CLAY MADDEN MAYOR





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REQUEST FOR PROPOSALS

DRAIN LINE CLEANING AND STRUCTURE EVALUATION SERVICES AND SEWER SYSTEM EVALUATION SERVICES

Sealed Proposals will be accepted until **WEDNESDAY**, **AUGUST 24**, **2022**, **at 11:00 A.M.**, **CST** in the office of the Purchasing Agent, City Hall, Mandeville, Louisiana, 3101 East Causeway Approach, Mandeville, LA, 70448 from individuals or firms qualified to provide **DRAIN LINE CLEANING AND STRUCTURE EVALUATION SERVICES AND SEWER SYSTEM EVALUATION SERVICES.**

Interested parties may obtain the solicitation package or submit written inquiries by contacting the Purchasing Agent at 985-626-3144 ext. 202, or purchasing@cityofmandeville.com. Written inquiries must be received no later than Tuesday, August 16, 2022, at 2:00 PM.

There will be a non-mandatory pre-proposal conference on Thursday, August 11, 2022, at 10:00 A.M. The conference will be held at the City of Mandeville Department of Public Works, 1100 Mandeville High Blvd, Mandeville, LA 70471. For contractors wishing to attend remotely, please use the following Microsoft Teams Meeting credentials:

Meeting ID: 278 460 667 170

Passcode: CA3Exf

Contractors may also view the documents and submit electronic responses at www.centralauctionhouse.com. For questions relating to the electronic submission process, please call Central Auction House at 225-810-4814.

Non-electronically submitted proposals shall be delivered in a sealed envelope. Proposals shall include one original and four copies of the proposal plus an electronic scanned pdf file of the proposal on a USB thumb drive. The envelope must be clearly marked as follows:

REQUEST FOR PROPOSALS

DRAIN LINE CLEANING AND STRUCTURE EVALUATION SERVICES AND SEWER SYSTEM EVALUATION SERVICES DEADLINE: WEDNESDAY, AUGUST 24, 2022, AT 11:00 A.M. CONTRACTOR NAME, ADDRESS, & LA CONTRACTOR'S LICENSE NUMBER

The City reserves the right to revise this schedule. Any revision will be formalized by the issuance of an addendum to this RFP. The City further reserves the right to withdraw this RFP any time prior to the award of a contract.

Proposer is solely responsible for ensuring that its courier service provider makes inside deliveries to our physical location. The City is not responsible for any delays caused by the proposer's chosen means of proposal delivery. Proposer is solely responsible for the timely delivery of its proposal. Failure to meet the proposal opening date and time shall result in rejection of the proposal. Projects funded by federal grant monies are subject to all applicable laws, regulations and policies of all authorities having jurisdiction over the project and shall apply to any contract issued through this RFP.

Clay Madden, Mayor

St Tammany Farmer: July 27, Aug 3, Aug 10, 2022

DRAIN LINE CLEANING AND STRUCTURE EVALUATION SERVICES AND SEWER SYSTEM EVALUATION SERVICES

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GENERAL INFORMATION

The City is located on the north shore of Lake Pontchartrain. While any disaster or emergency may affect the City and its citizens, the greatest threat to the City is a hurricane. Hurricanes historically cause flooding to low lying areas located within the City. Flooding also brings with it significant amounts of sediment which impact the City's drainage system and requires cleaning and removal of the sediment. Successful response to and recovery from such an impact to the City's drainage system involves manpower, material and specific skill sets. The City is soliciting responses to this RFP from qualified firms that can meet the Scope of Work (SOW) outlined herein.

SCOPE OF WORK

The contract is a standby contract in response to any disaster or emergency experienced by the City. Activation of contract will be upon the discretion of the Mayor of Mandeville. The City reserves the right to assign a contract to more than one proposer. Attachment A of this RFP outlines that statement of work required by the City for storm drain line cleaning and sewer system evaluation services. The storm drain line cleaning and sewer system evaluation services qualifies as work under the FEMA Public Assistance program and as such, contractor will be required to comply with all federally required FEMA contract provisions. ¹

¹ Equal Employment Opportunity, Contract Work Hours and Safety Standards, Clean Air Act, Federal Water Pollution Control Act, Suspension and Debarment, Byrd Anti-Lobbying Act, Procurement of Recovered Materials, Prohibition on Contracting for Covered Telecommunications Equipment or Services, Domestic Preferences for Procurements, Access to Records, DHS Seal, Logo, and Flags, Compliance with Federal Executive Orders, No Obligation by the Federal Government, Program Fraud and False or Fraudulent Statements or Related Acts, Contracting with Small and Minority Businesses, Women's Business Enterprises, and Labor Surplus Area Firms, Copyright and Data Rights

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CONTENT OF PROPOSAL

a) COVER LETTER

All proposals must include a cover letter, which shall provide the following:

- i) All contact information of the firm (address, phone, fax, email);
- ii) Proposer's federal tax identification number;
- iii) Letter signed by the individual who has the authority to obligate the firm in a contract and affirms such in the letter; (Note that evidence of signature authority shall be provided upon the City's request);
- iv) Contact information for the individual who will provide technical or contractual clarification during the evaluation process;
- v) A statement that the Proposer is familiar with the SOW in this RFP, that it has the required experience and resources to meet the requirements of the RFP, and that it is prepared to mobilize within 48 hours upon receiving a "Notice to Proceed" from the City; and
- vi) That the Proposer understands that a resulting contract from this RFP will be a "standby contract" to be activated at the sole discretion of the Mayor of the City.

b) BACKGROUND AND QUALIFICATIONS OF PROPOSER'S FIRM

Provide a history of the firm, its resources, experience and qualifications in performing the SOW stated herein. Proposer should include a list and description of its projects related to the SOW and any other information which exhibits the proposer's qualifications to successfully address the SOW. Projects associated with the FEMA Public Assistance program should be highlighted.

c) QUALIFICATIONS OF ASSIGNED PERSONNEL

Provide resumes of individuals assigned to this project that would showcase their experience and skill set to meet the requirements of the SOW. Experience with the FEMA Public Assistance program should be highlighted.

d) PROPOSER'S UNDERSTANDING AND APPROACH

This section is designed for the Proposer to outline its understanding of the SOW and its approach to meeting the SOW requirements. This section should include any organization, timetables, training and all actions to be taken by the Proposer to address the SOW and the Proposer's working knowledge of the

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FEMA Public Assistance program. Proposer should provide information on how proposer will execute this contract in the event proposer's business is affected by the disaster or emergency.

e) cost

Includes all expenses, i.e., personnel, equipment, travel, lodging, etc. that will be realized by the proposer/contractor in the execution of the SOW. The proposal with the lowest cost will receive a score of 20 points. The remaining proposers will receive a score based upon the following formula:

CS = LPC/(PC)*25

CS = Compared cost score for proposers LPC = Lowest proposed cost of proposers PC

= Proposer's cost

Proposers are required to include a completed Cost Proposal Form (Attachment A) as part of their proposal.

All proposals shall be considered valid for acceptance until such time an award is made.

f) COMPLIANCE WITH SMALL, MINORITY OR WOMEN-OWNED BUSINESS ENTERPRISES (HEREIN REFERRED TO AS "DBE")

In accordance with 2 CFR 215.44 (b)(1) and 44CFR 13.36 (e), proposer is required to make every effort to include DBE participation in the submission of this RFP. In the event a proposer identifies a qualified individual or firm in its proposal, the proposer will be awarded 10 points. The proposer who evidences an effort to locate a qualified firm or individual by posting an inquiry with the Small Business Administration, the Louisiana Department of Transportation and Development, or the like will receive five (5) points. A proposer who does neither of the above will not receive any points.

g) ORAL PRESENTATION

The City may require an oral presentation from proposers. The maximum points which may be awarded for an oral presentation is ten (10). The points awarded for an oral presentation are in addition to those points awarded under the other criteria. Points awarded from an oral presentation are added to the earlier points awarded to the proposer and form the total sum of points awarded to the proposer.

SELECTION CRITERIA

All proposals shall be evaluated to determine which proposal best meets the needs of the City. Proposals will be evaluated by a Selection Committee appointed by the mayor. Each area of the

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proposal criteria (Background and Qualifications of the Firm, Qualifications of Personnel, Proposer's Understanding and Approach, Cost and Compliance with DBE) will be individually graded for each proposal. The proposal garnering the highest score shall be awarded the contract.

The Selection Committee shall assign points for its evaluation as follows:

Evaluation Criteria	Possible Points
Background and Qualifications of Firm	25
Qualifications of Assigned Personnel	20
Proposer's Understanding and Approach	20
Cost	25
Compliance with DBE	10
Oral Presentation (if required)	(10)
Total	100

Proposers are required to include with their proposal all signed affidavits in Attachments B thru G.

CONTRACT PROVISIONS

a) TERM OF CONTRACT

The term of this contract shall be for a period of three (3) years, commencing on the date that both the City and the proposer have signed the contract. Upon approval of both parties, this contract may be extended for two one-year periods as agreed upon by both parties a minimum of 60 days prior to the end dates of the contract and subsequent extension.

b) PRICE SCHEDULE

This time and materials contract shall not exceed the amount of \$1,000,000 per twelve-month period commencing from the signing of this contract unless changed by the City.

Prices submitted by the Proposers shall be firm for the term of the contract. Contractor has option to present City with evidence supporting a price increase and shall include information based on FEMA's reasonable cost estimate info. The City shall have a right to negotiate any adjustment as to cost and has the right to refuse adjustment. All unit item price rates are inclusive of operator, equipment, fuel, maintenance, overhead, and regulatory compliance costs.

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c) INVOICING AND PAYMENT

Contractor shall submit monthly invoices to the City. City will pay invoice approximately 60 days from receipt. Contractor shall attach any supporting documentation to invoices. Invoices will be reviewed by City for accuracy, completeness and compliance with federal regulations and policy for which contractor is responsible to receive payment.

d) CONTRACT AWARD

Upon the recommendation of the selection committee the Purchasing Agent will issue a "Notice of Intent to Award" communication to the successful Proposer. A contract shall be completed and executed by all parties within twenty (20) calendar days of the date of the notice. If the selected Proposer fails to sign the contract within twenty (20) calendar days of delivery of it, the City may elect to cancel the award and award the contract to the next-highest-ranked Proposer.

If for any reason the Proposer whose proposal is most responsive to The City's needs, price and other evaluation factors set forth in the RFP considered, does not agree to a contract, that proposal shall be rejected and The City may negotiate with the next most responsive Proposer. Negotiation may include revision of non-mandatory terms, conditions, and requirements. The Finance Department must approve the final contract form and issue a purchase order, if applicable, to complete the process.

e) NOTICE TO UNSUCCESSFUL PROPOSERS

The Purchasing Agent will notify all unsuccessful Proposers that they were not awarded the contract. All RFPs submitted and the subsequent grading records are public records under Louisiana Law and are made available to any interested party. Unsuccessful proposers may request an out-briefing regarding the selection process.

f) MANDATORY ATTENDANCE AT ANNUAL PREPARATION EXERCISE

Prior to the beginning of the annual hurricane season, the Mayor conducts a preparation exercise of the Mandeville Emergency Response Team (MERT) to ensure readiness.

Contractor will be required to attend the exercise.

GENERAL PROVISIONS

a) PROPOSAL CLARIFICATIONS PRIOR TO SUBMITTAL

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The City shall not and cannot permit an open-ended inquiry period, as this creates an unwarranted delay in the procurement cycle and City operations. The City reasonably expects and requires responsible and interested proposers to conduct their in-depth proposal review and submit inquiries in a timely manner.

An inquiry period is hereby firmly set for all interested Proposers to perform a detailed review of the proposal documents and to submit any written inquiries relative thereto. Without exception, all inquiries MUST be submitted in writing by an authorized representative of the Proposer, clearly marked with the RFP # and cross-referenced to the relevant solicitation section. All inquiries must be received by the close of business on the Inquiry Deadline date set forth in the advertisement (first page) of this RFP. Only those inquiries received by the established deadline shall be considered by The City. Inquiries received after the established deadline shall not be entertained.

Inquiries concerning this solicitation may be delivered by mailing, hand-delivery, or e-mail to: Purchasing Agent, City of Mandeville, 3101 East Causeway Approach, Mandeville, LA 70448; or rchadwick@cityofmandeville.com.

An addendum will be issued by email to all RFP specification holders to address all inquiries received and any other changes or clarifications to the solicitation. Thereafter, all proposal documents, including but not limited to the specifications, terms, conditions, plans, etc., will stand as written and/or amended by any addendum. No negotiations, decisions, or actions shall be executed by any Proposer as a result of any oral discussions with any City employee or City consultant. The City is not responsible for a Proposer's failure to acknowledge any addenda documents required to complete an RFP.

b) ERRORS AND OMISSIONS IN PROPOSAL

The City will not be liable for any error in the proposal. Proposer will not be allowed to alter proposal documents after the deadline for proposal submission, except under the following condition: The City reserves the right to make corrections or clarifications due to patent errors identified in proposals by The City or the Proposer. The City, at its option, has the right to request clarification or additional information from the Proposer.

c) DAMAGES

The Proposer shall hold forever harmless the City, its elected officials, agencies, boards and commissions, employees, representatives, and its insurers, from any and all claims, damages, losses, demands, expenses, fines, legal fees, and liability as a result of the actions or inactions by the Proposer, its employees, representatives, and sub-contractors in the performance of any and all work performed under a contract awarded under this RFP and additionally from any claims, damages, losses, demands, expense, fines, legal fees, and liability that may result from any compliance or non-compliance imposed by any regulatory authority. Payment to contractor shall be held for each incident wherein a damage

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claim has been received or damage has been confirmed by the City until such time that the claim has been settled.

d) INDEMNIFICATION AND LIABILITY

Neither party shall be liable for any delay or failure in performance beyond its control resulting from acts of God or force majeure. The parties shall use reasonable efforts to eliminate or minimize the effect of such events in performing their respective duties under the contract.

Contractor shall be fully liable for the actions of its agents, employees, partners or subcontractors and shall fully indemnify and hold harmless The City from suits, actions, damages and costs of every name and description relating to personal injury and damage to real or personal tangible property caused by Contractor, its agents, employees, partners or subcontractors in the performance of the contract, without limitation; provided, however, that the Contractor shall not indemnify for that portion of any claim, loss or damage arising hereunder due to the negligent act or failure to act of The City. A hold harmless agreement shall be part of the contract awarded through this RFP.

Contractor will indemnify, defend and hold The City harmless, without limitation, from and against any and all damages, expenses (including reasonable attorneys' fees), claims judgments, liabilities and costs which may be finally assessed against The City in any action for infringement of a United States Letter Patent with respect to the Products, Materials, or Services furnished, or of any copyright, trademark, trade secret or intellectual property right, provided that The City shall give the Contractor: (i) prompt written notice of any action, claim or threat of infringement suit, or other suit, (ii) the opportunity to take over, settle or defend such action, claim or suit at Contractor's sole expense, and (iii) assistance in the defense of any such action at the expense of Contractor. Where a dispute or claim arises relative to a real or anticipated infringement, The City may require Contractor, at its sole expense, to submit such information and documentation, including formal patent attorney opinions, as The City shall require. The Contractor shall not be obligated to indemnify that portion of a claim or dispute based upon:

(i) City's unauthorized modification or alteration of a Product, Material, or Service; (ii) City's use of the Product, Material, or Service in combination with other products, materials, or services not furnished by Contractor; (iii) City's use in other than the specified operating conditions and environment.

