraulic model for each area and recommended subsurface improvements based on the SWMM model to handle a 10-year design storm.

Harvard Avenue Drainage Study (Master Plan of area bounded by Veterans, I-10, Transcontinental, and Clearview), Project No. 99-046-046-DR and 99-046A-DR, Jefferson Parish, LA, 04/2000-06/2006

Mr. Bonura designed approximately 6,000 linear feet of 24-inch to 72-inch drainpipe in Jefferson Parish, Louisiana. BBEC used Intergraph's Storm and Sanitary SelectCAD modeling software to determine the surface runoff and the pipe sizes. Data from the existing Parish's GIS was used to develop the surface terrain for the basis of the model. The project requires that the various drain lines be installed within 50-foot Parish rights-of-way in commercial and residential areas, existing utilities throughout the length of the project are maintained, and the site is restored, including roadways, to its before construction condition. The project also required three separate jack-and-bores, from 30-inches to 72-inches in diameter, across a three-lane roadway to discharge into a canal. The estimated construction cost is \$2,430,000.

Lake Avenue and Carrollton Avenue Drainage Study, Jefferson Parish, LA, 04/2003-07/2005

Project included an extensive drainage and traffic control study on Lake and Carrollton Avenues in the Bucktown area of Jefferson Parish, Louisiana. Hydraulic modeling of the entire area was performed, and drainage improvements were recommended in conjunction with the findings of the traffic study. Mr. Bonura performed the hydraulic model, coordinated with the traffic engineer and designed the proposed drainage improvements.

Cleary Avenue Roadway and Drainage Improvements, Jefferson Parish, LA, 01/1998-06/2005

The project included reconstruction of approximately 4000 feet of concrete roadway, redesign of existing drainage system and general improvements to existing infrastructure on Cleary Avenue from Veterans Boulevard to West Esplanade Avenue. Hydraulic modeling and studies were performed on the existing drainage system to determine the size and location of new trunk lines to be constructed with this project. Mr. Bonura performed the modeling, design, evaluation (drainage under roadway), and plans and specifications. The Parish constructed improvements as the funding allowed with annual maintenance contracts.

LA-45 Evacuation Route Basin Drainage Improvements, Lafitte Area Independent District, LA, 02/2020-Present

Mr. Bonura is serving as Supervising Engineer for BBEC, performing as sub-consultant, for the development H&H models for the LA-45 Evacuation Route Basin, both for existing conditions and to reflect the proposed Lafitte Tidal protection project. The analysis identified internal drainage problems resulting from the completion of the Tidal Protection project and established pipe, ditch, canal, and LADOTD roadway culvert sizes. BBEC also modeled discharge pump station and determined the capacity for each of the three pump stations. BBEC also provided Drainage Maps and Conceptual Storm Sewer Routing Plans to show ditches and storm sewer locations, and sized required, and identify any potential problem areas, plans and profiles, required right-of-way and construction access, and any impacts to existing properties.

Widening / Stabilization of Congressman Hebert, Creely, and Bluebird Canals (Hazard Mitigation Grant Program (HMGP), St. Bernard Parish, LA, 01/2015-Present

Mr. Bonura serves as the supervising professional and project engineer on the hydraulic and hydrologic model phase of the entire project and the design of the Congressman Hebert Canal replacement portion of the project. The project includes increasing the capacity and improves 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. Bonura 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 performed a hydrologic and hydraulic analysis of the existing system to evaluate the entire area for the 5-year, 10-year, and 25-year storms. 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.

Cypress Park Subdivision Drainage Evaluation, St. Tammany Parish, LA, 11/2016-12/2017

Mr. Bonura served as the supervising professional and project engineer on the hydraulic and hydrologic study of the Erindale Heights and Cypress Park Subdivisions (about 450 acres of single-family residential property). The study consisted of developing a computer model of the hydrology and drainage system consisting of natural channels, open ditches, closed conduits, and culverts. BBEC evaluated the 5, 10, 25, 50, and 100-year storms, and developed several alternatives for addressing the flooding concerns. BBEC provided pros and cons, permitting concerns, and construction cost estimates related to the alternatives. The alternatives considered included elevation adjustments to open channels, increased closed conduit usage and size of existing closed conduits, levees, and pump stations.

HMGP Elevation of Coast Guard Road, Phase I (Project No. 1603x-075-0010), Plaquemines Parish, LA (Funding Source: FEMA Hazard Mitigation Grant Program), 09/2013-06/2016

Mr. Bonura worked with Plaquemines Parish Government to design the two-foot elevation and stabilization of Coast Guard Road. As Supervising Engineer, he oversaw the design of the upgrades to the existing drainage system, a Hydrologic and Hydraulic (H & H) Study to identify the existing drainage system, the need for upgrades, and to assess the reduction of flooding due to contemplated improvements to Coast Guard Road. He performed calculations, modeling, and analysis to assess the hydraulic capacity of the existing drainage system and provided recommendations for improvements that will increase system capacity and reduce the risk of flooding. As part of the H&H evaluation, Mr. Bonura included an analysis of Mississippi River elevations data to identify periods when the improvements would be inundated by the river effects, and what depths would be encountered. Mr. Bonura oversaw the surveying and environmental review process.

Map Modernization Project (DFIRM) (Contract No. EMT-2005-CA-0110), St. Bernard Parish, LA, 03/2005-12/2008

Mr. Bonura oversaw and assisted FEMA to develop St. Bernard Parish's flood insurance rate maps as part of FEMA's map modernization program. Mr. Bonura prepared the project scoping document for St. Bernard Parish and received FEMA approval in accordance with FEMA document Guidance for Scoping Flood Mapping Projects. Mr. Bonura incorporated the Parish's hydraulic features into the GIS. Mr. Bonura performed the necessary hydraulic and hydrologic studies and analyses necessary for the implementation of the map modernization project by using USCAE's hydraulic and hydrologic modeling software HEC-RAS and HEC-HMS. Mr. Bonura incorporated the results of the hydrologic and hydraulic studies GIS to develop the necessary flood plains. Mr. Bonura prepared a Base Map for the project (streets, ditches, benchmarks, etc.) from St. Bernard Parish's existing GIS, modifying the format to FEMA standards. Mr. Bonura has submitted all hydraulic and hydrologic and survey work for independent QA/QC and is currently developing DFIRM base maps. All work associated with the development of the DFIRMs were in strict compliance with the National Flood Insurance Program.

Bayou Gauche Drainage Analysis, St. Charles Parish, LA, 01/2003-12/2005

Mr. Bonura served as Design Engineer for the project which included updating the Parish's existing hydraulic and hydrologic computer models with current developments for the Sunset Drainage District watershed in St. Charles Parish. The Parish's existing HEC -1 and HEC-2 hydraulic models were evaluated and revised to include infrastructure improvements throughout the drainage district. The existing models were converted to HEC-RAS and HEC-HMS for use in this study and future evaluations. Model runs were performed to verify the need for drainage pump station improvements in the area and determine the improved capacity of the pump station.

Guichard Canal Area Drainage Evaluation, St. Bernard Parish, LA, 03/2004-04/2005

The project consisted of evaluating the ability of an existing drainage system in St. Bernard Parish, Louisiana to handle the 10-year storm for a 200-drainage basin in a residential area primarily consisting of open ditches and miscellaneous culverts with multiple outfalls into the Guichard Canal. The area is bounded by the Guichard Canal on the west, Paris Road on the east, Judge Perez Drive on the south, and Patricia Street on the north. The area also contained two drainage pump stations that were designed to drain the subsurface system, while the main volume of flow during the rain events utilized roadside ditches and some subsurface drain lines. Mr. Bonura supervised the development of a drainage layer in the Parish's GIS, supervised the surveying of elevations of the drainage features, developed a hydrologic and hydraulic model for the area, modeled the area and determined all deficient drain lines. Mr. Bonura made recommendations for the necessary improvements to cover the 10-year storm.

DRAINAGE PROJECT ENGINEERING

The projects listed demonstrate Mr. Bonura's vast experience with the design and construction of drainage facilities, enabling him to develop realistic projects in a drainage master plan:

Craig Avenue Drainage Improvements, Public Works Project No. 2019-022-DR, Jefferson Parish, LA, 01/2020-Present

Mr. Bonura is currently serving as the Supervising Engineer for this project. The scope of work includes the design and construction administration services for the design of upgrades to subsurface drainage on Craig Avenue between Kawanee Avenue and West Esplanade Avenue. The project involves installing a large diameter drain line within 20 feet of residential

structures and connecting this new drain line to the existing trunk line that runs along the opposite side of the road and to the existing catch basins on the cross streets of Craig Avenue. BBEC is overseeing the Surveying and Geotechnical Engineering services.

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 is 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.

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

Mr. Bonura is currently serving as Design Engineer and Supervising Professional for this project which consists of the reconstruction of Cleary Avenue between Veterans Boulevard and West Esplanade Avenue and includes drainage improvements. The improvements include 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 includes traffic phasing, allowing the contractor to work on one lane at a time. When working on the parking lanes, the 2-way traffic is maintained. When working in the travel lanes, only 1-way traffic is 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.

Design of Access Ways and Ladders at Drainage Pump Stations, Jefferson Parish, LA, 01/2015-11/2016

Mr. Bonura served as Supervising Engineer where BBEC prepared cost estimates and designed ladders, stairs, and elevated walkways to be installed in 16 drainage pump stations to connect elevated structures or allow personnel to access the top of structures within Jefferson Parish. Design included analysis and details to retrofit new items to existing structures.

Manson Ditch and Lower Kraak Outfall System Improvements, Jefferson Parish, LA, 06/2004-09/2008

Mr. Bonura served as Supervising Engineer for the project which the scope of the work was to provide full engineering services, including evaluation of alternatives, preliminary design, final design, bidding, construction administration, resident inspection, and as-built drawing services, for the improvements to the Manson Ditch outfall into the West Metairie Avenue Canal. All design work is complete, and the project is on hold pending funding. The project consists of hydraulic modeling of drainage structures, design of drainage systems composed of cast-in-place concrete structures and pipe systems, connection to existing culverts, transition to existing canal banks, utility relocations, roadway and other site restoration, traffic maintenance and signal design, pavement striping, and all incidental work. Currently two large diameter

drain lines (60-inch and 72-inch diameter) discharge into the West Metairie Canal culvert crossing under Cleary Avenue. The purpose of the project is to remove the connection and discharge the two drain lines directly into the canal, requiring an outfall structure. The outfall structure is designed to accept the two drain lines, connect to the existing two 96-inch diameter culverts, and be able to transition to a future 16-foot wide u-channel. Temporary bank stabilization is required until the future u-channel project is completed. Traffic flow on the two major arterial streets always had to be maintained throughout construction of the project.

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.

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 LFT. 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.

Labarre Road Back-to-Back U-Turn Intersection Improvements (West Esplanade Avenue/North Labarre Road), Jefferson Parish, LA, 2004

Mr. Bonura served as the Supervising Engineer where the project consisted of the construction of a new cast-in-place concrete bridge and the installation of a 36-inch diameter water line canal crossing. BBEC provided construction management and resident inspection. The construction cost was \$1,200,000.

Drainage Pump Station Fuel Storage Secondary Containment, Jefferson Parish, LA, 09/2002-06/2004

Mr. Bonura designed secondary containment systems to contain diesel fuel at 11 west bank drainage pump stations so that the fuel from the largest storage tank on the site would be retained in the event of a diesel fuel spill. Mr. Bonura developed details for containment systems such as concrete retaining walls for tanks farms stored on existing slabs, and lining systems for earthen containment ponds if the slab option did not provide enough volume. Mr. Bonura provided the details to the Drainage Department, who in-turn advertised the work for public bid as funding allowed and administered the work through construction.

Sanitary Landfill Stormwater Detention, Jefferson Parish, LA, 1998

As part of the landfill permitting process, the requirement for the site was to contain the 25-year storm. Mr. Bonura developed the initial stormwater management plans to address the requirement. To put the landfill project out for bid, Mr. Bonura designed the actual facilities and site improvements to maintain compliance with the 25-year storm requirement. Mr. Bonura designed a complete drainage system for the 88 acre Phase III expansion site, which included the construction of ditches, canals, bridges, culverts, and outfall structures, Mr. Bonura performed the hydraulic modeling to determine the runoff for the site, performed the hydraulic modeling analysis to determine the ditch and canal cross sections, with the existing tight elevation constraints, performed a cost analysis study to determine the most cost effective method for the canal crossings, compared precast box culverts, poured in place box culverts, ConSpan sections, precast (Waskey) bridge sections, and poured in place bridge sections. Mr. Bonura determined (with concurrence of the contractor

on the site) that the poured in place bridge section was the most cost-effective method, determined the culvert sizes and prepared final construction drawings and specifications for the entire project. The drainage portion of the project cost about \$3,000,000.

CN Railroad Culverts in Ormond, Project No. P200801, Ordinance No. 20-9-5, St. Charles Parish, LA, 10/2020 – Present

Mr. Bonura is serving as Supervising Engineer for this project which includes performing engineering services related to improving the drainage systems crossing Canadian National (CN) Railroad System on the east bank of St. Charles Parish. The project includes the drainage facilities crossing and/or adjacent to the CN railroad at Ducayet Drive, Ormond Oaks Drive, Destrehan Drive, Longview Drive, Longwood Drive, and S. Destrehan Avenue. The project includes the installation of (6) 60-inch culverts, (2) 54-inch culverts, and (1) 48-inch culvert crossing the railroad at various locations. The project also includes the installation of 60-inch drainpipe, cast-in-place concrete box culverts, u-channels, and other drainage structures. BBEC is performing design, construction management, and permitting of the project. BBEC is also coordinating with and managing the surveying, and geotechnical engineering services.

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. The proposed scope of the 45 cfs expansion includes:

- Installing a new 45 cfs pump in line with the second discharge pipe provided by the levee project
- Constructing a new reinforced concrete pump station structure for both pumps, with bar screens (mechanical if funding allows) at the entrance. The new structure will replace the deteriorating timber bulkhead, as well.
- Repairing or replacing the timber bulkhead wall not addressed by the pump station structure.
- Installing a new generator structure and generator sized to run both pumps and incidental equipment.
- Extending the new pump discharge pipe as required and providing for scour protection at the outfall.
- Building the project in phases to utilize the existing pump during construction or providing temporary pumping during construction.

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 drainpipe, 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.

Reggio Canal Flood and Erosion Protection, St. Bernard Parish, LA, 2006

The project consisted of structural design of the steel sheet pile bulkhead wall and tieback systems, design of drainage

systems, connection and coordination with a levee project adjacent to the proposed bulkhead, maintenance dredging of the existing canal, utility relocations, roadway and other site restoration, traffic maintenance, and all incidental work. Mr. Bonura performed all phases of the project, including design of bulkhead and drainage system, construction supervision throughout the project and coordination with local and state agencies for disposal of spoil.

Ring Levee Improvements, St. Bernard Parish, LA, 2003-2005

Mr. Bonura served as Project Engineer assisting St. Bernard Parish in identifying low segments of their existing levees for approximately 12 miles of Parish-maintained levees. BBEC utilized existing aerial photographs and GPS elevations obtained from a surveyor to determine the low areas as compared to the permitted levee. BBEC provided the Parish with cross sections, fill estimates, and construction details to repair the settled levees. St. Bernard Parish repaired the levees themselves.

Primrose Box Culverts, St. Charles Parish, LA, 03/2004-10/2004

Mr. Bonura provided design and construction related services for the three 24-foot clear span box culverts and related road/drive restoration.

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.

OTHER MASTER PLAN DEVELOPMENT PROJECTS

The following projects demonstrate that Mr. Bonura has experience in developing comprehensive master plans, including existing topography, surveying (aerial and field) hydraulic conditions, condition assessment, and needed improvements to facilities (pipes and pump stations), prioritizing with the client, estimating project cost, developing funding mechanisms, and addressing O&M concerns.

Drainage User Fee Study, Jefferson Parish, LA, 2005

Mr. Bonura served as a project engineer supervising data collection and performed statistical analysis of the collected data and drafted various sections of the final report. The project scope was to develop a parish-wide drainage utility user fee for Jefferson Parish. The project consisted of collecting sufficient data to develop a comparison of previous to impervious land for the various land uses in the Parish. The project utilized the Parish's then current drainage master plan cost projections as a cost basis, and then used the data collected and analyzed as a basis for cost allocation to the residents, businesses, and other property owners in Jefferson Parish. The report served as the basis for the proposed drainage user fee that was put out for a vote of the public.

Drainage Pump Station Evaluation, St. Bernard Parish, LA, 2005

Evaluation of condition and hydraulic capacity of the Parish's 18 existing pump stations, perform preliminary design services, identify alternatives for improvements. The evaluation considered the hydraulic performance of the pumps, the conditions of the incoming channel, automation/control capabilities, and projected flows. Mr. Bonura developed a master plan document to prioritize the improvements, and developed cost estimate for the improvements.

Water Master Plan, Jefferson Parish, LA, 1993-1994

Mr. Bonura assisted the Project Engineer for this project, which included a complete analysis of the 5 water treatment plants and two separate water distribution systems for Jefferson Parish, Louisiana. Mr. Bonura assisted with developing the computer models of both distribution systems, evaluating the systems with the models, and estimating the cost and

constructability of the recommended improvements for the distribution system. Mr. Bonura assisted with the treatment plant evaluation regarding their current treatment process, operation and constructability. Mr. Bonura also assisted with the overall report development.

OPERATION AND MAINTENANCE (O&M)

O&M concerns may be incorporated into a comprehensive drainage masterplan. If desired, Mr. Bonura has experience with O&M projects such as canal bottom right-of-way surveys and the parish-wide drain line cleaning programs as shown in the following projects:

District 4 Drainage Outfall Improvements Evaluation, Jefferson Parish, LA, 08/2014-08/2017

Mr. Bonura was project engineer and the supervising professional on the project. The project consisted of identifying all drainage outfalls in Jefferson Parish Council District 4 and developing preliminary plans and cost estimates for options to replace the existing outfalls with improved structures, considering aesthetics, maintenance, and hydraulic performance.

Canal Monumentation Program, Jefferson Parish, LA, 01/2004-12/2005

Mr. Bonura worked with the Parish's Drainage Department to develop and implement a canal monumentation project for the entire Parish. The project included stationing the canals with vertical and horizontal monuments strategically located, locating right of way and servitude information, researching existing data and projects for data relevant to the project such as current or past projects, subdivision plats, the Parish's GIS, and other information available for the implementation of the project.

Parish-Wide Drain Line Cleaning – Phase 2, St. Bernard Parish, LA, 2007

Phase 1 of the project included the removal of debris from the drainage system immediately following Katrina. After Phase 1 was completed, and Parish residents started to return home, further drainage problems were observed. It was determined that drain lines not cleaned in Phase 1 contained debris that required cleaning. Mr. Bonura coordinated with the Parish, State, and FEMA to develop a project to clean the remaining drain lines that needed cleaning. The project included working with FEMA to perform eligibility inspections, documentation of the eligibility inspections, procurement of a contractor, construction contract administration, resident inspection of the project, and compliance with the FEMA funding program. Mr. Bonura managed the project through completion, coordinating the work with the Parish and FEMA, overseeing the procurement, construction contract administration, and resident inspection.

Parish-Wide Drain Line Cleaning – Phase I, St. Bernard Parish, LA, 2005

Immediately following Hurricane Katrina many of the Parish's streets were flooded and had difficulty draining due to the storm debris clogging its drainage system. The Parish issued an emergency contract for debris removal services, including the removal of debris from Parish drain lines. Mr. Bonura managed the immediate issuance of work orders to the contractor to remove the debris and restore drainage, and monitored the work being performed. He utilized the Parish's existing GIS system to accurately track and report progress. Mr. Bonura worked with the Parish and FEMA to obtain FEMA Public Assistance eligibility determinations and assisted the Parish in securing \$9.3 million in FEMA funding to cover the project costs. Mr. Bonura managed the project through completion, including developing the necessary work orders and field protocol for resident inspection and quality control, overseeing the document control and invoice review in the office, coordination of disposal sites, and contract compliance.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:**Name & Title:**

***Kevin Forschler, P.E.
Civil Engineer***

Project Assignment:

Sr Construction Manager

Name of Firm with which associated:

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

Years' experience with this Firm:

6

Education: Degree(s)/Year/Specialization:

B.S. / 2014 / Civil Engineering

Active registration: Year first registered/discipline:

2020 / Civil

Other experience and qualifications relevant to the proposed Project:

Mr. Forschler is a graduate of Louisiana State University. His knowledge and experience in the civil engineering field has been expanded by the diverse types of projects he has worked on. He is currently working on projects for the City of New Orleans, St. Bernard Parish, St. Tammany Parish and Jefferson Parish. The projects he is working on involve roadway restoration, drainage modeling and design, off-system bridges, walkway design, lift station design, and water and wastewater treatment.

Mr. Forschler has worked on multiple 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 help develop drainage models for multiple areas in Jefferson Parish, including

certain sections of Waggaman and the Bissonet Plaza neighborhood. He is currently working on a drainage model for the Avondale and Bride City area in order to determine possible drainage improvements in the area. 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 both DOTD and SWBNO, coordinating with representatives of the agencies to resolve conflicts and ensure that proposed designs met the entities' guidelines on some projects. Relevant projects Mr. Forschler has worked on over the years include:

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

Mr. Forschler used Autodesk Storm and Sanitary Analysis software to create accurate drainage models of the project area for both pre-mitigation and post-mitigation conditions. The drainage model provides analyses of the area's interior canal system for a 10-year, 50-year and 100-year storm event. The results of the model were then compared to the existing house slab elevation data provided by St. Bernard Parish for each of the storms in order to determine the impact that the improvements have on flooding of the properties in the project area.

Bissonet Plaza Drainage Master 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.

Waggaman Hydraulic Study, Jefferson Parish, LA, 02/2013-01/2016

Mr. Forschler performed a hydrologic study for three separate residential subdivisions in Waggaman, Louisiana, Waggaman, South Kenner, and Manor Lane. The Waggaman subdivision is bounded by River Road to the north, Live Oak Boulevard to the south, Saul's Canal to the west, and Dandelion Ditch to the east. South Kenner subdivision is bounded by River Road to the north, North Railroad Canal to the south, Saul's Canal to the east, and another subdivision to the west. The Manor Lane subdivision is bounded by River Road to the north, North Railroad Canal to the south, Latigue Road Ditch to the west, and Modern Farms Road Ditch to the east. Mr. Forschler utilized the Storm Water Management Model (SWMM) to evaluate the existing subsurface drainage capacities for each subdivision and to examine if the existing system can handle a 10-year design storm. He developed a hydrologic and hydraulic model for each area and recommended subsurface improvements based on the SWMM model to handle a 10-year design storm.

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

Mr. Forschler estimated the cost of the replacement of drain lines along Jean Lafitte Parkway from Judge Perez Dr. to the outfall at Hermitage Dr. The scope of work for the project included the removal and replacement of drain lines; removal and replacement of roadway pavement section, sidewalks, and driveways; and the improvement of the outfall at Hermitage Dr.

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.

Cleary Improvements (Veterans Blvd. to West Esplanade Ave.) (Council District 5) Jefferson Parish, LA, Public Works No. 2017-014-RBP, 11/2017-Present

Mr. Forschler assisted with developing plans for the rehabilitation of this road and verified that the proposed vertical profiles allowed for positive drainage along the road. 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.

Craig Ave. Drainage Improvements, 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 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.

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

Mr. Forschler accompanied a representative of New Orleans DPW and assessed the damage along the streets contained in this project. 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. **Mr. Forschler used DOTD's HYDRWIN software to design all drainage improvements in the project area.** He is also designing the roadways receiving full pavement replacement and subsurface utility relocations/improvements and creating plans for the construction of the proposed work. Mr. Forschler made sure that the plans for sewer and water line replacements addressed all SWBNO comments and that design followed the SWBNO guidelines.

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

Mr. Forschler accompanied a representative of New Orleans DPW and assessed the damage along the streets contained in this project. 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. **Mr. Forschler used DOTD's HYDRWIN software to design all drainage improvements in the project area.** He is also designing the roadways receiving full

pavement replacement and subsurface utility relocations/improvements and creating plans for the construction of the proposed work. Mr. Forschler made sure that the plans for sewer and water line replacements addressed all SWBNO comments and that design followed the SWBNO guidelines.

RR178 – St. Roch Group North Group C (FRC), City of New Orleans, LA, 10/2019-Present

Mr. Forschler accompanied a representative of New Orleans DPW and assessed the damage along the streets contained in this project. 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. **Mr. Forschler used DOTD's HYDRWIN software to design all drainage improvements in the project area.** He is also designing the roadways receiving full pavement replacement and subsurface utility relocations/improvements and creating plans for the construction of the proposed work. Mr. Forschler made sure that the plans for sewer and water line replacements addressed all SWBNO comments and that design followed the SWBNO guidelines.

Design, Capacity, and Installation of Emergency Pump Outs (EPO) and Related Incidentals, Jefferson Parish, LA, 05/2015-Present

Mr. Forschler worked on the EPO Installation Initiative Project. The project contained 192 lift stations that needed EPO installations and 76 lift stations that had EPOs that were undersized or needed relocation. Through this project, new EPOs were installed at all 192 lift stations and EPO modifications were made at the other 76 lift stations. Mr. Forschler assisted with the review of lift stations and gathering site information prior to site surveys. Mr. Forschler performed all site surveys to document existing conditions and developed site sketches of the stations. Mr. Forschler performed construction administration, reviewed all lift station photos and updated As-Builts and worked with the contractor and client to make sure that the EPOs were installed correctly at each site. Mr. Forschler visited every site where installations of the new or modified EPOs were completed to make sure that the installations met the specifications provided to the contractor.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:**Name & Title:**

Madan Kamboj, P.E.
Civil- Environmental Engineer

Project Assignment:

Sr Construction Manager

Name of Firm with which associated:

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

Years' experience with this Firm:

1

Education: Degree(s)/Year/Specialization:

M.S. / 1978 / Civil Engineering: Structures/Soil Mechanics
B.S. / 1967 / Civil Engineering

Active registration: Year first registered/discipline:

1977 / Civil - Environmental

Other experience and qualifications relevant to the proposed Project:

Mr. Kamboj has more than 41 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 includes 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.

Relevant projects Mr. Kamboj has worked on over the years include:

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.

CN Railroad Culverts in Ormond, Project No. P200801, Ordinance No. 20-9-5, St. Charles Parish, LA, 10/2020-Present

Mr. Kamboj is preparing drainage improvements by the Jack & Bore method of multiple culvert sites to improve frequent flooding in Luling, St. Charles Parish. Multiple culverts employing Jacking Method are to be rammed under the road embankment by using 72", 60" and 48" metal pipes. The ditches on inlet and outlet shall be improved by providing Conspan Culvert Bridges and these ditches shall be provided with G.C.C.M. lining to improve flow of rain discharge. The project cost is \$6.2M.

Westbank Mississippi River Bike Trail, Around Avondale Shipyard, (2017-059-RBP), Jefferson Parish, LA, 12/2020-Present

Mr. Kamboj is designing a 2.3 milelong bike path along River Road and finishing on the top of Mississippi River Levee. The bike path is designed to provide separated path to the pedestrians and shall provide safety by separating bike and pedestrian traffic. The project cost is \$350,000.

Clear Creek CSO Treatment Facility, Atlanta, Georgia, 04/2004-09/2006

While employed with Delon Hampton Associates, Mr. Kamboj oversaw the structural design group. The Clear Creek CSO Treatment serves as one of the largest combined sewershed of the City's seven (7) CSO facilities and includes the downtown business district and midtown areas. Dry weather flow 40 MGD is routed to the Peachtree Intercept which then takes the flow to RM Clayton WRC for treatment. Wet weather flow is routed to Clear Creek CSO facility for treatment before being discharged to open channel that leads to Clear Creek.

B & E Jackson Engineers, Atlanta, GA., 06/2001-11/2003

Mr. Kamboj performed planning and preliminary design for rerouting I-285 with twin tunnel structures under proposed New Runway V and related Taxiway 10-28 at Hartsfield Airport. He also performed planning and preliminary design for I-285 from Riverdale Road (GA 139) to Lake Mirror Road, detailed construction sequence, traffic detours, and construction estimation. Project Const Cost: \$ 160 million. Consolidated Rental Car facility planning, preliminary design for people movers, parking garages and maintenance facilities for all rental carriers at Hartsfield airport. Concourse E planning and preliminary design for land side at grade and elevated access at the airport, improvements to Airport Blvd. Roadways, ramps and retaining wall structures, geometry and profiles, drainage and utility relocations. Project Const. Cost: \$ 182 million.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:**Name & Title:**

Johnny Housey, P.E.
Civil Engineer

Project Assignment:

Sr Construction Manager

Name of Firm with which associated:

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

Years' experience with this Firm:

10

Education: Degree(s)/Year/Specialization:

M.S. / 1965 / Structural Engineering
B.S. / 1964 / Civil Engineering

Active registration: Year first registered/discipline:

1966 / Civil

Other experience and qualifications relevant to the proposed Project:

Mr. Housey has been working as an engineer in the public works industry for over 54 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 54 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 \$40 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.

Relevant projects Mr. Housey has worked on over the years include:

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 currently designing 2,500 linear feet of large diameter reinforced concrete pipe box culverts, and U-channels for the project.

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 includes 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).

Access Ways & Ladders at Drainage Pump Stations; Project No. 2014-022-DR, Jefferson Parish, LA, 11/2014-Present

Mr. Housey has prepared cost estimates and designed ladders, stairs, and elevated walkways to be installed in 16 drainage pump stations to connect elevated structures or allow personnel to access the top of structures within Jefferson Parish. Design included analysis and details to retrofit new items to existing structures.

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.

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

Mr. Housey provided Construction Administration services and Supervised Resident Inspectors for over \$40 Million in roadway 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 was BBEC's on-site engineer for BBEC's (18) project \$100 million street and drainage repair program. 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 is 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.

Read Blvd. East Group C, Capital Improvement Program, Project No. 2016-RR146 (PW No. 21032), City of New Orleans, LA, 03/2017-Present

As Project Manager, Mr. Housey has designed requirements to remove damage to existing streets and replace with new concrete streets and proper drainage profiles. He is also providing Contract Administration on this project. This involves overseeing the resident inspector and reviewing inspection reports, approval of construction materials, conducting bi-weekly progress meeting, approving construction invoices and keeping the client informed of construction progress, issues and other items. The CCTV Inspection of the existing drainage lines revealed the need for multiple repairs to existing drainage lines. This has required evaluation of method of repair and associated costs. Mr. Housey managed the resident inspection services, including providing guidance and oversight to the resident inspector and coordinating with the City to ensure contract quantities were tracked timely and accurately.