In addition to the foregoing, if the use of any item(s) or part(s) thereof shall be enjoined for any reason or if Contractor believes that it may be enjoined, Contractor shall have the right, at its own expense and sole discretion as The City's exclusive remedy to take action in the following order of precedence: (i) to procure for The City the right to continue using such item(s) or part(s) thereof, as applicable; (ii) to modify the component so that it becomes non-infringing equipment of at least equal quality and performance; or (iii) to replace said item(s) or part(s) thereof, as applicable, with non-infringing

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components of at least equal quality and performance, or (iv) if none of the foregoing is commercially reasonable, then provide monetary compensation to The City up to the dollar amount of the Contract.

The City may, in addition to other remedies available to them at law or equity and upon notice to the Contractor, retain such monies from amounts due Contractor, or may proceed against the performance and payment bond, if any, as may be necessary to satisfy any claim for damages, penalties, costs and the like asserted by or against the City.

$\it e)$ Confidential information, trade secrets, and proprietary information

Proposer should not include any confidential information, trade secrets or proprietary information in its proposal. The City will not regard any information received in a proposal as confidential information, trade secrets or proprietary information.

f) APPOINTMENT OF CITY DESIGNATED AGENT

The contract resulting from this RFP shall appoint a City Designated Agent (CDA) who shall serve as the primary point of contact for the contractor and from whom the contractor shall receive instructions and tasking.

q) OWNERSHIP OF PROPOSAL

all materials submitted in response to this RFP become the property of The City. Selection or rejection of a proposal does not affect the City's ownership to the materials.

h) Cost of Preparation

Proposers are liable for all costs associated with developing the proposal, preparing for oral presentations, and any other expenses incurred in responding to the RFP.

i) STANDBY-BY CONTRACT AND DISCRETION OF MAYOR

The contract will be awarded as a standby contract to be activated in response to any emergency or disaster which may affect the City for the period of the contract resulting from this RFP. The activation of the contract is subject to the total discretion of the mayor. An award of this contract does not guarantee a "Notice to proceed" or any amount of work assigned to the contractor.

j) Withdrawal of Proposal and Proposal Validity

A Proposer may withdraw a proposal at any time prior to the signing of the contract by sending a letter to the Purchasing Agent directing the proposal be withdrawn. In the event the selected firm is unwilling or unable to accept the contract, the City shall offer the award to the second highest ranking firm or withdraw the RFP based upon what is in the best interest of the City.

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k) REJECTION OF PROPOSAL AND WITHDRAWAL OF RFP

Issuance of this RFP in no way constitutes a commitment by the City to award a contract. The City reserves the right to reject any proposal for cause and to withdraw this RFP prior to the execution of a contract.

RETENTION OF RECORDS

Contractor shall retain all records in connection with the performance of the contract for a period of three (3) years following date of the receipt of last payment.

m) AUDIT OF RECORDS

Contractor agrees to make available all records in connection with the performance of this contract available at any time to the City and to any state or federal agency which requests access to the records.

n) DELIVERABLES

Deliverables will consist of a weekly report outlining the issues addressed and accomplishments of objectives of the previous week and a list of objectives for the current week. The report will be sent to the CDA.

The deliverables listed in this section are the minimum desired from the successful Proposer. Every Proposer should describe what deliverables will be provided per their proposal and how the proposed deliverables will be provided. The City reserves the right to require additional reporting to support project performance and activity, invoiced amounts, or as may be required by the federal granting agency.

o) WAIVER OF ADMINISTRATIVE FORMALITIES AND TECHNICALITIES

The City reserves the right to waive administrative formalities and technicalities contained in any proposal.

p) GOVERNING LAW

Jurisdiction and venue for any suit filed in connection with this RFP process and any resulting contract shall be exclusive to the 22nd Judicial District Court for St. Tammany Parish, State of Louisiana.

q) ORDER OF PRECEDENCE

In the event of any inconsistency between the contract, the RFP and/or the Contractor's Proposal, the inconsistency shall be resolved by giving precedence first to the final contract, then to the RFP and any subsequent addenda and finally, the Contractor's Proposal.

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r) USE OF SUBCONTRACTORS

Each Contractor shall serve as the single prime contractor for all work performed pursuant to its contract. That prime contractor shall be responsible for all deliverables referenced in this RFP. This general requirement notwithstanding, Proposers may enter into subcontractor arrangements. Proposers may submit a proposal in response to this RFP, which identifies subcontract(s) with others, provided that the prime contractor acknowledges total responsibility for the entire contract.

If it becomes necessary for the prime contractor to use subcontractors, The City urges the prime contractor to use Louisiana vendors, including small and emerging businesses, a small entrepreneurship or a veteran or service-connected disabled veteran-owned small entrepreneurship, if practical. In all events, any subcontractor used by the prime should be identified to The City in its proposal.

Information required of the prime contractor under the terms of this RFP, is also required for each subcontractor and the subcontractors must agree to be bound by the terms of this contract between the Prime Contractor and the City. The prime contractor shall assume total responsibility for compliance. The Prime Contractor assumes responsibility for compliance with all federal requirements and all performance by its subcontractors and affiliates.

The contractor shall include all subcontractors as insured under its policies or shall ensure that all subcontractors satisfy the same insurance requirements stated herein for the contractor.

s) Assignment

The contractor shall not assign any interest in the contract to any third party without prior written consent of the City.

t) SUBSTITUTION OF PERSONNEL

If during the term of the contract, the contractor or subcontractor cannot provide the personnel as stated in its proposal and requests a substitution, that substitution shall meet or exceed the knowledge, experience, education and skill set of the individual in the proposal. A resume of the individual to be substituted will be submitted to the City for approval prior to any personnel substitution.

u) DOCUMENTATION UPON TERMINATION OF CONTRACT

The contractor shall provide two (2) electronic copies of all project documentation and records to the City within 60 days of the termination of the contract.

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ATTACHMENT A: SPECIFICATIONS (STATEMENT OF WORK) AND COST PROPOSAL FORM

SPECIFICATIONS

A. STORM DRAIN LINE CLEANING

- 1. Standard line cleaning shall be performed to remove foreign material and restore pipe capacity to 95%. Standard cleaning shall be defined as three (3) complete passes of the storm drain line with the cleaning equipment. The term "complete passes" shall mean cleaning from the upstream structure all the way to the downstream structure.
- 2. Heavy line cleaning shall be performed to remove foreign material and restore pipe capacity to 95%. Heavy line cleaning shall be defined as four (4) or more complete passes of the cleaning equipment. The term "complete passes" shall mean cleaning from the upstream structure all the way to the downstream structure.
- 3. Conditions such as broken pipe and major blockages may prevent cleaning from being accomplished, especially where additional damage would result if cleaning were attempted or continued. Should such conditions be encountered, the CONTRACTOR shall not be required to clean those specific pipe sections unless the OWNER removes the apparent obstruction.
- 4. During storm drain cleaning operations, satisfactory precautions shall be taken by the CONTRACTOR in the use of cleaning equipment. Precautions shall be taken to ensure that damage to, or flooding of public or private property does not occur during the cleaning procedure.
- 5. Selection of the equipment shall be the sole discretion of the CONTRACTOR and based on the conditions of lines at the time the work commences. The equipment shall be capable of removing dirt, grease, rocks, sand, and other materials and obstructions from the storm drain lines and structures.

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- 6. If cleaning of an entire section cannot be successfully performed from one structure, the equipment shall be set up at the other structure and cleaning again attempted. If successful cleaning still cannot be performed or the equipment fails to traverse the entire structure-to-structure pipe segment it will be assumed that a major blockage exists, and the cleaning operation will be abandoned. The cleaning operator will note these occurrences in his daily cleaning log. The CONTRACTOR will be compensated for cleaning the entire length of storm drain line should this occur.
- 7. All sludge, dirt, sand, rocks, grease, and other solid or semi-solid materials resulting from the cleaning operation shall be removed at the downstream structure of the section being cleaned. Passing materials from pipe segment to pipe segment, which could cause line stoppages, accumulations of debris in wet wells, interference with in-line long term flow monitoring equipment or damage to pumping equipment will not be permitted.
- 8. If the CCTV inspection shows the cleaning to be unsatisfactory, the CONTRACTOR shall reclean and re-inspect the storm drain line at his sole expense until the cleaning is shown to be satisfactory.
- 9. All sludge, dirt, sand, rocks, grease, and other solid or semisolid materials removed from the storm drain lines and structures during the cleaning operation shall be drained of water and transported to the approved local dumpsite for legal disposition in accordance with all local, state, and federal regulations. CONTRACTOR shall be responsible for all necessary permitting.
- 10. The OWNER will provide water for cleaning operations from any fire hydrant at no cost to CONTRACTOR.

UNCOVER BURIED STRUCTURES LESS THAN 12" DEEP

 CONTRACTOR shall provide all labor, materials, and equipment necessary to uncover storm drain structures less than 12" deep requiring access for storm drain line inspection on this project. CONTRACTOR will uncover only those structures approved by the OWNER.

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- 2. CONTRACTOR will not be required to uncover structures covered in asphalt, concrete or any other permanent or semi-permanent material.
- 3. After inspection is complete, the CONTRACTOR shall close the lid and re-cover the structure only with the material removed to access the structure. The CONTRACTOR will not be required to seal structure lid or replace any gasket material that may have been removed or damaged during the opening of the structure.

REMOVAL OF STABILIZED DEBRIS IN STRUCTURE INVERTS

1. CONTRACTOR shall provide all labor, materials, and equipment necessary to remove stabilized debris from structure inverts on this project. CONTRACTOR will only remove stabilized debris from structure inverts approved by the OWNER.

TRAFFIC CONTROL FOR EVALUATION AND CLEANING CREWS

- 1. CONTRACTOR will provide standard traffic control including cones, signs, etc. at no cost to the OWNER.
- 2. CONTRACTOR will provide additional traffic control such as a flagman or policeman, as needed and as approved by the OWNER.
- 3. The CONTRACTOR shall notify the local fire department, police department, engineering department, and all other necessary authorities to carry out the requirements of the scope
 - of work. All investigation work shall be coordinated with these authorities on a daily basis to avoid any conflict.

B. STRUCTURE AND PIPE EVALUATION SERVICES

The CONTRACTOR shall provide all labor, material, supplies, equipment, and transportation necessary to complete the 360-degree structure evaluation and zoom camera pipe assessment with GPS data collection.

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360 DEGREE STRUCTURE EVALUATION AND ZOOM CAMERA PIPE ASSESSMENT WITH GPS DATA COLLECTION

- 1. The CONTRACTOR shall perform each assessment by locating and identifying each structure, characterizing its components, and classifying it based on its conditions.
- 2. During inspections, the structure will be illuminated with high-intensity LED lighting. High-resolution 360 video of each structure will be obtained, capturing both the inside of each structure as well as the area surrounding it. This video shall provide a full illustration of the condition of the structure interior, the pipelines connecting to the structure, as well as the general conditions in the area surrounding the structure. A digital photograph of each structure will be taken from above ground, showing the structure and its proximity to identifying features or landmarks.
- 3. The purpose of structure assessment is to determine the location, physical condition and possible defects in all structures designated and approved by the OWNER. Information obtained during the physical survey will be utilized in determining rehabilitation costs and methods.
- 4. As a component of the inspection, CONTRACTOR will collect GPS coordinates (x, y, and z) of every structure with centimeter-grade precision. CONTRACTOR will utilize real- time corrections to collect the GPS data directly into ESRI's ArcGIS Online platform. This data can be imported into the OWNER's GIS mapping system. A digital photograph taken from above ground to show the structure and its proximity to identifying features or landmarks will be associated as an attribute of the GIS data.
- 5. CONTRACTOR shall utilize pole-mounted, HD zoom cameras to assess pipes during the structure evaluation. Zoom camera inspection will allow for the rapid assessment of how clean or dirty a pipe segment is as well as allowing for the location of significant defects within the pipes such as pipe collapses, considerable offset joints and intruding taps or roots. The process involves lowering a high definition, pole-mounted camera equipped

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with an integrated laser rangefinder to the invert of a structure. Once positioned on the incoming or outgoing pipe segments inside the structure, CONTRACTOR will zoom the camera down the pipe segment while watching the footage real-time on a handheld tablet above ground.

6. Zoom camera pipe inspections will be reviewed using a custom database that utilizes NASSCO PACP guidelines as the basis for assessing each pipe. Debris levels will be categorized on a scale of 0-10.

DOCUMENTATION

The following is an example of the data required during a structure condition assessment, but is not limited to:

- 1. General Information:
 - a. Structure number
 - b. Basin
 - c. Address/location description
 - d. Surface conditions, etc.
- 2. Structure Characteristics:
 - a. Type
 - b. Surface cover
 - c. Primary construction materials
 - d. Depth
 - e. Cover type
 - f. Grate type
 - g. Condition
- 3. Pipe Data
 - a. Size
 - b. Shape
 - c. Material

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- d. Depth to invert
- e. Flow depth
- f. Pipe ID or connecting structure
- 4. Structure connectivity will be documented in GIS
- 5. General Inspection Data
 - a. Inspector
 - b. Inspection date
 - c. Status
 - d. Weather/ground condition
- 6. Defects in structures
 - a. Visible defects
 - b. Roots
 - c. Debris
- 7. Defects in pipes
 - a. Significant PACP defects capable of impeding flow
 - b. PACP defects that may create adverse conditions in the future

DELIVERABLES

- 1. GIS database with inventory, condition data and photographs shall be submitted to the OWNER.
- 2. ESRI ArcMap file, AutoCAD, or PDF map if preferred by OWNER.
- 3. 360 videos in mp4 format.
- 4. Zoom camera videos in mp4 format.
- 5. Zoom camera inspection reports.
- 6. Zoom camera inspection database.
- 7. Once the structure inspection data has been obtained and analyzed and professional reports compiled, a recommended protocol for repairs will be recommended by the CONTRACTOR.

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8. All rehabilitation recommendations will be approved by a registered licensed engineer in the state of Louisiana with a minimum of 10 years of experience analyzing structure inspection data.