Orleans Materials & Equipment Company, Inc.

As Project manager, Mr. Housey was responsible for interpreting plans and specifications, interacting with owner, engineer and contractor, resolving discrepancies, ensuring quality of construction and maintaining construction schedule. Many projects included modifications to existing structures for increased load capacity, replacement of existing structural members, connections or other requirements. Requirements for pumping stations usually included all steel requirements including columns, crane runways, bar screens and floor grating.

Sample projects completed by Mr. Housey include:

Pumping Stations

- **Hero Canal Pumping Station**
All structural steel, walkway grating, bar screens, and related items.
- **Citrus Pumping Station**
All structural steel, walkway grating, bar screens, and related items.
- **Michoud Pumping Station**
All structural steel, walkway grating, bar screens, and related items.
- **Pumping Station No. 6**
All structural steel, walkway grating, bar screens, and related items

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:**Name & Title:**

Walt Barowka
Principal

Project Assignment:

GIS/Mapping

Name of Firm with which associated:

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

Years' experience with this Firm:

28

Education: Degree(s)/Year/Specialization:**Active registration: Year first registered/discipline:****Other experience and qualifications relevant to the proposed Project:**

Mr. Barowka has broad experience in computer consulting with a strong emphasis on Geographic Information Systems (GIS) and 3D modeling. He has been employed in the IT/ Surveying / GIS industry for 40 years and has been a Partner and with BBEC since its inception in November 1993. Mr. Barowka has an extensive knowledge of a wide range of computer application software packages, including numerous GIS programs. Mr. Barowka was part of the team that developed the GIS for Jefferson Parish. He was involved in the creation of digital terrain models and photogrammetric control that allowed for the accurate collection of point and vector data that was the foundation of the Jefferson Parish GIS project. This project was also used as a pilot project to determine how to incorporate the new LIDAR technology to enhance terrain model accuracy. He was involved in the project from its inception in 1987 to completion. He worked as a hands-on manager for the Jefferson Parish IT support project for over 20 years. He was part of the management team that utilized document management and custom web-based applications to manage the Katrina disaster recovery efforts for the Louisiana Land Trust, St.

Bernard Parish, Livingston Parish, and Jefferson Parish. Mr. Barowka has managed projects for BBEC for the past 28 years. Mr. Barowka has consulted on GIS projects for Jefferson Parish, LA, New Orleans, LA, St. Bernard Parish, LA, Calcasieu Parish, LA, Harrison County, MS, Kissimmee, FL, Siskiyou County, CA, City of Irvine, CA and Rancho Cucamonga, CA.

Relevant projects Mr. Barowka has worked on over the years include:

GIS Project, Jefferson Parish, LA, 1987-Present

Mr. Barowka had consulted with Jefferson Parish on their GIS project since its inception in the mid 1980's. Mr. Barowka oversaw work plan preparation, budgeting, cost control and monitoring, team supervision and database administration, including importing data from various sources and incorporating into the Jefferson Parish GIS, developing applications allowing simple access to GIS information by numerous departments throughout Jefferson Parish, performing spatial analysis on the GIS data combining both graphic and non-graphic data into information useful for decision making by Jefferson Parish administration and assisting the GIS staff with using the various GIS applications available to them. Mr. Barowka trained new users and provided support to the Jefferson Parish GIS user community, maintained the GIS database to ensure accuracy and efficient performance, and exported the various GIS layers into DXF file grids for distribution to various entities in and around Jefferson Parish, as well as assisting these entities with use of the information.

GIS/ SCADA Project, Jefferson Parish, LA, 1987-2012

Mr. Barowka consulted with Jefferson Parish on their GIS/SCADA project since its inception in the mid 1980's. Mr. Barowka worked on the creation of screens and network interfaces for the presentation of real time SCADA information. Mr. Barowka worked on the implementation of SCADA in the water plants and pump stations. Mr. Barowka oversaw work plan preparation, budgeting, cost control and monitoring, team supervision and database administration, including importing data from various sources and incorporating into the Jefferson Parish GIS/SCADA systems.

Street Network Project, Calcasieu Parish, LA

Mr. Barowka assisted in the creation for Calcasieu Parish of a parish wide street address network file. ArcCAD and AutoCAD software were utilized to combine information from printed maps, computer printouts and Tiger Line files into a street network used for mapping various databases by address throughout Calcasieu Parish.

Hurricane Katrina Damaged Roadway Restoration, St. Bernard Parish, LA, 2005-2017

Mr. Barowka oversaw the development and maintenance of a web-based project tracking map providing progress which utilized a digital document management system (DM) to store all project documents, provided easy simplified access to project documents, and managed CAD drawings and GIS importation of as-built drawings.

Louisiana Land Trust Demolition Program, Statewide, LA, 01/2009-12/2016

Mr. Barowka supervised the development and maintenance of database administration. Mr. Bonura worked directly with support staff in the development of the Louisiana Land Trust Demolition Tracking System and database management system. He researched and resolved database issues, completed updates to the database, and oversaw budgeting and cost control.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:**Name & Title:**

Tony Bonura
Principal

Project Assignment:

GIS / Mapping

Name of Firm with which associated:

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

Years' experience with this Firm:

28

Education: Degree(s)/Year/Specialization:

B.A. / 1988 / Social Sciences

Active registration: Year first registered/discipline:**Other experience and qualifications relevant to the proposed Project:**

Mr. Bonura has broad experience in computer consulting with a strong emphasis on Geographic Information Systems (GIS). He has been employed in the computerized mapping industry for over 30 years and has been a Senior Consultant with BBEC since its inception in November 1993. Mr. Bonura has an extensive knowledge of a wide range of computer application software packages, including the GIS programs GDS, ARC/INFO and Intergraph. He has guided BBEC in the management and administration of databases and database dependent applications for numerous projects.

Mr. Bonura has experience working as Project Manager, Database Administrator, DM Manager and GIS Consultant for clients including St. Bernard Parish, Livingston Parish, Louisiana Land Trust, Calcasieu Parish, Jefferson Parish, and the Town of Jean Lafitte. Mr. Bonura served as senior consultant/manager for the projects

listed below and his responsibilities included work plan preparation, budgeting, cost control and monitoring, team supervision and database administration.

Relevant projects Mr. Bonura has worked on over the years include:

Map Modernization Project, St. Bernard Parish, LA, 03/2005-12/2008

Mr. Bonura Supervised the Jefferson Parish Digital Flood Insurance Rate Map project. He was responsible for the timeliness and quality of the services provided, including the preparation of the DFIRM metadata, base layers, and final maps. Duties included meeting with Parish personnel, researching data availability and National Flood Insurance Program standards, reviewing the metadata and map production and assisting with all aspects of the map production.

Digital Flood Insurance Rate Map, Jefferson Parish, LA, 03/2005-12/2008


Mr. Bonura performed all GIS / Database Management services for the Jefferson Parish DFIRM Project, including documentation and preparation of maps and GIS data. Mr. Bonura was responsible for preparing Metadata Base according to "Content Standard for Digital Geospatial Metadata." Mr. Bonura prepared base maps including streets, railroads, canals, ditches, benchmarks and flood hazard contours to meet DFIRM specifications. Mr. Bonura was also responsible for generating maps to meet DFIRM specifications and to provide all data and maps in the correct format acceptable by FEMA. Considering that all work associated with the development of the DFIRMs was in strict compliance with the National Flood Insurance Program, BBEC has an intimate knowledge of the NFIP program.

GIS Project, Jefferson Parish, LA

As senior consultant/manager, Mr. Bonura oversaw work plan preparation, budgeting, cost control and monitoring, team supervision and database administration, including importing data from various sources and incorporating into the Jefferson Parish GIS, developing applications allowing simple access to GIS information by numerous departments throughout Jefferson Parish and performing spatial analysis on the GIS data combining both graphic and non-graphic data into information useful for decision making by Jefferson Parish administration. Mr. Bonura assisted the GIS staff with using the various GIS applications available to them, trained new users and provided help desk type support to the Jefferson Parish GIS user community, maintained the GIS database to ensure accuracy and efficient performance and exported the various GIS layers into DXF file grids for distribution to various entities in and around Jefferson Parish, as well as assisting these entities with use of the information.

Street Network Project, Calcasieu Parish, LA

Mr. Bonura assisted in the creation for Calcasieu Parish of a parish wide street address network file. ArcCAD and AutoCAD software were utilized to combine information from printed maps, computer printouts and Tiger Line files into a street network used for mapping various databases by address throughout Calcasieu Parish.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:	
Name & Title:	
<p style="text-align: center;"><i>Pete Foret</i> <i>Computer Aided Drafting</i></p>	
Project Assignment:	
<p style="text-align: center;">GIS / CAD</p>	
Name of Firm with which associated:	
 <p style="margin-left: 20px;">Barowka and Bonura Engineers and Consultants, L.L.C.</p>	
Years' experience with this Firm:	
<p style="text-align: center;">1</p>	
Education: Degree(s)/Year/Specialization:	
<p style="text-align: center;">B.S. / 1995 / Business Administration with a Computer Science Option and Management Minor</p>	
Active registration: Year first registered/discipline:	
Other experience and qualifications relevant to the proposed Project:	
<p>Mr. Foret is a multi-discipline AutoCAD drafter and designer with experience in the Civil, Structural, Architectural, Electrical and GIS/Mapping fields. He has a combined 31 years of experience generating alignments, plan and profile sheets, cross sections, contour maps, structural and architectural plans and details and electrical one-line diagrams. He has been the drafting coordinator for multiple firms and has been responsible for developing drafting standards for a consistent and quality drawing set.</p> <p>Relevant projects Mr. Foret has worked on over the years include:</p> <p>Gloria Drive Pump Station, Project No. 20-2022A, Lafitte Area Independent Levee District Drainage, Town of Jean Lafitte, LA, 02/2021-Present</p> <p>Mr. Foret set up the survey and generated a preliminary site plan for a drainage pump station.</p>	

CN Railroad Culverts in Ormond, Project No. P200801, Ordinance No. 20-9-5, St. Tammany Parish, LA, 10/2020- Present

Mr. Foret set up the survey reference file with a baseline supplied by the railroad and created site plans for 6 proposed construction sites including a plan/profile sheet for a new 425' long 60" drainpipe connecting two sites. He also generated multiple cross sections through the 6 construction sites as well as other details.

Craig Avenue Drainage Improvements, Public Works Project No. 2019-022-DR, Jefferson Parish, LA, 10/2020-Present

Mr. Foret updated the plan/profile sheets with a new proposed roadway grade line.

East Bank Water Treatment Plant Improvements, Jefferson Parish, LA., 07/2020-Present

Mr. Foret was responsible for plan preparation following established project standards. Plans included a site layout for the routing of new chemical feed lines over an existing survey and avoiding existing utilities. Drawings also included details necessary for the proper routing and installation of the new feed lines.

Texaco, Inc., New Orleans, LA., 05/1990-11/1994

Mr. Foret's job duties at Texaco included the drafting of geologic structures and civil/GIS mapping using Microstation. This involved scanning large scale maps and inserting the raster image into the design file in order to digitize the data for digital manipulation.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:**Name & Title:**

Rayburn Clipper
GIS

Project Assignment:

GIS / Mapping

Name of Firm with which associated:

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

Years' experience with this Firm:

15

Education: Degree(s)/Year/Specialization:

B.S. / 2006 / Computer Information Systems
A.S. / 2000 / Computer Aided Drafting

Active registration: Year first registered/discipline:**Other experience and qualifications relevant to the proposed Project:**

Mr. Clipper is a Geographic Information Systems Analyst with 20 years of experience in GIS project architecture, systems engineering and management, and 10 years designing, supporting, and maintaining enterprise and solutions architectures in a variety of public and private projects; he also has 20 years of experience using AutoCAD in association with his GIS projects.

Relevant projects Mr. Clipper has worked on over the years include:

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

Mr. Clipper created flood inundation models to assist with capital drainage projects. Models built for the project were used to forecast the water depths for 1 year, 5-year, 50-year, 100 year, and 500-year flood events.

Digital Flood Insurance Rate Map, Jefferson Parish, LA, 03/2005-12/2008

Mr. Clipper created features and layers for the creation of DFIRM maps in Geomedia 5. He geoprocessed digital elevation models used in the determination of flood zones and provided support for Jefferson parish officials accessing data.

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

Mr. Clipper created maps to illustrate the locations of drainage lines and inlets, and he created project maps to show affected drainage areas.

Waggaman Area Drainage Study, Jefferson Parish, LA, 02/2013-01/2016

Mr. Clipper created hydraulic models based on the engineer specifications to determine 10-year storm flooding.

Jefferson Parish GIS Dept., Jefferson Parish, LA, 2019-Present

Mr. Clipper Maintains the Parish's GIS infrastructure. The enterprise architecture includes ArcGIS Enterprise Portal, ArcGIS GeoEvent Server, ArcGIS Image Server, ArcGIS Datastore, and several ArcGIS Servers. Mr. Clipper has created several applications for the enterprise including a Damage assessment application for parish inspectors to survey damages after hurricanes. The recent pandemics called for the creation of a covid-19 dashboard to track cases and hospitalizations in the parish. Parish administration required several sites for economic development and analysis which Mr. Clipper designed.

Cypress Park Subdivision Drainage Evaluation, St. Tammany Parish, LA, 11/2016-12/2017

Mr. Clipper created hydraulic models based on the engineer specifications to determine 10, 25, 50, and 100-year storms flood inundation.

GIS Project, St. Charles Parish, LA, 2003-2006

Mr. Clipper designed GIS for St. Charles Parish Government, collected field information on parish assets to incorporate them into the GIS Aerial imagery rectification and mosaicing, and provided Base map creation. Mr. Clipper created 3-D terrain models from elevation data collected from sub-meter GPS precision units, developed first, highly accurate, zoning map based on parish code and CAD drawings, created first land use map for zoning department, and created shapefiles for project base map.

GIS Project, St. Tammany Parish, LA, 1999-2003

Mr. Clipper inaugurated the GIS Project; collected ground control points with sub-meter precision GPS receiver for aerial image orthorectification. He identified parish assets from aerial imagery, geoprocessed initial features for base map layer creation, created 3-D terrain models from analysis of Imagery and Digital Elevation Models. Mr. Clipper provided re-mapping of facilities on a land base into different co-ordinate systems. He developed digital land base maps inclusive of Planimetric, topographic and cadastral features maps from mosaiced aerial imagery.

GIS Projects, St. Bernard Parish, LA

Mr. Clipper provided the parish with GIS support with daily need and custom request. He supported St. Bernard's 911 systems by providing telco's with addressing requests. Mr. Clipper designed the first Evacuation Registration application in the State of Louisiana based on state requirements which surpassed the states own software by providing a failure free registration environment during the Hurricane Gustav evacuation. During

the summer when the river levels reached record highs throughout the state, Mr. Clipper created ESRI ArcGIS Server maps for the projects showing the area of construction exclusion based on the army corps of engineers' guild lines that state no construction or excavation work could take place within a certain distance from the levees.

GIS Projects, Jefferson Parish, LA

Mr. Clipper created mobile application with ESRI ArcGIS Mobile mapping screens for location-based field work and code enforcement that synchronized map data to ArcSDE server via ArcGIS Server over HTTP.

GIS Project, St. Charles Parish, LA

Mr. Clipper was responsible for drawing maps, diagrams, and profiles, using cross-sections and surveys, to represent elevations, topographical contours, subsurface formations and structures. Mr. Clipper would correlate, interpret, and modify data obtained from topographical surveys, well logs, and geophysical prospecting reports, and he prepared subdivision plats for integration into the GIS. Mr. Clipper used AutoCAD to digitize features on aerial images.

FEMA Hazard Mitigation Assistance Consultant (Project No. 2130-02035), Project Management for 2013 FMA Grant Funding, City of New Orleans, LA, 08/2017- Present

Mr. Clipper created flood inundation models to identify homes impacted during flood events. Models built for the project were used to forecast the water depths for 1 year, 5-year, 50-year, 100 year, and 500-year flood events.

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

Mr. Clipper created and identified areas in the Parish that were not developed and could be certified for FEMA's undeveloped land use for rainwater drainage. He developed a new parish map to calculate the total are of parish land to be used by the parish for all FEMA certifications. Mr. Clipper reviewed previous Mitigation Plans, identified areas of the plan to be updated. He also mapped critical facilities and developed inundation models to forecast the water depths for 1 year, 5-year, 50-year, 100 year, and 500-year flood events.

I-85 Extension and Corridor Study, ALDOT Project No. NCPD-PE02 (910), Montgomery, AL

I-85 Extension from I-59/I-20 near the Mississippi State Line NE of Cuba to I-65 near Montgomery. Mr. Clipper was a GIS consultant to Volkert and associates, in the use of CorridorTrak software. He developed a highly accurate parcel map with land-owner information for use in land acquisition and created map of ecologically sensitive areas which includes mapping of WMA and other wetlands.

I-12 to Bush Corridor Study, LADOTD Project No. 700-52-0124 (TIMED), Bush, LA, 2006

While employed with DBSysgraphy, Mr. Clipper provided Environmental Site Assessment, extensive cultural resources survey and wetlands delineations, and hydrological modeling, along with numerous other analyses. Mr. Clipper separated from DBSysgraphy prior to completion of the project.

Merlin Oil Company, Smith, MS

Mr. Clipper created parcel base map for Mineral Lease Ownership map in Smith County Mississippi and collected ground control points for geoprocessing of parcel ownership information.

Louisiana Land Trust, Statewide, LA, 01/2009-12/2016

Mr. Clipper created ESRI ArcGIS Server web-based mapping of LLT properties for tracking property status and provided analysis of properties in flood zones by given spec from LDEQ. Complete design of n-tier architecture. Demonstrated proximity and contiguous properties through a specially designed proxy parcel layer in the absence of a real parcel layer in ESRI ArcMap.

MRGO Closure

Mr. Clipper designed figures and base maps for engineering support and created Triangulated irregular network (Tin) datasets for 3D surface model of the MRGO channel bottom for closure location review by project engineer in ArcMap and ArcGLOBE.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:**Name & Title:**

Craig Comeaux
Certified Floodplain Manager

Project Assignment:

Sr Construction Manager

Name of Firm with which associated:

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

Years' experience with this Firm:

19

Education: Degree(s)/Year/Specialization:

M.A. / In Progress / Public Policy and Administration
B.S. / 1996 / Mathematics

Active registration: Year first registered/discipline:**Other experience and qualifications relevant to the proposed Project:**

Craig 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.

Relevant projects Mr. Comeaux has worked on over the years include:

Technical Assistance for Floodplain Management, Community Rating System, and Hazard Mitigation Related Services, (Project No. 0352), Jefferson Parish, LA, 12/2016-06/2020

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.

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
- Terrebonne Parish, FY 2020 BRIC Elevation \$577,695.00
- Terrebonne Parish, FY 2020 BRIC Lirette Street Drainage Improvements \$1,101,281.00
- Terrebonne Parish, FY 2020 BRIC Ashland CJC Generator Project \$1,003,829.00
- Terrebonne Parish, FY 2020 BRIC Oysterbed Shoreline (BCA only) \$1,955,300.00

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

Mr. Comeaux works with the Parish to perform grant writing, administration, technical support, application, monitoring, and post-grant requirements services with respect to the Restore Act Direct Component allocation from the U.S. Treasury Department. Mr. Comeaux has assisted with the identification of eligible activities, amendments to existing grants, and the development of new grant applications during the open award period.

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 Communities (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 2019 FMA SRL/RL Elevations \$749,891.00
- Lafourche Parish, FY 2020 BRIC Elevations \$643,111.00

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.

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

FEMA Hazard Mitigation Assistance Consultant (Project No. 2130-02035), Project Management for 2013 FMA Grant Funding, 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:

- FY20 FMA SRL Structure Elevation \$14,200,582.00
- FY20 FMA RL Structure Elevation \$9,263,934.00
- FY20 FMA SRL Structure Reconstruction \$475,151.00
- FY20 BRIC Audubon Golf Course Community Flood Mitigation (BCA only) \$13,070,071.00
- 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, 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, FY 17 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.

- 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

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

In his role as grant closeout specialist, Mr. Comeaux has provided closeout services for St. Bernard Parish on Category A and B projects since 2015. In his role, Mr. Comeaux has provided oversight of the closeout process and participated in cost reconciliations, cost analyses, documentation reviews, and preparation of closeout versions for submittal by GOHSEP to FEMA. He has been successful in identifying costs that were previously overlooked through the reimbursement process as well as justifying cost reasonableness for the numerous emergency and debris removal projects that were undertaken by St. Bernard Parish.

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.

Demolition of Road Home Owned Properties, St. Bernard Parish, Louisiana (CDBG PROJECT), 2008-2009

As Project Manager for recovery projects throughout St. Bernard Parish, Louisiana following Hurricanes Katrina and Rita, Mr. Comeaux managed the grant for the demolition of homes owned by the Road Home Corporation throughout St. Bernard Parish. Approximately \$18 million of grant eligible work was completed and St. Bernard Parish received in federal grant funding to the parishes applying to reimburse money spent on recovery projects. Mr. Comeaux worked directly with the Louisiana Office of Community Development – Disaster Recovery Unit, to process environmental review records for each of the properties included in the program.

Federal Emergency Management Agency Public Assistance Grants, City of Baker, St. Bernard Parish, St. Charles Parish, Livingston Parish, and the Town of Jean Lafitte, 2005-Present

As Project Manager for recovery projects throughout south Louisiana following Hurricanes Katrina/Rita, Gustav/Ike, Isaac, 2016 Floods, and Hurricane Barry, Mr. Comeaux prepared grant applications for recovery grants for the City of Baker, Town of Jean Lafitte, and the Parishes of St. Bernard, St. Charles, and Livingston. As part of the grant application process, the following information had to be collected and reported: scope of disaster, scope of services to be covered, cost estimate based on cost reasonableness in accordance with the Code of Federal Regulations (44 CFR Part 13, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments) and the updated 2 CFR 200. These grant applications resulted in approximately \$800 million in federal grant funding to the parishes applying to reimburse money expended on recovery projects.

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

Mr. Comeaux is assisting the City of Covington with preparing a Letter of Map Revision based on FEMA's Flood Insurance Study for the City's Preliminary Digital Flood Insurance Rate Map (DFIRM). Mr. Comeaux has assisted with identifying projects to support the City's request to make preliminary flood zones effective with respect to its current flood zone determinations.

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

Mr. Comeaux oversaw the development of a comprehensive Debris Management Plan based on the below listed contents which met FEMA’s general criteria for a debris management plan. The plan was successfully completed in May 2019 and ultimately approved by FEMA.

- Debris management overview
- Incidents and assumptions
- Debris collection and removal plan
- Debris removal from private property
- Public Information
- Health and safety requirements
- Environmental considerations and other regulatory requirements
- Temporary debris management sites and disposal locations
- Force account or contracted resources and procurement
- Monitoring of debris operations

FEMA Hazard Mitigation Grant Village Square Site Clearance, Phases 1, 2 and 3, St. Bernard Parish, LA, 2011-2015

Mr. Comeaux coordinated and managed contracts involved in the removal of slabs and all associated concrete in the Village Square area of St. Bernard Parish in compliance with FEMA’s Hazard Mitigation Grant Program to return properties in the affected area to green space. He prepared and reviewed contract specifications and advertisements, prepared change order adjustments, completed site reviews with the contractor, conducted progress meetings with contractors and reviewed daily schedules and progress reports. The value for this contract totaled \$1.2 million.

- FY 2011 HMGP Acquisition/Demolition \$1,071,555.00

Residential Slab Removal, St. Bernard Parish, LA, 2011-2013

Mr. Comeaux coordinated and managed contracts involved in the removal of slabs and all associated concrete from privately-owned sites throughout St. Bernard Parish where removal has been requested by the receipt of a right-of-entry agreement. He conducted progress meetings with contractors and reviews daily schedules and progress reports; managed the assignment of field personnel for all aspects of slab removal and debris removal monitoring; coordinated progress meetings with St. Bernard Parish and its agents in all matters pertaining to the removal of slabs and all associated concrete; and reviewed and monitored all reports and data received and transmitted to St. Bernard Parish Government for accounting and progress reporting. Mr. Comeaux assisted with the coordination of LDEQ for compliance for the abatement of structures and slabs.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:**Name & Title:**

Thomas Rodrigue
Certified Floodplain Manager

Project Assignment:

Sr Construction Manager

Name of Firm with which associated:

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

Years' experience with this Firm:

6

Education: Degree(s)/Year/Specialization:

Diploma / 1963 / Business Administration/Traffic Management

Active registration: Year first registered/discipline:**Other experience and qualifications relevant to the proposed Project:**

Thomas Rodrigue has 20 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 in the above fields. 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 both for the Parish and the private company previously mentioned.

Relevant projects Mr. Rodrigue has worked on over the years include:

Technical Assistance for Floodplain Management, Community Rating System and Hazard Mitigation Related Services (Project No. 0352), Jefferson Parish, LA, 01/2017-05/2019

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. Rodrigue's 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 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.

Project Management 2014 Hazard Mitigation Grant Funding, Jefferson Parish, LA, 04/2015-04/2019

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.

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.

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 several key drainage projects both on the Eastbank and Westbank of Jefferson Parish that represented approximately \$50M in total project costs:

Eastbank:

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

Westbank:

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

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).

**Project Name,
Location and Owner's
contact information:**

Nature of Firm's Responsibility:

**Map Modernization
Project (DFIRM) (Contract
No. EMT-2005-CA-0110)
(2003 Contract), St.
Bernard Parish, LA**

**St. Bernard Parish
Government**

**Donald R. Bourgeois,
Capital Projects Manager
Department of Public
Works**

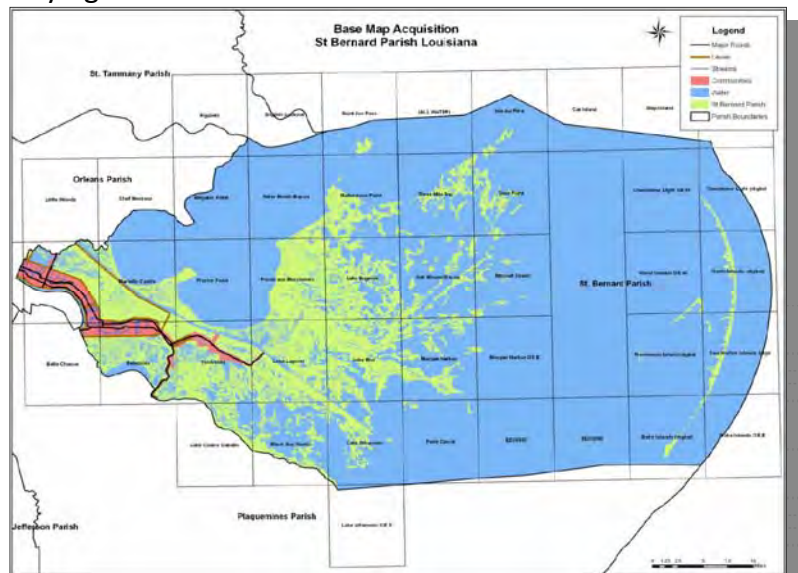
**1125 E. St Bernard Hwy.
Chalmette, LA 70043
dbourgeois@sbpg.net
(504) 278-4250**

Applicable Experience

- H & H Modeling
- Model Results Mapping
- Floodplain Analysis
- Funding Development
- Funding Assistance

BBEC assisted FEMA develop St. Bernard Parish's flood insurance rate maps as part of FEMA's map modernization program. BBEC prepared the project scoping document for St. Bernard Parish and received FEMA approval in accordance with FEMA document Guidance for Scoping Flood Mapping Projects. BBEC incorporated the Parish's hydraulic features into the GIS. BBEC performed the necessary

hydraulic and hydrologic studies and analyses necessary for the implementation of the map modernization project by using USCAE's hydraulic and hydrologic modeling software HEC-RAS and HEC-HMS. BBEC incorporated the results of the hydrologic and hydraulic studies GIS to develop the necessary flood plains. BBEC prepared a Base Map for the project (streets, ditches, benchmarks, etc.) from St. Bernard Parish's existing GIS, modifying the format to FEMA standards. BBEC has submitted all hydraulic and hydrologic and survey work for independent QA/QC and is currently developing DFIRM base maps. All work associated with the development of the DFIRMs were in strict compliance with the National Flood Insurance Program.



**Completion Date
(Actual or
estimated):**

Estimated Cost:

Entire Project:

Work for which Firm was Responsible:

2008

\$536,163 (fee)

\$536,163 (fee)



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

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>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</p> <p>Jefferson Parish Government Mark K. Roberts, P.E., Program Manager Department of Capital Projects West Bank Road Bond Program 1221 Elmwood Park Blvd., Suite 904 Jefferson, LA 70123 mroberts@jeffparish.net (504) 736-8753</p>	<p><u>Applicable Experience</u></p> <ul style="list-style-type: none">• Utilize Parish Data• Model Results Mapping• Alternatives Review• Project Development• Floodplain Analysis	<p>BBEC developed the topographical survey scope for the project and manages the surveyor for the Parish. BBEC is developing 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; and, developing various alternatives for improvements with cost estimates for the alternatives. BBEC will provide alternatives and associated cost estimates for improvements, including alternate channels to drain the Host Facility and rail yard area, alternatives to drain the Training Facility, potential locations for storage as an alternative to transmission, and alternatives to drain the Bridge City residential area.</p>
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2024 (est)	\$237,342 (fee)	\$237,342 (fee)

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Widening / Stabilization of Congressman Hebert, Creely, and Bluebird Canals (Hazard Mitigation Grant Program (HMGP)), St. Bernard Parish, LA</p> <p>St. Bernard Parish Government Matt Falati Department of Hazard Mitigation 8201 West Judge Perez Drive Chalmette, LA 70043 mfalati@sbsp.net (504) 278-4223</p>	<div data-bbox="451 415 852 688"> <p><u>Applicable Experience</u></p> <ul style="list-style-type: none"> • Model Results Mapping • Floodplain Analysis • Funding Assistance </div>	<p>The project includes increasing the capacity and improves 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. BBEC 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 performed a hydrologic and hydraulic analysis of the existing system to evaluate the entire area for the 5-year, 10-year, and 25-year storms. 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. BBEC obtained the necessary USACE, LDNR, SLFPA-E, and CPRA permits required to construct the contract. 90% Final Designs have been submitted to the client.</p>
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
On Hold	\$106,000 (fee)	\$106,000 (fee)



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

**Project Name,
Location and Owner's
contact information:**

Nature of Firm's Responsibility:

**Digital Flood Insurance
Rate Map,
Jefferson Parish, LA**

**Jefferson Parish
Government
Jeb Tate, Director
Electronic Information
Systems
1221 Elmwood Park
Blvd., Suite 700
Jefferson Parish, LA
70123
jtate@jeffparish.net
(504) 736-6720**

Applicable Experience

- Model Results Mapping
- Floodplain Analysis

BBEC performed all GIS / Database Management services for the Jefferson Parish DFIRM Project, including documentation and preparation of maps and GIS data. BBEC was responsible for preparing Metadata Base according to "Content Standard for Digital Geospatial Metadata." BBEC prepared base maps including streets, railroads, canals, ditches, benchmarks and flood hazard contours to meet DFIRM specifications. BBEC was also responsible for generating maps to meet DFIRM specifications and to provide all data and maps in the correct format acceptable by FEMA. Considering that all work associated with the development of the DFIRMs was in strict compliance with the National Flood Insurance Program, BBEC has an intimate knowledge of the NFIP program.

**Completion Date
(Actual or
estimated):**

Estimated Cost:

Entire Project:

Work for which Firm was Responsible:

2008

\$248,131 (fee)

\$248,131 (fee)

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Bissonet Plaza Master Drainage Plan (A/E Project No. 20-1708), Jefferson Parish, LA</p> <p>Jefferson Parish Government John O'Connor, P.E. Department of Capital Projects 1221 Elmwood Park Blvd., Suite 906 Jefferson, LA 70123 joconnor@jeffparish.net (504) 736-6833</p>	<div data-bbox="451 415 852 688"> <p><u>Applicable Experience</u></p> <ul style="list-style-type: none"> • Model Results Mapping • Floodplain Analysis </div>	<p>BBEC developed a hydrologic and hydraulic (H & H) model of a 180 acre residential (zoned R1) area in Jefferson Parish, Louisiana, said area bounded by Power Boulevard, Kawanee Avenue, West Esplanade Avenue, and the Elmwood Canal. BBEC developed a limited scope of services for the necessary topographical survey; provided oversight and reviewed the final topographic survey; developed the H & H model using third party software; coordinated the model with the Parish's own parish-wide H & H model; and provided the running model to others for evaluation of improvements.</p>
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
May 2021	\$108,258	\$24,500 (fee)

**Project Name,
Location and Owner's
contact information:**

Nature of Firm's Responsibility:

**Cleary Avenue Roadway
and Drainage
Improvements,
Jefferson Parish, LA**

**Jefferson Parish
Government
Mark Drewes,
Director
Department of Public
Works
1221 Elmwood Pk. Blvd.,
Suite 904
Jefferson, LA 70123
MDrewes@jeffparish.net
(504) 736-6783**

Applicable Experience

- Utilize Parish Data
- Model Results Mapping
- Floodplain Analysis
- Project Development

BBEC developed a hydrologic and hydraulic model for the project area and the surrounding neighborhoods that drain into the project area. BBEC evaluated the various alternatives to drain to the Veterans Boulevard canal and/or the West Esplanade Avenue canal to accommodate the 10-year design storm, which concluded with a recommendation for construction. BBEC utilized the

Parish's existing GIS to develop a base map of the project area, including a schematic of the existing drainage system. BBEC developed a drainage model of the existing conditions and calibrated the model with the Parish's parish-wide HEC-RAS model. With the existing conditions model, BBEC determined areas of deficient drainage capacity.

BBEC developed different scenarios for improvement by increasing pipe sizes and/or adding trunk lines to address the deficiencies.

The improvements include 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 about 2,500 feet of new sub-surface drainage from 36-inch to 48-inch pipe; installation of (2) new outfall pipe crossing W. Esplanade Avenue and discharging into W. Esplanade Avenue Canal; 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 includes traffic phasing, allowing the contractor to work on one lane at a time. When working on the parking lanes, the 2-way traffic is maintained. When working in the travel lanes, only 1-way traffic is allowed.

As part of the roadway and drainage improvement project, BBEC performed the engineering services to design and construct 7 water line roadway crossings varying in size from 8-inch to 12-inch water mains. The roadway crossings included connecting to existing water mains with valves, tees, and other fittings as required.

The project is "Substantially Complete" and BBEC is currently performing construction contract close-out services.

Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
	November 2021	\$4,456,889

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Harvard Avenue Drainage Improvements, Project No 99-046-DR and 99-046A-DR, (Funding Source: Community Development Block Grant), Jefferson Parish, LA</p> <p>Jefferson Parish Government Mark Drewes, Director Department of Public Works 1221 Elmwood Pk. Blvd., Suite 904 Jefferson, LA 70123 MDrewes@jeffparish.net (504) 736-6783</p>	<div data-bbox="446 415 852 688"> <p><u>Applicable Experience</u></p> <ul style="list-style-type: none"> • Utilize Parish Data • H&H Modeling • Model Results Mapping • Funding Assistance </div>	<p>The Parish residents and businesses were encountering flooding along Harvard Avenue between Veterans Boulevard and I-10. BBEC used the Parish's GIS to determine that the area of concern was the area bounded by Veterans Boulevard, I-10, Transcontinental Boulevard, and Clearview Parkway. BBEC developed a topographic survey scope of work and managed the surveyor to obtain the needed survey data to develop an H&H model of the area.</p> <p>BBEC used the Parish's GIS to develop a base map of the project area and incorporated the base map and survey data into an H&H model of the existing drainage system using Intergraph's Storm and Sanitary SelectCAD modeling software. BBEC coordinated the model with the Parish's parish-wide model for continuity of modeled basins.</p> <p>BBEC performed multiple model runs to determine the most cost-effective means to drain the 10-year storm. The recommended option exceeded the project budget, so BBEC developed a phased approach to accomplish the Parish's goals, with the first phasing being within budget and providing the most cost-effective benefit.</p> <p>The Phase I project constructed consisted of about 1,900 linear feet of 30-inch to 72-inch drainpipe, including crossing Veterans Boulevard with an outfall into the Veterans Boulevard Canal.</p> <p>BBEC performed the H&H study, design, construction administration, and resident inspection services for the project.</p>
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2006	\$2,879,840	\$2,879,840



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

bbec Barowka and Bonura Engineers and Consultants, L.L.C.		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Lake Avenue and Carrollton Avenue Drainage Study, Jefferson Parish, LA</p> <p>Jefferson Parish Government Mark Drewes, Director Department of Public Works 1221 Elmwood Pk. Blvd., Suite 904 Jefferson, LA 70123 MDrewes@jeffparish.net (504) 736-6783</p>	<div><p><u>Applicable Experience</u></p><ul style="list-style-type: none">• Utilize Parish Data• H&H Modeling• Model Results Mapping• Floodplain Analysis• Project Development• Funding Assistance</div> <p>The project included an extensive drainage and traffic control study on Lake and Carrollton Avenues in the Bucktown area. BBEC utilized the Parish's GIS to develop a base map of the area and determine the drainage facilities that needed to be studied. BBEC developed a survey scope of work for the surveyor to collect the needed data to develop an H&H model.</p> <p>BBEC ran an existing model and calibrated model with the Parish's parish-wide model to have continuity between the models. BBEC ran multiple model runs to determine the most cost-effective alternatives to drain a 10-year storm in the area. BBEC made recommendations for a trunk line running down Lake Avenue, which addressed the 10-year storm, but presented constructability issues due to traffic on Lake Avenue. At the Parish's request, BBEC provided a secondary project on Orpheum Avenue that addressed the 5-year storm but did not have the same traffic problems.</p> <p>BBEC designed the drainage trunk line down Orpheum Avenue from Plaquemine Street to West Esplanade Avenue, but the project is still awaiting funding for construction.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2005	\$80,000 (fee)	\$80,000 (fee)

**Project Name,
Location and Owner's
contact information:**

Nature of Firm's Responsibility:

**Waggaman Area
Drainage Study
(Project No. 2011-03-DR),
Jefferson Parish, LA**

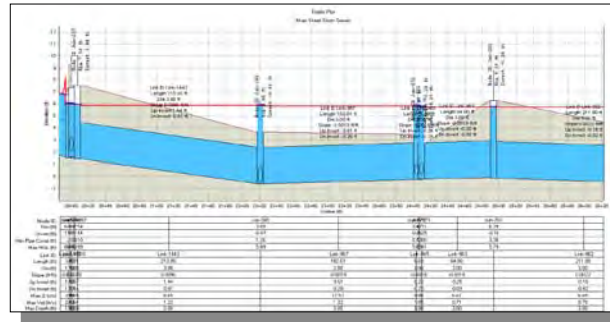
**Jefferson Parish
Government
Mitchell Theriot, P.E.,
Director
Department of Drainage
1221 Elmwood Park
Blvd., Suite 907
Jefferson, LA 70123
MTheriot@jeffparish.net
(504) 736-6753**

Applicable Experience

- Utilize Parish Data
- H&H Modeling
- Model Results Mapping
- Alternatives Review
- Project Development

BBEC performed a hydrologic study for three separate residential subdivisions in Waggaman, Louisiana: Waggaman, South Kenner, and Manor Lane. The Waggaman subdivision is bounded by River Road to the north, Live Oak Boulevard to the south, Saul's Canal to the west, and Dandelion Ditch to the east. South Kenner subdivision is bounded by River Road to the north, North Railroad Canal to the south, Saul's Canal to the east, and another subdivision to the west. The Manor Lane subdivision is bounded by River Road to the north, North Railroad Canal to the south, Latigue Road Ditch to the west, and Modern Farms Road Ditch to the east. BBEC used the Storm Water Management Model (SWMM) V.5 to evaluate the existing subsurface drainage capacities for each subdivision and to examine if the existing system was able handle a 10-year design storm. BBEC developed a hydrologic and hydraulic model using the existing Parish GIS for each area and recommended subsurface improvements based on the SWMM model to handle a 10-year design storm.

BBEC developed the survey scope of work and managed the surveyor to obtain the needed data for the model. BBEC performed multiple model runs to determine the most cost-effective means to drain the 10-year storm for each subdivision. BBEC developed recommended project scopes and construction cost estimates for each subdivision.



**Completion Date
(Actual or
estimated):**

Estimated Cost:

Entire Project:

Work for which Firm was Responsible:

2016

\$300,000 (fee)

\$300,000 (fee)

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>LA-45 Evacuation Route Basin Drainage Improvements, Lafitte Area Independent District, LA</p> <p>Lafitte Area Independent Levee District Nicole Cooper, Project Manager 2654 Jean Lafitte Blvd. Lafitte, LA 70067 (504) 233-1109 ncooper@townofjeanlafi tte.com</p>	<div data-bbox="446 415 852 688"> <p><u>Applicable Experience</u></p> <ul style="list-style-type: none"> • H&H Modeling • Project Development • Alternatives Review </div>	<p>BBEC, performing as sub-consultant, developed H&H models for the LA-45 Evacuation Route Basin, both for existing conditions and to reflect the proposed Lafitte Tidal protection project. The analysis identified internal drainage problems resulting from the completion of the Tidal Protection project and established pipe, ditch, canal, and LADOTD roadway culvert sizes. BBEC also modeled discharge pump station and determined the capacity for each of the three pump stations. BBEC also provided Drainage Maps and Conceptual Storm Sewer Routing Plans to show ditches and storm sewer locations, and sized required, and identify any potential problem areas, plans and profiles, required right-of-way and construction access, and any impacts to existing properties.</p>
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2021 (est)	\$67,200 (fee)	\$67,200 (fee)

RNM Consultants, Inc.

650 Poydras St., Suite 1400
New Orleans, LA 70131

Statement of Qualifications

RNM Consultants, Inc. is highly experienced Professional Engineering firm established in early 2020 with previous expertise in design and engineering of infrastructure related projects, management of the design and construction of the \$2.4B Capital Improvement Program for the City of New Orleans. The work involved managing consultants and contractors providing design, project and program management, utility coordination, testing and inspection, and construction services for the City's Capital Infrastructure Improvement Program. In addition to the infrastructure design and construction related experience, RNM Consultants, Inc. possess technical expertise and capabilities related to disaster recovery and management.

RNM Consultants, Inc. is currently in a top 5 firms selected by the City of New Orleans to provide the City with professional design, engineering, construction management and inspection services for 2021 – 2023 performance period.


Disaster Recovery Services:

- Provide disaster recovery and/or management services with an emphasis on engineering and design principles.
- Conducting Preliminary Damage Assessments (PDA) and documenting all disaster related damages per the owner's requirements as outlined in the RFP.
- Develop cost estimates and scopes of work, including related code and standard requirements. Proficient utilization of FEMA required/approved cost estimating tools such as RS Means Costing Software and CEF (Cost Estimating Format).
- Evaluation and determination of FEMA eligible and disaster related damages.
- Develop Hazard Mitigation proposals for FEMA eligible projects.
- Provide EHP compliance reviews on the actual SOW to determine potential environment, historic properties, or archaeological impacts. This includes, but is not limited to, demolition, site preparation, and ground disturbing activities.
- Provide subject matter expertise directly related to the administration and management of the FEMA grant programs.
- Formulate technically complex disaster recovery projects and act as a technical resource by providing guidance to the FEMA eligible Applicants.
- Technical Assistance for all FEMA categories of work (A through G) including Emergency Protective Measures (COVID19).


RNM Consultants, Inc.

Phone: 504-496-8662

E-mail: alex.rudenko@rnmconsultants.com

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Alex Novikov, PE, PMP Civil Engineer
Project Assignment:
Sr Construction Manager
Name of Firm with which associated:

Years' experience with this Firm:
2
Education: Degree(s)/Year/Specialization:
B.S. in Civil Engineering, University of New Orleans
Active registration: Year first registered/discipline:
Discipline: <u>Civil</u>
Other experiences and qualifications relevant to the proposed Project:
<p>Alex Novikov is a licensed engineer and project management professional with over twelve years of experience providing project management, planning, cost estimating, design and construction oversight and supervision for a variety of project types including: FEMA Disaster Recovery, Roadway/Transportation Design; Stormwater & Drainage Facilities; Water & Sewage, Green Infrastructure, and; Bicycle/Pedestrian Facilities. While serving as a Senior Project Manager, Mr. Novikov was involved in a wide-ranging array of projects including rehabilitation, repair, resurfacing, full reconstruction, and restoration of city roadways (in excess of \$30M).</p> <p>Relevant projects Mr. Novikov has worked on over the years include:</p> <p><u>RR187 Village De L'Est Group A (PMOI) - New Orleans, LA</u> Mr. Novikov provided design and engineering oversight to ensure the project was designed and constructed in coordination with the Roads Recovery Program. Ensured that project work was completed on time and on budget; focused on meeting contract scope and terms and conditions. Monitored significant deviations/inconsistencies, project progress and took corrective action when needed. Interfaced daily with external and internal stakeholders in order to review project plans, budgets, status reports, and deliverables. Ensured that work product meets defined standard. Approximate Cost \$3.7M.</p> <p><u>RR021 Central City Group A (FRC) - New Orleans, LA</u> Mr. Novikov was responsible for administrative design of full block reconstruction (major pavement rehabilitation). In addition to the roadway pavement restoration scope, the project scope consisted of any necessary associated demolition, removal and reconstruction of the roadway pavement structure, sub-base and/or base courses, placement of engineering fabrics (geotextile and/or geogrid), bus pads, curbs, curbs & gutters, driveway aprons, sidewalks, ADA-compliant handicapped ramps, and/or other street system feature work within the public right-of-way. Approximate Cost \$6.6M.</p>


KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Alex Novikov, PE, PMP Civil Engineer
<u>DPW095 Lafitte Greenway Corridor - New Orleans, LA</u> Mr. Novikov provided design oversight of the N. Lopez Street Bridge over the St. Louis Drainage Canal, to link the newly constructed Lafitte Greenway Bicycle/Pedestrian Path with Lafitte Street and Conti Street, and adjacent neighborhoods. The bicycle/pedestrian bridge and multi-use path connection will serve as a critical link between these neighborhoods.
<u>RR094 Lakewood Group A (PMOI)- New Orleans, LA</u> Mr. Novikov provided design and engineering oversight to ensure the project was designed and constructed in coordination with the Roads Recovery Program. Ensured that project work was completed on time and on budget; focused on meeting contract scope and terms and conditions. Monitored significant deviations/inconsistencies, project progress and took corrective action when needed. Interfaced daily with external and internal stakeholders in order to review project plans, budgets, status reports, and deliverables. Ensured that work product meets defined standard. Approximate Cost \$1.1M.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:	
Name & Title:	Alex Rudenko Civil Engineer
Project Assignment:	Sr Construction Manager
Name of Firm with which associated:	
Years' experience with this Firm:	2
Education: Degree(s)/Year/Specialization:	B.S. in Civil Engineering, University of New Orleans
Active registration: Year first registered/discipline:	
Other experiences and qualifications relevant to the proposed Project:	
<p>Mr. Rudenko has over 12 years of experience in civil and structural engineering. During his professional career, Alex Rudenko executed engineering design and surveying services for FEMA-eligible street repairs. Developed FEMA PWs, preliminary design plans, final plans, cost estimates, specifications, and bid documents for use in the reconstruction of damaged roadways, curbs, utilities, driveways. Performed professional work in managing the design and construction of the FEMA Hurricane Katrina Program.</p> <p>Relevant projects Mr. Rudenko has worked on over the years include:</p> <p><u>RR069 Lake Terrace and Oaks Group A, New Orleans, LA</u> Mr. Rudenko served as a project manager on this project, serving administrative support and the point of contact of the City of New Orleans Department of Public Works. Managed consultants and contractors providing design, project and program management, utility coordination, testing and inspection, and construction services. Provided city management with accurate and on-going status reports, recommended solutions for project issue resolution, coordinated design quality control and assurance, and managed contract, budget and claims. Approximate Cost \$3.8M.</p> <p><u>RR052 Gentilly Terrace North Group B, New Orleans, LA</u> Served as a Subcontractor (RNM Consultants, Inc) performing Preliminary and Final Design of full reconstruction streets. RNM Consultants was responsible for developing design plans, drainage analysis and cost estimating in accordance with the City of New Orleans Standards and Specifications. Approximate Cost \$19M.</p>	

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Alex Rudenko Civil Engineer
<u>RR050 Freret Group A</u> Mr. Rudenko served as a project manager on this project, serving administrative support and the point of contact of the City of New Orleans Department of Public Works. Managed consultants and contractors providing design, project and program management, utility coordination, testing and inspection, and construction services. Provided city management with accurate and on-going status reports, recommended solutions for project issue resolution, coordinated design quality control and assurance, and managed contract, budget and claims. Approximate Cost \$2.5M.
<u>RR203 Gentilly Terrace South Group K, New Orleans, LA</u> Served as a Subcontractor (RNM Consultants, Inc) performing Preliminary and Final Design of full reconstruction streets. RNM Consultants was responsible for developing design plans, drainage analysis and cost estimating in accordance with the City of New Orleans Standards and Specifications. Approximate Cost \$10M.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Maks Burlak
Project Assignment:
Debris Monitor/Resident Inspector
Name of Firm with which associated:

Years' experience with this Firm:
2
Education: Degree(s)/Year/Specialization:
Active registration: Year first registered/discipline:
Other experiences and qualifications relevant to the proposed Project:
<p>Maks Burlak is experienced and detail-oriented person with over five years of progressive construction experience providing inspection, maintenance, and supervision for a variety of construction projects including, but not limited to commercial construction, refinery plants, building maintenance and inspection, and roadway inspection.</p> <p>Relevant projects Mr. Burlak has worked on over the years include:</p> <p><u>RR168 St. Claude Group C, New Orleans, LA</u></p> <p>Mr. Burlak serves as Senior Resident Inspector of full reconstruction streets and responsible for daily Resident Inspection in accordance with the City of New Orleans Standards and Specifications. Maks Burlak maintains workflow and communicates significant problems or production delays to the next level in the chain of command, eliminates all risks by identifying potential safety hazards.</p> <p>The estimated cost of construction for this project is approximately \$6M.</p> <p><u>Various Projects Across Louisiana and Texas</u></p> <p>Inspected various roadway construction projects. Prepared detailed reports and records of work performed. Monitored work of contractors to ensure that all the construction process is in accordance to the plans. Inspected road excavation sites for soil composition. Performed measurements of completed work. Reviewed plans to make sure they complied with codes regulations. Tested concrete to ensure appropriate mix use.</p>

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:	
Name & Title:	Iryna Sarafaniuk
Project Assignment:	Debris Monitor
Name of Firm with which associated:	
Years' experience with this Firm:	2
Education: Degree(s)/Year/Specialization:	
Active registration: Year first registered/discipline:	
Other experiences and qualifications relevant to the proposed Project:	
<p>Ms. Sarafaniuk is a highly trained Civil Engineer possessing undergraduate Civil Engineering degree and an international Civil Engineering degree. Iryna Sarafaniuk demonstrates extensive training, knowledge, and understanding of project management, planning, cost estimating, design and construction oversight and supervision for a variety of project types including: Roadway/Transportation; Stormwater & Drainage Facilities; and Water & Sewage.</p> <p>Relevant projects worked on over the years include:</p> <p><u>RR072 Lake Terrace and Oaks Group D, New Orleans, LA</u> Was responsible for conducting field inspection of FEMA eligible waterlines replacement to ensure the installation conformed to all of the requirements of the General Specifications and Standard Plans of the Sewerage & Water Board (S&WB) and the City of New Orleans. The estimated cost of construction for this project is approximately \$5M.</p> <p><u>RR073 Lake Vista Group A, New Orleans, LA</u> Was responsible for conducting field inspection of the water main and related appurtenances to be performed under the inspection of the S&WB and in accordance with the requirements of the General Specifications and Standard Plans of the SWBNO and the City of New Orleans. The estimated cost of construction for this project is approximately \$3M.</p>	

21. TITLE AND LOCATION <i>(City and State)</i> RR168 St. Claude Group C, New Orleans, LA	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION <i>(If applicable)</i> 2020-2021

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER City of New Orleans	b. POINT OF CONTACT NAME Khalid Saleh	c. POINT OF CONTACT TELEPHONE NUMBER 504-658-8000
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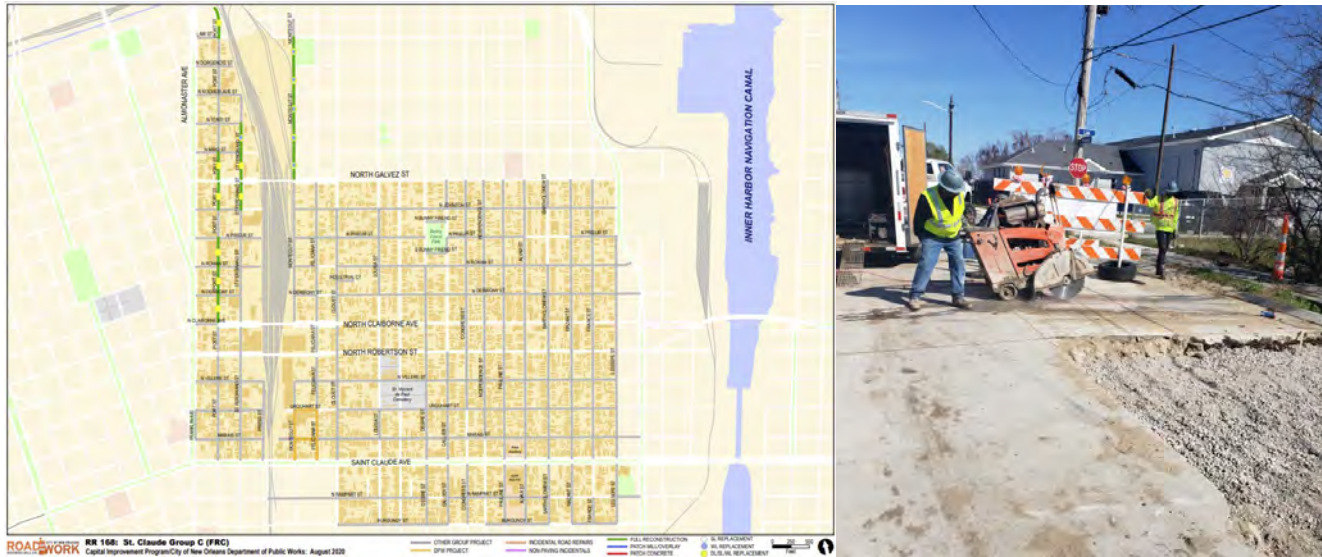
24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

RR168 St. Claude Group C

This project is a part of largest FEMA-Funded Recovery Roads Program, a comprehensive recovery strategy to repair Hurricane Katrina related damages. Scope of work included of full block reconstruction (major pavement rehabilitation). In addition to the roadway pavement restoration scope, the project scope consisted of any necessary associated demolition, removal and reconstruction of the roadway pavement structure, sub-base and/or base courses, placement of engineering fabrics (geotextile and/or geogrid), curbs, curbs & gutters, driveway aprons, sidewalks, ADA-compliant handicapped ramps, and/or other street system feature work within the public right-of-way. Also, the construction scope was to incorporate replacement of utility infrastructure components such as storm water drainage, water and sewerage (sanitary sewer) mains and service laterals and house connection repairs, utility manholes, drop manholes, catch basins, water meters, valves, and other utility system appurtenances cleaning, adjustments, relocations, repairs or replacements within the public right-of-way or publicly maintained servitudes or easements.

RNM Consultants served as Subcontractor to Rahman & Associates Inc. to performed Construction Management and Resident Inspection of full reconstruction streets. RNM Consultants was responsible for daily Resident Inspection in accordance with the City of New Orleans Standards and Specifications. The estimated cost of construction for this project is approximately \$6M.

Project Scope Map



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME RNM Consultants, Inc.	(2) FIRM LOCATION <i>(City and State)</i> New Orleans, Louisiana	(3) ROLE Construction Management, Inspection
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE

21. TITLE AND LOCATION <i>(City and State)</i> RR073 Lake Vista Group A, New Orleans, LA	22. YEAR COMPLETED PROFESSIONAL SERVICES CONSTRUCTION <i>(If applicable)</i> 2020-2021
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23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER City of New Orleans	b. POINT OF CONTACT NAME Khalid Saleh	c. POINT OF CONTACT TELEPHONE NUMBER 504-658-8000
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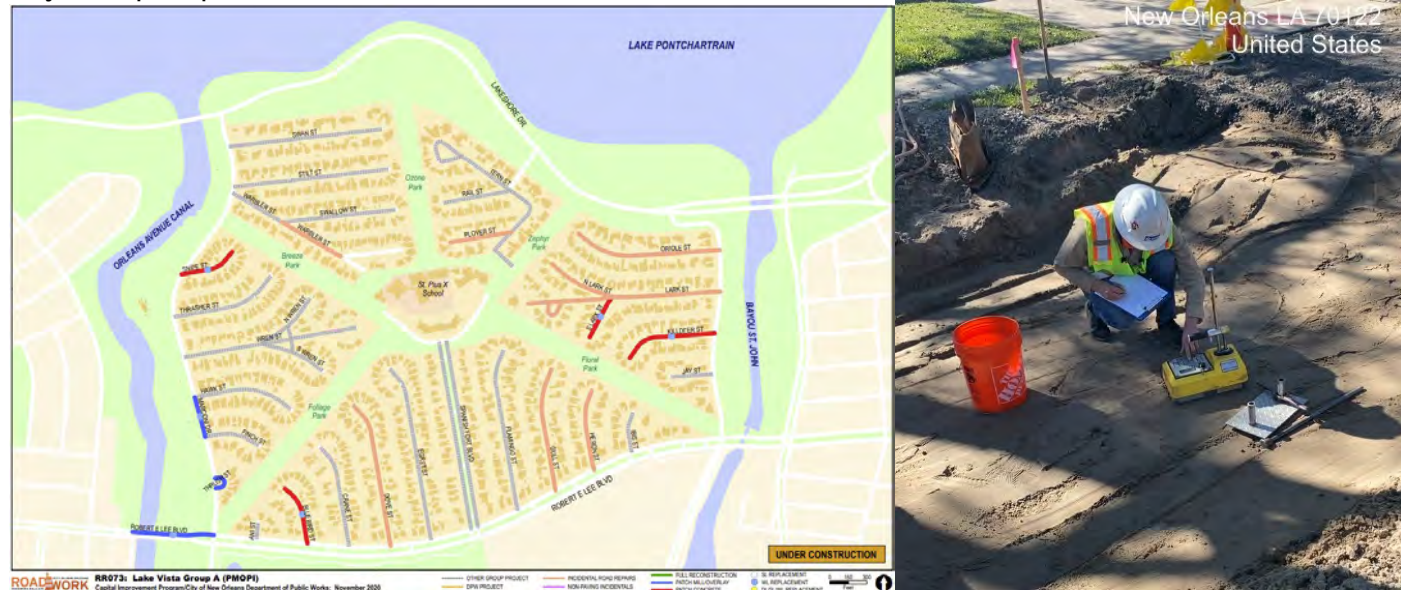
24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

RR073 Lake Vista Group A

This project is a part of largest FEMA-Funded Recovery Roads Program, a comprehensive recovery strategy to repair Hurricane Katrina related damages. Scope of work included of full block reconstruction (major pavement rehabilitation). In addition to the roadway pavement restoration scope, the project scope consisted of any necessary associated demolition, removal and reconstruction of the roadway pavement structure, sub-base and/or base courses, placement of engineering fabrics (geotextile and/or geogrid), curbs, curbs & gutters, driveway aprons, sidewalks, ADA-compliant handicapped ramps, and/or other street system feature work within the public right-of-way. Also, the construction scope was to incorporate replacement of utility infrastructure components such as storm water drainage, water and sewerage (sanitary sewer) mains and service laterals and house connection repairs, utility manholes, drop manholes, catch basins, water meters, valves, and other utility system appurtenances cleaning, adjustments, relocations, repairs or replacements within the public right-of-way or publicly maintained servitudes or easements.

RNM Consultants served as Subcontractor to Rahman & Associates Inc. to performed Construction Management and Resident Inspection of full reconstruction streets. RNM Consultants was responsible for daily Resident Inspection in accordance with the City of New Orleans Standards and Specifications. The estimated cost of construction for this project is approximately \$3M.