CCTV INSPECTION

- The CONTRACTOR shall furnish all labor, equipment, supplies, and supervision and shall
 perform all work required in accordance with these specifications. CCTV inspection shall
 be performed on pipes selected and approved by the OWNER.
- 2. If flows are such that they interfere with the CONTRACTOR's ability to collect accurate data, then the CONTRACTOR shall be responsible to schedule his work during low flow periods or to request written permission to perform sonar inspection of the surcharged pipes.
- 3. Inspection of storm drain infrastructure by means of CCTV equipment shall be performed to determine the location and extent of any obstructions and defects such as offset joints, protruding tees, broken pipe and more. Logs shall note the existence of any significant defects. Cleaning by the CONTRACTOR shall be performed prior to each CCTV inspection on each pipeline to be inspected.
- 4. CCTV inspections shall be performed on one structure-to-structure pipe segment at a time. The inspection shall be performed by moving the CCTV camera through the line along the
 - axis of the pipe at a rate not to exceed 30 feet per minute. Any means of propelling the camera through the storm drain line that would exceed this rate of speed or produce non-uniform or jerky movements shall not be acceptable. The camera shall be stopped for a minimum of 5 seconds at each identifiable defect to ensure proper documentation of the lines condition. In addition, the camera shall be stopped at each service connection, and the camera shall pan the service connection to video inside the service line. CCTV inspection is performed from the upstream structure to the downstream structure when the conditions

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- allow. If conditions do not allow an upstream to downstream inspection, the inspection will be performed in reverse (from the downstream to the upstream structure).
- 5. The pipe segment length, with respect to the referenced structure, shall be determined with a meter device, accurate to within ±2%. Markings on the cable, instruments requiring observation inside a structure, or correction of each reading for the depth of the reference structure shall not be allowed. Accuracy of the measurement meters shall be checked daily by use of a walking meter, roll-a-tape, or other suitable device.
- 6. A header screen showing segment number, structure numbers, and starting structure shall be recorded for 10 seconds at the beginning of each televised line segment.
- 7. At the CONTRACTOR's discretion the camera shall be stopped or backed up to view and analyze conditions that appear to be unusual or uncommon for a sound storm drain line. At all times, the operating technician shall be able to move the camera through the line in either direction without loss of quality in the video presentation on the monitor. The picture shall be free of electrical interference and provide a clear, stable image of the specified resolutions at all times. The camera lens shall be cleaned, as required, to provide a clear image within the storm drain lines.
- 8. In the event that equipment becomes lodged in the storm drain line, the CONTRACTOR shall notify the OWNER immediately. If equipment becomes lodged through no fault of CONTRACTOR, the OWNER will remove the camera at no cost to the CONTRACTOR. Timely excavation is necessary to maintain project schedules and to eliminate the possibility of overflows resulting from the lodged equipment creating a blockage.
- 9. If during the inspection the camera cannot pass through the entire pipe segment, the CONTRACTOR shall set up his equipment so that the inspection can be performed from the opposite structure. Should this occur, CONTRACTOR will be paid for an additional setup. If the camera again fails to pass through the entire pipe segment, the inspection shall be abandoned and considered complete. The CONTRACTOR will be paid for the actual footage inspected, and no additional inspection work shall be required in that pipe

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segment until the pipe has been rehabilitated. CONTRACTOR will be paid for the actual footage inspected during each subsequent attempt.

SUBMITTALS

- 1. Copy of completed CCTV log
- 2. Schedule for cleaning and inspecting each storm drain line
- 3. Daily report form
- 4. Confined space entry form

DATA SUBMITTALS

- 1. All line pictures will be digital .mpeg video, clear, legible, and free of "snow" or haze.
- 2. Electronic copies (data files) shall be submitted in a PACP Exchange Database.
- 3. The CONTRACTOR shall prepare and submit a list of defects, which appear to require immediate corrective action, based on their size and/or type, on a daily and weekly basis. This submittal is not a final deliverable.
- 4. To establish the working criteria for video picture quality which must be maintained throughout the project, the CONTRACTOR shall furnish a USB drive with .mpg video footage of an actual storm drain line inspection that is satisfactory to the OWNER and meets the job specifications for CCTV inspection. This USB drive shall become the property of the OWNER and shall be used throughout the project as a standard that the CONTRACTOR's video picture quality must meet.
- 5. The CONTRACTOR shall furnish the OWNER a hard drive or USB drive that contains both data files and video files. The data files shall be able to upload into PACP compliant software. If a specific naming convention of file is required, OWNER shall provide labeling and file naming standards at the pre-construction meeting.
- 6. All inspections performed by CONTRACTOR shall be made by PACP certified operators and data shall be documented using NASSCO's Pipeline Assessment and Condition Program.

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- 7. Once the CCTV inspection data has been obtained and analyzed and professional reports compiled, a recommended protocol for repairs will be recommended by the CONTRACTOR.
- 8. All rehabilitation recommendations must be approved by a registered licensed engineer in the state of Louisiana with a minimum of 10 years of experience analyzing storm drain line inspection data.

SONAR INSPECTION

- 1. The CONTRACTOR shall determine the inspection technology method or combination of methods to be utilized in each pipeline segment. Generally, sonar alone will be used where the depth of fluid in the pipeline is greater than 75% of the full diameter of the pipe. CCTV and sonar will be used together when the fluid levels are between 25% and 75% of the full pipe diameter. Sonar will not be used where the fluid depth is generally less than 25% of the pipe diameter or more specifically where there is insufficient depth to pass the sonar gear on the float or crawler.
- 2. The speed of the crawler or float shall not be greater than 20 feet per minute when the scanning sonar is in use either alone or in combination with the CCTV camera.
- 3. The sonar equipment shall be purpose built for use in the inspection of storm drain system pipelines and shall be operative in totally submerged conditions. It shall be capable of being traversed by crawler tractor, float, or other suitable means through the pipeline on a stable vehicle constructed to situate the sonar inspection equipment below the water level.
- 4. The maximum beam width of the sonar energy pulse will be no greater than 2 degrees from the center of the transducer. The transducer will be of the continuous scanning type. The sonar image will be in full color during the inspection.
- 5. The sonar survey will include complete structural and service assessment of the equivalent PACP standard as that obtained through the CCTV survey. The sonar survey will include measurement of fluid depth and silt depth.

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- 6. The sonar survey will be continuously recorded and saved on flash drives in MPEG format, supported by complete defect inspection logs and summary reports.
- 7. A color sonar still image of cross-sections of the pipeline must be taken and recorded every 50 feet or more frequently should the internal profile of the pipeline change and at every defect. These images are to be cross referenced to the reports and databases for ease of reference.

C. SEWER SYSTEM EVALUATION SERVICES

MOBILIZATION / DEMOBILIZATION

- A. Mobilization and demobilization consist of the preparatory work and operations including, but not limited to the movement of supplies, equipment, personnel, and incidentals to and from the project location.
- B. Equipment includes, but is not limited to CCTV inspection units, combination vacuum trucks, fully equipped smoke testing units, sonar inspection units, Electros can inspection units, acoustic pipe assessment units, fully equipped manhole condition assessment units or any other equipment necessary to complete the project.

C. MEASUREMENT AND PAYMENT

Mobilization / Demobilization of Equipment & Crews: The unit price shown on Attachment A shall constitute full payment for all costs associated with the initial and subsequent mobilizations / demobilizations of equipment, as defined above. This item shall be paid once unless additional mobilizations are caused by direct action of directly by inaction of the Owner.

FLOW MONITORING SERVICES

TEMPORARY FLOW MONITORING

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A. The objective of temporary flow monitoring is to quantify high groundwater, dry weather base flows rainfall dependent inflow/infiltration and wet weather peak flows to support extraneous quantification and decision making and hydraulic modeling.

B. The Work includes:

- a. Investigating proposed monitoring sites and confirming suitability.
- b. Installing, calibrating, and monitoring temporary flow monitors for a minimum of 60 days (up to a maximum of 120 days) at each site.
- c. Visiting each meter location once a week to enter the confined space to perform depth and velocity sensor calibrations, collect data and verify monitor operation.
- d. Installing, calibrating, and maintaining temporary rain gauges, for a minimum of 60 days (up to a maximum of 120 days) at each site.
- e. Visiting each rain gauge once per week collect data and ensure synchronization with the temporary flow meters.
- f. Evaluating the collected data, performing the required QA/QC of the data, and providing electronic data delivery and written reports and analysis of the temporary flow monitoring results/rain gauge data.
- C. The temporary flow monitor, as manufactured by MGD, Sigma, ISCO or equal, shall be equipped with a pressure and area velocity sensors. Accuracy shall be demonstrated from the manufacturer of the meter to be +/- 5 percent of actual flow, recorded in time intervals as short as 5 minutes or another specified interval. The vendor shall submit certification results for each meter proposed to be used in the project of the date of the most recent manufacturer of field calibration and results.
- D. Rainfall data shall be collected by the Consultant by means of tipping bucket rain gauges. Each unit shall be approved by the OWNER, shall provide real time synchronized to computer type memory bank, and shall be of the solid-state type. Whenever 0.01 inches of rain is collected, the tipping bucket shall empty, triggering an electronic counter. At the agreed upon time interval, the timer shall activate the computer and the number of counts shall be recorded on the memory bank.

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- E. The flow meter and rain gauge data storage and clocks shall be compatible so each time interval of data shall be recorded synchronously with respect to each other meter and rain gauge deployed during the project.
- F. OWNER will select and propose initial locations for the flow meters and rain gauges.

 OWNER will provide maps of the initial meter site selections to the Consultant. The

 Consultant will perform field investigations and evaluate the prosed sites for the meters

 (those manholes with the best hydraulic characteristics) and rain gauges (clear, open, and secure areas that are protected from vandalism.
- G. Laminar flow is desired with little evidence of backwater and/or surcharging conditions. Meter locations upstream of pumping stations shall get particular attention to ensure a minimum impact from the wet well operating levels. Should a proposed meter or rain gauge site not be suitable, the Consultant shall propose and document alternate sites that still meet the general criteria of the collection system area identified for metering.
- H. The Consultant will develop and submit detailed site reports, including upstream pipe photos, for the proposed meter or rain gauge locations. The manhole meter and rain gauge site reports will be submitted to the OWNER for review and confirmation of the site before the meters are installed.
- I. Following OWNER's approval of the site, the Consultant will install the flow meters and rain gauges in the selected locations. Consultant will initially calibrate the meters at each installation. The meters will be set up to record flow data (depth, velocity, and flow) at 15-minute intervals unless otherwise requested and the sensor calibrations confirmed in the pipe. The tipping bucket rain gauges, recording rainfall in depths of 0.01inch increments, will also be set up to record every 15 minutes synchronously with the flow monitors.
- J. The Consultant will maintain the flow meters throughout minimum, 60-day metering period. Consultant will visit each meter a minimum of one time per week to download the data, to perform necessary meter maintenance (e.g. scrubbing sensors, removing debris) and to field calibrate and confirm the meter sensor firings. Manual depth and velocity

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confirming measurements will be made weekly during each visit. Data collection routes, time of data collection and calibrations should be staggered, as practical, to ensure a reasonable calibration across the full range of diurnal flows for each meter site. One calibration point each, generally at the dry-weather peak diurnal flow and the minimum diurnal flow, is required over the minimum 60-day metering and data collection period.

- K. Data will be reviewed on-site for overall data quality and any problems will be immediately addressed by the Consultant. A documentation log will be maintained by the Consultant of each meter visit and calibration and a copy of the entries provided to the Owner on a biweekly basis. The manhole number (meter location), date, time on meter, and the time of manual depth verification will be indicated on the log. A written record will be maintained by field personnel for each monitoring point for each site inspection. The data will also be reviewed in the Consultant's office by engineering staff. Field crews will return to the site as necessary if the engineering staff identifies any additional issues.
- L. The Consultant shall maintain spare meters, parts, and testing equipment to permit replacement of defective meters to ensure a reasonably continuous metering period.
- M. After a 60-day minimum monitoring period, the OWNER has the option to direct the additional data collection and field calibration on a weekly basis for up to an additional 60 days. The OWNER will determine when to pull the meters and rain gauges and advise the Consultant of that decision at least 7 days in advance of the meter data collection termination date. The Consultant can then begin removing meters subsequent to the meter termination data.

ANALYSIS & DELIVERABLES

Preliminary Data Review and Submittal:

A. Preliminary data (site logs, initial raw meter, and rain gauge data) will be delivered for the OWNER's review following the initial 30 days of date collections. This data will be submitted no later than 45 days after the start of the data collection period. This data and

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any contemporary rain and flow data collected in the remaining period will be the basis for extending the meters on a weekly basis beyond the minimum 60-day flow-metering period.

Final Data Submission:

The Consultant will submit a letter report summarizing the data collected (statistical wastewater flow summaries, rainfall data, hydrographs, and tabularized formats); and will perform analyses associate with the date including an estimate of base sanitary flow and an assessment of 1/1quantities tributary to each meter. Consultant will also submit meter data to OWNER in electronic Excel file format. Final calibrated date and letter report will be delivered no later than 30 calendar days following the termination of the flow-monitoring period.

A. The report shall include, but not be limited to, the following:

- a. Executive Summary
- b. Field procedures used for date collection and calibration
- c. Site location information and reports
- d. Hydrographs of depth, velocity, flow, and rain.
- e. Graphs of dry and wet weather analysis.
- f. Results of the dry and wet weather analysis. Prioritized areas shall be ranked by the amount of extraneous (1/1) flow tributary to each meter
- g. Electronic data (rain, depth, velocity & flow ASCII, or CSV format)

NIGHT FLOW ISOLATION

- A. The purpose of flow isolation is to identify localized areas of likely sources of infiltration to specific reaches of sewer where flow monitors have indicated specifically high levels of flow relative to base flow. Measurements are typically taken between 12:00 a.m. and 5:00 a.m. when base flows are minimal.
- B. Graduated V-notch weirs or depth/velocity measurements shall be used to determine flow rate during flow isolation. Floating devices are not acceptable to estimate mean

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- flow velocity. Computation of mean velocity using sewer slope and measured depth of flow is not acceptable.
- C. All flow isolation field measurements shall be conducted between 12:00 A.M. and 5:00 A.M. local time on a micro-system of sewers with a total length of approximately 1,000 linear feet. Consultant will plug all pipes upstream of the test segment or differentially isolate the segments.
- D. The Consultant shall document all observations regarding each flow isolation test in a report. The report shall include the following information at a minimum:
 - a. Date and time
 - b. Location, including reference to the City manhole numbering system and street address
 - c. Testing personnel
 - d. Schematic layout of the manholes and sewer lines under testing, showing location of the weir.
 - e. Pipe Sizes and lengths.
- E. Prior to measuring flows, Consultant will perform an area survey to identify and document businesses and/or institutions that typically have high discharge rates to the sewer, such as hospitals, laundries/cleaners, food establishments, bars, etc.
- F. Public notification is critical and compliance with the public notification criteria is a prerequisite for conducting flow isolation when conducting flow isolation tests on sewers is easements which pass through private property. At a minimum, the following steps shall be taken:
 - a. Residential/commercial: Distribute advance notice flyers between 24 and 72 hours before flow isolation commences for each section of pipe.
 - b. Emergency response agency (fire/police): Set up contact person and notify daily as to area, start time, and ending time.

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- c. Schools, hospitals, and nursing homes: Distribute advance notice flyers between 24 and 72 hours before flow isolation.
- d. The Consultant shall keep a daily log of his/her contact with all affected agencies and institutions.
- G. Electronic database of flow isolation data and digital photographs of results shall be submitted to the OWNER. The electronic database using the required file format in Microsoft Access®.
- H. A binder with hard copies of the flow isolation reports including photos shall be submitted to the OWNER.

MEASUREMENT AND PAYMENT

Flow Monitoring: The unit price shown on Attachment A shall constitute full payment for all costs for flow monitoring, documentation and preparation and delivery of data including but not limited to labor, equipment, transportation, tools and other related procedures and materials necessary to produce the results in the form, format and of the quality specified in the flow monitoring section. Payment will be made based on the number of meters installed and the number of days each meter is installed for (meter days).

Rain Gauges: The unit price shown on Attachment A shall constitute full payment for all costs for rain gauges, documentation and preparation and delivery of data including but not limited to labor, equipment, transportation, tools and all other related procedures and materials necessary to produce the results in the form, format and of the quality specified in the flow monitoring section. Payment will be made based on the number of rain gauges installed and the number of days each gauge is installed for (gauge days).

Night Flow Isolation: The unit price shown on Attachment A shall constitute full payment for all costs with night flow isolation, documentation and preparation and delivery of data including but not limited to labor, equipment, transportation, tools and other related procedures and materials necessary to produce the results in the form, format and of the quality specified in the flow monitoring section. Payment will be made per each night flow isolation setup utilized.