Project Scope Map



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME RNM Consultants, Inc.	(2) FIRM LOCATION <i>(City and State)</i> New Orleans, Louisiana	(3) ROLE Construction Management, Inspection
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE

21. TITLE AND LOCATION <i>(City and State)</i> RR203 Gentilly Terrace South Group K, New Orleans, LA	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES 2020-2021	CONSTRUCTION <i>(If applicable)</i>

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER City of New Orleans	b. POINT OF CONTACT NAME Khalid Saleh	c. POINT OF CONTACT TELEPHONE NUMBER 504-658-8000
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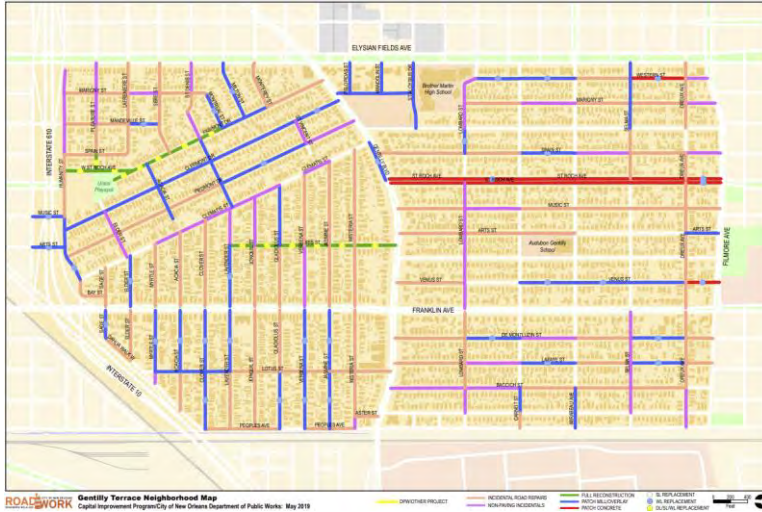
24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

RR203 Gentilly Terrace South Group K, New Orleans, LA

The project scope of work consisted FEMA eligible roadway repair (full reconstruction) to the Gentilly Terrace Neighborhood. This included conducting topographic and boundary surveys, developing preliminary design plans, final plans and specifications, and bid documents for use in the reconstruction of damaged roadways, curbs, drainage, utilities, driveways, including roadway milling and overlay.

RNM Consultants served as Subcontractor to Professional Engineering Consultants (PEC) to performed Preliminary and Final Design of full reconstruction streets. RNM Consultants was responsible for developing design plans, drainage analysis and cost estimating in accordance with the City of New Orleans Standards and Specifications. The estimated cost of construction for this project is approximately \$10M.

Project Scope Map



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME RNM Consultants, Inc.	(2) FIRM LOCATION <i>(City and State)</i> New Orleans, Louisiana	(3) ROLE Design and Engineering.
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE

21. TITLE AND LOCATION <i>(City and State)</i> RR053 Gentilly Terrace Group C, New Orleans, LA	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES 2020-2021	CONSTRUCTION <i>(If applicable)</i>

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER City of New Orleans	b. POINT OF CONTACT NAME Khalid Saleh	c. POINT OF CONTACT TELEPHONE NUMBER 504-658-8000
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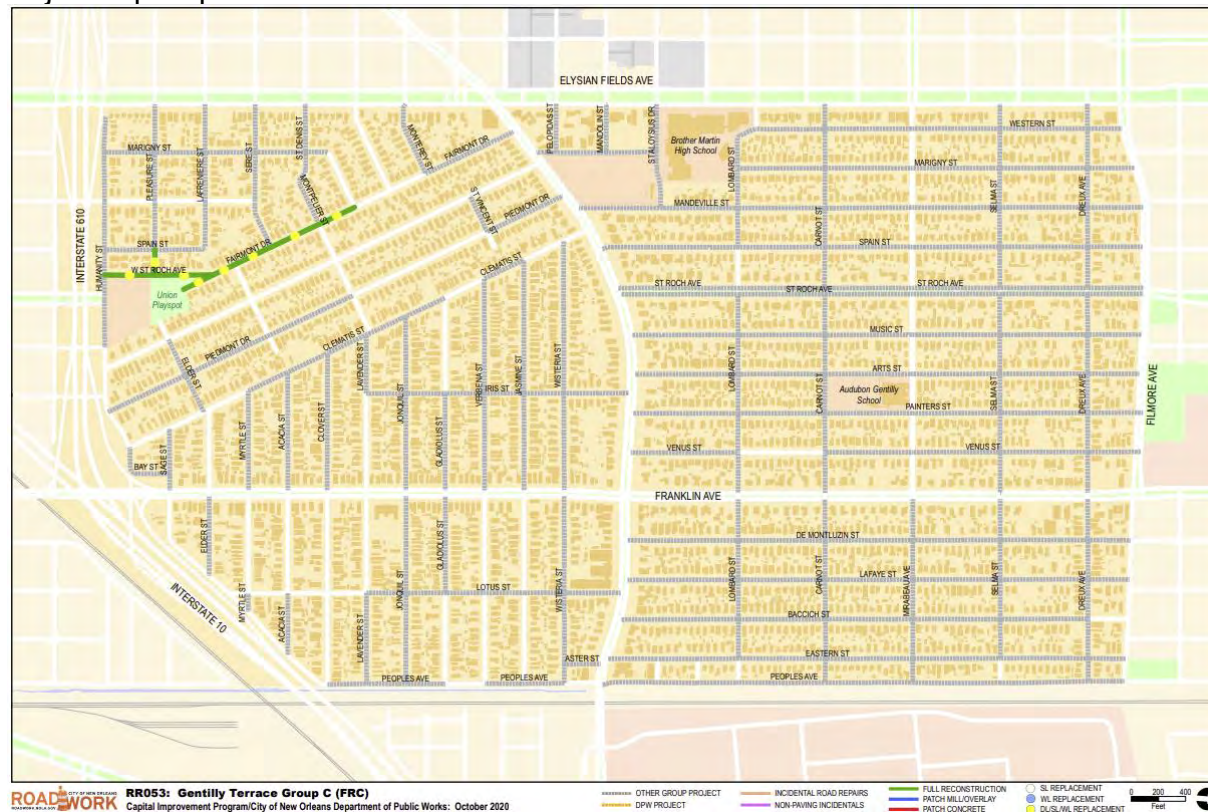
24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

RR053 Gentilly Terrace Group C

The project consisted of roadway repairs damaged by the flooding and recovery due to Hurricane Katrina. Scope of work included of full block reconstruction (major pavement rehabilitation). In addition to the roadway pavement restoration scope, the project scope consisted of any necessary associated demolition, removal and reconstruction of the roadway pavement structure, sub-base and/or base courses, placement of engineering fabrics (geotextile and/or geogrid), curbs, curbs & gutters, driveway aprons, sidewalks, ADA-compliant handicapped ramps, and/or other street system feature work within the public right-of-way. Also, the construction scope was to incorporate replacement of utility infrastructure components such as storm water drainage, water and sewerage (sanitary sewer) mains and service laterals and house connection repairs, utility manholes, drop manholes, catch basins, water meters, valves, and other utility system appurtenances cleaning, adjustments, relocations, repairs or replacements within the public right-of-way or publicly maintained servitudes or easements.

RNM Consultants served as Subcontractor to Professional Engineering Consultants (PEC) to performed Drainage Design of full reconstruction streets. RNM Consultants was responsible for Drainage Design/Analysis in accordance with the City of New Orleans Standards and Specifications. The estimated cost of construction for this project is approximately \$3M.

Project Scope Map



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME RNM Consultants, Inc.	(2) FIRM LOCATION <i>(City and State)</i> New Orleans, Louisiana	(3) ROLE Design and Engineering.
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE

21. TITLE AND LOCATION <i>(City and State)</i> RR173 St. Claude Group H, New Orleans, LA	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES 2020-2021	CONSTRUCTION <i>(If applicable)</i>

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER City of New Orleans	b. POINT OF CONTACT NAME Virginia Brisley	c. POINT OF CONTACT TELEPHONE NUMBER 504-658-8000
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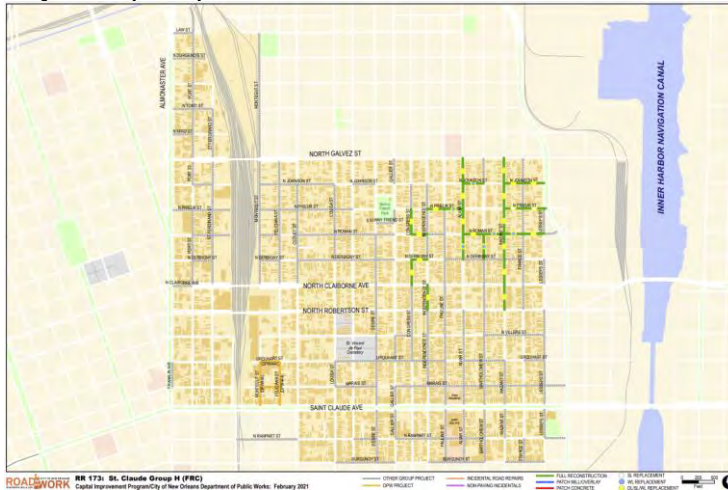
24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

RR173 St. Claude Group H

The Scope of work for this project was to provide baseline and topographic survey, roadway design, and construction administration for streets in the St. Claude neighborhood. Scope included assessment of existing street conditions including ADA compliance, accessibility and provision for pedestrians; and design of any needed repairs. Roadway, sidewalk and curb condition was assessed and compared to a FEMA project worksheet, and then related to disaster recovery activities such as demolition and debris removal to justify funding. Also, the construction scope was to incorporate replacement of utility infrastructure components such as storm water drainage, water and sewerage (sanitary sewer) mains and service laterals and house connection repairs, utility manholes, drop manholes, catch basins, water meters, valves, and other utility system appurtenances cleaning, adjustments, relocations, repairs or replacements within the public right-of-way or publicly maintained servitudes or easements.

RNM Consultants served as Subcontractor to Rahman & Associates Inc. to performed Drainage Design of full reconstruction streets. RNM Consultants was responsible for Drainage Design/Analysis in accordance with the City of New Orleans Standards and Specifications. The estimated cost of construction for this project is approximately \$11M.

Project Scope Map



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME RNM Consultants, Inc.	(2) FIRM LOCATION <i>(City and State)</i> New Orleans, Louisiana	(3) ROLE Design and Engineering.
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE

21. TITLE AND LOCATION <i>(City and State)</i> RR072 Lake Terrace and Oaks Group D, New Orleans, LA	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION <i>(If applicable)</i> 2020-2021

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER City of New Orleans	b. POINT OF CONTACT NAME Khalid Saleh	c. POINT OF CONTACT TELEPHONE NUMBER 504-658-8000
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

RR072 Lake Terrace and Oaks Group D

This project is a part of largest FEMA-Funded Recovery Roads Program, a comprehensive recovery strategy to repair Hurricane Katrina related damages. Scope of work included of full block reconstruction (major pavement rehabilitation). In addition to the roadway pavement restoration scope, the project scope consisted of any necessary associated demolition, removal and reconstruction of the roadway pavement structure, sub-base and/or base courses, placement of engineering fabrics (geotextile and/or geogrid), curbs, curbs & gutters, driveway aprons, sidewalks, ADA-compliant handicapped ramps, and/or other street system feature work within the public right-of-way. Also, the construction scope was to incorporate replacement of utility infrastructure components such as storm water drainage, water and sewerage (sanitary sewer) mains and service laterals and house connection repairs, utility manholes, drop manholes, catch basins, water meters, valves, and other utility system appurtenances cleaning, adjustments, relocations, repairs or replacements within the public right-of-way or publicly maintained servitudes or easements.


RNM Consultants served as Subcontractor to Rahman & Associates Inc. to performed Construction Management and Resident Inspection of full reconstruction streets. RNM Consultants was responsible for daily Resident Inspection in accordance with the City of New Orleans Standards and Specifications. The estimated cost of construction for this project is approximately \$5M.

Project Scope Map




25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME RNM Consultants, Inc.	(2) FIRM LOCATION <i>(City and State)</i> New Orleans, Louisiana	(3) ROLE Construction Management, Inspection
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:	
Name & Title:	Sergio Aviles, PE Civil Engineer
Project Assignment:	Sr Construction Manager
Name of Firm with which associated:	
Years' experience with this Firm:	9
Education: Degree(s)/Year/Specialization:	B.S., Civil Engineering/Geotechnical Engineering, Louisiana State University, 2001
Active registration: Year first registered/discipline:	Discipline: <u>Civil</u>
Other experiences and qualifications relevant to the proposed Project:	
<p>Mr. Aviles has over 19 years of experience in geotechnical and civil engineering. He has significant experience working at LADOTD performing slope stability analysis, embankment settlement calculations, mechanically stabilized earthen wall design, sheet pile design and pile testing. After founding APS Engineering nine years ago, Mr. Aviles has continued his work throughout Louisiana for both government and private entities. While specializing in both geotechnical and materials testing, Mr. Aviles also has extensive experience in the design and construction supervision of roadway projects in the region.</p> <p>Relevant projects Mr. Aviles has worked on over the years include:</p> <p><u>Lakeview Neighborhood, New Orleans, LA</u> Street improvement program for the Lakeview neighborhood encompassing numerous blocks of roadway throughout. Mr. Aviles served as project manager for all geotechnical services for the project. Mr. Aviles design duties were, but not limited to, pavement recommendation and possible repair methods of existing damages. APS drilled and sampled a total of 292 borings throughout the Lakeview neighborhood. Project Cost: \$189,000.</p> <p><u>Plum Orchard Neighborhood, New Orleans, LA</u> Street improvement program for the Plum Orchard neighborhood encompassing numerous blocks of roadway throughout. Sai served as project manager for all geotechnical services for the project. Sai's design duties were, but not limited to, pavement recommendation and possible repair methods of existing damages. APS drilled and sampled a total of 33 borings throughout the Plum Orchard neighborhood. Project Cost: \$35,000</p>	

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Sergio Aviles, PE Civil Engineer
<u>DPW095 Lafitte Greenway Corridor - New Orleans, LA</u> Mr. Aviles served as both lead designer and project manager for this project. Scope included design of all subsurface utilities which required hydraulic modeling to determine pipe sizing utilizing LADOTD HYDR programs, waterline, sewer line, and pavement design including ADA accessibility incorporated on all blocks. The project is currently on schedule and in final design.
<u>2012-FEMA-7H1-1, Touro Neighborhood, New Orleans, LA</u> Mr. Aviles served as both lead designer and project manager for this project. Scope included design of all pavement, including roadways, curbing, sidewalks, and ADA accessibility incorporated on all blocks. The project was successfully taken to bid and managed during construction by Mr. Aviles.
<u>RR067 Hollygrove/Leonidas Group A, New Orleans, LA</u> Mr. Aviles served as both lead designer and project manager for this project. Scope included design of all pavement, including roadways, curbing, sidewalks, and ADA accessibility incorporated on all blocks. The project was successfully taken to bid. A P S currently assisting with Resident Inspection services.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Sairam (Sai) Eddanapudi, ME, PE Civil Engineer
Project Assignment:
Sr Construction Manager
Name of Firm with which associated:

Years' experience with this Firm:
8
Education: Degree(s)/Year/Specialization:
MS, Civil Engineering, Lamar University, 2002
Active registration: Year first registered/discipline:
Discipline: <u>Civil</u>
Other experiences and qualifications relevant to the proposed Project:
<p>Sairam (Sai) Eddanapudi's geotechnical experience includes soil investigation, construction material testing and quality control/ quality assurance (QA/QC) of shallow and deep foundations. He has significant experience supervising geotechnical drilling and sampling activities. Sai has extensive experience in laboratory testing of soils and aggregates for engineering properties. Additionally, Sai has accrued significant experience designing deep and shallow foundation systems, retaining walls, and embankments.</p> <p>Relevant projects Mr. Eddanapudi has worked on over the years include:</p> <p><u>Lakeview Neighborhood, New Orleans, LA</u> Street improvement program for the Lakeview neighborhood encompassing numerous blocks of roadway throughout. Mr. Aviles served as project manager for all geotechnical services for the project. Mr. Aviles design duties were, but not limited to, pavement recommendation and possible repair methods of existing damages. APS drilled and sampled a total of 292 borings throughout the Lakeview neighborhood. Project Cost: \$189,000</p> <p><u>Plum Orchard Neighborhood, New Orleans, LA</u> Street improvement program for the Plum Orchard neighborhood encompassing numerous blocks of roadway throughout. Sai served as project manager for all geotechnical services for the project. Sai's design duties were, but not limited to, pavement recommendation and possible repair methods of existing damages. APS drilled and sampled a total of 33 borings throughout the Plum Orchard neighborhood. Project Cost: \$35,000</p>

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Sairam (Sai) Eddanapudi, ME, PE Civil Engineer
<u>RR141 Pontchartrain Park Group B</u> Mr. Sai served as both designer and project manager for this project. Scope included design of all subsurface and pavement design including ADA accessibility incorporated on all blocks. The project is currently on schedule and in final design.
<u>RR067 Hollygrove/Leonidas Group A, New Orleans, LA</u> Mr. Sai served as both designer and project manager for this project. Scope included design of all pavement, including roadways, curbing, sidewalks, and ADA accessibility incorporated on all blocks. The project was successfully taken to bid. A P S currently assisting with Resident Inspection services.
<u>2012-FEMA-7H1-1, Touro Neighborhood, New Orleans, LA</u> Mr. Sai served as assistant project manager for this project. Scope included design of all pavement, including roadways, curbing, sidewalks, and ADA accessibility incorporated on all blocks. The project was successfully taken to bid and construction.

21. TITLE AND LOCATION (*City and State*)**2012-FEMA-7H1-1, Touro Neighborhood, New Orleans, LA**

22. YEAR COMPLETED

PROFESSIONAL SERVICES
2015CONSTRUCTION (*If applicable*)

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER

City of New Orleans

b. POINT OF CONTACT NAME

Khalid Saleh

c. POINT OF CONTACT TELEPHONE NUMBER

504-658-810024. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (*Include scope, size, and cost*)

The City of New Orleans implemented a multi-million dollar, multi-year comprehensive program to repair roadways damaged due to hurricane Katrina. APS Engineering provided professional engineering services in an multi-neighborhood project for the Touro portion of the Milan/Touro project under Waggoner Engineering.

The repairs in this project that were determined to be eligible for FEMA funding are roadways, sidewalks, ADA ramps, and curbing. APS performed a thorough assessment of these damages and recommended the best value approach to implement the repairs. The recommendations by APS allowed the City to maximize the federal dollars to have the most impact on the neighborhood's infrastructure as possible.

The Hollygrove neighborhood project included multiple construction repair types with an estimated value for roadway improvements that is approximately \$1.2 million.

**Client**

City of New Orleans Department of Public Works

Reference

Khalid Saleh, Project Director

1300 Perdido Street, Ste. 6W03, New Orleans, LA 70112

Construction Cost

\$1,200,000

APS Personnel

Sai Eddanpuddi, P.E.

Sergio Aviles, P.E.

Nature of Firm's Responsibility

A P S provided design, bidding, construction administration, inspection, and bidding services.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME A P S Engineering and Testing, LLC	(2) FIRM LOCATION (<i>City and State</i>) New Orleans, Louisiana	(3) ROLE Design, Bidding, Construction Management, Inspection
	(1) FIRM NAME	(2) FIRM LOCATION (<i>City and State</i>)	(3) ROLE

21. TITLE AND LOCATION <i>(City and State)</i> RR052 Gentilly Terrace North Group B, New Orleans, LA	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES 2020-2021	<i>applicable)</i>

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER City of New Orleans	b. POINT OF CONTACT NAME Khalid Saleh	c. POINT OF CONTACT TELEPHONE NUMBER 504-658-8000
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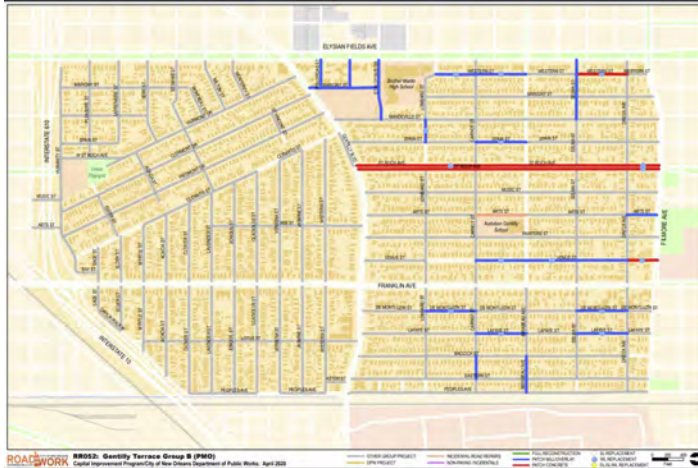
24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

RR052 Gentilly Terrace North Group B

The project consisted of roadway repairs damaged by the flooding and recovery due to Hurricane Katrina. Scope of work included of full block reconstruction (major pavement rehabilitation). In addition to the roadway pavement restoration scope, the project scope consisted of any necessary associated demolition, removal and reconstruction of the roadway pavement structure, sub-base and/or base courses, placement of engineering fabrics (geotextile and/or geogrid), curbs, curbs & gutters, driveway aprons, sidewalks, ADA-compliant handicapped ramps, and/or other street system feature work within the public right-of-way. Also, the construction scope was to incorporate replacement of utility infrastructure components such as storm water drainage, water and sewerage (sanitary sewer) mains and service laterals and house connection repairs, utility manholes, drop manholes, catch basins, water meters, valves, and other utility system appurtenances cleaning, adjustments, relocations, repairs or replacements within the public right-of-way or publicly maintained servitudes or easements.

RNM Consultants served as Subcontractor to Professional Engineering Consultants (PEC) and APS Engineering to performed Preliminary and Final Design of full reconstruction streets. RNM Consultants was responsible for developing design plans, drainage analysis and cost estimating in accordance with the City of New Orleans Standards and Specifications. The estimated cost of construction for this project is approximately \$19M.

Project Scope Map



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME RNM Consultants, Inc.	(2) FIRM LOCATION <i>(City and State)</i> New Orleans, Louisiana	(3) ROLE Design and Engineering.
b.	(1) FIRM NAME A P S Engineering and Testing, LLC	(2) FIRM LOCATION <i>(City and State)</i> New Orleans, Louisiana	(3) ROLE Design, Bidding, Construction Management, Inspection
c.	(1) FIRM NAME	2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE

CHRISTIAN SCHADE, P.E.

Sr. Electrical Engineer



Education

B.S. in Electrical
Engineering
University of New
Orleans
1993

Registration

P.E. (Louisiana) #34283
P.E. (Mississippi) #1776
P.E. (Alabama) #29261-E
P. E. (Texas) #49819

Total Years of Experience

27

Years with MCA

3

Mr. Schade's areas of expertise include electrical engineering, power distribution, power generation, lighting, specification writing and contract administration. His experience includes Power system analysis, consisting of load flow, fault, arc flash and coordination studies using SKM Power Tools for Windows and ETAP. Proficient with incident energy level method of Arc Flash calculations per NFPA 70E, 2015 version. Electrical design support for small to medium size projects in industrial facilities, including installation of new pumps, agitators, metering equipment, lighting and power distribution centers. Design of utility switchyards up to 230 KV and protective relaying. Electrical design support for architectural type projects, such as office buildings, restaurants, hotels, casinos and marinas. Projects that he has worked on include:

Sewerage and Water Board – EWWTP Effluent Pump Station Expansion, New Orleans, Louisiana - Marrero, Couvillon & Associates is providing electrical and instrumentation engineering for a new priming system at the effluent outfall, lowering the EPS system curve and its energy grade line and a new 1,000-hp pump at the EPS, similar in configuration and capacity to the two existing 1,000-hp pumps. MCA will also be providing electrical and instrumentation engineering for the modifications of the EPS pump discharge header to accommodate the new pump(s) and to allow improve the flow of the parallel effluent force mains. MCA is providing electrical engineering and design to specify the new motors, drives and controls, and their integration with the currently planned upgrades of the EPS electrical system

New Orleans Sewerage and Water Board Head House Renovation/Repurposing Critical Services Facility Center, EOC and Safe House (Resiliency Complex), New Orleans, Louisiana -Renovation of an existing early 20th century 3-story building for use as Emergency Operations Building for the S&WB, including Operations Center, office spaces and temporary living quarters. A new InFill Building, also 3-stories, will be built adjacent to the Safe House to provide a kitchen facility and additional office spaces. Marrero, Couvillon & Associates is handling the Mechanical, Electrical, Plumbing and Fire Protection design.

Upgrade Electrical Infrastructure at Jackson Barracks – New Orleans, LA - MCA designed and prepared complete bid documents including plans and specifications for the execution of the Replacement of twelve (12) existing air-cooled switchgear facilities on Jackson Barracks, and the Creation of a Loop Feed Electrical System between specific switchgears on Jackson Barracks.

Port of New Orleans - France Road – North Roadway and Drainage Improvements, New Orleans, Louisiana - MCA is providing the electrical and mechanical engineering services for the roadway and drainage improvements, including street lighting design.



St. Mary Parish – Amelia Pump Station 2 and 2A, St. Mary Parish, Louisiana – Installation of a 48” pump that will replace an existing 20” pump at the pumping station, a new pump house and associated power. Electrical engineering and design included installation of new alternator control system to link new pump with existing 48” pump to stage/alternate operation of both pumps based on water level and operating sequence.

KIMBALL M. SCHLAFLY, P.E.

Sr. Electrical Engineer



Education

B.S. in Electrical
Engineering
Tulane University
1988

Registration

P.E. (Louisiana) #27699

Organizations

National Fire Protection
Association

National Society of
Professional Engineers

Total Years of Experience

33

Years with MCA

2

Mr. Schlafly has over 33 years of engineering experience in electrical engineering, project engineering and project management. He has been responsible for various projects requiring design of lighting, low and medium voltage power distribution, standby and emergency power systems, telecommunications, fire alarm, access control, video surveillance, and theatrical audio/visual and lighting systems. Mr. Schlafly has worked on projects with clients in both the public and private sector, such as the Recovery School District in New Orleans, Facility Planning and Control in Baton Rouge, Tulane University, Loyola University, University of New Orleans, as well as with various Architects, Engineering firms, and building owners. Prior to joining Marrero, Couvillon & Associates, Mr. Schlafly was managing partner of his own firm, working for contractors and owners on design-build projects as well as design-bid projects.

- **Hurricane Ida Damage Assessment at Tulane University – New Orleans, LA** – MCA has recently completed hurricane damage assessment services at Tulane University. Mr. Schlafly, along with other MCA personnel, reviewed multiple facilities at the uptown campus and downtown medical school to develop an inventory of hurricane damages at the university. Data was entered into software on tablets, and uploaded daily to a central program.
- **Low Barrier Shelter, New Orleans, Louisiana** - Marrero, Couvillon & Associates has worked with architect The Mathes Group on a homeless shelter project for the City of New Orleans. The facility provides year round, 24 hour shelter for homeless adults with minimal restrictions. The work involved demolition and build-out within an existing building that was previously used for medical purposes. MCA provided engineering design for HVAC, plumbing, fire protection and electrical systems for the project. An expansion project for this facility is currently underway.
- **City of New Orleans Fire Engine No. 36, New Orleans, Louisiana**- MCA was responsible for the mechanical, electrical and plumbing systems for a 4 bay fire station with living quarters for nine fire fighters, their supervisors, apparatus and support equipment. This project includes utility hook-ups and tie-downs for trailers for temporary housing; phased demolition of the existing facility so that it could remain operable during construction; rebuilding the programmed facility, and removal of temporary utilities and site clean-up of NOFD property.
- **City Hall and Civil Courts Mechanical and Electrical Upgrades– New Orleans, Louisiana - New Orleans, Louisiana** - MCA is providing mechanical and electrical engineering services for upgrades to HVAC, mechanical, electrical and plumbing systems at the City of New Orleans



City Hall and Civil Courts Buildings, which includes: Demolition and Replacement of Chiller Compressors, Replacement of Insulation on Chiller and Boiler Supply and Return Water lines, Replace Re-circulating Pumps, Replace Filter Racks and Baffles at Cooling Towers, Replace Filter Racks at Primary Air Handling Units, Repair or Replace Heat Pump Units, Replace Back-up Control Air Compressor and Dryers, Add Additional Ductwork and Vents at Council Chamber Offices, Replace Rooftop Exhaust Fans, Demolition of the Domestic House Tank and Associated Piping, Replace Existing Building Automation System, Replace Existing Sump Pumps in Parking Garage. MCA also provided engineering services for the renovation of 8 elevators which included partial demolition and reconstruction of the equipment elevator rooms.

- **Municipal and Traffic Court Renovations, New Orleans, Louisiana -**
This project included a complete renovation of a three story building to increase the New Orleans Municipal Courts building from 4 courtrooms to 7. Project also includes renovating one floor of the old VA Hospital to serve as a Temporary Courts building. The VA Temporary Courts scope included demolishing all existing mechanical systems and replacing with new air handlers and chilled water piping, new piping for domestic water, all new ductwork, Fan Coil units, demolition and replacement of sewer piping, and design of holding cell for prisoners, modifications to the sprinkler system, and security systems. The Municipal Courts renovations included the demolition of the existing mechanical systems and installation of new chillers, boilers, pumps, and cooling towers, Air Handling Units, domestic water system, fire alarm system, security systems, a new elevator, and a holding cell in ground floor for prisoners. Since the utility plant also provides all utilities (chilled water, heating water, domestic water, and electricity) to the police station next door the design had to include temporary utilities during the construction period and connecting all new systems to the police station.

Marrero, Couvillon & Associates, LLC

Consulting Engineers



Post Katrina Projects in the City of New Orleans:

Immediately after Hurricane Katrina, MCA mobilized to begin recovery efforts throughout the area. MCA's New Orleans staff consolidated with our staff in Baton Rouge and got to work. Immediately after the storm passed, Hugo Marrero was at the Louis Armstrong New Orleans International Airport assisting with efforts to bring airport electrical systems back online. In the aftermath of the storm, MCA also performed additional damage assessments and design of repairs for the following projects:

Lakefront Airport

- o Terminal (Historic Building)
- o Fire Station (ARFF)
- o Bastian Mitchell Hangar
- o James Wedell Hangar
- o Walter Wedell Hangar

Louis Armstrong New Orleans International Airport

The day after the storm, MCA was called to the airport to aid the airport and National Guard in getting the power restored to the facility. After the power was restored, MCA was awarded a contract to do inspections, make recommendations for repairs and design temporary and permanent repairs to the entire airport and ancillary buildings. These projects included:

- o Roof
- o High Mast Lighting
- o Terminal
- o Ancillary Buildings

Orleans Parish Sheriff

- o Temporary Jail/Courtroom
- o House of Detention repairs

Southern University Gymnasium

Dillard University – multiple facilities

Nunez Community College, Chalmette

New Orleans Coroner's Office Complex

Delgado Community College

New Orleans Fire Engine 36

Old Arabi Courthouse & Jail, Arabi

Northrop Grumman Shipyard, Pascagoula, MS

Various Playground for City of New Orleans



Marrero, Couvillon & Associates, LLC

Consulting Engineers



FEMA/HMGP Projects:



Department of Health and Hospitals, Emergency Generators, State of Louisiana

The State of Louisiana, through the Department of Health and Hospitals (DHH) as sub-grantee, is administering a **5% Hazard Mitigation – Generator Grant Program** funded by the Federal Emergency Management Administration (FEMA) through the Governor's Office of Homeland Security and Emergency Preparedness. There are approximately 100 participating facilities throughout the state of Louisiana with installations that must be verified. DHH retained Marrero, Couvillon & Associates to provide services required as part of the grant funding. Marrero, Couvillon & Associates is responsible for the inspection of existing generators at approximately 100 hospital and health facility sites in Louisiana. Assist DHH in organization of records and processing of invoices.



Citywide HMGP Generator Installation, City of New Orleans

The City of New Orleans has received a grant to install Automatic Switch Transfer (ATS) Switches and/or Emergency Generator to allow for continued operations during loss of power events. This will be done initially at 10 facilities, with more facilities to be added later. Marrero, Couvillon & Associates is responsible for preparing construction documents for bidding and Construction administration services.



Government Tower Generator – Terrebonne Parish Consolidated Government, Houma, LA

Terrebonne Parish was awarded FEMA Hazard Mitigation Grant Program funds to install a permanent diesel generator at the Government Tower building to provide near-continuous governance before, during and after an event of any sort. Marrero, Couvillon & Associates provided the design engineering services for a diesel generator/emergency power installation.

Marrero, Couvillon & Associates, LLC

Consulting Engineers



FEMA/HMGP Projects:

FEMA/HMGP projects below showing Marrero, Couvillon and Associates experience and knowledge.



Louis Armstrong New Orleans International Airport, Kenner, LA

Immediately after Hurricane Katrina, Marrero, Couvillon & Associates mobilized to begin recovery efforts throughout the area. Marrero, Couvillon & Associates's New Orleans staff consolidated with our staff in Baton Rouge and got to work. The day after the storm, Marrero, Couvillon & Associates was called to the airport to aid the airport and National Guard in getting the power restored to the facility. After the power was restored, Marrero, Couvillon & Associates was awarded a contract to do inspections, make recommendations for repairs and design temporary and permanent repairs to the entire airport and ancillary buildings. These projects included the Roof, High Mast Lighting, Terminal and Ancillary Buildings



FEMA Trailer Parks – Temporary Family Housing After Hurricane Katrina

Marrero, Couvillon & Associates performed engineering services for the design of electrical and plumbing infrastructures for the trailer parks, to accommodate 300 or more trailers in each park.



Lakefront Airport, New Orleans, LA

Marrero, Couvillon & Associates has undertaken design for multiple FEMA funded projects to repair/reconstruct flood damaged facilities at the Lakefront Airport in New Orleans. These projects are located in a V flood zone, requiring adherence to strict FEMA mitigation guidelines for prevention of future storm related damage. The facilities include Restoration of the 1934 Art-Deco Terminal Building - In addition to meeting FEMA mitigation requirements, design required safeguarding the historical nature of the building. Also include Repairs to the Airport Fire Station and Construction of 3 new Aircraft Hangars to replace 3 storm-damaged hangars. These facilities posed technically complex issues. A high density foam fire suppression system has been designed for fire protection in the hangar buildings. Water storage/pumping facilities for fire protection were needed due to an inadequate city water supply in the area.

Marrero, Couvillon & Associates, LLC

Consulting Engineers



FEMA/HMGP Projects:

A few other FEMA related projects include:

New Coroner's Office Complex, New Orleans, LA
Temporary HVAC System, Nunez Community College, Chalmette, LA
Gymnasium, Southern University at New Orleans, New Orleans, LA
Southern University Gymnasium, New Orleans, LA
Dillard University – multiple facilities, New Orleans, LA
Nunez Community College, Chalmette, LA
Delgado Community College, New Orleans, LA
New Orleans Fire Engine 36, New Orleans, LA
Old Arabi Courthouse & Jail, Arabi, LA
Northrop Grumman Shipyard, Pascagoula, MS

FEMA Flood Related Projects Include:

Ascension Parish Schools
Lake Elementary
St. Amant Middle
Galvez Primary

East Baton Rouge Parish Schools
Broadmoor Middle
Brookstown Middle
Montgomery Education Center
Lanier Elementary
Greenbrier Elementary

Ascension Parish Regional Cancer Center

BFM CORPORATION, LLC

Professional Land & Hydrographic Surveying

OVERVIEW & CAPABILITIES/SERVICES

Established in 1982, **BFM Corporation, LLC, Professional Land & Hydrographic Surveying**, has provided services to public & private concerns throughout Louisiana and the Gulf South. The firm provides surveying services covering all facets of engineering, construction, and forensics; topographic, hydrographic, and high definition laser scanning.

BFM is a majority Woman-Owned Business Enterprise (WBE) as well as a Hudson Initiative certified Small & Emerging Business and Small Entrepreneurship in Louisiana.

Our capabilities include the following and more:

- **Topographic Surveying** (determine relative positions & elevations of natural & man-made features)
- **Drone Surveying** (detailed multi-acre data-capturing surveying)
- **Bathymetric / Hydrographic Surveys** (determine shoreline and depths of bodies of water)
- **Property, Boundary, and Right-of-Way Surveys** (preparation of Legal Descriptions, property, and ROW maps to define project boundaries and for acquisition of property)
- **Maps, Cross-Sections, and Data Sets** (provision of plan drawings, maps, diagrams, and data sets)
- **3D Laser Scanning** (unify raw data & model)
- **Benchmarks** (establishment of permanent, temporary, and construction benchmarks)
- **Construction-Related Surveying** (all types)
- **Builder's Package** (includes Boundary Survey & Construction Benchmark, Form Board Certificate, Top of Slab Certificate, & Final FEMA Elevation Certificate)
- **ALTA Surveys** (American Land Title Association-compliant surveys)

BFM offers **Drone Surveying Services**, featuring a **DJI Matrice 600 Pro drone** outfitted with a Sony A7R3 42 megapixel camera, Pixhawk Triggering System, VMAP PPK system, and an A3 Pro Flight Controller. The unit can fly with payload for 20 minutes and **can capture 50 acres of land in that time (with a flight ceiling of 165 feet, pixel quality is 0.71 CM)**. This system allows BFM to quickly & accurately capture data and facilitates quicker field work to produce highly accurate and precise surveying information. Deliverables feature Clean Point Cloud, 3D Mesh, Orthomosaic, and AutoCAD DWG Topographic.

Our **Survey Field Crews** are equipped with Leica Viva & Leica Captivate Data Collectors, as well as Leica GPS Smart Antennas. Each GPS unit is linked to the Leica SmartNet Network, giving each crew the ability for Real Time Kinematic Positioning (RTK), derived from the Global Navigation Satellite System (GNSS). Furthermore, each crew is outfitted with Leica TS series robotic total stations, simplifying and expediting projects. BFM's crews are trained to use this equipment to its full potential to maximize accuracy and efficiency in the field.

Project work (property, utilities, rights-of-way, etc.) routinely involves extensive records & related research as an element of successful completion, as well as coordination with the client, agency or department. BFM has personnel in place to make sure this is done correctly and expeditiously.

PERSONNEL

BFM Corporation's **Ralph P. Fontcuberta, Jr., PLS**, is a **Louisiana-Registered Professional Land Surveyor (since 1974)** and meets or exceeds any minimum requirements for any surveying project. He has been **providing surveying services in Louisiana for over 50 years** and brings an almost incalculable wealth of experience in the region to any project, especially in Southeast Louisiana.

BFM's **Chad M. Poché, P.E.** has nearly **three decades of experience** to assist in completing projects on time and within budget. He has been a **consulting geotechnical engineer for nearly 30 years in South Louisiana** and has been the geotechnical engineer of record for thousands of projects throughout his career.

Our personnel included **multiple survey field crews** and a **fully-staffed drafting department** to handle any project needs; they are thoroughly trained and extensively familiar with the region and needs of various types of surveying projects.

PROFESSIONAL REPUTATION & REFERENCE

Since 1982, BFM has worked with virtually every municipality in the region. We enjoy a high repeat-business rate with all our municipal & private clients and offer the following specific references for contact:

Mark R. Drewes, P.E., Director, Jefferson Parish Public Works Department

(504-736-6783 | JPPW@jeffparish.net)

Neil Schneider, CCM, P.E., Director, Capital Projects, Jefferson Parish Public Works Department

(504-736-6783 | JPPW@jeffparish.net)

Tom Schreiner, Deputy CAO, City of Kenner Public Works & Capital Projects

(504-468-7515 | tschreiner@kenner.la.us)

Angela DeSoto, P.E., Director, Jefferson Parish Engineering Department

(504-736-6511 | ADeSoto@jeffparish.net)

Sid Trouard, P.E., Program Manager, Jefferson Parish Sewerage Capital Improvement Program

(504-736-6386 | STrouard@jeffparish.net)

Greg Cromer, Mayor, City of Slidell

(985-646-4333 | gcromer@cityofslidell.org)

Our professional work history is exemplary. We strive to provide on-time and technically thorough project deliverables at the budget set by our clients.

INSURANCE

BFM Corporation, LLC, along with our sister company, Gulf South Engineering and Testing, Inc., are included as named insureds on a single professional liability policy providing coverage limits of \$2,000,000 each claim and aggregate. This policy is issued by the Berkley Insurance Company.

Representative Project Work

Almonaster Avenue Bridge Rehabilitation Project (DOTD H.014530), New Orleans, LA

Hardesty & Hanover (Metairie LA); Babak Naghavi, 504-962-9212; bnaghavi@hardestyhanover.com

The existing Almonaster Avenue Bridge over the Inner Harbor – Navigation Canal (IH-NC) is a movable Strauss-heel trunnion bridge built circa 1920 and is owned and operated by the Board of Commissioners of the Port of New Orleans. The bridge carries two railroad tracks owned by CSX Transportation, Inc., and one vehicular lane in each direction; however, the vehicular lanes are closed. The Board, in conjunction with the Louisiana Department of Transportation and Development (LADOTD) and the City of New Orleans, wishes to modify the bridge and approach roadways. BFM was contracted to provide surveying services for multiple phases of the overall project, including topographic surveying, GPS static control, and survey line. Drone surveying is a key element. (\$46,550 (fee); ongoing)

Orange Lane Pump Station Project, Grand Isle, Jefferson Parish, LA

AIMS Group, Inc. (Metairie LA); Lowell Pitre, P.E., 504-887-7045; ljp@aimsgroupinc.com

The project consists of a new storm water pumping station on the intersection of Orange Lane at Orleans Avenue in Grand Isle, Louisiana. The scope of services includes obtaining topographical survey information and the preparation of a drainage map for the project. Phase 1 of the project involved the topographic and right of way surveying services; BFM conducted a site topographic survey at the proposed lift station site and provided boundary surveying to determine rights of way. Phase 2 of the project established the Drainage Map. BFM located all drainage structures within the Limits of Survey; this included ditches, culverts, drain inlets, and catch basins. A drone survey was executed to gather a 25 ft elevation grid throughout the project area. (\$32,280 (fee); 2020)

Lapalco Boulevard Bridge at Harvey Canal, (PW 2017-046-RBP; DOTD H.004396), Jefferson Parish, LA

Hardesty & Hanover (Metairie LA); Babak Naghavi, 504-962-9212; bnaghavi@hardestyhanover.com

BFM Corporation provided extensive surveying services for a topographic survey and right-of-way (R/W) determination for the project. Project elements included setting GPS Static Control (5 permanent control points), traversing a proposed survey line, and land topography surveying. Additional phases include hydrographic topography/bathymetric surveying of the project area, the right-of-way determination, and subsurface utility engineering (SUE). Drone Surveying was utilized throughout the project. A Route Topographic Survey was also included as part of the scope, as was Subsurface Utility Engineering (SUE). (\$478,744 (fee); 2020)

Causeway Boulevard Overpass (over Airline Drive), Jefferson Parish, LA

Design Engineering (Metairie LA); John Karlin, 504-836-2155

BFM's surveying services included Route Topographic and Boundary Survey for the project, which was located at the Causeway Boulevard Overpass of Airline Drive. This was designated as Phase 3 of the Rehabilitation Project, which included Ramps 4, 5, and the Traffic Circle. Drone Surveying services were also included. (\$68,090 (fee); 2020)

Upper Barataria Basin Risk Reduction (UBRR) Project, Segment 3, Lafourche Parish, LA

Greenup Industries, LLC (Kenner LA); Rodney Greenup, Jr., 225-283-4843; rodney@greenupind.com

BFM's scope of services included all topographic & hydrographic surveying as directed; magnetometer surveying was utilized to determine the presence of pipelines within the subject survey area. BFM established as client-supplied baseline and Temporary Benchmarks (TBM). Provided cross sections along Bayou Des Allemands and located elements & existing improvements within the designated limits of survey, as well as above- & below-ground utilities. As-built data was also taken into account. (\$118,873 (fee); 2019)

Levee Breaches, Inner Harbor Navigational Canal Reaches, Levee & Floodwall Reconstruction, New Orleans, LA
URS Corporation (Metairie LA); John Grebar, 504-837-6326

BFM provided topographic surveying for various Levee Breaches at the Inner Harbor Navigational Canal Reaches for Levee & Floodwall Reconstruction. A U.S. Army Corps of Engineers project. (\$115,300 (fee); 2006)

Coventry Drainage Pump Stations, Jefferson Parish, LA

ECM Consultants, Inc. (Metairie LA); Sunina Shrestha, 504-885-4080; SShrestha@ecmconsultants.com

BFM provided a Route Topographic Survey with Hydrographic Survey for the project, located in River Ridge, Louisiana. The limits of survey extended from r/w to r/w along Jefferson Highway. The levee and hydrographic survey area was noted as 400 feet wide (200 ft. in either direction of the extended centerline of Colonial Heights Road). Drone Surveying was a key element of the project. The hydrographic survey extended 500 feet into the river from the water's edge. (\$89,780 (fee); 2020)

River Road Estates Construction Layout, Hahnville, St. Charles Parish, LA

Bill Hubbard, 318-308-9904

BFM provided surveying services for the construction layout of River Road Estates. The project featured drone-based surveying services. (\$17,445 (fee); 2018)

London Avenue Canal Floodwall & Levee Breaches, New Orleans, LA

URS Corporation (Metairie LA); John Grebar, 504-837-6326

BFM established cross sections at various locations of the London Avenue Canal for floodwall breach repairs. A U.S. Army Corps of Engineers project. BFM also performed hydrographic surveys at various points. (\$62,200 (fee); 2006)

High Water Mark/Inundation Data Surveys, Various Parishes throughout Southern Louisiana

URS Corporation (Metairie LA); Carrie Ovellette, 301-258-5842

In the wake of Hurricanes Katrina and Rita, BFM provided surveying for high water marks/inundation data as noted by URS technicians in various Parishes throughout Southern Louisiana, including the Parishes of Livingston, Coupee, Rapides, Calcasieu, Allen, Beauregard, Vernon, Avoyelles, and St. Landry. (\$27,300 (fee); 2006)

Parish-Wide Safe House Program, Jefferson Parish, LA

Multiple Area Engineering Clients

BFM provided surveying services associated with elevated safe houses at multiple locations throughout Jefferson Parish; this was part of a Parish-wide project to establish safe houses for pumping stations at multiple locations which will allow pump operators to safely remain at their station, ensuring the pumps continue to operate, during a hurricane event. (\$112,490 (fee); 2005 - 2007)

Multiple Post-Katrina FEMA Trailer Site Surveys throughout the Metro Area

Multiple Area Engineering Clients

BFM provided topographic surveying for multiple FEMA trailer sites (Coca-Cola Plant, Perry Street Wharf, UNO-SUNO, etc.) as requested. (2005/2006)

CPRA BA-75-1, Lafitte Tidal Protection, Phase II, Lafitte Area Independent Levee District, Jefferson Parish, LA
Lafitte Area Independent Levee District; Nicole Cooper, 504-233-1109; ncooper@townofjeanlafitte.com

BFM's surveying services on the project included establishing horizontal & vertical control (referenced to established benchmark and LA State Plane Coordinate System, NAD 1983 2011), coordination of proposed bulkhead/I-wall centerline, and collection of spot elevation every 25 feet along the centerline. BFM also plotted collected data with centerline overlaid for reference purposes. Deliverables include hardcopy, PDF, and AutoCAD DWG files. (\$23,220 (fee); 2017)

CGB Marine Facility, LaPlace, St. John the Baptist Parish, LA

Gulf South Engineering and Testing, Inc. (Kenner LA); Chad M. Poché, P.E., 504-305-4401; cpoche@gulfsoutheng.com

Scope of services executed by BFM involved a topographic with hydrographic survey. This involved a Single Profile commencing at protected side toe of Mississippi River Levee (and extending perpendicular to the river). The hydrographic survey extended approx. 400 ft. from the water's edge (approx. 1,475 LF). (\$5,000 (fee); 2019)

Expansion of the Port of New Orleans Cold Storage Facility, Port of New Orleans, LA

N-Y Associates, Inc. (Metairie LA); James E. Simmons, 504-885-0500; jsimmons@n-yassociates.com

BFM provided surveying services for the Cold Storage Facility Expansion Project, located at 3411 Jordan Road, for the Port of New Orleans, Louisiana. The scope of services included a topographic survey; this included establishing three temporary benchmarks (TBMs) and location of improvements & utilities. Spot elevations were taken at 25 foot intervals and at grade breaks within the limits of survey. (\$29,710 (fee); 2020)

Hospital Expansion Project, Chalmette, St. Bernard Parish, LA

Rozas Ward Architects (New Orleans LA); Darren Rozas, AIA, 504-524-4375

BFM provided surveying services for the project, located at 8000 West Judge Perez Drive in Chalmette. The scope included a topographic and utility survey, four temporary benchmarks, and location of improvements, utilities & trees. BFM further established finished floor elevations, and took spot elevations at 25 ft intervals. (\$35,280 (fee); 2020)

Mid City Apartments Phase II, New Orleans, LA

Edwards Communities Construction, LLC (Columbus OH); Paul Stiak, 602-448-6737; pstiak@edwardsccc.com

BFM provided comprehensive surveying services associated with Phase II of the Mid City Apartments project in New Orleans. This phase involved the construction layout survey of the Apartment Building and Parking Garage, which consisted of shooting existing elevations, provision of corners, and staking piles. After project completion, an As-Built Survey was executed for both buildings. (\$54,000 (fee); 2019)

Sunset Drainage District Levee, St. Charles Parish, LA

Greenup Industries, LLC (Kenner LA); Rodney Greenup, Jr., 225-283-4843; rodney@greenupind.com

BFM's scope of services included the execution of a Route Topographic Survey of the project area, located in Paradis and Bayou Gauche in St. Charles Parish. In a Route Topographic Survey, the full scope plan & profile includes all services, utilities, properties, elevations and items necessary to perform any and all engineering and construction work. (\$76,460 (fee); 2020)



Ralph P. Fontcuberta, Jr., PLS

Executive Vice President; Registered Professional Land Surveyor

Louisiana, Professional Land Surveyor, No. 4329, 1974

Mississippi, Professional Land Surveyor, No. 1633, 1974

2 years, Building Trade Curriculum, Delgado, New Orleans

2 years, Mathematics, University of New Orleans

Years with this Firm: 39 (1982)

Total Years Experience: 54 (1967)

Ralph P. Fontcuberta, Jr., PLS has better than half a century of experience in the field of surveying and has been a registered Professional Land Surveyor (PLS) since 1974. He co-founded BFM Corporation in 1982 after serving with another surveying firm for over 15 years and is currently a partial owner of the firm. Mr. Fontcuberta is thoroughly knowledgeable in all facets of surveying: boundary, hydrographic, topographic, and right-of-way surveying, as well as residential, plant, and industrial layout. Since the beginning of his career, his work has entailed computations, drafting, and field work for various industrial, commercial, municipal, and private clients.

Project work has included topographic surveying needed for a wide variety of engineering, architectural, and related endeavors. This work has included projects for numerous branches of the Jefferson Parish Government, the Louisiana Dept. of Transportation & Development (LADOTD), the Louisiana Dept. of Natural Resources (LADNR), the U.S. Army Corps of Engineers (USACE), the Mississippi Dept. of Transportation (MDOT), the Dept. of the Navy, Entergy, BellSouth, and various other municipalities and public/private entities.

Lapalco Boulevard Bridge at Harvey Canal, (PW 2017-046-RBP; DOTD H.004396), Jefferson Parish, LA. BFM Corporation provided extensive surveying services for a topographic survey and right-of-way (R/W) determination for the project. Project elements included setting GPS Static Control (5 permanent control points), traversing a proposed survey line, and land topography surveying. Additional phases include hydrographic topography/bathymetric surveying of the project area, the right-of-way determination, and subsurface utility engineering (SUE). Drone Surveying was utilized throughout the project. A Route Topographic Survey was also included as part of the scope, as was Subsurface Utility Engineering (SUE). (\$478,744 (fee); 2020)

Almonaster Avenue Bridge Rehabilitation Project (DOTD H.014530), New Orleans, LA. The existing Almonaster Avenue Bridge over the Inner Harbor – Navigation Canal (IH-NC) is a movable Strauss-heel trunnion bridge built circa 1920 and is owned and operated by the Board of Commissioners of the Port of New Orleans. The bridge carries two railroad tracks owned by CSX Transportation, Inc., and one vehicular lane in each direction; however, the vehicular lanes are closed. The Board, in conjunction with the Louisiana Department of Transportation and Development (LADOTD) and the City of New Orleans, wishes to modify the bridge and approach roadways. BFM was contracted to provide surveying services for multiple phases of the overall project, including topographic surveying, GPS static control, and survey line. Drone surveying is a key element. (\$46,550 (fee); ongoing)

Inner Harbor Navigation Canal Levee & Floodwall Breaches, New Orleans, LA. BFM provided cross section at various locations of the Inner Harbor Navigation Canal for levee and floodwall breach repairs. A U.S. Army Corps of Engineers project. (\$30,000 (fee); 2006)

Causeway Boulevard Overpass (over Airline Drive), Jefferson Parish, LA. BFM's surveying services included Route Topographic and Boundary Survey for the project, which was located at the Causeway Boulevard Overpass of Airline Drive. This was designated as Phase 3 of the Rehabilitation Project, which included Ramps 4, 5, and the Traffic Circle. Drone Surveying services were also included. (\$68,090 (fee); 2020)

continues

continued **Ralph P. Fontcuberta, Jr., PLS**
Executive Vice President; Registered Professional Land Surveyor

Undesignated Canal Survey, Norco, St. John the Baptist Parish, LA. BFM provided topographic surveying services for an undesignated canal, in Norco, Louisiana, adjacent to the Shell Refinery and intersecting with the established Engineer's Canal. (\$11,580 (fee); 2017)

Parish-Wide Safe House Program, Jefferson Parish, LA. BFM provided surveying services associated with elevated safe houses at multiple locations throughout Jefferson Parish; this was part of a Parish-wide project to establish safe houses for pumping stations at multiple locations which will allow pump operators to safely remain at their station, ensuring the pumps continue to operate, during a hurricane event. (\$112,490 (fee); 2005 - 2007)

Orange Lane Pump Station Project, Grand Isle, Jefferson Parish, LA. The project consists of a new storm water pumping station on the intersection of Orange Lane at Orleans Avenue in Grand Isle, Louisiana. The scope of services includes obtaining topographical survey information and the preparation of a drainage map for the project. Phase 1 of the project involved the topographic and right of way surveying services; BFM conducted a site topographic survey at the proposed lift station site and provided boundary surveying to determine rights of way. Phase 2 of the project established the Drainage Map. BFM located all drainage structures; this included ditches, culverts, drain inlets, and catch basins. A drone survey was executed to gather a 25 ft elevation grid throughout the project area. (\$32,280 (fee); 2020)

High Water Mark/Inundation Data Surveys, Various Parishes throughout Southern Louisiana. In the wake of Hurricanes Katrina and Rita, BFM provided surveying for high water marks/inundation data as noted by URS technicians in various Parishes throughout Southern Louisiana, including the Parishes of Livingston, Coupee, Rapides, Calcasieu, Allen, Beauregard, Vernon, Avoyelles, and St. Landry. (\$27,300 (fee); 2006)

Coventry Drainage Pump Stations, Jefferson Parish, LA. BFM provided a Route Topographic Survey with Hydrographic Survey for the project, located in River Ridge, Louisiana. The limits of survey extended from r/w to r/w along Jefferson Highway. The levee and hydrographic survey area was noted as 400 feet wide (200 ft. in either direction of the extended centerline of Colonial Heights Road). Drone Surveying was a key element of the project. The hydrographic survey extended 500 feet into the river from the water's edge. (\$89,780 (fee); 2020)

Multiple Post-Katrina FEMA Trailer Site Surveys throughout the Metro Area. BFM provided topographic surveying for multiple FEMA trailer sites (Coca-Cola Plant, Perry Street Wharf, UNO-SUNO, etc.) as requested. (2005/2006)

Upper Barataria Basin Risk Reduction (UBRR) Project, Segment 3, Lafourche Parish, LA. BFM's scope of services included all topographic & hydrographic surveying as directed; magnetometer surveying was utilized to determine the presence of pipelines within the subject survey area. BFM established as client-supplied baseline and Temporary Benchmarks (TBM). Provided cross sections along Bayou Des Allemands and located elements & existing improvements within the designated limits of survey, as well as above- & below-ground utilities. As-built data was also taken into account. (\$118,873 (fee); 2019)

FEMA New Orleans Streets Program/Submerged Roads Program (Recovery Roads Program), City of New Orleans, LA. BFM Corporation provided surveying services for the FEMA New Orleans Streets Program (Recovery Roads Program; approximately three dozen separate contracts); this work involved the preparation of a Route Topographic Survey (FEMA) for each project; the full scope plan & profile included all services, utilities, properties, elevations and items necessary to perform any and all engineering and construction work. Project involved coordination with Prime Firm schedule and the City, as well as extensive records research. (\$8.9 M (cumulative fee); 2013 – 2018)

CGB Marine Facility, LaPlace, St. John the Baptist Parish, LA. Scope of services executed by BFM involved a topographic with hydrographic survey. This involved a Single Profile commencing at protected side toe of Mississippi River Levee (and extending perpendicular to the river). The hydrographic survey extended approximately 400 ft. from the water's edge (approx. 1,475 LF). (\$5,000 (fee); 2019)



Chad M. Poché, P.E.

Executive Vice President; Engineering Liaison

Louisiana, Civil Engineer, No. 27667, 1998
Mississippi, Civil Engineer, No. 15405, 2002

M.S., 1998, Civil Engineering, University of New Orleans
B.S., 1993, Civil Engineering, Louisiana State University

Transportation Work Identification Card (TWIC)

Years with this Firm: 4 (2017)
Total Years Experience: 28 (1993)

Mr. Poché is an Executive Vice President with (and partial owner of) BFM Corporation, LLC, and a co-founder of BFM's sister company, Gulf South Engineering and Testing, Inc. He has been a consulting geotechnical engineer for more than 20 years in South Louisiana, working on traditional and unique geotechnical engineering projects (shallow and deep foundation design, slope stability, pavement design, etc.). Mr. Poché has also provided construction oversight for waste facilities and virtually every type of earthwork related project. He has been the geotechnical engineer of record for thousands of projects throughout his career.

Mr. Poché's experience includes the development of appropriate scopes of work and proposals for a broad range of projects; planning and coordinating analyses; preparing technical reports; foundation and geotechnical engineering design; construction recommendations; Miss. River facility permitting; managing personnel and office operations; and expert witness testimony. Mr. Poché has logged soil borings; overseen the installation of ground water monitoring wells, piezometers, and inclinometers; overseen and evaluated pile load tests; overseen, performed, and evaluated dynamic pile testing (PDA and PIT); performed CMT field testing and inspection; and performed laboratory testing.