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Pump Station Draw/Fill Test: CONSULTANT will be paid per each pump station draw/fill test performed based on how many pumps each pump station contains. The unit price shown on Attachment A shall constitute full payment for each Pump Station Draw/Fill Test performed.

MANHOLE SERVICES

- A. The CONSULTANT shall provide all labor, materials, supplies, equipment, and transportation necessary to complete the 3D manhole / wet well condition assessment, structural manhole condition assessment, uncovering of buried manholes removal of stabilized debris and cleaning of manholes.
- B. The CONSULTANT shall perform each manhole / wet well assessment by determining the dimensional configuration and physical condition of the base, channel(s), barrel, corbel, connections, cone, ring, and cover of the structure and locate possible sources of inflow/infiltration (1/1) and defects. The arrangement in the manhole / wet well shall be characterized with a drawing that shall indicate the invert and direction of flow.
- C. The manhole / wet well interior structure shall be manually inspected using high-level illumination. High-resolution digital photographs with approved picture quality shall be taken of observed defects as well as other relevant features. Information gathered shall provide a full illustration of the condition of the manhole / wet well interior as well as each pipeline entering the manhole / wet well.

3D MANHOLE / WET WELL CONDITION ASSESSMENT WITH INTERNAL IMAGES AND GPS DATA COLLECTION

A. The purpose of manhole / wet well condition assessment is to determine the physical condition, location and possible sources of 1/1 in all manholes / wet wells designated and approved by the OWNER. Information obtained during the physical survey will be utilized in determining rehabilitation costs and methods.

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- B. CONSULTANT will perform 3D inspections of each manhole / wet well utilizing the Panorama SI 3D Optical Manhole Scanner. The 3D scanner uses two height resolution digital cameras with specially designed distortion-free wide-angle lenses. The cameras optically scan the entire interior of the manhole / wet well in a few seconds in one single vertical run. The digitally transmitted image data can be viewed by the operator as if it were a live picture.
- C. As a component of the inspection, CONSULTANT will collect GPS coordinates (XXY) of every manhole / wet well. This data can be imported into the OWNER's GIS mapping system.
- D. 3D manhole / wet well condition assessments shall provide superior imagery and geometric data as compared to traditional methods. The CONSULTANT shall provide the OWNER with the software required to view the digital film file in the way that the CONSULTANT can view them, including full control of the virtual pan and tilt. The digital film files must include the following:
 - a. An unfolded view of the manhole / wet well with a minimum of 3,000 lines of vertical resolution.
 - b. The capability to produce a three-dimensional representation of the manhole / wet well structure.
 - c. A distortion-free virtual pan and tilt allowing the review of the manhole / wet well structure from any angle at any depth. The virtual pan and tilt must consist of view from the bottom and top camera, any virtual pan and tilt that artificially creates this view from a single camera will be deemed unacceptable due to distorted images on the direct side view.
 - i. The virtual pan and tilt and up/down direction of the view must be able to be controlled from a computer mouse.
 - ii. The virtual pan and tilt and unfolded views must be able to be viewable by the OWNER without the need for any third-party data logging software.

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MANHOLE CONDITION ASSESSMENT WITH INTERNAL IMAGES

- A. Manhole condition assessment with internal images shall be performed using a pole-mounted viewing camera(s) with lighting. CONSULTANT will utilize this method on manholes that cannot be accessed with 3D equipment.
- B. Digital high-resolut6ion photographs shall be taken, at a minimum showing general surrounding view(s) to locate the manholes above ground location and other GIS map features, plan view looking down at the manhole invert. Major defects in the manhole and pipes shall be included in the photographs. Digital pictures shall have minimum resolution of 72 dpi x 72 dpi and minimum dimensions of 640 x 480 pixels.

DOCUMENTATION

The following is an example of the data required during a manhole condition assessment, but is not necessarily limited to:

A. General Information:

- a. Manhole number
- b. Basin
- c. Address / Location descriptions
- d. Surface conditions, etc.

B. Manhole Characteristics:

- a. For each section of a manhole Type, Shape, Materials of Construction, Depth, and size
- b. Cover vents and size
- c. At/Above/Below grade
- d. Inflow dish
- e. General configuration of manhole

C. Pipe Data

- a. Size, shape, material, liner and depth of pipes, clock position
- b. Flow depth

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- c. Indication if drop pipe and/or parallel line
- D. Manhole Sketch showing incoming and outgoing pipes with connecting points
- E. General Inspection Data
 - a. Inspector, date of condition assessment, status of inspection, method of inspection,
 weather condition
 - b. Presence of flusher valves
 - c. Evidence of surcharge, groundwater, ponding, and debris.

F. Defects in manholes

- a. Location and nature of visible defects and obstructions (i.e., indication of structural conditions or special problems in the pipe connection/manhole)
- b. Root growth and type in manhole wall/base (if any)
- c. Evidence of leaks and locations, along with measured or estimated sources of extraneous flows (i.e. identification and quantification of 1/1)
- d. Special problems and/or conditions such as overflows, bypasses, etc.
- e. Type and depth of debris and deposition in the manhole.

PHOTOGRAPHIC DOCUMENTATION PROCEDURES

- A. High-resolution digital color photographs shall be taken for each manhole assessed and shall show the following:
 - a. Above ground features and conditions in the vicinity of the manhole to be assessed using pole-mounted viewing camera – photograph to be taken looking downstream with manhole in immediate foreground
 - Plan view from surface of manhole invert photographer's feet placed on location of outgoing pipe
 - c. Elevation view of each incoming and outgoing sewer
 - d. All observed defects and obstructions
- B. Groups of digital photographs for each designated manhole, orientated so that the long side of the photograph is horizontal, shall be incorporated in the hard copy of the manhole

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- condition assessment report and supplied on a DVD(s) incorporated for each work order issued by the OWNER, unless otherwise directed.
- C. Reference to location for each photograph shall be indicated on the sketches at the end of the report. Photographs taken within the manhole shall indicate the depth below the ground surface and clock reference, relative to North at 12 o'clock. Each photograph filename shall be entered into the electronic database in the appropriate corresponding record.

DELIVERABLES

- A. Electronic database with inventory and condition date and photographs shall be submitted to the OWNER.
- B. All photographs shall be digital pictures in electronic format.
- C. Corrections to the printed map shall be illustrated with red markings and delivered at the completion of each work task or at progress meetings. Supplemental sketches will be provided, as necessary, to clearly depict actual site conditions.
- D. Once the manhole inspection data has been obtained and analyzed and professional reports compiled, a recommended protocol for repairs will be recommended by the CONSULTANT.
- E. All rehabilitation recommendations must be approved by a registered licensed engineer in the state of Louisiana with a minimum of 10 years of experience analyzing manhole inspection data. Engineer must be MACP certified.

<u>UNCOVER BURIED MANHOLES LESS THAN 12" DEEP</u>

- A. CONSULTANT shall provide all labor, materials, and equipment necessary to uncover sewer manholes less than 12" deep requiring access for sewer line inspection on this project. CONSLTANT will uncover only those manholes approved by the OWNER.
- B. CONSULTANT will not be required to uncover manholes covered in asphalt, concrete or any other permanent or semi-permanent material.

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C. After inspection is complete, the CONSULTANT shall close the lid and re-cover the manhole only with the material removed to access the manhole. The CONSULTANT will not be required to scale manhole lid or replace any gasket material that may have been removed or damaged during the opening of the manhole.

REMOVAL OF STABILIZED DEBRIS IN MANHOLE INVERTS

A. CONSULTANT shall provide all labor, materials, and equipment necessary to remove stabilized debris from manholes inverts on this project. CONSULTANT will only remove stabilized debris from manhole inverts approved by the OWNER.

INSTALLATION OF RAINSTOPPER DURING MANHOLE CONDITION ASSESSMENT

- A. The CONSULTANT shall provide all labor, material, supplies, equipment, and transportation necessary to complete the installation of Rain stopper manhole inserts during manhole condition assessment, in areas designated by the OWNER.
- **B.** The Rain stopper insert, and components shall be manufactured of materials resistant to corrosion from atmospheres containing hydrogen sulfide and dilute sulfuric acid.
- C. The insert body shall be manufactured of high-density ethylene hexane-1 copolymer equal to Phillips Chemical Co. Marley HHM-4402, meeting the requirements or ASTM D1248 Class A, Category 5. The insert shall exceed 5 ½" in depth to allow penetration of the manhole lid through the clear opening in the ring. The insert shall have three or more ribs in the bottom for stiffness and lid deflection. The insert shall have a straight-side design to allow a loose fit into ring for each removal. The insert manufacturer must furnish a "load test verification" showing a load test failure in excess of 800 pounds.
- D. The gasket shall be made of close cell neoprene and shall have a pressure sensitive adhesive on one side. The gasket shall be installed by the manufacturer and must be compatible with the insert material to form a long-lasting bond in wet or dry conditions.
- E. The gas relief valve shall be designed to release at a pressure of .5-1.5 PSI and have a water leak down rate no greater than 5 gallons per 24 hours. The valve shall be installed in the

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insert by means of a hole tapped in the insert by the manufacturer and secured by a special designed lip molded into the insert to prevent being knocked out by lid rotation. The valve shall be made of nitrile for prevention of corrosion from contact with hydrogen sulfide, dilute sulfuric acid and other gasses associated with sewers.

- F. The handle shall be made of 1" wide nylon webbing and shall be installed on the insert body with #6 high-grade stainless-steel rivets and washers. The handle shall be installed on the insert in such a way that it does not interfere with the installation of the manhole lid. The handle shall be able to withstand a pull o 500 pounds of force before it fails or separated from the insert.
- G. The manhole frame rim shall be free of dirt and debris prior to the installation of the Rain stopper insert. The Rain stopper insert should be fully seated around the manhole frame to insure against water seepage between the insert and manhole frame rim. A generous coating of grease on the gasket will be applied by CONSULTANT to assist in seating and prevention of rust.

<u>MEASUREMENT AND PAYMENT</u>

3D Manhole Condition Assessment: The unit price shown on Attachment A shall constitute full payment for all costs associated with inspecting all designated manholes and documentation including but not limited to labor, equipment, transportation, tools, GPS data collection and all other related procedures and materials necessary to produce the results in the form, format and of the quality specified in the manhole condition assessment section. CONSULTANT will be paid per each manhole inspected.

Structural Manhole Condition Assessment: The unit price shown on Attachment A shall constitute full payment for all costs associated with inspecting all designated manholes and documentation including but not limited to labor, equipment, transportation, tools and all other related procedures and material necessary to produce the results in the form, format and of

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the quality specified in the manhole condition assessment section CONSULTANT will be paid per each manhole inspected.

3D Wet Well Condition Assessment (Less Than or Equal to 8-Ft Diameter): The unit price shown on Attachment A shall constitute full payment for all costs associated with inspecting all designated wet wells that are less than or equal to 8-ft. diameter and documentation including but not limited to labor, equipment, transportation, tools, GPS data collection and all other related procedures and materials necessary to produce the results in the form, format and of the quality specified in the manhole / wet condition assessment section. CONSULTANT will be paid per each wet well inspected.

3D Wet Well Condition Assessment (Greater Than 8-Ft. Diameter): The unit price shown on Attachment A shall constitute full payment for all costs associated with inspecting all designated wet wells that are greater than 8-ft. diameter and documentation including but not limited to labor, equipment, transportation, tools, GPS data collection and all other related procedures and materials necessary to produce the results in the form, format and of the quality specified in the manhole / wet well condition assessment section. CONSULTANT will be paid per each wet well inspected.

Uncover Buried Manholes Less than 12" Deep: Payment will be made for the uncovering of buried manholes in less than 12" of soil. Uncovering of manholes in concrete, asphalt, or any other material besides soil will not be performed. The unit price shown on Attachment A shall constitute full payment for each buried manhole less than 12" deep uncovered.

Removal of Stabilized Debris in Manhole Inverts: The unit price shown on Attachment A shall constitute full payment for all costs associated with confined space entry into manhole and removal of stabilized debris from manhole inverts. CONSULTANT will be paid for each manhole that stabilized debris is removed from

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Installation of Rain stopper During Manhole Condition Assessment: CONSULTANT will be paid for each Rain stopper installed during manhole condition assessment. The unit price shown on Attachment A shall constitute full payment for each Rain stopper provided and installed.

Manhole Inspection Data Management: The unit price shown on Attachment A shall constitute full payment for all costs associated with the preparation and delivery of manhole inspection data, reports in the form, format and quality specified in the manhole inspection. Payment will be made per each manhole inspected.

Manhole / Wet Well Rehabilitation Recommendations: The unit price shown on Attachment A shall constitute full payment for all cost associated with the preparation and delivery of manhole / wet well rehabilitation recommendations. Payment will be made per each manhole/wet well inspected.

SMOKE TESTING

- A. The CONSULTANT shall provide all labor, materials, supplies, equipment, and transportation necessary to complete the smoke testing work.
- B. The objective of smoke testing sewer pipes is to locate specific sources of direct inflow to the sewers, such as storm sewer cross-connections, roof drains, yard and basement drains, fountain drains and abandoned building sewers. Additionally, smoke testing assists in locating system defects that contribute 1/1 to the sewers, including broken sewer pipes and service laterals and areas subject to ponding.
- C. Smoke testing work shall be conducted on pipes in areas of the system as selected and approved by the OWNER.
- D. Smoke testing may affect residences and/or businesses in the area being tested. Therefore, public and emergency response notification is an important aspect of this testing procedure. Such notification shall be conducted by the CONSULTANT as specified herein and is a prerequisite for initiating smoke testing.

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- E. High-grade mineral oil will be used to generate the smoke required for smoke testing. Smoke shall be dense, non-toxic, odorless, and non-staining.
- F. Blowers shall be used to force smoke into the sewer and shall be portable, custom-mounted to be installed over an open manhole casting and shall have a maximum capacity of 4,500 CFM and a minimum capacity of 2,000 CFM.
- G. Intensified smoke testing techniques shall be employed in all cases. Intensified techniques shall include at least one blower capable of a free air delivery of at least 2,000 CFM and smoke generation for a minimum of six minutes. Up to three-line segments, but no more than 1,000 feet of sewer main may be tested at one time. However, a separate Smoke Test Form must be filled out for each line segment even if no defect is found. Line segments shall be adequately isolated by using sandbags, baffles, or other methods. Smoke emanating from vents on buildings or adjacent manholes will determine the extent of successful smoke testing. Only clearly visible, dense smoke will qualify the sewer main tested for acceptance up to 1,000 feet of sewer main.
- H. Restrictions: Smoke testing shall not be conducted on rainy days or when saturated soil conditions exist. Rainy days are defined as days where greater than 0.5 inches of rain falls in any consecutive twelve-hour period. Testing shall be closely monitored on windy days. If smoke coming out of the ground is blown away so quickly as to escape accurate detection and/or photo documentation, testing shall cease until such time that weather conditions permit an accurate record of smoke testing results.
- I. The roofs of each building shall be visually inspected for evidence of roof drains connected to sanitary sewers.

DOCUMENTATION

- A. The following data will be recorded on a paper form and entered into a database by the CONSULTANT, using the required file format in Microsoft ACCESS®. Data will be recorded using the approved smoke test form. A bound hard copy and DVD shall be submitted to the OWNER. The smoke test database shall include the following information at a minimum:
 - a. Description of the smoke return ("leak"), including intensity;

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- b. Date and time;
- c. Location, including reference to the relevant manhole segment (upstream and downstream manhole incorporating the OWNER's manhole numbering system) and the nearest street address;
- d. Area and type of surface drained by the smoke return ("leak");
- e. Testing personnel; and
- f. Digital color photographs and filenames of the results of each smoke test
- g. GPS X & Y location of the leak location
- B. The location of smoke defects shall be marked with a flag using blue for light smoke, yellow for medium smoke and red for heavy smoke and each leak's location will be collected with a GPS collection device.
- C. Sketch must be provided of the manholes and sewer lines under testing including address, location, photo number, dimensional ties, and offsets to the documented smoke returns (leaks). Note geographical orientation relative to north.