Orange Lane Pump Station Project, Grand Isle, Jefferson Parish, LA. The project consists of a new storm water pumping station on the intersection of Orange Lane at Orleans Avenue in Grand Isle, Louisiana. The scope of services includes obtaining topographical survey information and the preparation of a drainage map for the project. Phase 1 of the project involved the topographic and right of way surveying services; BFM conducted a site topographic survey at the proposed lift station site and provided boundary surveying to determine rights of way. Phase 2 of the project established the Drainage Map. BFM located all drainage structures within the Limits of Survey; this included ditches, culverts, drain inlets, and catch basins. A drone survey was executed to gather a 25 ft elevation grid throughout the project area. (\$32,280 (fee); 2020)

River Road Estates Construction Layout, Hahnville, St. Charles Parish, LA. BFM provided surveying services for the construction layout of River Road Estates. The project featured drone-based surveying services. (\$17,445 (fee); 2018)

Lapalco Boulevard Bridge at Harvey Canal, (PW 2017-046-RBP; DOTD H.004396), Jefferson Parish, LA. BFM Corporation provided extensive surveying services for a topographic survey and right-of-way (R/W) determination for the project. Project elements included setting GPS Static Control (5 permanent control points), traversing a proposed survey line, and land topography surveying. Additional phases include hydrographic topography/bathymetric surveying of the project area, the right-of-way determination, and subsurface utility engineering (SUE). Drone Surveying was utilized throughout the project. A Route Topographic Survey was also included as part of the scope, as was Subsurface Utility Engineering (SUE). (\$478,744 (fee); 2020)

Causeway Boulevard Overpass (over Airline Drive), Jefferson Parish, LA. BFM's surveying services included Route Topographic and Boundary Survey for the project, which was located at the Causeway Boulevard Overpass of Airline Drive. This was designated as Phase 3 of the Rehabilitation Project, which included Ramps 4, 5, and the Traffic Circle. Drone Surveying services were also included. (\$68,090 (fee); 2020)

continued **Chad M. Poché, P.E.**
Executive Vice President; Engineering Liaison

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Upper Barataria Basin Risk Reduction (UBRR) Project, Segment 3, Lafourche Parish, LA. BFM's scope of services included all topographic & hydrographic surveying as directed; magnetometer surveying was utilized to determine the presence of pipelines within the subject survey area. BFM established as client-supplied baseline and Temporary Benchmarks (TBM). Provided cross sections along Bayou Des Allemands and located elements & existing improvements within the designated limits of survey, as well as above- & below-ground utilities. As-built data was also taken into account. (\$118,873 (fee); 2019)

Sunset Drainage District Levee, St. Charles Parish, LA. BFM's scope of services included the execution of a Route Topographic Survey of the project area, located in Paradis and Bayou Gauche in St. Charles Parish. In a Route Topographic Survey, the full scope plan & profile includes all services, utilities, properties, elevations and items necessary to perform any and all engineering and construction work. (\$76,460 (fee); 2020)

CGB Marine Facility, LaPlace, St. John the Baptist Parish, LA. Scope of services executed by BFM involved a topographic with hydrographic survey. This involved a Single Profile commencing at protected side toe of Mississippi River Levee (and extending perpendicular to the river). The hydrographic survey extended approximately 400 ft. from the water's edge (approx. 1,475 LF). (\$5,000 (fee); 2019)

Fish Bayou Site (Servitude Survey, Sect 28, T8S, R2E), Ascension Parish, LA. BFM's scope of services included location of topography within the proposed servitude, property corners to verify the boundaries affected by said servitude, and the existing levee trail for the creation of a servitude for EAD and USGS servitude. Services under Task 1 also included staking, mapping, and legal documentation of drainage servitudes and fee title property concerning the Ascension Parish DPW EA Drainage District No. 1. (\$12,890 (fee); 2019)

Bayou St. John Seawall Erosion Control Project (Reaches 2D and 3A), Bayou St. John, Orleans Parish, LA. BFM's scope of services involved all required topographic and hydrographic surveying services for this element of the Bayou St. John Seawall Erosion Control Project. Elevations and two TBMs were tied in to baselines from previous BFM project work for Reaches 2D and 3A after recovery & verification of horizontal & vertical control. Scope included location of visible above-ground utilities and underground utilities with visible surface evidence; where available, BFM obtained record drawings from relevant agencies to further plot utilities. Improvements (within the limits of the survey scope) were located, including existing flood wall and footer, existing concrete revetments at the toe of the levee, the tops & toes of the levee, and rip-rap; also included were bridge joints, barrier top, and exterior bridge deck. Elevation shots were taken and shown on aerial imagery. Deliverables included hardcopy, PDF, and AutoCAD DWG formats. (\$17,385 (fee); 2019)

Mid City Apartments Phase II, New Orleans, LA. BFM provided comprehensive surveying services associated with Phase II of the Mid City Apartments project in New Orleans. This phase involved the construction layout survey of the Apartment Building and Parking Garage, which consisted of shooting existing elevations, provision of corners, and staking piles. After project completion, an As-Built Survey was executed for both buildings. (\$54,000 (fee); 2019)



John Philip Thayer

Field Operations Supervisor

Professional Land Surveyor Registration in process, State of Louisiana

Certificate, 2015, Land Surveying Services

B.S., 2007, Physical Education, Trevecca Nazarene University

Years with this Firm: 13 (2008)

Total Years Experience: 14 (2007)

Mr. Thayer is a Field Operations Supervisor with considerable experience in field surveying services, including ALTA/as-built surveying, construction layout, boundary, topographic, cross-sections, GPS use, and numerous other surveying types. He has provided field surveying and project supervision on hundreds of roadway projects with BFM Corporation.

Lapalco Boulevard Bridge at Harvey Canal, (PW 2017-046-RBP; DOTD H.004396), Jefferson Parish, LA. BFM Corporation provided extensive surveying services for a topographic survey and right-of-way (R/W) determination for the project. Project elements included setting GPS Static Control (5 permanent control points), traversing a proposed survey line, and land topography surveying. Additional phases include hydrographic topography/bathymetric surveying of the project area, the right-of-way determination, and subsurface utility engineering (SUE). Drone Surveying was utilized throughout the project. A Route Topographic Survey was also included as part of the scope, as was Subsurface Utility Engineering (SUE). (\$478,744 (fee); 2020)

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FEMA New Orleans Streets Program/Submerged Roads Program (Recovery Roads Program), City of New Orleans, LA. BFM Corporation provided surveying services for the FEMA New Orleans Streets Program (Recovery Roads Program; approximately three dozen separate contracts); this work involved the preparation of a Route Topographic Survey (FEMA) for each project; the full scope plan & profile included all services, utilities, properties, elevations and items necessary to perform any and all engineering and construction work. Project involved coordination with Prime Firm schedule and the City, as well as extensive records research. (\$8.9 M (cumulative fee); 2013 – 2018)

Coventry Drainage Pump Stations, Jefferson Parish, LA. BFM provided a Route Topographic Survey with Hydrographic Survey for the project, located in River Ridge, Louisiana. The limits of survey extended from r/w to r/w along Jefferson Highway. The levee and hydrographic survey area was noted as 400 feet wide (200 ft. in either direction of the extended centerline of Colonial Heights Road). Drone Surveying was a key element of the project. The hydrographic survey extended 500 feet into the river from the water's edge. (\$89,780 (fee); 2020)

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continued **John Philip Thayer**
Field Operations Supervisor

Causeway Boulevard Overpass (over Airline Drive), Jefferson Parish, LA. BFM's surveying services included Route Topographic and Boundary Survey for the project, which was located at the Causeway Boulevard Overpass of Airline Drive. This was designated as Phase 3 of the Rehabilitation Project, which included Ramps 4, 5, and the Traffic Circle. Drone Surveying services were also included. (\$68,090 (fee); 2020)

Mid City Apartments Phase II, New Orleans, LA. BFM provided comprehensive surveying services associated with Phase II of the Mid City Apartments project in New Orleans. This phase involved the construction layout survey of the Apartment Building and Parking Garage, which consisted of shooting existing elevations, provision of corners, and staking piles. After project completion, an As-Built Survey was executed for both buildings. (\$54,000 (fee); 2019)

Upper Barataria Basin Risk Reduction (UBRR) Project, Segment 3, Lafourche Parish, LA. BFM's scope of services included all topographic & hydrographic surveying as directed; magnetometer surveying was utilized to determine the presence of pipelines within the subject survey area. BFM established as client-supplied baseline and Temporary Benchmarks (TBM). Provided cross sections along Bayou Des Allemands and located elements & existing improvements within the designated limits of survey, as well as above- & below-ground utilities. As-built data was also taken into account. (\$118,873 (fee); 2019)

New North Terminal, Louis Armstrong New Orleans International Airport, Kenner, LA. BFM provided all required surveying services (topographic, boundary, etc.) as required for this \$800 million project which consists of the construction of a new terminal facility including a new 800,000 square foot building, vehicle ramps, parking garage & lots, and other airport appurtenances. Changes to the scope occurred due to project area expansion and additional service needs by the Prime, all of which were handled by BFM. (\$208,541 (fee); 2014)

Lafitte Housing Surveys, Housing Authority of New Orleans (HANO), LA. BFM provided surveying services for the Lafitte Housing project in New Orleans. Specifically, BFM's tasks included ALTA survey, as-built survey, and construction elevations/final elevations. (\$120,715 (fee); 2011)

New Veterans Administration Hospital, First District, Orleans Parish, LA. BFM provided surveying services for the project. This included the general area around the building, South Galvez between Canal Street & Tulane Avenue, and a general survey of the existing infrastructure within the project limits. (\$88,944 (fee); 2010)

Ernest N. Morial Convention Center Neighborhood Site Infrastructure, New Orleans, LA. BFM provided boundary & topographic surveying services for the project site (900 Convention Center Boulevard in New Orleans) for the Convention Center Development District. The project executed was adherent to the client-provided AIA document (dated August 20, 2015). (\$86,720 (fee); 2015)

SLFPA-E Levee Certification Phase 2 Survey - 40 Arpent & Maxent Levees, Orleans & St. Bernard Levee Systems, Orleans Parish, LA. BFM surveyed the centerline of the 40 Arpent "Back" Levee (in excess of 124,000 lf on a 100 ft grid). Control points were established utilizing RTK GPS. In addition, each pump station was surveyed and all grade breaks/roads were obtained along the centerline of the levee. The old shrimp building at Violet Canal was also located as part of the survey. Surveys included utility locations (based on field evidence, investigation, and available utility records) as well as foundation of above-ground utility poles, wet wells, and pipeline crossings. Bathymetry information was incorporated into cross-section point file and combined with ground survey; this information was further converted to the same elevations as the levee profile work. Additional cross sections were surveyed to support detailed geotechnical analysis; locations were coordinated with the geotechnical engineer of record for the project. These cross sections extended 100 ft from the toe of the levee in both directions and included bathymetry of the lake, wetland, or canal, depending on location, and extended until depth of the body was determined. (\$46,505 (fee); 2013)



Gary J. Lambert, Jr., PLS

Project Manager/Drafting Supervisor

Louisiana, Professional Land Surveyor (No. 5929, 2021)

B.S., 2018, Geomatics, Nicholls State University

B.S., 2014, Construction Management, Louisiana State University

Basic OSHA Training - Completed

Gulf Coast Safety Council, 08SSV, ID429523

Years with this Firm: 3 (2018)

Total Years Experience: 3 (2018)

Mr. Lambert provides Project Management and Drafting Oversight for the firm. He has also provided Survey Crew Chief Services since joining BFM and offers a well-rounded experience overview for any project. Mr. Lambert has completed Basic OSHA Training and holds license with the Gulf Coast Safety Council (08SSV, ID429523) and is a Registered Professional Land Surveyor in the State of Louisiana (No. 5929, 2021).

Lapalco Boulevard Bridge at Harvey Canal, (PW 2017-046-RBP; DOTD H.004396), Jefferson Parish, LA. BFM Corporation provided extensive surveying services for a topographic survey and right-of-way (R/W) determination for the project. Project elements included setting GPS Static Control (5 permanent control points), traversing a proposed survey line, and land topography surveying. Additional phases include hydrographic topography/bathymetric surveying of the project area, the right-of-way determination, and subsurface utility engineering (SUE). Drone Surveying was utilized throughout the project. A Route Topographic Survey was also included as part of the scope, as was Subsurface Utility Engineering (SUE). (\$478,744 (fee); 2020)

Orange Lane Pump Station Project, Grand Isle, Jefferson Parish, LA. The project consists of a new storm water pumping station on the intersection of Orange Lane at Orleans Avenue in Grand Isle, Louisiana. The scope of services includes obtaining topographical survey information and the preparation of a drainage map for the project. Phase 1 of the project involved the topographic and right of way surveying services; BFM conducted a site topographic survey at the proposed lift station site and provided boundary surveying to determine rights of way. Phase 2 of the project established the Drainage Map. BFM located all drainage structures within the Limits of Survey; this included ditches, culverts, drain inlets, and catch basins. A drone survey was executed to gather a 25 ft elevation grid throughout the project area. (\$32,280 (fee); 2020)

Upper Barataria Basin Risk Reduction (UBRR) Project, Segment 3, Lafourche Parish, LA. BFM's scope of services included all topographic & hydrographic surveying as directed; magnetometer surveying was utilized to determine the presence of pipelines within the subject survey area. BFM established as client-supplied baseline and Temporary Benchmarks (TBM). Provided cross sections along Bayou Des Allemands and located elements & existing improvements within the designated limits of survey, as well as above- & below-ground utilities. As-built data was also taken into account. (\$118,873 (fee); 2019)

Causeway Boulevard Overpass (over Airline Drive), Jefferson Parish, LA. BFM's surveying services included Route Topographic and Boundary Survey for the project, which was located at the Causeway Boulevard Overpass of Airline Drive. This was designated as Phase 3 of the Rehabilitation Project, which included Ramps 4, 5, and the Traffic Circle. Drone services were also included. (\$68,090 (fee); 2020)

Coventry Drainage Pump Stations, Jefferson Parish, LA. BFM provided a Route Topographic Survey with Hydrographic Survey for the project, located in River Ridge, Louisiana. The limits of survey extended from r/w to r/w along Jefferson Highway. The levee and hydrographic survey area was noted as 400 feet wide (200 ft. in either direction of the extended centerline of Colonial Heights Road). Drone Surveying was a key element of the project. The hydrographic survey extended 500 feet into the river from the water's edge. (\$89,780 (fee); 2020)

Broadmoor/Freret Transmission Line Replacement, New Orleans, LA. BFM's scope of services included a Route Topographic Survey for the project area, which included South Claiborne Avenue, Eden Street, and Magnolia Street. A later element included South Claiborne Avenue from the westerly property line of Tulane University to the westerly right-of-way for Jefferson Avenue. (\$75,140 (fee); 2021)

St. Claude Group G (RR172) Route Topographic Survey, City of New Orleans, LA. BFM's Route Topographic Surveying services for this group encompassed multiple routes: Congress Street, Independence Street, Alvar Street, Bartholomew Street, and Mazant Street, with various segments totaling 8,425 linear feet. In a Route Topographic Survey, the full scope plan & profile includes all services, utilities, properties, elevations and items necessary to perform any and all engineering and construction work. (\$58,975 (fee); 2020)

Expansion of the Port of New Orleans Cold Storage Facility, Port of New Orleans, LA. BFM provided surveying services for the Cold Storage Facility Expansion Project, located at 3411 Jordan Road, for the Port of New Orleans, Louisiana. The scope of services included a topographic survey; this included establishing three temporary benchmarks (TBMs) and location of improvements & utilities. Spot elevations were taken at 25 foot intervals and at grade breaks within the limits of survey. (\$29,710 (fee); 2020)

Brewster Road Subsurface Drainage Improvements and Proposed Detention Pond, St. Tammany Parish, LA. BFM provided multiple surveying services (including Route Topographic, Right-of-Way, Drainage Study, Property Acquisition) for the Brewster Road Subsurface Drainage Improvements and Proposed Detention Pond in St. Tammany Parish. The Limits of Survey included the area of Brewster Road between LA HWY 1077 and LA HWY 21; BFM provided Temporary Benchmarks, location of all improvements (natural and man-made) and utilities (including drainage, sewer, and water structures), and coordination with State and Local agencies. BFM took cross-sections at 100 ft. intervals and property corners along the route to determine rights-of-way. (\$203,320 (fee); 2020)

John Hopkins Force Main, City of Kenner, LA. BFM provided Route Topographic and right-of-way surveying services for the project which was located along a portion of Ole Miss Drive in Kenner. (\$12,510 (fee); 2020)

Gentilly Terrace South Group (RR203) Surveying Services (Lavender Street), New Orleans, LA. BFM provided Route Topographic Surveying services for the RR203 Gentilly Terrace South Group (Lavender Street, from Lotus Street to Iris Street), consisting of approximately 1,620 linear feet. For the RTS, the full scope plan & profile included all services, utilities, properties, elevations and items necessary to perform any and all engineering and construction work. (\$4,250 (fee); 2020)

Medical Center Boulevard Lighting, Marrero, Jefferson Parish, LA. BFM executed a Route Topographic Survey for the proposed lighting project; the survey extended from apparent R/W (right-of-way) to apparent R/W along Medical Center Boulevard from Wichers Drive to the West Bank Expressway (approximately 2,200 linear feet), with spot elevations taken at 50 foot intervals. The full scope plan & profile included all services, utilities, properties, elevations and items necessary to perform any and all engineering and construction work. BFM established a baseline and temporary benchmarks along each route, as well as location of improvements and utilities. (\$26,410 (fee); 2020)

Hollygrove Group E (RR065) Route Topographic Survey, Jefferson Parish, LA. BFM executed a Route Topographic Survey of Hollygrove Group E (RR065); this involved Forshey Street, Hollygrove Street, Hamilton Street, Edinburgh Street, and Mistletoe Street (a total of 4,950 linear feet). The full scope plan & profile included all services, utilities, properties, elevations and items necessary to perform any and all engineering and construction work. BFM established a baseline and temporary benchmarks along each route, as well as location of improvements and utilities. (\$34,650 (fee); 2020)



Christopher Lemley

Quality Control Supervisor / Survey Crew Chief

American Traffic Safety Service Assn. – Traffic Flagger

Years with this Firm: 7 (2014)

Total Years Experience: 15 (2006)

Christopher Lemley's surveying experience includes over 7 years as a Survey Crew Chief. His survey software experience includes projects involving Trimble, Topcon, Leica, and Hypack, and has maintained and operated GPS, Auto-Level, and Total Station. Notable past project work has included the New Orleans Museum of Art, Jackson Barracks Restoration, US Highway 11, NASA Michoud Cells 3 & 4, the St. Bernard Lot Next Door Program, and multiple Orleans Parish School Recovery project (including L.B. Landry, George Washington Carver, and Alice M. Harte schools). Further, Mr. Lemley serves as BFM's Quality Control Supervisor.

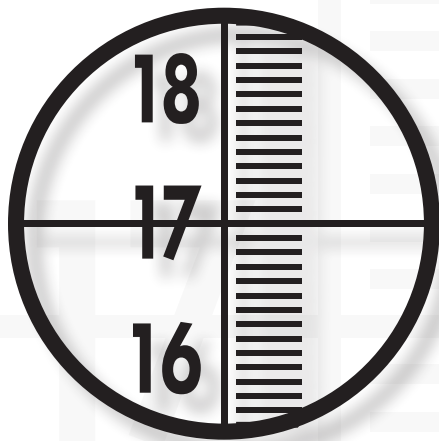
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Orange Lane Pump Station Project, Grand Isle, Jefferson Parish, LA. The project consists of a new storm water pumping station on the intersection of Orange Lane at Orleans Avenue. Scope of services includes obtaining topographical survey information and the preparation of a drainage map for the project. Phase 1 of the project involved the topographic and right of way surveying services; BFM conducted a site topographic survey at the proposed lift station site and provided boundary surveying to determine rights of way. Phase 2 of the project established the Drainage Map. BFM located all drainage structures within the Limits of Survey; this included ditches, culverts, drain inlets, and catch basins. A drone survey was executed to gather a 25 ft elevation grid throughout the project area. (\$32,280 (fee); 2020)

Lapalco Boulevard Bridge at Harvey Canal, (PW 2017-046-RBP; DOTD H.004396), Jefferson Parish, LA. BFM Corporation provided extensive surveying services for a topographic survey and right-of-way (R/W) determination for the project. Project elements included setting GPS Static Control (5 permanent control points), traversing a proposed survey line, and land topography surveying. Additional phases include hydrographic topography/bathymetric surveying of the project area, the right-of-way determination, and subsurface utility engineering (SUE). Drone Surveying was utilized throughout the project. A Route Topographic Survey was also included as part of the scope, as was Subsurface Utility Engineering (SUE). (\$478,744 (fee); 2020)

Upper Barataria Basin Risk Reduction (UBRR) Project, Segment 3, Lafourche Parish, LA. BFM's scope of services included all topographic & hydrographic surveying as directed; magnetometer surveying was utilized to determine the presence of pipelines within the subject survey area. BFM established as client-supplied baseline and Temporary Benchmarks (TBM). Provided cross sections along Bayou Des Allemands and located elements & existing improvements within the designated limits of survey, as well as above- & below-ground utilities. As-built data was also taken into account. (\$118,873 (fee); 2019)

Causeway Boulevard Overpass (over Airline Drive), Jefferson Parish, LA. BFM's surveying services included Route Topographic and Boundary Survey for the project, which was located at the Causeway Boulevard Overpass of Airline Drive. This was designated as Phase 3 of the Rehabilitation Project, which included Ramps 4, 5, and the Traffic Circle. Drone services were also included. (\$68,090 (fee); 2020)



Anthony Watson

CADD Technician

Coursework - CAD, Avatech Solutions, Los Colinas, TX

Years with this Firm: 8 (2011)

Total Years Experience: 28 (1991)

Mr. Watson has experience as a draftsman/survey technician, having started his career as an intern with the Surveying Department of the City of Plano, Texas. His experience through the years includes manual and computer-aided drafting for a wide range of projects, ranging from small lot surveys to subdivisions to municipal treatment and private industrial plants. He has experience in all facets of surveying (boundary, topographic, ALTA/ACSM, plan & profile, etc.) in both drafting and field environments.

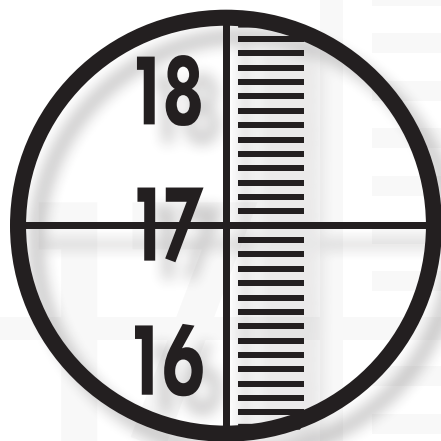
Lapalco Boulevard Bridge at Harvey Canal, (PW 2017-046-RBP; DOTD H.004396), Jefferson Parish, LA. BFM Corporation provided extensive surveying services for a topographic survey and right-of-way (R/W) determination for the project. Project elements included setting GPS Static Control (5 permanent control points), traversing a proposed survey line, and land topography surveying. Additional phases include hydrographic topography/bathymetric surveying of the project area, the right-of-way determination, and subsurface utility engineering (SUE). Drone Surveying was utilized throughout the project. A Route Topographic Survey was also included as part of the scope, as was Subsurface Utility Engineering (SUE). (\$478,744 (fee); 2020)

FEMA New Orleans Streets Program/Submerged Roads Program (Recovery Roads Program), City of New Orleans, LA. BFM Corporation provided surveying services for the FEMA New Orleans Streets Program (Recovery Roads Program; approximately three dozen separate contracts); this work involved the preparation of a Route Topographic Survey (FEMA) for each project; the full scope plan & profile included all services, utilities, properties, elevations and items necessary to perform any and all engineering and construction work. Project involved coordination with Prime Firm schedule and the City, as well as extensive records research. (\$8.9 M (cumulative fee); 2013 – 2018)

Upper Barataria Basin Risk Reduction (UBRR) Project, Segment 3, Lafourche Parish, LA. BFM's scope of services included all topographic & hydrographic surveying as directed; magnetometer surveying was utilized to determine the presence of pipelines within the subject survey area. BFM established as client-supplied baseline and Temporary Benchmarks (TBM). Provided cross sections along Bayou Des Allemands and located elements & existing improvements, as well as above- & below-ground utilities. As-built data was also taken into account. (\$118,873 (fee); 2019)

Orange Lane Pump Station Project, Grand Isle, Jefferson Parish, LA. The project consists of a new storm water pumping station on the intersection of Orange Lane at Orleans Avenue in Grand Isle, Louisiana. The scope of services includes obtaining topographical survey information and the preparation of a drainage map for the project. Phase 1 of the project involved the topographic and right of way surveying services; BFM conducted a site topographic survey at the proposed lift station site and provided boundary surveying to determine rights of way. Phase 2 of the project established the Drainage Map. BFM located all drainage structures; this included ditches, culverts, drain inlets, and catch basins. A drone survey was executed to gather a 25 ft elevation grid throughout the project area. (\$32,280 (fee); 2020)

Causeway Boulevard Overpass (over Airline Drive), Jefferson Parish, LA. BFM's surveying services included Route Topographic and Boundary Survey for the project, which was located at the Causeway Boulevard Overpass of Airline Drive. This was designated as Phase 3 of the Rehabilitation Project, which included Ramps 4, 5, and the Traffic Circle. Drone services were also included. (\$68,090 (fee); 2020)



Curtis "Jay" Barrios

Survey Crew Chief

American Traffic Safety Service Assn. – Traffic Flagger
Transportation Work Identification Card (TWIC)

Years with this Firm: 31 (1990)
Total Years Experience: 31 (1990)

Mr. Barrios' surveying experience includes boundary, hydrographic, and topographic. He has worked on location and performed topographic surveys for a number of large capital projects. Further, Mr. Barrios has been involved on major transmission projects for Entergy and South Central Bell (AT&T). He is American Traffic Safety Service Association certified as a Traffic Flagger, and is Transportation Work Identification Card (TWIC) certified.

Causeway Boulevard Overpass (over Airline Drive), Jefferson Parish, LA. BFM's surveying services included Route Topographic and Boundary Survey for the project, which was located at the Causeway Boulevard Overpass of Airline Drive. This was designated as Phase 3 of the Rehabilitation Project, which included Ramps 4, 5, and the Traffic Circle. Drone services were also included. (\$68,090 (fee); 2020)

Orange Lane Pump Station Project, Grand Isle, Jefferson Parish, LA. The project consists of a new storm water pumping station on the intersection of Orange Lane at Orleans Avenue in Grand Isle, Louisiana. The scope of services includes obtaining topographical survey information and the preparation of a drainage map for the project. Phase 1 of the project involved the topographic and right of way surveying services; BFM conducted a site topographic survey at the proposed lift station site and provided boundary surveying to determine rights of way. Phase 2 of the project established the Drainage Map. BFM located all drainage structures within the Limits of Survey; this included ditches, culverts, drain inlets, and catch basins. A drone survey was executed to gather a 25 ft elevation grid throughout the project area. (\$32,280 (fee); 2020)

High Water Mark/Inundation Data Surveys, Various Parishes throughout Southern Louisiana. In the wake of Hurricanes Katrina and Rita, BFM provided surveying for high water marks/inundation data as noted by URS technicians in various Parishes throughout Southern Louisiana, including the Parishes of Livingston, Coupee, Rapides, Calcasieu, Allen, Beauregard, Vernon, Avoyelles, and St. Landry. (\$27,300 (fee); 2006)

Levee Breaches at the Inner Harbor Navigational Canal Reaches for Levee & Floodwall Reconstruction, New Orleans, LA. BFM provided topographic surveying for various Levee Breaches at the Inner Harbor Navigational Canal Reaches for Levee & Floodwall Reconstruction. A U.S. Army Corps of Engineers project. (\$115,300 (fee); 2006)

London Avenue Canal Floodwall & Levee Breaches, New Orleans, LA. BFM established cross sections at various locations of the London Avenue Canal for floodwall breach repairs. A U.S. Army Corps of Engineers project. BFM also performed hydrographic surveys at various points. (\$62,200 (fee); 2006)

Bonnabel Pump Station Safe House, JPPW 2003-022-PS, Jefferson Parish, LA. BFM provided surveying services associated with an elevated safe house; part of a Parish-wide project to establish safe houses for pumping stations at multiple locations which will allow pump operators to safely remain at their station, ensuring the pumps continue to operate, during a hurricane event. (\$6,815 (fee); 2005)

Multiple Post-Katrina FEMA Trailer Site Surveys throughout the Metro Area. BFM provided topographic surveying for multiple FEMA trailer sites (Coca-Cola Plant, Perry Street Wharf, UNO-SUNO, etc.) as requested. (2005/2006)



The Louisiana Professional Engineering and Land Surveying Board
has the following information on file:

Lookup Detail View

Contact

Name	Public Address
BFM Corporation, LLC	BFM Corporation, LLC Ms. Dale L. Holley 15 Veterans Memorial Boulevard Kenner, LA 70062

License/Certificate Information w/ Supervision

License	Status	First Issuance Date	Expiration Date	Supervisor(s)
VF.0000008	Active	09/11/1984	09/30/2021	Mr. Ralph P. Fontcuberta Jr. # PLS.0004329 - Active

Generated on: 9/30/2019 9:52:01 AM



**LOUISIANA PROFESSIONAL
ENGINEERING & LAND SURVEYING BOARD
(LAPELS)**

9643 Brookline Avenue, Suite 121
Baton Rouge, LA 70809
Phone (225) 925-6291
www.lapels.com

Mr. Ralph P. Fontcuberta Jr.

License/Certificate Type - Number	Expiration Date
PLS.0004329	09/30/2022

Status: **Active**



**LOUISIANA PROFESSIONAL
ENGINEERING & LAND SURVEYING BOARD
(LAPELS)**

9643 Brookline Avenue, Suite 121
Baton Rouge, LA 70809
Phone (225) 925-6291
www.lapels.com

Mr. Chad Mitchell Poche

License/Certificate Type - Number	Expiration Date
PE.0027667	09/30/2022

Status: **Active**



**LOUISIANA PROFESSIONAL
ENGINEERING & LAND SURVEYING BOARD
(LAPELS)**

9643 Brookline Avenue, Suite 121
Baton Rouge, LA 70809
Phone (225) 925-6291
www.lapels.com

Mr. Gary James Lambert Jr.

License/Certificate Type - Number	Expiration Date
PLS.0005259	03/31/2023

Status: **Active**



Division of Small and Emerging Business Development
SEBD CERTIFICATION

BFM CORPORATION, LLC

is hereby certified as a Small and Emerging Business Enterprise.

This certification is valid beginning 7/19/2019 and supersedes any registration or listing previously issued. At any time there is a change in ownership or control of the firm, notification must be made immediately to the Division of Small and Emerging Business Development.

Issued at Baton Rouge, Louisiana 7/19/2019

This certification expires on: 7/19/2029

Certification No. 9551

John W. Matthews, Jr.,
Executive Director, Entrepreneurial Services



DIVISION OF SMALL BUSINESS SERVICES

This certification acknowledges that

BFM CORPORATION, LLC

is Certified-Active as a Small Entrepreneurship with
Louisiana Economic Development's Hudson Initiative.

This certification is valid from 7/14/2020 to 7/14/2021.

Certification No. 9551

Stephanie Hartman,
Director, Entrepreneurial Services

NOTE: BFM Corporation, LLC, has been certified as a Small Entrepreneurship since first applying in 2011. Due to unforeseen circumstances, we have not received our renewal certificate for 2021-2022.



GULF SOUTH

ENGINEERING AND TESTING, INC.

Geotechnical & Materials Consultants

OVERVIEW & CAPABILITIES/SERVICES

Gulf South Engineering and Testing, Inc. (Gulf South) is a geotechnical engineering and construction materials testing and inspection company which began operations in 2011. Since that time, we have grown to two offices and over two dozen employees. Gulf South provides a broad range of geotechnical related services, completing **more than 100 geotechnical engineering projects** and **300 construction materials testing and inspection projects each year**. These projects typically include soil borings (shallow and deep borings), laboratory testing (AASHTO, ASTM methods, etc.), soil classification (USCS), geotechnical engineering, and construction material testing and field inspection.