PHOTOGRAPHIC DOCUMENTATION PROCEDURES

- A. The CONSULTANT shall document each smoke leak or series of leaks by high- resolution digital photograph. Digital photographs shall be provided in jpg format. The resolution of the photographs shall be a minimum of 72 dpi x 72 dpi and minimum dimensions of 640 X 480 pixels. The photographs shall be referenced in the database by filename using UPSMH#_DNSMH#_LEAK#.
- B. Photographs will be taken in such a way that the smoke leak is clearly visible in the foreground and a distinct fixed reference is visible in the background. This method of referencing something fixed will support QA/QC to ensure that smoke leaks and their associated date can be confirmed by someone other than the original smoke test crew.
- C. Groups of digital photographs will be orientated so that the long side of the photographs is horizontal and printed copies can be incorporated in the hard copy of the smoke testing report. The report shall be supplied on a USB 2.0 flash drive(s) to the OWNER.

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D. The digital photographs shall incorporate annotation references below the image to upstream manhole number and date when the photograph was taken. The annotation shall be clearly visible and shall have a 12 pt. (uppercase) font size.

PUBLIC NOTIFICATION

- A. Public notification is critical. Compliance with the public notification criteria is a prerequisite for conducting smoke testing, especially when conducting smoke tests on sewer lines that pass through private property. At a minimum, the following steps shall be taken:
 - a. Residential/Commercial: The CONSULTANT shall distribute pre-approved advance notice flyers 48 hours before smoke testing commences for each section of pipe.
 - b. Emergency Response Agency Fire & Sheriff's Office: The CONSULTANT shall notify the appropriate local authorities daily to report the start time and end time for smoke testing and the exact locations where the tests will be performed. Fire stations within the smoke testing work area must be notified daily before field work commences each day.
 - c. Schools, Hospitals & Nursing Homes: The CONSULTANT shall distribute advanced notice flyers 48 hours before smoke testing and make personal contact with responsible persons no more than 60 minutes prior to testing.
 - d. Advance notice flyers to all property owners/occupiers likely to be affected by smoke testing shall be customized by the CONSULTANT to suit this project and must be submitted for approval by the OWNER prior to project commencement. The warning flyer shall include, at a minimum, the following information:
 - i. The reason for the smoke testing
 - ii. The location and area affected by smoke testing
 - iii. The timing of smoke testing
 - iv. The CONSULTANT's name
 - v.Contact person(s) and telephone number(s) of pertinent people involved in the project.

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B. The CONSULTANT shall note his contact with all affected agencies and institutions and incorporate these contacts into his daily-submitted log.

DELIVERABLES

A. The standard electronic deliverable (all inspection images, database containing line segment information and leak details, coding information, Shapefiles containing GPS points of leaks and manholes and a GPS map created from the collection of manholes and leak points) will be submitted on an external USP 2.0 flash drive for each basin as it is completed. The smoke testing report will consist of a report for each segment smoked (imagery from Are map) leak detail with one digital photograph of each leak and one aerial imagery shot (collected from Are map). A final report will be provided for all basins upon completion of the entire project.

MEASUREMENT AND PAYMENT

Smoke Testing: The unit price shown on Attachment A shall constitute full payment for all costs for smoke testing, documentation and public notification including by not limited to labor, equipment, transportation, tools and all other related procedures and materials necessary to produce the results in the form, format and of the quality specified in the smoke testing section. CONSULTANT will be paid for the actual footage of pipe smoke tested.

Smoke Testing Data Management: The unit price shown on Attachment A shall constitute full payment for all costs associated with the preparation and delivery of smoke testing data and reports in the form, format and quality specified in the smoke testing section. CONSULTANT will be paid for the actual footage of pipe smoke tested.

SANITARY SEWER LINE CLEANING

A. Standard line cleaning shall be performed to remove foreign material and restore pipe capacity 95%. Standard cleaning shall be defined as two (2) complete passes of the sewer

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- line with the cleaning equipment. The term "complete passes" shall mean cleaning from the upstream manhole all the way to the downstream manhole.
- B. Heavy line cleaning shall be performed to remove foreign material and restore pipe capacity to 95%. Heavy line cleaning shall be defined as three (3) or more complete passes of the cleaning equipment. The term "complete passes" shall mean cleaning from the upstream manhole all the way to the downstream manhole.
- C. The location of manholes and line segments which require additional equipment and manpower to access and perform cleaning operations are considered to be in the easement. Additional equipment includes, but is not limited to an easement machine, additional vacuum hose, additional manpower, etc.
- D. Conditions such as broken pipe and major blockages may prevent cleaning from being accomplished especially where additional damage would result if cleaning were attempted or continued. Should such conditions be encountered, the CONSULTANT shall not be required to clean those specific pipe sections unless the OWNER removes the apparent obstruction.
- E. During sewer cleaning operations, satisfactory precautions shall be taken by the CONSULTANT in the use of cleaning equipment. Precautions shall be taken to ensure that damage to, or flooding of public or private property does not occur during the cleaning procedure.
- F. Selection of the equipment shall be the sole discretion of the CONSULTANT and based on the conditions of lines at the time the work commences. The equipment shall be capable of removing dirt grease, rocks, sand, and other materials and obstructions from the sewer lines and manholes.
- G. If cleaning of an entire section cannot be successfully performed from one manhole, the equipment shall be set up at the other manhole and cleaning again attempted. If successful cleaning still cannot be performed or the equipment fails to traverse the entire manhole-to-manhole pipe segment it will be assumed that a major blockage exists, and the cleaning operation will be abandoned. The cleaning operator will note these consequences in his

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- daily cleaning log. The CONSULTANT will be compensated for cleaning the entire length of sewer should this occur.
- H. All sludge, dirt, sand, rocks, grease, and other solid or semi-solid materials resulting from the cleaning operation shall be removed at the downstream manhole of the section being cleaned. Passing materials from pipe segment to pipe segment, which could cause line stoppages, accumulations of debris in wet wells, interference with in-line long term flow monitoring equipment or damage to pumping equipment will not be permitted. Under no circumstances shall sewage or solids removed during the cleaning operation be dumped onto the streets or in ditches, catch basins or storm drains.
- I. If the CCTV inspection shows the cleaning to be unsatisfactory, the CONSULTANT shall reclean and re-inspect the sewer line at his sole expense until the cleaning is shown to be satisfactory.
- J. All sludge, dirt, sand, rocks, grease, and other solid or semisolid materials removed from the sewers and manholes during the cleaning operation shall be drained of water and transported to the local dumpsite to be provided by the OWNER. No tipping fee will be charged to the CONSULTANT by the OWNER.
- K. The OWNER will provide water for cleaning operations from any fire hydrant at no cost to CONSULTANT.

MEASUREMENT AND PAYMENT

Standard and Heavy Sanitary Sewer Line Cleaning: Standard and heavy sanitary sewer line cleaning will be billed per linear foot with measurement being made between centerlines of consecutive manholes for the line segments being cleaned. Payment for standard and heavy sanitary sewer line cleaning shall be made at the unit price per linear foot based on the pipe size being cleaned and whether or not the line is in the right of way. Either standard or heavy sanitary sewer line cleaning will be billed. The line items will not be combined. The unit price shown on Attachment A shall constitute full payment for each linear foot satisfactorily cleaned.

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ROOT/GREASE/TAP CUTTING

- A. The CONSULTANT shall furnish all labor, equipment, supplies, and supervision and shall perform all work required in accordance with these specifications.
- B. Roots, grease and/or taps that can be removed by conventional means, such as cutting, shall be removed by the CONSULTANT at the rate specified for that line item
- C. The cutting of roots, grease and or taps will occur during CCTV inspections.
- D. Roots, grease4 and/or taps will only be removed if they do not allow the passage of the CCTV inspection camera are obscuring the view of potential defects or could causes a potential blockage and overflow.
- E. When root, grease and/or tap cutting occurs, roots, grease and/or taps shall be cut to clear the pipe for flow and to allow for the proper viewing of defects.

CHEMICAL ROOT CONTROL

- A. CONSULTANT will apply EPA registered root-control agents to various main line sanitary sewers, as selected by OWNER in order to kill the root growth present in the lines and to control root re-growth.
- B. CONSULTANT will apply the chemical, as a foam, directly to the roots via a hose that extends throughout the entire length of each sewer section. The material will be applied evenly and uniformly, so as to completely fill the sewer pipe. CONSULTANT will not use "pour down" products or utilize high pressure application equipment. CONSULTANT will pump the chemical foam under low pressure to assure that the sewer section is completely filled with foam, and to ensure that foam penetrates "wye" connections. The chemical agent will contain an herbicide to destroy root tissue and a foaming surfactant to deliver the herbicide to the targeted roots.
- C. The root control materials will be EPA registered, labeled for the intended use in sewer lines, and registered with the Louisiana Department of Agriculture & Forestry.
- D. CONSULTANT will comply with all applicable federal, state, and local requirements and ordinances relative to this type of material and usage thereof (OSHA, EPA, DOT and the

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- Louisiana Department of Agriculture & Forestry). Chemical handling and treatments will be applied by trained, professional applicators that are certified by the Louisiana Department of Agriculture & Forestry, as required by law.
- E. CONSULTANT will keep complete and accurate records of each day's operation. Records shall show the date of treatment6, the sections of line treated, pipe size and distance, and other pertinent information.
- F. The OWNER will provide water for root control operations from any fire hydrant at no cost to CONSULTANT.
- G. CONSULTANT guarantees to kill all the roots in every sewer it treats in order to eliminate main line sewer stoppages caused by live tree roots. CONSULTANT will apply this guarantee for a period of two (2) years, beginning on the date of treatment and ending 2 (2) years after the date of treatment. If a treated sewer plugs up due to live tree roots during the guarantee period, CONSULTANT will re-treat the sewer line at his sole expense. CONSULTANT will provide a three (3) year guarantee on any paid repeat application that are performed within six (6) months of the expiration date of the previous guarantee period. Retreatments performed at no charge in honor of the guarantee do not extend the expiration date of the guarantee. This guarantee applies only to main line sewer stoppages caused by live tree roots. The guarantee does not apply to stoppages caused by grease or other foreign matter, flat, collapsed, or deformed pipe or flooding caused by a surcharged or plugged sewer section downstream from a guaranteed sewer section.

MEASUREMENT AND PAYMENT

Root / Grease Cutting: Payment will be made per linear foot requiring root and/or grease cutting. The unit price shown on Attachment A shall conclude full payment for each Root/Grease Cutting performed.

Chemical Root Control: The unit price shown on Attachment A shall constitute full payment for all costs for the application of chemical root control. CONSULTANT will be paid at the unit price per linear foot based on the pipe size that chemical root control is applied to.

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Removal of Protruding Taps By Internal Cutting: Payment will be made per tap cutting performed. The unit price shown on Attachment A shall constitute full payment for each Removal of Protruding Taps by Internal Cutting performed.

CCTV INSPECTION

- A. The CONSULTANT shall furnish all labor, equipment, supplies, and supervision and shall perform all work required in accordance with these specifications. CCTV inspection shall be performed in the areas selected and approved by the OWNER.
- B. It shall be the responsibility of the CONSULTANT to schedule and perform investigations to prevent system overflows. If flows are such that they interfere with the CONSULTANT's ability to collect accurate data, then the CONSULTANT shall be responsible to schedule his work during low flow periods or to request written permission to perform by-pass pumping around the site. The CONSULTANT may provide by-pass pumping only with the specific approval from the OWNER. OWNER will reimburse CONSULTANT for all costs associated with bypass pumping.
- C. Inspection of sewer infrastructure by means of CCTV equipment shall be performed to determine the location and extent of any obstructions and defects such as offset joints, protruding tees, broken pipe, and other pipe defects that my permit groundwater infiltration. Logs shall note the existence of any significant defects. Cleaning by the CONSULTANT shall be performed prior to each CCTV inspection on each pipeline to be inspected.
- D. CCTV inspections shall be performed on one manhole-to-manhole pipe segment at a time. The inspection shall be performed by moving the CCTV camera through the line along the axis of the pipe at a rate not to exceed 30 feet per minute. Any means of propelling the camera through the sewer that would exceed this rate of speed or produce non-uniform or jerky movements shall not be acceptable. The cameral shall be stopped for a minimum of 5 seconds at each identifiable defect to ensure proper documentation of the lines condition. In addition, the camera shall be stopped at each service connection, and the

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came a shall pan the service connection to video inside the service line. CCTV inspection is performed from the upstream manhole to the downstream manhole when the conditions allow. If conditions do not allow an upstream to downstream inspection, the inspection will be performed in reverse (from the downstream to the upstream manhole).

- E. A log shall be made by the CONSULTANT when each manhole-to-manhole pipe segment is televised. The log shall include at a minimum:
 - a. Location of each point of leakage
 - b. Location of each service connection or other pipe entering the televised line
 - c. Location and degree of offsets
 - d. Location of any damaged sections, and nature of damage
 - e. Location of buried structures or blind junctions
 - f. Location and amount of any deflection in alignment or grade of pipe; also the total length of pipe sag
 - g. Pipe materials, diameter, and distance between pipe joints
 - h. Date, city, manhole-to-manhole segment, reference manhole number, name of operator, and inspector
 - i. Video Filename
- F. The pipe segment length, with respect to the referenced manhole, shall be determined with a meter device, accurate to within ±2%. Markings on the cable, instruments requiring observation inside a manhole, or correction of each reading for the depth of the reference manhole shall not be allowed. Accuracy of the measurement meters shall be checked daily by use of a walking meter, roll-a-tape, or other suitable device.
- G. A header screen showing tape number, segment number, and manhole number shall be taped for 10 seconds at the beginning of each televised line segment. All header information shall be recorded on the log forms.
- H. At the CONSULTANT's direction the camera shall be stopped or backed up to view and analyze conditions that appear to be unusual or uncommon for a sound sewer line. At all times, the operating technician shall be able to move the camera through the line in either

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direction without loss of quality in the video presentation on the monitor. The picture shall be free of electrical interference and provide a clear, stable image of the specified resolutions at all times. The camera lens shall be cleaned, as required, to provide a clear image within the sewer lines.

- I. In the event that equipment becomes lodged in the sewer line, the CONSULTANT shall notify the OWNER immediately. If equipment becomes lodged through no fault of CONSULTANT, the OWNER will remove the camera at no cost to the CONSULTANT. Timely excavation is necessary to maintain project schedules and to eliminate the possibility of overflows resulting from the lodged equipment creating a blockage.
- J. If during the inspection the camera cannot pass through entire pipe segment, the CONSULTANT shall set up his equipment so that the inspection can be performed from the opposite manhole. Should this occur, CONSULTANT will be paid for an additional set-up. If the camera again fails to pass through the entire pipe segment, the inspection shall be abandoned and considered complete. The CONSULTANT will be paid for the actual footage inspected, and no additional inspection work shall be required in that pipe

segment until the pipe has been rehabilitated. CONSULTANT will be paid for the actual footage inspected during each subsequent attempt.