Gulf South is a woman-owned, Hudson Initiative-certified & Regional Transit Authority-recognized small business in Louisiana. Our laboratory is AASHTO and CCRL certified and USACE validated.

Geotechnical Engineering Services

Gulf South's ownership and senior management have decades of combined experience in the profession and have completed thousands of projects. One of Gulf South's Principals, **Chad M. Poché, P.E.**, is a founder of the company and Professional Engineer registered in Civil Engineering in Louisiana and Mississippi with specific training and experience in geotechnical engineering. He has nearly 30 years of experience in planning, administering, and conducting geotechnical investigations.

The firm has specific engineering experience and training in **Geotechnical Engineering, Foundation Design, and Geology & Geohydrology**; our staff has extensive experience in all aspects of soil mechanics and geotechnical engineering with specific knowledge in the following areas:

- *Shallow and deep foundations (piles, shafts, augercast, screw/anchor piles)*
- *Deep excavations, cofferdams, retaining walls*
- *Levees and soft ground construction; slope stability & seepage*
- *Earthwork; settlement analyses*
- *Shoreline protection*
- *Scour analyses*
- *LRFD Design*
- *Mechanically Stabilized Earth (MSE) Walls*
- *Development of load test programs*
- *Geotechnical instrumentation and construction monitoring*
- *Canals and pump station foundations*
- *Pipe bedding and backfill*
- *Roadways, bridges, pavements*

Field Investigation Services

Gulf South owns truck mounted (ARDCO C-1000) and track mounted (ARDCO SD 350) drilling rigs with associated and appurtenant support equipment (water trucks and buggy). Our equipment and crews are capable of drilling soil borings to depths of up to 300 feet and installing monitor wells, piezometers, and inclinometers. We can also perform CPT soundings, geoprobe borings, and field testing at any site. Our staff has extensive experience in planning, oversight, and direction of field investigations.

Laboratory Testing Services

Gulf South's laboratory is equipped to serve the specific needs of our clients and managed by trained and experienced personnel. All testing is performed in accordance with ASTM, AASHTO, and/or other approved procedures. Gulf South routinely performs soil and concrete strength testing (unconfined and triaxial), soil classification tests (Atterberg limits, moisture content, density, particle size), soil and aggregate sieves, organic content, pH, soil resistivity, and moisture/density relationships (Proctor tests). Gulf South's laboratories are managed by full time, experienced, managers and staff. As noted, **Gulf South's Kenner laboratory is AASHTO and CCRL certified and USACE validated.**

Construction Materials Testing & Inspection

Gulf South provides a full range of construction materials testing and inspection services for structures, earthwork, foundations, pipelines, and pavements. The range of services provided includes:

- *Fill and base compaction and density testing*
- *Vibration monitoring*
- *Pre- and post-construction inspection*
- *Concrete testing and inspection*
- *Soil testing (field and laboratory)*
- *Asphalt testing*
- *Pile (driven & augercast) and shaft installation monitoring*
- *Load tests*
- *Earthwork/proof roll inspection*
- *Welding inspection*
- *Steel inspection*
- *Noise monitoring*

We have provided construction testing and oversight for projects as small as fill for a house pad to as large as the **\$1.2 billion Louis Armstrong New Orleans International Airport New Terminal project.**

Resident Inspection Services

Gulf South has experience providing Resident Inspection Services for projects. Our services include:

- *Observe construction at all times while the Construction Contractor is on-site*
- *Inspect, measure, and track (eligible) work completed for pay requests approved by the Construction Contractor and the Engineer and provide this information to the client*

- *Notify the Construction Contractor and Engineer if observe that any work may adversely affect utilities, adjacent areas and/or property, etc.*
- *Prepare daily field reports, and/or field books*
- *Photograph and/or document work progress on a daily basis, capable of using in social media posts by the client*
- *Document and coordinate with the client and any secondary agencies for unforeseen items encountered during construction*
- *Notify utility agencies in a timely manner of any drainage, sewer, or water line damage so that such facilities may be properly inspected*
- *Coordinate with and monitor work performed by material testing agency, utilities, and other on-site visitors as required*
- *Prepare memorandums or documentation required for field changes or plan changes*
- *Verify that Construction Contractor providing adequate traffic control and site safety procedures*
- *Prepare incident reports & notify the client and Construction Contractor of any safety concerns and potential impacts to the public*
- *Maintain records per the client's directive*

PROFESSIONAL REPUTATION & REFERENCE

The Principals and key employees of Gulf South have many years of applicable experience in working for and with Government Agencies and private industry. We are proud that a majority of its work is from repeat clients – we complete our projects on-time and within budget. Gulf South invites you to contact any of our clients for a candid discussion of our service and professionalism, and offer these direct references:

Joey Tureau, Director of Transportation, Ascension Parish

(225-450-1013 | jtureau@apgov.us)

Mark R. Drewes, P.E., Director, Jefferson Parish Public Works Department

(504-736-6783 | JPPW@jeffparish.net)

Neil Schneider, CCM, P.E., Director, Capital Projects, Jefferson Parish Public Works Department

(504-736-6783 | JPPW@jeffparish.net)

Tom Schreiner, Deputy CAO, City of Kenner Public Works & Capital Projects

(504-468-7515 | tschreiner@kenner.la.us)

Angela DeSoto, P.E., Director, Jefferson Parish Engineering Department

(504-736-6511 | ADeSoto@jeffparish.net)

Sid Trouard, P.E., Program Manager, Jefferson Parish Sewerage Capital Improvement Program

(504-736-6386 | STrouard@jeffparish.net)

INSURANCE

Gulf South Engineering and Testing, Inc., along with our sister company BFM Corporation, LLC, are included as named insureds on a single professional liability policy providing coverage limits of \$2,000,000 each claim and aggregate. This policy is issued by the Berkley Insurance Company.

REPRESENTATIVE PROJECTS

Charity Hospital Building Redevelopment Project, New Orleans, LA

1532 Tulane Holdco, LLC (New Orleans LA); Joe St. Martin; jsm@1532tulane.com

Gulf South provided all construction materials and environmental testing for the project, which involved the complete renovation of the Charity Hospital Building (more than 1 million sf) in New Orleans, Louisiana. Inspection and testing consisted of soil borings, laboratory testing, asbestos abatement, concrete testing, mortar testing, steel coupon testing, concrete coring, and building envelope testing. The project's total cost was \$500 million. (\$200,000 (est. fee); ongoing)

Highway 90 Tie-In Levee, Upper Barataria Risk Reduction Program Segment 4, St. Charles Parish, LA

Lafourche Basin Levee District (Vacherie LA); Donald Ray Henry, 225-265-7545; drhenry@lbld.us.com

Geotechnical investigation for construction of a new earthen levee within the flood protection/risk reduction system in St. Charles Parish, LA. Gulf South's scope includes drilling undisturbed soil borings (1 at 200 ft., 3 at 75 ft.), CPT probes (6 at 75 ft.), lab testing, and engineering analyses including site/soil characterization, global/local SSA for floodwalls, levee tie-ins, and floodgates, seepage analyses for sheetpile walls, settlement/downdrag analyses, unbalanced forces for structures, pile load capacities, pile foundation load-deflection relationship, estimates of settlement, ground improvement recommendations, and general construction procedures and recommendations. (\$174,720 (fee); 2021)

Bayou Des Allemands Gate, Upper Barataria Risk Reduction Program Segment 3, St. Charles Parish, LA

Lafourche Basin Levee District (Vacherie LA); Donald Ray Henry, 225-265-7545; drhenry@lbld.us.com

Geotechnical investigation for construction of a new swinging barge gate structure within the UBRR flood protection/risk reduction system in St. Charles Parish, LA. Gulf South's scope includes drilling undisturbed soil borings (1 at 200 ft., 2 at 120 ft., 1 at 100 ft.), lab testing (including consolidation tests), and engineering analyses including site/soil characterization, global/local SSA for floodwalls, levee tie-ins, and floodgates, seepage analyses for sheetpile walls, settlement/downdrag analyses, unbalanced forces for structures, pile load capacities, pile foundation load-deflection relationship, estimates of settlement, ground improvement recommendations, and general construction procedures and recommendations. One boring was performed over water; the remaining borings were performed over land. (\$145,885 (fee); 2021)

St. Peter's Ditch – Phase IV (Pump Station at Clearview), Metairie, Jefferson Parish, LA

Jefferson Parish Public Works Department; Reda M. Youssef, P.E., 504-736-6783; JPPW@jeffparish.net

Project consisted of the construction of a new pump station and below grade culverts and piping for the Jefferson Parish Department of Public Works. Gulf South provided materials testing and inspection during construction (CMT). Scope included performing pile plant inspection, pile monitoring during installation, vibration monitoring, concrete testing and inspection, earthwork testing and inspection including soil sampling and field density tests, and steel inspection. (\$110,000 (fee); 2016)

FEMA Submerged Roads Program, Marlyville-Fountainbleau Neighborhood, City of New Orleans, LA

City of New Orleans Department of Public Works; Mark Penny, 504-606-0997; mdpenny@nola.gov

Geotechnical investigation for the City of New Orleans, FEMA Submerged Roads Program, to determine existing pavement conditions (thicknesses and material types). Scope of work included drilling 73 pavement cores and soil borings to a depth of 5 feet (66 in asphalt and 7 in concrete), performing laboratory testing, and providing engineering reports of our findings. (\$58,493 (fee); 2013)

Salt Bayou Road Bridge Engineering Analysis Review (EAR), City of Slidell, St. Tammany Parish, LA
Baker Pile Driving & Site Work, LLC (Covington LA); Scott Gros, P.E., 985-792-5001; scottgros@gmail.com
Gulf South performed an EAR of alternative pile type/size recommendations for replacement bridge structure off LA Highway 433 at Salt Bayou Road in Slidell, LA. Gulf South's scope includes load and resistance factor design (LRFD) for steel H-piles per DOTD standards (allowable shaft capacities, estimates of settlement, and general construction recommendations). (\$27,000 (fee); 2018)

FEMA Housing Inspection, East Baton Rouge Parish, LA

Royal Engineers & Consultants, LLC (New Orleans LA); Dwayne Bernal, 985-727-9377

Project management for inspections for FEMA program (Shelter in Place Program Support) in East Baton Rouge Parish, LA. Gulf South's scope includes managing inspection personnel per assigned task orders. (\$320,000 (fee); 2016)

FEMA Submerged Roads Program, Florida Avenue Neighborhood, City of New Orleans, LA

City of New Orleans Department of Public Works; Mark Penny, 504-606-0997; mdpenny@nola.gov

Geotechnical investigation for the City of New Orleans, FEMA Submerged Roads Program, to determine existing pavement conditions (thicknesses and material types). This investigation was for the Florida Avenue Neighborhood in New Orleans, LA. Scope of work included drilling 19 pavement cores and soil borings to a depth of 5 feet (13 in asphalt and 6 in concrete), performing laboratory testing, and providing engineering reports of our findings. (\$20,945 (fee); 2013)

Community Safe Room (Corbin Avenue), Town of Walker, Livingston Parish, LA

Livingston Parish Office of Homeland Security and Emergency Preparedness; Heather Crain, 225-686-4415

Geotechnical investigation for a new building (17,000 sf) at the subject site. Scope includes drilling five undisturbed soil borings to depths of 40, 20, & six feet and providing engineering analyses including allowable soil bearing values, allowable pile/shaft load capacities, estimate of settlement, flexible and/or rigid pavement design recommendations, and general construction recommendations. (\$8,925 (fee); 2018)

Wastewater Treatment Plant – New Administration Building & Safe Room, Marrero, Jefferson Parish, LA

Digital Engineering (Kenner LA); Timothy Smith, 504-468-6129; tsmith@deii.net

Geotechnical investigation for a new administration building and safe room at the Marrero WWTP off Lapalco Blvd. in Marrero, LA. Gulf South's scope includes drilling two soil borings each to a depth of 60 feet, lab testing, and geotechnical engineering analysis including allowable pile load capacities, estimate of settlement, and general construction recommendations. (\$6,500 (fee); 2015)

Engineering Analysis Review - Lafitte Tidal Protection Project (Phase I), Lafitte, Jefferson Parish, LA

G&S Engineering, LLC (Mandeville LA); Scott Gros, 504-744-0630; scottgros@gmail.com

Engineering analysis review of alternative pile type/size recommendations (provided by Client) for drainage structure site in Jefferson Parish, near Lafitte, LA. Gulf South's scope includes engineering analysis consisting of LPILE analysis and general construction recommendations. (\$5,000 (fee); 2016)

S Lafourche Levee District: Cut Off/Point Aux Chenes Levee Design - Reach K, Lafourche Parish, LA

All South Consulting Engineers, LLC (Metairie LA); Stephen Bourg, P.E., 504-322-2783; sbourg@ascells.com
Geotechnical investigation for proposed levee improvements to Reach K along Grand Bayou between Cut Off and Point Aux Chenes in Lafourche Parish, LA. Gulf South's scope includes two drilling phases consisting of three soil borings to a depth of 60 feet each for Phase I (land borings), and drilling six soil borings to depths of 60 feet (3 borings for levee) and 20 feet (3 borings for borrow/fill) for Phase II. Phase II borings drilled in water or marsh. In addition, laboratory testing (strength, classification, consolidation), and geotechnical engineering analysis consisting of new levee design recommendations, slope stability analyses, estimates of settlement, estimate of strength gain, and general construction recommendations were performed. All project elements reviewed by Louisiana CPRA. (\$69,000 (fee); 2015)

Bayou Gauche/Sunset Levee - New Roller Gate, Upper Barataria Risk Reduction Program Segment 2, St. Charles Parish, LA

Lafourche Basin Levee District (Vacherie LA); Donald Ray Henry, 225-265-7545; drhenry@lbld.us.com
Geotechnical investigation for construction of a new roller gate and T-wall structures within the UBRR flood protection/risk reduction system in St. Charles Parish, LA. Gulf South's scope includes drilling undisturbed soil borings (2 at 200 ft.), CPT probes (2 at 200 ft.), lab testing (including consolidation tests), and engineering analyses including site/soil characterization, global/local SSA for floodwalls, levee tie-ins, and floodgates, design levee lift stability, seepage analyses for sheetpile walls, settlement/downdrag analyses, unbalanced forces for structures, pile load capacities, pile foundation load-deflection relationship, estimates of settlement, ground improvement recommendations, and general construction procedures and recommendations. The borings and CPT were performed over water using barge-mounted equipment. (\$110,880 (fee); 2020)

Levee Raising, Twin Oaks/Sugarland Levee Area, North Lafourche Levee District, Lockport, LA

Leonard Chauvin, P.E., PLS, Inc. (Thibodaux LA); Dustin Rabalais, 985-449-1376
Geotechnical investigation for raising of existing levee from Butch Hill to Company Canal in Lafourche. The investigation includes drilling 8 borings (5 to 50 ft. and 3 to 80 ft. below the ground surface), laboratory testing; and engineering analyses consisting of slope stability and settlement. (\$26,500 (fee); 2012)

Louis Armstrong New Orleans International Airport: New North Terminal, Kenner, LA

Terracon Consultants, Inc. (New Orleans LA); Daren L. Thomas, P.E., 504-818-3638
Gulf South performed field and laboratory testing during construction of the Terminal Building Project at the Louis Armstrong New Orleans International Airport in Kenner, Louisiana. Gulf South provided QA oversight of the contractor for the owner for this \$1.2 billion project which consists of the construction of a new terminal facility including a new 800,000 sf building, vehicle ramps, parking, etc. QA inspection consists of pile monitoring, concrete inspection and testing, earthwork testing and inspection, and steel inspection. The project was valued at \$1.2 billion. (\$2M (fee); 2019)

Hagan Lafitte Drainage Updates, New Orleans, LA

Stantec (New Orleans LA); Ryan LeBlanc, 504-322-3050; randy.leblanc@stantec.com
Gulf South performed construction materials testing and inspection during construction of the project. Testing consisted of density tests, concrete, asphalt, and earthwork. Total project cost was \$13 million. (\$85,562 (fee); 2021)



Chad M. Poché, P.E.

Vice President; Geotechnical Engineer

2002, Civil Engineer, Mississippi No. 15405

1998, Civil Engineer, Louisiana No. 27667

M.S., 1998, Civil Engineering, University of New Orleans

B.S., 1993, Civil Engineering, Louisiana State University

TWIC (Transportation Worker Identification Card)

Years with this Firm: 10 (2011)

Total Years Experience: 28 (1993)

Mr. Poché is the Vice President, co-founder, and partner in Gulf South. He has been a consulting geotechnical engineer for nearly 30 years in South Louisiana, working on traditional and unique geotechnical engineering projects (shallow and deep foundation design, slope stability, pavement design, etc.). Mr. Poché has also provided construction oversight for virtually every type of earthwork related project. He has been the geotechnical engineer of record for thousands of projects throughout his career. Further, Mr. Poché is a Member-at-Large of the American Council of Engineering Companies of Louisiana.

Mr. Poché's experience includes the development of appropriate scopes of work and proposals for a broad range of projects; planning and coordinating analyses; preparing technical reports; foundation and geotechnical engineering design; construction recommendations; Miss. River facility permitting; managing personnel and office operations, and; serving as an Expert Witness. Mr. Poché has logged soil borings; overseen the installation of ground water monitoring wells, piezometers, and inclinometers; overseen and evaluated pile load tests; overseen, performed, and evaluated dynamic pile testing (PDA and PIT); performed CMT field testing and inspection; and performed laboratory testing.

Charity Hospital Building Redevelopment Project, New Orleans, LA. Gulf South provided all construction materials and environmental testing for the project, which involved the complete renovation of the Charity Hospital Building (more than 1 million sf) in New Orleans, Louisiana. Inspection and testing consisted of soil borings, laboratory testing, asbestos abatement, concrete testing, mortar testing, steel coupon testing, concrete coring, and building envelope testing. The project's total cost was \$500 million. (\$200,000 (est. fee); ongoing)

Highway 90 Tie-In Levee, Upper Barataria Risk Reduction Program Segment 4, St. Charles Parish, LA. Geotechnical investigation for construction of a new earthen levee within the flood protection/risk reduction system in St. Charles Parish, LA. Gulf South's scope includes drilling undisturbed soil borings (1 at 200 ft., 3 at 75 ft.), CPT probes (6 at 75 ft.), lab testing, and engineering analyses including site/soil characterization, global/local SSA for floodwalls, levee tie-ins, and floodgates, seepage analyses for sheetpile walls, settlement/downdrag analyses, unbalanced forces for structures, pile load capacities, pile foundation load-deflection relationship, estimates of settlement, ground improvement recommendations, and general construction procedures and recommendations. (\$174,720 (fee); 2021)

Bayou Des Allemands Gate, Upper Barataria Risk Reduction Program Segment 3, St. Charles Parish, LA. Geotechnical investigation for construction of a new swinging barge gate structure within the UBRR flood protection/risk reduction system in St. Charles Parish, LA. Gulf South's scope includes drilling undisturbed soil borings (1 at 200 ft., 2 at 120 ft., 1 at 100 ft.), lab testing (including consolidation tests), and engineering

Chad M. Poché, P.E.

continued

analyses including site/soil characterization, global/local SSA for floodwalls, levee tie-ins, and floodgates, seepage analyses for sheetpile walls, settlement/downdrag analyses, unbalanced forces for structures, pile load capacities, pile foundation load-deflection relationship, estimates of settlement, ground improvement recommendations, and general construction procedures and recommendations. One boring was performed over water; the remaining borings were performed over land. (\$145,885 (fee); 2021)

Bayou Gauche/Sunset Levee - New Roller Gate, Upper Barataria Risk Reduction Program Segment 2, St. Charles Parish, LA. Geotechnical investigation for construction of a new roller gate and T-wall structures within the UBRR flood protection/risk reduction system in St. Charles Parish, LA. Gulf South's scope includes drilling undisturbed soil borings, CPT probes, lab testing (including consolidation tests), and engineering analyses including site/soil characterization, global/local SSA for floodwalls, levee tie-ins, and floodgates, design levee lift stability, seepage analyses for sheetpile walls, settlement/downdrag analyses, unbalanced forces for structures, pile load capacities, pile foundation load-deflection relationship, estimates of settlement, ground improvement recommendations, and general construction procedures and recommendations. The borings and CPT were performed over water using barge-mounted equipment. (\$110,880 (fee); 2020)

FEMA Submerged Roads Program, Marlyville-Fountainbleau Neighborhood, City of New Orleans, LA. Geotechnical investigation to determine existing pavement conditions (thicknesses and material types). Scope included drilling 73 pavement cores and soil borings to a depth of 5 feet (66 in asphalt and 7 in concrete), performing laboratory testing, and providing engineering reports of our findings. (\$58,493 (fee); 2013)

FEMA Submerged Roads Program, Pontchartrain Park, City of New Orleans, LA. Geotechnical investigation for the FEMA Submerged Roads Program, to determine existing pavement conditions (thickness & material types). Scope included drilling 65 pavement cores and soil borings to a depth of 5 feet each. Proposed pavement cores consist of 12 asphalt cores and 53 concrete cores. (\$16,360 (fee); 2014)

Community Safe Room (Corbin Avenue), Town of Walker, Livingston Parish, LA. Geotechnical investigation for a new building (17,000 sf) at the subject site. Gulf South's scope includes drilling five undisturbed soil borings to depths of 40, 20, & six feet and providing engineering analyses including allowable soil bearing values, allowable pile/shaft load capacities, estimate of settlement, flexible and/or rigid pavement design recommendations, and general construction recommendations. (\$8,925 (fee); 2018)

Marrero Wastewater Treatment Plant – New Administration Building and Safe Room, Marrero, Jefferson Parish, LA. Geotechnical investigation for a new administration building and safe room at the Marrero WWTP off Lapalco Blvd. in Marrero, LA. Gulf South's scope includes drilling two soil borings each to a depth of 60 feet, lab testing, and geotechnical engineering analysis including allowable pile load capacities, estimate of settlement, and general construction recommendations. (\$6,500 (fee); 2015)

South Lafourche Levee District: Cut Off/Point Aux Chenes Levee Design - Reach K, Lafourche Parish, LA. Geotechnical investigation for proposed levee improvements to Reach K along Grand Bayou between Cut Off and Point Aux Chenes. Scope includes two drilling phases consisting of three soil borings for Phase I (land borings), and drilling six soil borings (3 borings for levee; 3 borings for borrow/fill) for Phase II. Phase II borings drilled in water or marsh. In addition, lab testing (strength, classification, consolidation), and geotechnical engineering analysis consisting of new levee design recommendations, slope stability analyses, estimates of settlement, estimate of strength gain, and general construction recommendations were performed. All project elements reviewed by Louisiana CPRA. (\$69,000 (fee); 2015)



Blake E. Vutera, P.E.

Engineering Manager; Geotechnical Engineer

2013, Civil Engineer, Louisiana No. 38607

2018, Professional Engineer, Texas No. 129410

M.S., 2018, Civil Engineering, University of New Orleans

Certification - Coastal Engineering, 2018, University of New Orleans

B.S., 2008, Civil Engineering, Louisiana State University

TWIC (Transportation Worker Identification Card)

Years with this Firm: 9 (2012)

Total Years Experience: 15 (2006)

Mr. Vutera serves as Gulf South's Engineering Manager and is based in Gulf South's Kenner, LA office. His experience with the firm includes daily work on geotechnical engineering projects as well as managing all geotechnical investigations and providing assistance with laboratory testing and construction materials testing and inspection. Engineering analyses that Mr. Vutera routinely performs include shallow and deep foundations, slope stability analyses, settlement estimates, and pavement design. He is responsible for engineering design, report preparation, proposal preparation, personnel management, project management, and client interaction.

Mr. Vutera's field work consists of borehole logging; installation of ground water monitoring wells, piezometers, and inclinometers; overseen and evaluated pile load tests; overseen, performed, and evaluated dynamic pile testing (PDA and PIT); pavement coring; nuclear field density tests; and hand augers. Mr. Vutera has been the geotechnical engineer of record for hundreds of projects throughout his career.

Highway 90 Tie-In Levee, Upper Barataria Risk Reduction Program Segment 4, St. Charles Parish, LA.

Geotechnical investigation for construction of a new earthen levee within the flood protection/risk reduction system in St. Charles Parish, LA. Gulf South's scope includes drilling undisturbed soil borings (1 at 200 ft., 3 at 75 ft.), CPT probes (6 at 75 ft.), lab testing, and engineering analyses including site/soil characterization, global/local SSA for floodwalls, levee tie-ins, and floodgates, seepage analyses for sheetpile walls, settlement/downdrag analyses, unbalanced forces for structures, pile load capacities, pile foundation load-deflection relationship, estimates of settlement, ground improvement recommendations, and general construction procedures and recommendations. (\$174,720 (fee); 2021)

Charity Hospital Building Redevelopment Project, New Orleans, LA. Gulf South provided all construction materials and environmental testing for the project, which involved the complete renovation of the Charity Hospital Building (more than 1 million sf) in New Orleans, Louisiana. Inspection and testing consisted of soil borings, laboratory testing, asbestos abatement, concrete testing, mortar testing, steel coupon testing, concrete coring, and building envelope testing. The project's total cost was \$500 million. (\$200,000 (est. fee); ongoing)

FEMA Housing Inspection, East Baton Rouge Parish, LA. Project management for inspections for FEMA program (Shelter in Place Program Support) in East Baton Rouge Parish, LA. Gulf South's scope includes managing inspection personnel per assigned task orders. (\$320,000 (fee); 2016)

Marrero Wastewater Treatment Plant – New Administration Building and Safe Room, Marrero, Jefferson Parish, LA. Geotechnical investigation for a new administration building and safe room at the Marrero WWTP off Lapalco Blvd. in Marrero, LA. Gulf South's scope includes drilling two soil borings each to a depth of 60 feet, lab testing, and geotechnical engineering analysis including allowable pile load capacities, estimate of settlement, and general construction recommendations. (\$6,500 (fee); 2015)

Blake E. Vutera, P.E.

continued

FEMA Submerged Roads Program, Marlyville-Fountainbleau Neighborhood, City of New Orleans, LA.

Geotechnical investigation for the City of New Orleans, FEMA Submerged Roads Program, to determine existing pavement conditions (thicknesses and material types). Scope of work included drilling 73 pavement cores and soil borings to a depth of 5 feet (66 in asphalt and 7 in concrete), performing laboratory testing, and providing engineering reports of our findings. (\$58,493 (fee); 2013)

Replacement of Sewer Pump Station (SPS) 8, Sewerage & Water Board of New Orleans, LA.

This \$15 million project consisted of the replacement of a sewer pump station for the Sewerage & Water Board of New Orleans. Gulf South provided field and laboratory inspection and testing of materials during construction (CMT). Our scope of services included performing: a pile load test, pile plant inspection, pile monitoring during installation, vibration monitoring, concrete testing and inspection, earthwork testing and inspection including field density tests, and steel inspection. (\$103,411 (fee); 2019)

FEMA Submerged Roads Program, Pontchartrain Park, City of New Orleans, LA.

Geotechnical investigation for the City of New Orleans c/o SESI, FEMA Submerged Roads Program, to determine existing pavement conditions (thickness & material types). Scope of work included drilling 65 pavement cores and soil borings to a depth of 5 feet each. Proposed pavement cores consist of 12 asphalt cores and 53 concrete cores. (\$16,360 (fee); 2014)

Safe House Project – Claiborne Avenue Facility, Sewerage and Water Board of New Orleans, LA.

Field testing and evaluation for design and remodel of an existing building into a safe house for the Sewerage and Water Board of New Orleans. Testing consisted of coring concrete walls, columns, and floors and sampling steel from steel beams and trusses to determine their structural integrity. (\$4,928 (fee); 2016)

New Safe Room (LA Highway 61), LaPlace, St. John the Baptist Parish, LA.

Geotechnical investigation for a new safe room building (3,200 sq. ft.; 1-story) off LA Hwy 61 (Airline Hwy.) for the Parish in LaPlace, LA. Gulf South's scope includes drilling one (1) soil boring to a depth of 50 feet, lab testing, and geotechnical engineering analysis including allowable soil bearing values, allowable pile load capacities, estimate of settlement, and general construction recommendations. (\$2,800 (fee); 2015)

FEMA Submerged Roads Program, Bayou St. John & Fairgrounds Neighborhoods, City of New Orleans, LA.

Geotechnical investigation for the City of New Orleans, FEMA Submerged Roads Program, to determine existing pavement conditions (thickness and material types). This investigation was for the Seventh Ward Neighborhoods in New Orleans, LA. Scope of work included drilling 8 pavement cores and 2 soil borings to a depth of 5 feet (2 in concrete, 4 in asphalt, 2 in combo. concrete/asphalt), performing laboratory testing, and providing engineering reports of our findings. (\$7,786 (fee); 2014)

South Lafourche Levee District: Cut Off/Point Aux Chenes Levee Design - Reach K, Lafourche Parish, LA.

Geotechnical investigation for proposed levee improvements to Reach K along Grand Bayou between Cut Off and Point Aux Chenes in Lafourche Parish, LA. Gulf South's scope includes two drilling phases consisting of three soil borings to a depth of 60 feet each for Phase I (land borings), and drilling six soil borings to depths of 60 feet (3 borings for levee) and 20 feet (3 borings for borrow/fill) for Phase II. Phase II borings drilled in water or marsh. In addition, laboratory testing (strength, classification, consolidation), and geotechnical engineering analysis consisting of new levee design recommendations, slope stability analyses, estimates of settlement, estimate of strength gain, and general construction recommendations were performed. All project elements reviewed by Louisiana CPRA. (\$69,000 (fee); 2015)



Sara E. Lockwood, E.I.

Graduate Geotechnical Engineer

B.S., 2019, Civil Engineering, University of New Orleans

B.S., 2016, Physics, Loyola University

2020, Engineering Intern, Louisiana, No. EI.0034718

Years with this Firm: 2 (2019)

Total Years Experience: 4 (2017)

Ms. Lockwood is serving as a Graduate Engineer, providing such duties as project management, geotechnical engineering analyses, and field & laboratory testing & inspection. Her coursework included such disciplines as foundation engineering, soil mechanics, geotechnical engineering, structural concrete & structural steel design, and sustainability principals. She worked as an intern during her college career for a local consulting group, assisting on a variety of environmental studies for infrastructure projects, and preparing regulatory permit applications, as well as preparation of various components of Louisiana DEQ and NEPA documents.

Highway 90 Tie-In Levee, Upper Barataria Risk Reduction Program Segment 4, St. Charles Parish, LA.