CCTV INSPECTION OF SERVICE LATERALS

- A. CONSULTANT will use a lateral launch inspection system, consisting of a robotic tractor and a lateral launch CCTV camera, to remotely deploy a pan & rotate camera into lateral pipes connected to a mainline sewer pipe. Should CONSULTANT encounter multiple laterals converging in a single tap, CONSULTANT shall utilize a steerable lateral camera with guide pin to inspect the adjoining laterals separately. Each pipe shall be identified as an independent inspection for data submittal and invoicing purposes.
- B. A main sewer television camera is used to position the lateral camera launcher. The lateral sewer camera is used to inspect each lateral from the mainline towards the cleanout.

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- C. The television inspection of the lateral will be attempted from inside the mainline sewer up into the lateral or attempted from the cleanout towards the sewer main. Lateral sewers inspected from the cleanout towards the mainline will be attempted by using a mini push camera if necessary.
- D. In the event a lateral pipe segment cannot be fully inspected after reasonable attempts, CONSULTANT shall provide all the information to the OWNER and the OWNER will determine alternate possible solutions.

SUBMITTALS

- A. Copy of completed CCTV log
- B. Schedule for cleaning and inspecting each sewer reach
- C. Daily report form
- D. Confined space entry form

DATA SUBMITTALS

- A. All line pictures will be digital .mpeg video, clear, legible, and free of "snow" or haze.
- B. Electronic copies (data files) shall be submitted in a PACP Exchange Database.
- C. The CONSULTANT shall prepare and submit a list of defects, which appear to require immediate corrective action, based on their size and/or type, on a daily and weekly basis. This submittal is not a final deliverable.
- D. To establish the working criteria for video picture quality which must be maintained throughout the project, the CONSULTANT shall furnish A DVD with .mpeg video footage
 - of an actual sewer line inspection that is satisfactory to the OWNER and meets the job specifications for CCTV inspection. This DVD shall become the property of the OWNER and shall be used throughout the project as a standard that the CONSULTANT's video picture quality must meet.
- E. The CONSULTANT shall furnish the OWNER a hard drive or DVD that contains both data files and video files. The date files shall be able to upload into a PACP Exchange Database.

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- Once downloaded by the OWNER, the hard drive will be returned to the CONSULTANT.

 Owner shall provide labeling and file naming standards at the pre- construction meeting.
- F. All inspections shall be made by PACP certified operators and data shall be documented using NASSCO' Pipeline Assessment and Condition Program.
- G. Once the CCTV inspection data has been obtained and analyzed and professional reports compiled, a recommended protocol for repairs will be recommended by the CONSULTANT.
- H. All rehabilitation recommendations must be approved by a registered licensed engineer in the state of Louisiana with a minimum of 10 years of experience analyzing sanitary sewer line inspection data. Engineer must be PACP certified.

MEASUREMENT AND PAYMENT

CCTV Inspection: The unit price shown on Attachment A shall constitute full payment for all costs associated with the CCTV inspection of sanitary sewer lines. CONSULTANT will be paid for the actual linear footage of pipe inspected at the unit rates specified based on pipe size.

Additional Setup of CCTV Inspection Equipment: The unit price shown on Attachment A shall constitute full payment for all costs associated with the additional setup performed during CCTV. This will occur when the CCTV camera is unable to traverse the line segment from one manhole and must be setup again at the opposite or connecting manhole to attempt the inspection. CONSULTANT will be pai for each additional setup performed.

CCTV Inspection of Service Laterals (Lateral Launching From Mainline): The unit price shown on Attachment A shall constitute full payment for all costs associated with the CCTV Inspection of sanitary sewer service laterals from the mainline towards the cleanout. CONSULTANT will be paid for each service lateral inspected.

CCTV Inspection of Service Laterals (Push Camera From Cleanout): The unit price shown on Attachment A shall constitute full payment for all costs associated with the CCTV inspection of sanitary sewer service laterals from the cleanout towards the mainline. CONSULTANT will be paid for each service lateral inspected.

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CCTV Inspection Data Management: The unit price shown on Attachment A shall constitute full payment for all costs associated with the preparation and delivery of CCTV inspection data, videos, reports and rehabilitation recommendations in the form, format and quality specified in the CCTV inspection section. Payment will be for the actual footage of pipe CCTV inspected.

BYPASS PUMPING

- A. CONSULTANT shall be responsible for furnishing all equipment, labor, and materials necessary to setup, operate and maintain by-pass pumping. The OWNER and CONSULTANT shall determine and agree upon the quantities and disposition of water to be pumped and the CONSULTANT shall provide the necessary equipment to meet these requirements.
- B. When by-pass pumping is required, the CONSULTANT shall furnish, install, and operate pumps, plugs, conduits, and other equipment to divert the flow of sanitary sewer around the pipeline reach around the pipe being inspected. The pumping system shall be of sufficient capacity to handle peak flow plus additional flow that may occur during a rainstorm.
- C. Pumping shall be done by the CONSULTANT in such a manner as to not damage public or private property or create a nuisance or health menace. The pumped sewage shall be in an enclosed hose or pipe and shall be reinserted into the sanitary sewer system. Sewage shall not be allowed to flow in gutters, streets or over sidewalks, nor shall any sewage be allowed to flow into storm inlets or conduits. After the work has been completed, flow shall be restored to normal.
- D. When flow in a sewer line is plugged, blocked, or by-passed, the CONSULTANT shall protect the sewer lines from damage that might result from sewer surcharging.

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MEASUREMENT AND PAYMENT

Setup of Bypass Pump: The unit price shown on Attachment A shall constitute full payment for all costs associated with the setup and subsequent teardown of bypass pumps, up to 600' of discharge hose and 50' of suction hose. Payment will be made based on the size of the pump needed to accommodate the amount of flow.

Operation of Bypass Pump: The unit price shown on Attachment A shall constitute full payment for all costs associated with the operation of bypass pumps. Payment will be made based on the size of the pump needed to accommodate the amount of flow.

MISCELLANEOUS SERVICES

TRAFFIC CONTROL

- A. CONSULTANT will provide standard traffic control including cones, signs, etc. at no cost to the OWNER.
- B. CONSULTANT will provide additional traffic control such as a flagman or policeman, as needed and as approved by the OWNER.
- C. The CONSULTANT shall notify the local fire department, police department, engineering department, and all other necessary authorities to carry out the requirements of the scope of work. All investigation work shall be coordinated with these authorities on a daily basis to avoid any conflict.

CLEANING WET WELLS

- A. The CONSULTANT shall scour debris or grease-laden wet wells with a high-velocity water gun. If the impact of the high-velocity water appears to be weakening the structural integrity of the wet well or any internal components of the wet well, the CONSULTANT shall discontinue the scouring on the wet well and notify the OWNER.
- B. Wet well cleaning shall be conducted on wet wells in the areas of the system as selected and approved by the OWNER.

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- C. Upon request from CONSULTANT, OWNER shall provide CONSULTANT with adequate access to the wet wells requiring cleaning.
- D. All debris removed during the cleaning process shall be properly disposed of by the CONSULTANT at a site provided by the OWNER at no cost to CONSULTANT.
- E. Upon request from CONSULTANT, OWNER shall draw down the water level in the wet well within a reasonable time and to a reasonable water level to facilitate the cleaning.

DYE TESTING

- A. The objective of dye water testing, when used in conjunction with CCTV, is to pinpoint specific points of entry of inflow into the sanitary sewer system, such as direct and indirect connections of storm drains, yard drain inlets and pipes, sinkholes, leaking manholes in unpaved areas and leaking manhole covers and rings. Dye water testing without CCTV shall also be used to trace line segments during sewer map updating, locate cross connections, and co-relationship of individual properties to sewer lines.
- B. At a minimum, CONSULTANT should flood the area over the suspected leak with dyed water and check for dye at 5-minute intervals for up to 30 minutes, noting positive or negative each time checked at the downstream manhole. Two photographs will be taken: one when dyed water is applied and a second when positive results are noted, or at the 30-minute check if results are negative.
- C. The following data shall be recorded by the CONSULTANT using the required file format in Microsoft ACCESS®. Data, where specified, will be recorded using codes provided by the OWNER. A hard copy and electronic diskette shall be submitted to the OWNER. The dye test database shall include the following information at a minimum:
 - a. Date and time
 - b. Location, including reference to the relevant manhole segment (upstream and downstream manhole incorporating the OWNER's manhole numbering system) and the nearest street address
 - c. Testing personnel

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- d. Schematic layout of the manholes and sewer lines under test noting location of sandbags and/or plugs
- e. Precise location of the site of confirmed source of inflow or leak, as determined by the dye testing, keyed to the relationship to appropriate manhole and pipe numbers for the ONWER's GIS mapping system and street address, and confirmation of any negative results of dye testing
- f. Digital color photographs filenames of the results of each dye test
- D. Digital photographs shall be provided in jpeg (jpg) format. Resolution of photographs shall be a minimum of 72 dpi x 72 dpi and minimum dimensions of 640 X 480 pixels. The CONSULTANT shall document each dye leak or series of dye tests by high-resolution digital photograph. The photographs shall be included in the database along with the location of the dye test defect.
- E. Groups of digital photographs orientated so that the long side of the photograph is horizontal and that 3" x 5" printed copies shall be incorporated in the hard copy of the dye testing report and supplied on a CD-ROM(s) incorporated for each work order issued by the OWNER, unless otherwise directed.
- F. The digital photographs shall incorporate annotated referenced superimposed on the image to upstream manhole number and date when the photograph was taken. The annotation shall be clearly visible and shall have a 12pt (uppercase) front size. Each photograph shall have a clearly labeled filename incorporating the upstream manhole ID following by the letter "D" and the three-character sequence number assignee by the digital camera. Reference to location of each photograph shall be indicated on the sketched at the end of the report.

DELIVERABLES

A. Electronic database of dye test data and digital photographs of results shall be submitted to the OWNER. The electronic database using the required file format in Microsoft ACCESS®

DRAIN LINE CLEANING AND STRUCTURE EVALUATION SERVICES AND SEWER SYSTEM EVALUATION SERVICES

- version 2002, shall be tied to the OWNER's GIS sewer maps through the manhole numbers. If no GIS sewer maps are available, the CONSULTANT will be responsible for providing an applicable numbering system for manholes.
- B. A binder with hard copies of the dye test reports, location sketches, and digital photographs shall be submitted to the OWNER.
- C. The photographs shall be digital pictures in both hard copy and electronic format.

SONAR INSPECTION

- A. The CONSULTANT shall determine the inspection technology method or combination of methods to be utilized in each pipeline segment. Generally, sonar alone will be used where the depts of fluid in the pipeline is greater than 74% of the full diameter of the pipe. CCTV and sonar will be used together when the flued levels are between 25% and 75% of the full pipe diameter. Sonar will not be used where the fluid depth is generally less than 25% of the pipe diameter or more specifically where there is sufficient depth to pass the sonar gear on the float or crawler.
- B. The speed of the crawler or float shall not be greater than 20 feet per minute when the scanning sonar is in use either alone or in combination with the CCTV camera.
- C. The sonar equipment shall be purpose built for use in the inspection of sewer system pipelines and shall be operative in totally submerged conditions. It shall be capable of being traversed by crawler tractor, float, or tother suitable means through the pipeline on a stable vehicle constructed to situate the sonar inspection equipment below the water level.
- D. The maximum beam width of the sonar energy pulse will be no greater than 2 degrees from the center of the transducer. The transducer will be of the continuous scanning type. The sonar image will be in full color during the inspection.
- E. The sonar survey will include complete structural and service assessment of the equivalent PACP standard as that obtained through the CCTV survey. The sonar survey will include measurement of fluid depth and silt depth.

DRAIN LINE CLEANING AND STRUCTURE EVALUATION SERVICES AND SEWER SYSTEM EVALUATION SERVICES

- F. The sonar survey will be continuously recorded and saved on CDs, DVDs or external hard drives in MPEG-1 format, supported by complete defect inspection logs and summary reports.
- G. A color high resolution sonar still image of cross-sections of the pipeline must be taken and recorded every 50 feet or more frequently should the internal profile of the pipeline change and at every defect. These images are to be cross referenced to the reports and databases for ease of reference.

ELECTRO SCAN INSPECTION

FIELD OPERATION

- A. For each sewer main, the Electro Scan procedure begins with a light flushing of the sewer line and then uses the hydraulic jet hose and reel to pull the Electro Scan probe through the pipe from the downstream manhole to the upstream manhole where the combo CCTV/Electro Scan unit is positioned.
- B. The sewer line will be flushed from the downstream manhole, the nozzle removed at the upstream manhole, a Sliding Funnel Plug will be attached to the hose, and the Electro Scan probe will be attached to the Sliding Funnel Plug. The hydraulically powered jet truck would then pull the probe through the pipe while simultaneously providing the water necessary for the probe to electrically examine the pipe walls.
- C. While water is used to surround the Electro Scan probe, only a small portion of the probe must be technically be surrounded in 360° of water to allow electrical current to conduct or reach the wall of the pipe. While only a portion of water is required, maintaining a 6–10-foot column or reservoir of water behind the full cone to allow sufficient water to surcharge 24-36 inches up each sewer lateral is recommended. By allowing water to surround the entire service connection, Electro Scan will be able to successfully test all elements of the connection for defects.

DRAIN LINE CLEANING AND STRUCTURE EVALUATION SERVICES AND SEWER SYSTEM EVALUATION SERVICES

- D. Should a pipe segment be surcharged to the point where flushing isn't appropriate, other techniques and equipment will be used, including, but not limited to, float lines, parachutes, and immediate-area flow restriction.
- E. If through no fault of CONSULTANT's operators, inspection equipment, cleaning nozzles or root cutters become lodged in the collection system, the OWNER will provide excavation services to retrieve the equipment at no cost to CONSULTANT. Excavation of lodged items will be completed by the OWNER with a 48-hour period.
- F. All data will be fed back to the combo Electro Scan/CCTV unit via the standard CCTV coaxial cable. One the data is collected on the unit's laptop computer, it will all be uploaded to CONSULTANT's Critical Sewers Cloud-Based Portal where it will be instantly processed and easily accessible for review by the OWNER.

DATA

- A. A temporary software use license will be provided to allow one person to access the Electro Scan Critical Sewers™ cloud application, where date from the field will either be uploaded directly from the combo CCTV / Electro Scan unit using a remote Wi-Fi connection or uploaded when a stable connection to the Internet can be established at the end of the day.
- B. The Scan Detail page shows each defect identified by Electro Scan including location, severity, and leakage rate. A visual graph of the Electro Scan readings is also displayed, along with any header information entered by the OWNER.
- C. Electro Scan's custom and proprietary algorithms are used to grade the size and type of each leak, and structural defects, and graphically display the defect grade size, corrosion, type, and frequency for each manhole-to-manhole pipe section. In addition, Electro Scan's software will provide an estimated gallons per minute (GPM) infiltration rate per defect and for the entire pipe system. The Electro Scan traces have a resolution of less than 0.1ft. This information can be readily used to qualitatively identify corrosion problems, highest potential infiltration sections and assist with the selection of the most cost-effective repair method.

DRAIN LINE CLEANING AND STRUCTURE EVALUATION SERVICES AND SEWER SYSTEM EVALUATION SERVICES

DATA EVALUATIONS AND ANALYSIS

- A. Data will be presented in both tabular and graphics formats to facilitate a comparative condition assessment of line segments.
- B. Data collected in the field will include:
 - a. Length of sewer line
 - b. Pipe defect locations
 - c. Classification of all defects as large, medium, or small
 - d. Classification of all defects as minor, moderate, or severe peak estimated flow.
 - e. A total estimated peak gallons per minute (GPM) will be provided for each defect and pipe segment, as a whole
 - f. If CCTV inspection reports or videotapes are available, CONSULTANT will compare a select number of sewer mains.

DELIVERABLES

- A. Three copies of the draft report will be prepared for submittal to the OWNER for review.
- B. Three (3) copies of the Final Report incorporating the comments from the review of the draft report will be furnished. Final Report in Microsoft Office 2010 and in PDF format will be included.

<u>ACOUSTIC PIPE ASSESSMENT</u>

- A. The CONSULTANT shall furnish all labor, equipment, supplies, and supervision and shall perform all work required in accordance with these specifications. Acoustic pipe assessment shall be performed in the areas selected and approved by the OWNER.
- B. The purpose of the acoustic pipe assessment is to identify blockages in sewer lines.
- C. The acoustic pipe assessment system shall be capable of inspecting 6"-12" lines using active acoustic transmission (transmit on one end of the pipe, receive on the other end of the pipe). Active transmission of sound for an individual inspection should be limited to no more than four (4) minutes of transmission time.
- D. The system shall be capable of inspecting an individual pipe length up to 800 linear feet.

DRAIN LINE CLEANING AND STRUCTURE EVALUATION SERVICES AND SEWER SYSTEM EVALUATION SERVICES

- E. The device shall contain a USB connection or similar to allow for downloading of inspection data to a computer.
- F. Acoustic inspection results shall be provided on the device within three (3) minutes of completion of each individual inspection.
- G. The device(s) shall not need to come into contact with the waste flow and shall not require penetration of more than two (2) feet into the manhole or access point.
- H. The device(s) shall be battery-powered with the capability of performing at least 35 measurements on a fully charged battery.

MEASUREMENT AND PAYMENT

Traffic Control: Payment shall be made when a flagger or uniformed police officer is required to control traffic during any inspection or cleaning activity. The unit price shown on Attachment A shall constitute full payment for each hour of Traffic Control performed.

Cleaning Wet Wells: The unit price shown on Attachment A shall constitute full payment for all costs associated with the cleaning of wet wells to include operators, combination truck, hoses, pipe, and confined space entry equipment shall be billed at the proposed unit rate. A 4- hour minimum will be charged anytime this item is utilized.

Dye Testing In Conjunction with CCTV Inspection: The unit price shown on Attachment A shall constitute full payment for all costs associated with the dye testing of sewer lines in conjunction with CCTV inspection and preparation and delivery of data. CONSULTANT will be paid per each dye testing setup performed.

Dye Testing NOT In Conjunction with CCTV Inspection: The unit price shown on Attachment A shall constitute full payment for all costs associated with the dye testing of sewer lines NOT in conjunction with CCTV inspection and preparation and delivery of data. CONSULTANT will be paid per each dye testing setup performed.

Sonar Inspection of > 12" Diameter Sewer Pipe: The unit price shown on Attachment A shall constitute full payment for all costs associated with the sonar inspection of sewer lines and

DRAIN LINE CLEANING AND STRUCTURE EVALUATION SERVICES AND SEWER SYSTEM EVALUATION SERVICES

preparation and delivery of data. CONSULTANT will be paid for the actual linear footage of pipe sonar inspected at the unit rates specified.

electro Scan Inspection 8"-21" Diameter: The unit price shown on Attachment A shall constitute full payment for all costs associated with the electro Scan inspection of sewer lines and preparation and delivery of data. CONSULTANT will be paid for the actual linear footage of pipe inspected at the unit rates specified.

Acoustic Pipe Assessment: The unit price shown on Attachment A shall constitute full payment for all costs associated with the acoustic pipe assessment of sewer lines and preparation and delivery of data. CONSULTANT will be paid for the actual linear footage of pipe assessed with measurement being made between centerlines of consecutive manholes for the line segments being assessed at the unit rates specified.

Combination Cleaning Truck with Operator and Helper (Min. 9 Hours) < 10,000LF: The unit price shown on Attachment A shall constitute full payment for all costs associated with the emergency port-to-port mobilization/demobilization of one (1) combination cleaning truck with operator and helper. This item is to be used for projects of less than 10,000 LF.

CCTV Inspection Unit with Operator and Helper (Min. 8 Hours) <10,000 LF: The unit price shown on Attachment A shall constitute full payment for all costs associated with the emergency port-to-port mobilization/demobilization of one (1) CCTV inspection unit with operator and helper. This item is to be used for projects of less than 10,000 LF.

ATTACHMENT A

CITY OF MANDEVILLE: SPECIFICATIONS (STATEMENT OF WORK) AND COST PROPOSAL FORM

COST PROPOSAL FORM

This Proposal Form shall be submitted with all required Attachments

The Cost Proposal will be evaluated on only the hourly rates submitted on this Proposal Form for the positions listed. The hourly rates stated shall include all overhead, profit, travel, lodging, equipment and other expenses realized by the proposer to execute the contract

Proposal Form may also include additional optional positions and services.

DRAIN LINE CLEANING AND STRUCTURE EVALUATION SERVICES

DESCRIPTION OF WORK	UNIT	ESTIMATED	UNIT	TOTAL
DESCRIPTION OF WORK	ONII	QUANTITY	RATE	TOTAL
HIGH PRESSURE CLEANING 8"- 18" STORM DRAIN	LINEAR FOOT	60,000.0		
HIGH PRESSURE CLEANING 21"-32" STORM DRAIN PIPE	LINEAR FOOT	60,000.0		
HIGH PRESSURE CLEANING 36"-48" STORM DRAIN PIPE	LINEAR FOOT	55,000.0		
HIGH PRESSURE CLEANING > 48" STORM DRAIN PIPE	LINEAR FOOT	50,000.0		
REMOVAL, HAULING & DISPOSALOF STORM STRUCTURES & PIPES	TON	655.0		
COMBO CLEANING TRUCK W/CREW < 5K LF (5HR MIN.)	HOUR	25.0		
COMBO CLEANING TRUCK & CCTV INSPECTION UNIT W/CREW < 5K LF (5HR MIN.)	HOUR	25.0		
TRAFFIC CONTROL	HOUR	150.0		
MOBILIZATION & DEMOBILIZATION	EACH	1.0		
360 DEGREE STRUCTURE EVALUATION W/GPS DATA COLLECTION	EACH	1,000.0		
ZOOM CAMERA PIPE ASSESSMENT	EACH	500.0		
CCTV <30" DIA. STORM DRAIN PIPE	LINEAR FOOT	100,000.0		
CCTV >30" DIA. STORM DRAIN PIPE	LINEAR FOOT	75,000.0		
SONAR INSPECTION > 18" DIA. STORM DRAIN PIPE	LINEAR FOOT	50,000.0		
ADDITIONAL SETUP INSPECTION EQUIPMENT	EACH	100.0		
STRUCTURE REHABILITATION RECOMMENDATIONS	EACH	1,000.0		
STORM DRAIN PIPE REHABILITATION RECOMMENDATIONS	LINEAR FOOT	175,000.0		
CCTV INSPECTION UNIT W/ CREW < 5K LF. (5 HR MIN.)	HOUR	25.0		

SEWER SYSTEM EVALUATION SERVICES

SEWER SYSTEM EVALUATION SERVICES				
DESCRIPTION OF WORK	UNIT	ESTIMATED QUANTITY	UNIT RATE	TOTAL
MOBILIZATION & DEMOBILIZATION	EACH	1.0		
TEMPORARY FLOW MONITORING (1-5 METERS)	DAY	1.0		
TEMPORARY FLOW MONITORING (1-5 METERS) AFTER 60 DAYS	DAY	1.0		
TEMPORARY FLOW MONITORING (6- 10 METERS)	DAY	1.0		
TEMPORARY FLOW MONITORING 6-10 METERS) AFTER 60 DAYS	DAY	1.0		
TEMPORARY FLOW MONITORING (11- 15 METERS)	DAY	1.0		
TEMPORARY FLOW MONITORING (11- 15 METERS) AFTER 60 DAYS	DAY	1.0		
TEMPORARY FLOW MONITIORING (16 OR MORE METERS)	DAY	1.0		
TEMPORARY FLOW MONITIORING (16 OR MORE METERS) AFTER 60 DAYS	DAY	1.0		
RAIN GAUGES	DAY	1.0		
NIGHT FLOW ISOLATION	EACH	1.0		
PUMP STATION DRAW/FILL TEST (1-2 PUMPS)	EACH	1.0		
PUMP STATION DRAW/FILL TEST (3-4 PUMPS)	EACH	1.0		
3D MANHOLE CONDITION ASSESSMENT	EACH	1.0		
STRUCTURAL MANHOLE CONDITION ASSESSMENT	EACH	1.0		
3D WET WELL CONDITION ASSESSMENT (LESS THAN OR EQUAL TO 8- FT DIAMETER)	EACH	1.0		1
3D WET WELL CONDITION ASSESSMENT (GREATER THAN TO 8-FT DIAMETER)	EACH	1.0		
UN-COVER BURIED MANHOLES	EACH	1.0		
REMOVAL OF STABILIZED DEBRIS	EACH	1.0		
INSTALLATION OF STAINLESS STEEL RAINSTOPPER	EACH	1.0		
MANHOLE/WET WELL INSPECTION DATA MANAGEMENT	EACH	1.0		
MANHOLE/WET WELL INSPECTION REHAB RECOMMENDATIONS	EACH	1.0		
SMOKE TESTING	LINEAR FOOT	100.0		
SMOKE TESTING DATA MANAGEMENT	LINEAR FOOT	100.0		
STANDARD CLEANING 6"- 10"	LINEAR FOOT	11,500.0		
HEAVY CLEANING 6"- 10"	LINEAR FOOT	500.0		
STANDARD CLEANING 6"- 10" NOT IN RIGHT OF WAY	LINEAR FOOT	100.0		
HEAVY CLEANING 6"- 10" NOT IN RIGHT OF WAY	LINEAR FOOT	100.0		
ROOT/GREASE CUTTING 6"- 10"	LINEAR FOOT	100.0		
CHEMICAL ROOT CONTROL 6"-8"	LINEAR FOOT	100.0		
CHEMICAL ROOT CONTROL 10"- 12"	LINEAR FOOT	100.0		
REMOVAL OF PROTRUDING TAPS	EACH	10.0		
CCTV <15"	LINEAR FOOT	11.500.0		
ADDITIONAL SETUP CCTV EQUIPMENT	EACH	2.0		
CCTV SERVICE LATERALS LAUNCHING FROM MAINLINE	EACH	1.0		
CCTV SERVICE LATERALS PUSH CAMERA	EACH	1.0		
CCTV DATA MANAGEMENT	LINEAR FOOT	11,500.0		
SEWER PIPE REHAB RECOMMENDATIONS	LINEAR FOOT	5.0		
SETUP 3"-4" BY-PASS PUMP	EACH	1.0		
SETUP 6" BY-PASS PUMP	EACH	1.0		
SETUP 8" BY-PASS PUMP	EACH	1.0		
OPERATION OF 3"-4" BY-PASS PUMP	HOUR	1.0		
OPERATION OF 6" BY-PASS PUMP		ļ		
OPERATION OF 6" BY-PASS PUMP OPERATION 8" BY-PASS PUMP	HOUR	1.0		
TRAFFIC CONTROL	HOUR	10.0		
CLEANING WET WELLS	HOUR	1.0		
DYE TESTING W/ CCTV 6"- 12" DYE TESTING WITHOUT CCTV	EACH EACH	1.0		
SONAR INSPECTION > 12"	LINEAR FOOT	100.0		
ELECTRO SCAN 8"-21"	LINEAR FOOT	100.0		
ACOUSTIC PIPE ASSESSMENT	LINEAR FOOT	100.0		
COMBO CLEANING TRUCK W/ OPERATOR	HOUR	2.0		
CCTV INSPECTION UNIT W/ OPERATOR	HOUR	1.0		
EMERGENCY SEWER HAULING	GALLON	100,000.0		

DATE:	
I have received Addenda, #s:	
ORGANIZATION'S NAME:	
ORGAINZATION'S ADDRESS:	
EMAIL ADDRESS:	
PHONE:	
NAME OF AUTHORIZED SIGNATORY OF PROPOSER:	
TITLE OF AUTHORIZED SIGNATORY OF PROPOSER:	
AUTHORIZED SIGNATORY OF PROPOSER**	

END: PROPOSAL FORM

^{**} A copy of a corporate resolution or other signature authorization shall be required for submission of proposal. Failure to include a copy of the appropriate signature authorization, if required, may result in the rejection of the bid.

ATTACHMENT B: NON-COLLUSION AFFIDAVIT

STATE OF	LOUISIANA	
Parish of	DF	
	ME, THE UNDERSIGNED AUTHORITY, PERSONALLY CAME AND APPEARED	
CAID TILAT	, WHO AFTER BEING BY ME DULY SWORN, DEF	OSED AND
	T HE/SHE IS THE FULLY AUTHORIZEDOF (HEREIN AFTER REFERRED TO AS VENDOR) THE PARTY WHO SU	
WAS RECE	AL FOR AND SAID:	D AFFIANT
 2. 4. 5. 	either directly or indirectly, to secure the public contract under which is payment, other than persons regularly employed by the vendor whose connection with the public contract were in the regular course of their vendor; and That no part of the contract price received by vendor was paid or will be person, corporation, firm, association, or other organization for soliciting the other than the payment of their normal compensation to persons regularly by the vendor whose services in connection with the project were in the regular of their duties for vendor. Said proposal is genuine and the vendor has not colluded, conspired or agree or indirectly with any other vendor to offer a sham or collusive proposal. Said vendor has not in any manner, directly or indirectly, agreed with any of to fix the proposal price of affiant or any other vendor, or to fix any overhead cost element of said price, or that of any other vendor, to induce any other refrain from providing a proposal.	paid to any e contract y employed cular course eed directly ther person to r person to
AUTHORIZ	IZED SIGNATURE	
NOTARY P	PLIBLIC	
NOTANT	1 Oblic	
SWORN TO	TO AND SUBSCRIBED BEFORE ME THISDAY OF, 20	

My commission expires_____

ATTACHMENT C: AFFIDAVIT OF PAST CRIMINAL CONVICTIONS

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PARISH OF	
BEFORE ME, THE UNDERSIGNED AUTHORITY, PERSONALLY CA	AME AND APPEARED
, WHO AFTER BEING BY	Y ME DULY SWORN, DEPOSED AND
SAID THAT HE/SHE IS THE FULLY AUTHORIZED	OF
(HEREIN AFTER REFERRED TO AS VEND	
PROPOSAL FOR	WHICH WAS
RECEIVED BY CITY OF MANDEVILLE ON	AND SAID AFFIANT
FURTHER SAID:	

He/she personally has not been convicted of, nor has he/she entered a plea of guilty or nolo contendere to any of the crimes or equivalent federal crimes listed below. NO individual partner, incorporator, director, manager, officer, organizer, or member, who has a minimum of a ten percent (10%) ownership in the bidding entity named below has been convicted of, or has entered a plea of guilty or nolo contendere to any of the following state crimes or equivalent federal crimes:

- (a) Public bribery (R.S. 14:118)
- (b) Corrupt influencing (R.S. 14:120)
- (c) Extortion (R.S. 14:66)
- (d) Money laundering (R.S. 14:23)

A conviction of or plea of guilty or nolo contendere to the following state crimes or equivalent federal crimes shall bar any person or the bidding entity from bidding on public projects for a period of five years from the date of conviction or from the date of the entrance of the plea of guilty or nolo contendere:

- (a) Theft (R.S. 14:67)
- (b) Identity Theft (R.S. 14:67.16)
- (c) Theft of a business record (R.S.14:67.20)
- (d) False accounting (R.S. 14:71)
- (e) Issuing worthless checks (R.S. 14:71)
- (f) Bank fraud (R.S. 14:71.1)
- (g) Forgery (R.S. 14:72)
- (h) Contractors; misapplication of payments (R.S. 14:202)
- (i) Malfeasance in office (R.S. 14:134)

The five-year prohibition provided for in this section shall apply only if the crime was committed during the solicitation or execution of a contract or bid awarded pursuant to these provisions. If evidence is submitted substantiating that a false attestation has been made and the project must

be re-advertised or the contract cancelled, the awarded entity making the false attestation sha
be responsible to the public entity for the costs of rebidding, additional costs due to increase
costs of bids and any and all delay costs due to the rebid or cancellation of this project.