Geotechnical investigation for construction of a new earthen levee within the flood protection/risk reduction system in St. Charles Parish, LA. Gulf South's scope includes drilling undisturbed soil borings (1 at 200 ft., 3 at 75 ft.), CPT probes (6 at 75 ft.), lab testing, and engineering analyses including site/soil characterization, global/local SSA for floodwalls, levee tie-ins, and floodgates, seepage analyses for sheetpile walls, settlement/downdrag analyses, unbalanced forces for structures, pile load capacities, pile foundation load-deflection relationship, estimates of settlement, ground improvement recommendations, and general construction procedures and recommendations. (\$174,720 (fee); 2021)

Bayou Gauche/Sunset Levee - New Roller Gate, Upper Barataria Risk Reduction Program Segment 2, St. Charles Parish, LA.

Geotechnical investigation for construction of a new roller gate and T-wall structures within the UBRR flood protection/risk reduction system in St. Charles Parish, LA. Gulf South's scope includes drilling undisturbed soil borings (2 at 200 ft.), CPT probes (2 at 200 ft.), lab testing (including consolidation tests), and engineering analyses including site/soil characterization, global/local SSA for floodwalls, levee tie-ins, and floodgates, design levee lift stability, seepage analyses for sheetpile walls, settlement/downdrag analyses, unbalanced forces for structures, pile load capacities, pile foundation load-deflection relationship, estimates of settlement, ground improvement recommendations, and general construction procedures and recommendations. The borings and CPT were performed over water using barge-mounted equipment. (\$110,880 (fee); 2020)

Bayou Des Allemands Gate, Upper Barataria Risk Reduction Program Segment 3, St. Charles Parish, LA.

Geotechnical investigation for construction of a new swinging barge gate structure within the UBRR flood protection/risk reduction system in St. Charles Parish, LA. Gulf South's scope includes drilling undisturbed soil borings (1 at 200 ft., 2 at 120 ft., 1 at 100 ft.), lab testing (including consolidation tests), and engineering analyses including site/soil characterization, global/local SSA for floodwalls, levee tie-ins, and floodgates, seepage analyses for sheetpile walls, settlement/downdrag analyses, unbalanced forces for structures, pile load capacities, pile foundation load-deflection relationship, estimates of settlement, ground improvement recommendations, and general construction procedures and recommendations. One boring was performed over water; the remaining borings were performed over land. (\$145,885 (fee); 2021)



Christopher Boutwell

Construction Materials Testing (CMT) Supervisor

High School Diploma

ACI Concrete Field Testing – Grade I
APNGA Nuclear Moisture/Density Gauge Training
OSHA Safety Training – 8 hr.
TWIC (Transportation Worker Identification Card)

Years with this Firm: 9 (2012)
Total Years Experience: 12 (2009)

Mr. Boutwell serves as a CMT Supervisor in Gulf South's Kenner office and serves as the firm's Radiation Safety Officer. He is responsible for scheduling technicians, technical training, resolving technical and personnel issues, equipment maintenance, preparing proposals, reviewing reports, and client interaction. Mr. Boutwell's construction monitoring experience includes nuclear density testing, concrete testing and inspection, asphalt inspection, earthwork testing and inspection, driven pile inspection, vibration monitoring, augercast pile inspection, and drilled shaft inspection. Laboratory testing experience includes soil and concrete compressive strength, moisture content, grain size sieve, organic content, Proctor compaction, lime/soil and soil/cement % determinations, density tests, and Atterberg limits.

Mr. Boutwell has logged soil borings, performed pile load tests, floor flatness testing, anchor bolt pull out tests, obtained and secured samples from soil borings and borrow pits, and completed hand augers. He routinely operates Gulf South's pavement coring machines.

Bayou Castine Bulkhead Repairs, Mandeville, St. Tammany Parish, LA. Gulf South provided the material testing and inspection during construction of the project. Services consisted of pile monitoring and inspection, density tests, and concrete testing and inspection. (\$5,000 (fee); 2021)

FEMA Submerged Roads Program: Read Boulevard East Group D, New Orleans, LA. Gulf South performed construction materials testing and inspection during construction of the project. Testing consisted of concrete, asphalt, and earthwork. Total project cost was \$11 million. (\$22,802 (fee); 2021)

Safe House Project – Claiborne Avenue Facility, Sewerage and Water Board of New Orleans, LA. Field testing and evaluation for design and remodel of an existing building into a safe house for the Sewerage and Water Board of New Orleans. Testing consisted of coring concrete walls, columns, and floors and sampling steel from steel beams and trusses to determine their structural integrity. (\$4,928 (fee); 2016)

Pearl River Truss Replacement (Honey Island Swamp Road), Pearl River, St. Tammany Parish, LA. Gulf South performed construction materials testing and inspection. Services included soil density tests, earthwork inspection and testing, backfill compaction testing, and concrete testing. (\$4,111 (fee); ongoing)

St. Peter's Ditch – Phase IV (Pump Station at Clearview), Metairie, Jefferson Parish, LA. Project consisted of the construction of a new pump station and below grade culverts and piping for the Jefferson Parish Department of Public Works. Gulf South provided materials testing and inspection during construction (CMT). Scope included performing pile plant inspection, pile monitoring during installation, vibration monitoring, concrete testing and inspection, earthwork testing and inspection including soil sampling and field density tests, and steel inspection. (\$110,000 (fee); 2016)



Cory Paille

Construction Materials Testing (CMT) Supervisor

High School Diploma

NASSCO PACP, MACP, LACP Inspector
APNGA Nuclear Moisture/Density Gauge Training
ACI Concrete Field Testing Technician - Grade I
OSHA Safety Training – 8 hr.

Years with this Firm: 7 (2014)

Total Years Experience: 7 (2014)

Cory Paille serves as the CMT Supervisor in Gulf South's Gonzales, LA office. As a CMT Supervisor, he is responsible for scheduling technicians, technical training, resolving technical and personnel issues, equipment maintenance, preparing proposals, reviewing reports, and client interaction.

Mr. Paille's construction monitoring experience includes nuclear density testing, concrete testing and inspection, asphalt inspection, earthwork testing and inspection, driven pile inspection, vibration monitoring, augercast pile inspection, and drilled shaft inspection. Mr. Paille is proficient in the following laboratory tests: concrete compressive strength, moisture content, grain size sieve, organic content, Proctor compaction, lime/soil and soil/cement % determinations, density tests, and Atterberg limits.

Mr. Paille has logged soil borings, obtained and secured samples from soil borings and borrow pits, and completed hand augers. Mr. Paille routinely operates Gulf South's pavement coring machines. He has worked on a wide range of projects from testing fill pads for single family residences to full time field supervision and inspection for multi-million dollar developments.

Charity Hospital Building Redevelopment Project, New Orleans, LA. Gulf South provided all construction materials and environmental testing for the project, which involved the complete renovation of the Charity Hospital Building (more than 1 million sf) in New Orleans, Louisiana. Inspection and testing consisted of soil borings, laboratory testing, asbestos abatement, concrete testing, mortar testing, steel coupon testing, concrete coring, and building envelope testing. The project's total cost was \$500 million. (\$200,000 (est. fee); ongoing)

Marsh Island Restoration Project, Lafreniere Park, Metairie, Jefferson Parish, LA. Geotechnical investigation for construction of a new bulkhead wall around Marsh Island within Lafreniere Park in Metairie, LA. Gulf South's scope includes drilling two soil borings each to a depth of 30 feet on the island, lab testing, and geotechnical engineering analyses including sheetpile and/or retaining wall design parameters, earth pressures, and general construction procedures and recommendations. (\$5,000 (fee); 2017)

Proposed Estuary Mitigation Bank (EMB) GIWW - Deadend Canal, Vendome Canal, Hockey Stick Canal, Crown Point, Jefferson Parish, LA. Geotechnical investigation for construction of a new wetland restoration project near Crown Point, LA. Gulf South's scope includes drilling nine soil borings to depths of 15 and 40 feet in water and marsh, lab testing (including settlement column test), and geotechnical engineering analysis including estimates of settlement, time rate of settlement, borrow/fill ratios, and general construction recommendations. (\$26,500 (fee); 2016)



Eric A. Paille, C.E.T.

Construction Services Manager

High School Diploma

ACI-I Field Technician (1991; No. 929012)

Certified Engineering Technician (1992)

Nuclear Gauge Safety Training (1994; No. 061321)

Pile Driving Analyzer/CAPWAP, OSHA 40 HAZWOPER

TWIC (Transportation Worker Identification Card)

Years with this Firm: 10 (2011)

Total Years Experience: 32 (1989)

Mr. Paille serves as Gulf South's Construction Services Manager as well as the manager of Gulf South's Gonzales, LA office. He has experience as a technician, inspector, and testing manager, and is knowledgeable in all aspects of construction materials testing and construction inspection. Mr. Paille has performed all applicable field and soil tests over the past 30 years. In addition, he is certified in the safe use and handling of the nuclear density gauge. He received PDA training in 2003 and has knowledge of PDA testing along with significant experience with pile driving analyzers. Mr. Paille is one of the most knowledgeable people in our industry.

Lafouche Parish Sheriff's Department Galliano Substation Safe Room (West 91st Street), Cut Off, Lafourche Parish, LA. Geotechnical investigation for new safe room in Galliano. Drilled 1 boring to 50 ft below the ground surface, provide laboratory testing and geotechnical engineering analyses consisting of conditions at site, allowable soil bearing values, settlement estimates, and general construction recommendations. (\$3,200 (fee); 2013)

FEMA Submerged Roads Program, Bayou St. John & Fairgrounds Neighborhoods, City of New Orleans, LA. Geotechnical investigation for the City of New Orleans, FEMA Submerged Roads Program, to determine existing pavement conditions (thickness and material types). This investigation was for the Seventh Ward Neighborhoods in New Orleans, LA. Scope of work included drilling 8 pavement cores and 2 soil borings to a depth of 5 feet (2 in concrete, 4 in asphalt, 2 in combo. concrete/asphalt), performing laboratory testing, and providing engineering reports of our findings. (\$7,786 (fee); 2014)

Proposed Estuary Mitigation Bank (EMB) GIWW - Deadend Canal, Vendome Canal, Hockey Stick Canal, Crown Point, Jefferson Parish, LA. Geotechnical investigation for construction of a new wetland restoration project near Crown Point, LA. Gulf South's scope includes drilling nine soil borings to depths of 15 and 40 feet in water and marsh, lab testing (including settlement column test), and geotechnical engineering analysis including estimates of settlement, time rate of settlement, borrow/fill ratios, and general construction recommendations. (\$26,500 (fee); 2016)

Des Allemands Breakwater Bulkhead, Lafourche Parish, LA. Performed pile and vibration monitoring during sheet pile installation. (\$35,000 (fee); 2013)

C&C Marine New Structure and Bulkhead, Peters Road Facility - Harvey Canal, Jefferson Parish, LA. Geotechnical investigation for new barge fabrication structure and 500 ft. (approx.) bulkhead. Tasks included drilling 2 soil borings to 80 ft and 120 ft in depth, performing lab testing, and providing geotechnical engineering analyses consisting of allowable pile load capacities, estimates of settlement, bulkhead design parameters, and general construction recommendations. (\$8,500 (fee); 2013)



Robert Albritton

Senior Engineering Technician

B.A., 1982, General Studies, Louisiana Tech University

APNGA Nuclear Moisture/Density Gauge Training
OSHA Safety Training – 10 hr., 30 hr., Disaster Site Worker

Years with this Firm: 7 (2014)

Total Years Experience: 7 (2014)

Mr. Albritton is a Senior Engineering Technician based in Gulf South's Kenner, LA office with experience includes construction inspecting and testing and laboratory testing. His direct construction monitoring experience includes nuclear density testing, concrete testing and inspection, asphalt inspection, earthwork testing and inspection, pile load test observation, driven pile inspection, and vibration monitoring. Mr. Albritton is proficient in multiple laboratory tests, including moisture content, grain size sieve, organic content, Proctor compaction, density tests, and Atterberg limits.

Mr. Albritton has worked on a wide range of projects from vibration monitoring for a small residential development to full time field supervision and inspection for the Louis Armstrong New Orleans International Airport New Terminal project.

Charity Hospital Building Redevelopment Project, New Orleans, LA. Gulf South provided all construction materials and environmental testing for the project, which involved the complete renovation of the Charity Hospital Building (more than 1 million sf) in New Orleans, Louisiana. Inspection and testing consisted of soil borings, laboratory testing, asbestos abatement, concrete testing, mortar testing, steel coupon testing, concrete coring, and building envelope testing. The project's total cost was \$500 million. (\$200,000 (est. fee); ongoing)

FEMA Submerged Roads Program: Read Boulevard East Group D, New Orleans, LA. Gulf South performed construction materials testing and inspection during construction of the project. Testing consisted of concrete, asphalt, and earthwork. Total project cost was \$11 million. (\$22,802 (fee); ongoing)

South Lafourche Levee District: Cut Off/Point Aux Chenes Levee Design - Reach K, Lafourche Parish, LA. Geotechnical investigation for proposed levee improvements to Reach K along Grand Bayou between Cut Off and Point Aux Chenes in Lafourche Parish, LA. Gulf South's scope includes two drilling phases consisting of three soil borings to a depth of 60 feet each for Phase I (land borings), and drilling six soil borings to depths of 60 feet (3 borings for levee) and 20 feet (3 borings for borrow/fill) for Phase II. Phase II borings drilled in water or marsh. In addition, laboratory testing (strength, classification, consolidation), and geotechnical engineering analysis consisting of new levee design recommendations, slope stability analyses, estimates of settlement, estimate of strength gain, and general construction recommendations were performed. All project elements reviewed by Louisiana CPRA. (\$69,000 (fee); 2015)

Bayou Castine Bulkhead Repairs, Mandeville, St. Tammany Parish, LA. Gulf South provided the material testing and inspection during construction of the project. Services consisted of pile monitoring and inspection, density tests, and concrete testing and inspection. (\$5,000 (fee); 2021)



James Tiner

Laboratory Manager/Field Supervisor

High School Diploma

ACI Grade 1 Certification

Years with this Firm: 8 (2013)

Total Years Experience: 24 (1997)

Mr. Tiner has over 24 years of experience in both field and laboratory testing & inspection. His field work includes soil inspection and testing consisting of nuclear density testing and soil boring logging, steel inspection, augercast pile inspection, vibration monitoring, drilled shaft inspection, static and dynamic pile load tests, pile inspection, concrete testing and inspection, asphalt testing and inspection, and pavement coring. In the laboratory, Mr. Tiner has performed soil laboratory testing consisting of unconfined compression strength tests, triaxial strength tests, Atterberg limits, organic content tests, moisture and density tests, Proctor compaction tests, sieve analyses, and sample extrusion.

North Lafourche Levee District - Des Allemands Flood Control Improvements, Des Allemands, Lafourche Parish, LA. Geotechnical investigation for construction of flood control structures (earthen levee and/or sheet pile wall) and pavement improvements along Bayou Des Allemands (West Bank) within Lafourche Parish, Des Allemands, LA. Gulf South's scope includes drilling six undisturbed soil borings to depths of 60 feet (4 borings) and 6 feet (2 borings) below ground surface, lab testing, and engineering analyses including slope stability analyses, sheetpile design parameters (Cantilever I-Wall), estimates of settlement, rigid and/or flexible pavement design recommendations, and general construction recommendations. (\$19,500 (fee); 2017)

Replacement of Sewer Pump Station (SPS) 8, Sewerage & Water Board of New Orleans, LA. This \$15 million project consisted of the replacement of a sewer pump station for the Sewerage & Water Board of New Orleans. Gulf South provided field and laboratory inspection and testing of materials during construction (CMT). Our scope of services included performing: a pile load test, pile plant inspection, pile monitoring during installation, vibration monitoring, concrete testing and inspection, earthwork testing and inspection including field density tests, and steel inspection. (\$103,411 (fee); 2019)

FEMA Submerged Roads Program, Touro-Milan Neighborhoods, City of New Orleans, LA. Geotechnical investigation for the City of New Orleans, FEMA Submerged Roads Program, to determine existing pavement conditions. Scope of work included drilling 11 pavement cores and soil borings to a depth of 5 feet, laboratory testing (strength and classification), and geotechnical engineering analyses consisting of pavement design analyses and general construction recommendations. (\$12,931 (fee); 2014)

FEMA Submerged Roads Program, Bayou St. John & Fairgrounds Neighborhoods, City of New Orleans, LA. Geotechnical investigation for the City of New Orleans, FEMA Submerged Roads Program, to determine existing pavement conditions (thickness and material types). This investigation was for the Seventh Ward Neighborhoods in New Orleans, LA. Scope of work included drilling 8 pavement cores and 2 soil borings to a depth of 5 feet (2 in concrete, 4 in asphalt, 2 in combo. concrete/asphalt), performing laboratory testing, and providing engineering reports of our findings. (\$7,786 (fee); 2014)



Joseph H. "Trey" Binder, III

Laboratory Manager

A.D., 2006, General Studies, Nunez (Chalmette)

HAZMAT Awareness

HAZMAT Operations Training

ACI Aggregate Base Testing Technician

TWIC (Transportation Worker Identification Card)

Years with this Firm: 10 (2011)

Total Years Experience: 15 (2006)

Mr. Binder has direct experience with field and laboratory testing services; his field work includes soil inspection and testing consisting of nuclear density testing and soil boring logging, vibration monitoring, pile inspection, concrete testing and inspection, asphalt testing and inspection, and pavement coring. In the laboratory, Mr. Binder has performed soil laboratory testing consisting of unconfined compression strength tests, triaxial strength tests, Atterberg limits, organic content tests, moisture and density tests, Proctor compaction tests, sieve analyses, and sample extrusion.

Charity Hospital Building Redevelopment Project, New Orleans, LA. Gulf South provided all construction materials and environmental testing for the project, which involved the complete renovation of the Charity Hospital Building (more than 1 million sf) in New Orleans, Louisiana. Inspection and testing consisted of soil borings, laboratory testing, asbestos abatement, concrete testing, mortar testing, steel coupon testing, concrete coring, and building envelope testing. The project's total cost was \$500 million. (\$200,000 (est. fee); ongoing)

Community Safe Room (Corbin Avenue), Town of Walker, Livingston Parish, LA. Geotechnical investigation for a new building (17,000 sf) at the subject site. Gulf South's scope includes drilling five undisturbed soil borings to depths of 40, 20, & six feet and providing engineering analyses including allowable soil bearing values, allowable pile/shaft load capacities, estimate of settlement, flexible and/or rigid pavement design recommendations, and general construction recommendations. (\$8,925 (fee); 2018)

Highway 90 Tie-In Levee, Upper Barataria Risk Reduction Program Segment 4, St. Charles Parish, LA. Geotechnical investigation for construction of a new earthen levee within the flood protection/risk reduction system in St. Charles Parish, LA. Gulf South's scope includes drilling undisturbed soil borings (1 at 200 ft., 3 at 75 ft.), CPT probes (6 at 75 ft.), lab testing, and engineering analyses including site/soil characterization, global/local SSA for floodwalls, levee tie-ins, and floodgates, seepage analyses for sheetpile walls, settlement/downdrag analyses, unbalanced forces for structures, pile load capacities, pile foundation load-deflection relationship, estimates of settlement, ground improvement recommendations, and general construction procedures and recommendations. (\$174,720 (fee); 2021)

FEMA Submerged Roads Program, Filmore Area Neighborhood, City of New Orleans, LA. Geotechnical investigation for the City of New Orleans, FEMA Submerged Roads Program, to determine existing pavement conditions (thicknesses and material types). This investigation was for the Filmore Avenue Neighborhood in New Orleans, LA. Scope of work included drilling 27 pavement cores and 24 soil borings to a depth of 5 feet. (\$8,358 (fee); 2014)

The Louisiana Professional Engineering and Land Surveying Board has the following information on file:

Name:

Gulf South Engineering and
Testing, Inc.

Public Address:

Mr. Chad Poche, PE 15 Veterans Memorial Boulevard
Kenner, Louisiana 70062

License/Certificate Information w/ Supervision

License	Status	First Issuance Date	Expiration Date	Supervisor(s)
EF.0004626	Active	07/27/2010	03/31/2023	Mr. Chad Mitchell Poche # PE.0027667 - Active



**LOUISIANA PROFESSIONAL
ENGINEERING & LAND SURVEYING BOARD
(LAPELS)**
9643 Brookline Avenue, Suite 121
Baton Rouge, LA 70809
Phone (225) 925-6291
www.lapels.com

Mr. Chad Mitchell Poche


License/Certificate Type - Number	Expiration Date
PE.0027667	09/30/2022
Status:	Active



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(LAPELS)**
9643 Brookline Avenue, Suite 121
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Mr. Blake Elliot Vutera

License/Certificate Type - Number	Expiration Date
PE.0038607	09/30/2022
Status:	Active



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Ms. Sara Elinor Lockwood

License/Certificate Type - Number	Expiration Date
EI.0034718	03/31/2023
Status:	Active



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Mr. Ralph P. Fontcuberta Jr.

License/Certificate Type - Number	Expiration Date
PLS.0004329	09/30/2022
Status:	Active





DIVISION OF SMALL BUSINESS SERVICES

This certification acknowledges that

Gulf South Engineering and Testing, Inc.

is Certified-Active as a Small Entrepreneurship with
Louisiana Economic Development's Hudson Initiative.

This certification is valid from 3/24/2021 to 3/24/2022 .

Certification No. 11011

A handwritten signature in black ink, reading "Stephanie Hartman", is written over a horizontal line.

Stephanie Hartman,
Director, Entrepreneurial Services



GULF SOUTH

ENGINEERING AND TESTING, INC.
Geotechnical & Materials Consultants



CERTIFICATE OF ACCREDITATION



Gulf South Engineering and Testing, Inc.


in

Kenner, Louisiana, USA

has demonstrated proficiency for the testing of construction materials and has conformed to the requirements established in AASHTO R 18 and the AASHTO Accreditation policies established by the AASHTO Committee on Materials and Pavements.

The scope of accreditation can be viewed on the Directory of AASHTO Accredited Laboratories (aashtoresource.org).


Jim Tymon,
AASHTO Executive Director


Moe Jamshidi,
AASHTO COMP Chair

This certificate was generated on 08/17/2021 at 7:12 PM Eastern Time. Please confirm the current accreditation status of this laboratory at aashtoresource.org/aap/accreditation-directory



SCOPE OF AASHTO ACCREDITATION FOR:

Gulf South Engineering and Testing, Inc.

in Kenner, Louisiana, USA

Quality Management System

Standard:**Accredited Since:**

R18	Establishing and Implementing a Quality System for Construction Materials Testing Laboratories	07/17/2020
C1077 (Aggregate)	Laboratories Testing Concrete and Concrete Aggregates	08/21/2020
C1077 (Concrete)	Laboratories Testing Concrete and Concrete Aggregates	07/27/2020
D3740 (Soil)	Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction	07/17/2020





SCOPE OF AASHTO ACCREDITATION FOR:

Gulf South Engineering and Testing, Inc.

in Kenner, Louisiana, USA

Soil

Standard:**Accredited Since:**

R58	Dry Preparation of Disturbed Soil and Soil Aggregate Samples for Test	07/29/2020
T88	Particle Size Analysis of Soils by Hydrometer	07/29/2020
T89	Determining the Liquid Limit of Soils (Atterberg Limits)	07/29/2020
T90	Plastic Limit of Soils (Atterberg Limits)	07/29/2020
T99	The Moisture-Density Relations of Soils Using a 5.5 lb [2.5 kg] Rammer and a 12 in. [305 mm] Drop	07/29/2020
T180	Moisture-Density Relations of Soils Using a 10 lb [4.54 kg] Rammer and an 18 in. [457 mm] Drop	07/29/2020
T265	Laboratory Determination of Moisture Content of Soils	07/29/2020
D421	Dry Preparation of Disturbed Soil and Soil Aggregate Samples for Test	07/17/2020
D422	Particle Size Analysis of Soils by Hydrometer	07/29/2020
D698	The Moisture-Density Relations of Soils Using a 5.5 lb [2.5 kg] Rammer and a 12 in. [305 mm] Drop	07/17/2020
D1140	Amount of Material in Soils Finer than the No. 200 (75-µm) Sieve	07/17/2020
D1556	Density of Soil In-Place by the Sand Cone Method	07/17/2020
D1557	Moisture-Density Relations of Soils Using a 10 lb [4.54 kg] Rammer and an 18 in. [457 mm] Drop	07/17/2020
D2166	Unconfined Compressive Strength of Cohesive Soil	07/17/2020
D2216	Laboratory Determination of Moisture Content of Soils	07/17/2020
D2487	Classification of Soils for Engineering Purposes (Unified Soil Classification System)	07/17/2020
D2488	Description and Identification of Soils (Visual-Manual Procedure)	07/17/2020
D2974	Determination of Organic Content in Soils by Loss on Ignition	07/17/2020
D4318	Determining the Liquid Limit of Soils (Atterberg Limits)	07/17/2020
D4318	Plastic Limit of Soils (Atterberg Limits)	07/17/2020
D4643	Determination of Water (Moisture) Content of Soil by Microwave Oven Heating	07/17/2020
D6938	In-Place Density and Moisture Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)	07/17/2020





SCOPE OF AASHTO ACCREDITATION FOR:

Gulf South Engineering and Testing, Inc.

in Kenner, Louisiana, USA

Aggregate

Standard:**Accredited Since:**

C117 Materials Finer Than 75- μ m (No. 200) Sieve in Mineral Aggregates by Washing	07/27/2020
C127 Specific Gravity and Absorption of Coarse Aggregate	07/27/2020
C128 Specific Gravity (Relative Density) and Absorption of Fine Aggregate	07/27/2020
C136 Sieve Analysis of Fine and Coarse Aggregates	07/27/2020
C566 Total Moisture Content of Aggregate by Drying	07/27/2020
C702 Reducing Samples of Aggregate to Testing Size	07/27/2020





SCOPE OF AASHTO ACCREDITATION FOR:

Gulf South Engineering and Testing, Inc.

in Kenner, Louisiana, USA

Concrete

Standard:**Accredited Since:**

C31 (Cylinders)	Making and Curing Concrete Test Specimens in the Field	07/27/2020
C39	Compressive Strength of Cylindrical Concrete Specimens	07/27/2020
C138	Density (Unit Weight), Yield, and Air Content of Concrete	07/27/2020
C143	Slump of Hydraulic Cement Concrete	07/27/2020
C172	Sampling Freshly Mixed Concrete	07/27/2020
C231	Air Content of Freshly Mixed Concrete by the Pressure Method	07/27/2020
C511	Moist Cabinets, Moist Rooms, and Water Storage Tanks Used in the testing of Hydraulic Cements and Concretes	07/27/2020
C1064	Temperature of Freshly Mixed Portland Cement Concrete	07/27/2020
C1231 (7000 psi and below)	Use of Unbonded Caps in Determination of Compressive Strength of Hardened Concrete Cylinders	07/27/2020





**USACE CERTIFICATE
OF
LABORATORY VALIDATION**



Gulf South Engineering and Testing

**15 Veterans Memorial Blvd
Kenner, LA, United States
Trey Binder
(504) 305-4401**

has demonstrated, by abbreviated audit of its AASHTO accreditation, or by inspection of required records, equipment, procedures, facilities, and/or final reports, its proficiency to perform testing of construction materials, as established by the quality standards of AASHTO R 18 guidance and the requirements of the applicable ASTM standards.

**THIS USACE CERTIFICATE OF LABORATORY VALIDATION IS ACCURATE AS OF ITS DATE AND TIME OF
GENERATION:**

02 JUN 2020 AT 18:10 HOURS

ALL METHODS LISTED ON THIS CERTIFICATE OF VALIDATION WILL EXPIRE ON 06/02/2022

PLEASE CONFIRM THE CURRENT VALIDATION STATUS OF THIS LABORATORY USING THE SEARCH FEATURE ON
OUR PUBLIC WEBSITE: <https://mtc.erdcdren.mil>

Chad A. Gartrell, PE, Director
USACE Materials Testing Center
Vicksburg, Mississippi, USA

SOILS

Soils - D 698 - Req - Compaction Characteristics by Standard Effort
Soils - D 1140 - Req - Material Finer than 75 μ m (No. 200) Sieve
Soils - D 1557 - Req - Compaction Characteristics by Modified Effort
Soils - D 2216 - Req - Water Content
Soils - D 2974 - Req - Moisture, Ash, & Organic Matter of Peat & Other Organic Soils
Soils - D 4318 - Req - Liquid & Plastic Limits & Plasticity Index
Soils - D 4643 - Req - Determination of Water Content of Soil by Microwave Oven



GULF SOUTH

ENGINEERING AND TESTING, INC.
Geotechnical & Materials Consultants

EXHIBIT B
SELECTION/SCORING CRITERIA

St. John the Baptist Parish Sheriff Office may select any or all of the submittals that best contribute to the overall functioning of the Parish. All submittals will be evaluated by applying a set of evaluation criteria and awarding points to each submittal.

The following criteria and corresponding point system will be utilized to evaluate all respondents. The award will be made to the firm which scores the highest number of points and whose costs are deemed reasonable for similar work.

CRITERIA	MAXIMUM POINTS
<u>Key Personnel Qualifications and Experience</u>	<u>0-30 pts</u>
<ul style="list-style-type: none">• Relevant experience of key personnel with similar projects• Work quality, cost control, and completion of work on schedule	
<u>Relevant Experience and References</u>	<u>0-30 pts</u>
<ul style="list-style-type: none">• Firm's experience providing the same services within the past ten years• References submitted regarding specific experience, resources, and management• Compliance with policies, procedures and requirements as stated in the RFQ	
<u>Understanding of Project/Familiarity</u>	<u>0-20 pts</u>
<ul style="list-style-type: none">• Firm's understanding of project scope• Firm's methodology for accomplishing the scope of work (e.g., ability to meet client's objectives including scope, schedule, quality and related factors; collaborative coordination with parish; coordination with outside agencies and entities; other aspects of work requirements deemed important by the Consultant, etc.)	
<u>Agency Project Experience</u>	<u>0-10 pts</u>
<ul style="list-style-type: none">• Experience with User Agencies (Parish, State, Federal), local criteria, codes, policies, procedures, and standards to successfully facilitate project completion	
<u>Current Work Load</u>	<u>0-10 pts</u>
<ul style="list-style-type: none">• Number and size of projects currently under contract• Available staff for duration/time frame to complete project• Size of firm and available key personnel relative to size of the project	
	TOTAL _____
<u>TOTAL MAXIMUM POINTS</u>	<u>100 PTS</u>