AUTHORIZED SIGNATURE		
NOTARY PUBLIC		
SWORN TO AND SUBSCRIBED BEFORE ME THIS	DAY OF	, 2
My commission expires		

ATTACHMENT D: CODE OF CONDUCT

CITY OF MANDEVILLE'S CODE OF CONDUCT

A. POLICY STATEMENT

The citizens of The City of Mandeville rightfully expect city elected officials, unclassified employees, and appointed personnel to adhere to the highest standards of professional and ethical conduct in the performance of their duties and responsibilities. The City of Mandeville Personnel Policies and Police Standard Operating Procedures Manual specifies the conduct of the classified civil service employee so that this code does not apply to this class of city employees. This code applies to the following persons:

- i) Elected municipal officials,
- ii) Unclassified employees of The City of Mandeville
- iii) Persons appointed to the various boards and commissions of The City of Mandeville.
- iv) Contractors as described in Section D of this code. Contractors are not obligated to participate in the training requirements of this code but will be required to demonstrate that they are familiar with this code and the Louisiana State Code of Ethics.

While this document in and of itself is not punitive in nature, it complements the existing laws incorporated in the Louisiana State Code of Ethics and other existing policies that cover persons employed by The City of Mandeville. All elected officials, unclassified public employees and appointed personnel of The City in whatever capacity should know that infractions of this Code of Conduct may also be violations prohibited by state ethical rules and regulations which do carry punitive provisions.

Every person covered by this Code has a unique position of trust in the community and, therefore, assumes a special responsibility to act with the highest standards of honesty, fidelity and fairness. Mandeville public servants should conduct themselves in a manner that merits public trust and confidence.

B. PURPOSE OF THIS POLICY

Section 7-02 of The City Charter for The City of Mandeville provides that "All officers and employees of The City government shall comply with the provisions of the Louisiana State Code of Ethics pertaining to local government." The purpose of the Code of Conduct is to complement the Code of Ethics with a code that requires conduct over and above the strict adherence to the letter of the general law and the Louisiana State Ethics Code. To establish a set of guidelines for the behavior of The City of Mandeville elected officials, unclassified public employees and appointed personnel which will enhance the effectiveness of city government while maintaining the high standards of quality and professionalism necessary for The City to successfully project the best image possible.

C. CITY OF MANDEVILLE CODE OF CONDUCT FOR ELECTED, UNCLASSIFIED CITY EMPLOYEES AND APPOINTED PERSONNEL.

All persons in each category as defined by the above title shall sign a copy of this Code of Conduct thereby acknowledging that they have received a copy and understand that it is therefore their responsibility to comply with this Code of Conduct and any revisions to it as follows:

- 1. Adhere to the principle that all activities undertaken by persons covered by this code shall be in the best interests of the citizens of The City and with the goal of perfection of city government. That no personal gain or benefit, except for compensation and benefits accompanying applicable personnel, should be accepted.
- 2. Accept the responsibility that improper conduct can reflect negatively on the public image of The City and bring embarrassment and discontent to the citizens of The City. It is the intent of this Code of Conduct to make the persons covered by this code aware, through training, of the existing laws and city rules and regulations of employment that are designed to respond to any improper conduct in whatever context.
- 3. Participate in a comprehensive training program regarding the Louisiana State Code of Ethics and this Code of Conduct for all levels of personnel defined by this Code of Conduct. This training shall include, but not be limited to, ongoing small and large group training sessions highlighting general rules of conduct and specific rules of conduct pertaining to elected officials, unclassified employees or appointed personnel. This training shall amplify what personnel can or cannot do in complying with the Louisiana State Code of Ethics and this Code of Conduct. It shall also identify and help personnel recognize potential conflicts of interest and provide mechanisms for alerting the proper officials of such potential conflicts. Each person covered by this code shall be required to participate in at least two hours of training per calendar year. These hours shall be certified to the Personnel Director and be a part of the person's record.
- 4. Always be in full compliance with all applicable federal, state and local laws and regulations.
- 5. Direct all requests for documents under the Public Records law to The City Attorney for response. All requests for documents under the Public Records law shall be in writing.
- 6. Respect the confidentiality of information concerning The City, City personnel or proceedings of The City.

D. CONTRACTORS

Any individual or business entity that enters into a contract with The City of Mandeville shall be

subject to this code and be referred to herein as a "Contractor". Every Contractor shall be mindful of the principles of law relating to the Code of Governmental Ethics of the State of Louisiana. The Contractor shall not make or authorize any payment or give anything of value directly or indirectly to an official of this government for the purpose of influencing an act or decision of official capacity or for assisting in obtaining or retaining business for or with, or for direction of business to any person. Likewise, the Contractor will not make or authorize any entity or person to use any influence with this government to assist anyone in obtaining or retaining business for or with, or directing business to, any person. Any breach or violation of this clause by the Contractor shall be considered a substantial and material breach of its contract with The City of Mandeville.

That all Contractors shall sign an affidavit in the form attached hereto as Attachment A as a condition of their contract with The City of Mandeville.

E. COMPLAINTS.

All complaints shall be in writing and signed by the person making the complaint. There shall be no "anonymous complaints". Any person wishing to file a complaint regarding any person covered by this code shall send the complaint to The City Attorney's Office where a log will be kept of such complaints. A copy of any complaint regarding any person covered by this code shall be sent to the person complained of within three days of the receipt of the complaint. The person complained of shall have five days to respond in writing to the complaint and his or her response shall be part of the complaint record. All complaints will be reviewed by The City Attorney to determine if any ethical violations had been alleged by the person making the complaint. If such allegations have been made, then The City Attorney shall forward a copy of the complaint to the Louisiana Board of Ethics for further action.

Any person who wishes to make a complaint to the Louisiana Board of Ethics may do so by sending the complaint to: Louisiana Ethics Administration Program, P.O. Box 4368, Baton Rouge, LA, 70821 or call the Board office at (225) 219-5600.

CODE OF CONDUCT AFFIDAVIT

STATE OF LOUISIANA PARISH OF

BEFORE ME, the undersigned Notary Public personally came and appeared:
; if a corporation, LLC, or partnership, then the affidavit may be signed by corporate officer, member or partner stating that the subject organization is aware of the Code of Governmental Ethics.
Who, after first being duly sworn did depose and say he/she is the president, corporate officer, of designee of and that he/she is familiar with the Code of Governmental Ethics contained in Louisiana Revised Statutes at Title 42, Chapter 15 and is familiar with and has a copy of the Code of Conduct for The City of Mandeville; and That, will conform to the provisions in the Code of Governmental Ethics and the Code of Conduct as a condition of any contract between the company and The City of Mandeville, Louisiana; and That, the provisions of the Code of Governmental Ethics and the Code of Conduct shall apply to any subcontract that the Contractor has with any other entity in the performance of its contract with The City of Mandeville, Louisiana and there shall be a statement in every subcontract to that effect.
CONTRACTOR:
By:
AUTHORIZED SIGNATURE
NOTARY PUBLIC
SWORN TO AND SUBSCRIBED BEFORE ME THISDAY OF, 20
My commission expires

ATTACHMENT E: E-VERIFY AFFIDAVIT

STATE OF LOUISIANA
PARISH OF
BEFORE ME, THE UNDERSIGNED AUTHORITY, PERSONALLY CAME AND APPEARED, WHO AFTER BEING BY ME DULY SWORN, DEPOSED AND
SAID THAT HE/SHE IS THE FULLY AUTHORIZEDOFOF
(HEREIN AFTER REFERRED TO AS VENDOR) THE PARTY WHO SUBMITTED A
QUOTE/PROPOSAL/CONTRACT/BID/RFP/SOQ TITLED
FOR CITY OF MANDEVILLE PROJECT:
Pursuant to LA.R.S. 38:2212.10C, a private employer shall not bid on or otherwise contract with a public Entity for the physical performance of services within the State of Louisiana unless the private employer verifies in a sworn affidavit that the private employer is registered with, participates in, and utilized the status verification system required by LA. R.S. 38:2212.10B(2), known as "E-Verify" program, in accordance with federal rules and regulations pertaining to E-Verify.
Affiant further said:
(1) Entity is registered and participates in a status verification system to verify that all employees in the State of Louisiana are legal citizens of the United States or are legal aliens.
(2) Entity shall continue, during the term of the contract, to utilize a status verification system to verify the legal status of all new employees in the State of Louisiana.
(3) Entity shall require all subcontractors to submit to the Entity an affidavit verifying compliance with statements (1) and (2).
Affiant further said that neither Entity nor subcontractors of Entity have any employees in the State of Louisiana.
AUTHORIZED SIGNATURE
NOTARY PUBLIC
NOTART TOBLE
SWORN TO AND SUBSCRIBED BEFORE ME THISDAY OF, 20
My commission expires

ATTACHMENT F: BYRD ANTI-LOBBYING CERTIFICATION (31 U.S.C.1352):

For contracts of \$100,000 or more, including amendments, the undersigned Prime Contractor's authorized official or principal certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any federally funded grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for making lobbying contacts to an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions [as amended by "Government wide Guidance for New Restrictions on Lobbying," 61 Fed. Reg. 1413 (1/19/96). Note: Language in paragraph (2) herein has been modified in accordance with Section 10 of the Lobbying Disclosure Act of 1995 (P.L. 104-65, to be codified at 2 U.S.C. 1601, et seq.)] A copy of Standard Form LLL is available from City of Mandeville.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all sub awards at all tiers (including subcontracts, sub grants, and contracts under grants, loans, and cooperative agreements) and that all sub recipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Pursuant to 31 U.S.C. § 1352(c)(1)-(2)(A), any person who makes a prohibited expenditure or fails to file or amend a required certification or disclosure form shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such expenditure or failure.

The undersigned prime Contractor's authorized official or principal also agrees that the requirements of the Byrd Anti- Lobbying Act and associated regulations, applies to all tiers of subcontractors performing work under the Contract.

The undersigned prime Contractor's authorized official or principal,	
certifies or affirms the truthfulness and accuracy of each statement of its certification	and
disclosure, if any. In addition, the Contractor understands and agrees that the provisions	of 31

Signature of Contractor's Authorized Official
Name and Title of Control to the original Official
Name and Title of Contractor's Authorized Official
Organization's name
Date

U.S.C. A 3801, et seq., apply to this certification, Contract and disclosure, if any.

THIS SIGNED FORM MUST BE SUBMITTED WITH PROPOSAL

ATTACHMENT G: SUSPENSION AND DEBARMENT CERTIFICATION BY CONTRACTOR

- (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. 180.94).
- (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 City of Mandeville. If it is 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 City of Mandeville, the Federal government may pursue available remedies, including but not limited to suspension and/or debarment.
- (4) The bidder or contractor agrees to comply with the requirements of 2 C.R.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 contractor further agrees to include a provision requiring such compliance in its lower tier covered transactions (sub-contracts).

Contractor's authorized Official or Principal's Signature	
Printed name and title	
Firm's name	
Data.	
Date	

THIS SIGNED FORM MUST BE SUBMITTED WITH THE PROPOSAL

Attachment H: CITY OF MANDEVILLE INSURANCE REQUIREMENTS

NOTICE: INSURANCE REQUIREMENTS ONLY APPLY AS THEY ARE RELEVANT TO THE SERVICES BEING PROVIDED.

THE CONTRACTOR SHALL SECURE AND MAINTAIN AT ITS EXPENSE SUCH INSURANCE THAT WILL PROTECT IT AND CITY FROM CLAIMS UNDER THE WORKERS' COMPENSATION ACTS AND FROM CLAIMS FOR BODILY INJURY, DEATH OR PROPERTY DAMAGE WHICH MAY ARISE FROM THE PERFORMANCE OF SERVICES UNDER THIS AGREEMENT. ALL CERTIFICATES OF INSURANCE SHALL BE FURNISHED TO THE CITY AND SHALL PROVIDE THAT INSURANCE SHALL NOT BE CANCELED OR SUBSTANTIVELY CHANGED WITHOUT THIRTY (30) DAYS PRIOR NOTICE OF CANCELLATION GIVEN TO THE CITY, IN WRITING, ON ALL OF THE REQUIRED COVERAGE PROVIDED TO THE CITY. ALL POLICIES AND NOTICES SHOULD NAME THE CONTRACTOR AND THE CITY. THE CONTRACTOR SHALL MAKE ITS POLICIES AVAILABLE FOR REVIEW AND EXAMINATION BY THE CITY AS MAY BE REASONABLY REQUESTED.

A. ALL POLICIES MUST PROVIDE FOR AND CERTIFICATES OF INSURANCE MUST CONTAIN THE FOLLOWING:

- (1) WAIVER OF SUBROGATION: THE CONTRACTOR'S INSURERS WILL HAVE NO RIGHT OF RECOVERY OR SUBROGATION AGAINST THE CITY, IT BEING THE INTENTION OF THE PARTIES THAT ALL INSURANCE POLICY(IES) SO AFFECTED SHALL PROTECT BOTH PARTIES AND BE THE PRIMARY COVERAGE FOR ANY AND ALL LOSSES COVERED BY THE BELOW DESCRIBED INSURANCE. POLICY ENDORSEMENTS REQUIRED FOR ALL COVERAGES.
- (2) ADDITIONAL INSURED: THE CITY, ITS OFFICERS, AGENTS, EMPLOYEES AND VOLUNTEERS SHALL BE NAMED AS ADDITIONAL NAMED INSURED WITH RESPECT TO GENERAL LIABILITY, AUTOMOBILE LIABILITY, EXCESS LIABILITY, POLLUTION/ENVIRONMENTAL LIABILITY COVERAGE, AND MARINE LIABILITY. POLICY ENDORSEMENTS REQUIRED.
- (3) HOLD HARMLESS: CONTRACTOR'S LIABILITY INSURERS SHALL EVIDENCE THEIR COGNIZANCE OF THE HOLD HARMLESS AND INDEMNIFICATION BEING GRANTED IN FAVOR OF THE CITY BY REFERENCING SAME ON THE FACE OF THE CERTIFICATE(S) OF INSURANCE ISSUED.
- (4) PAYMENT OF PREMIUMS: THE INSURANCE COMPANIES ISSUING THE POLICY OR POLICIES SHALL HAVE NO RECOURSE AGAINST THE CITY FOR PAYMENT OF ANY PREMIUMS OR FOR ASSESSMENTS UNDER ANY FORM OF POLICY.

DEDUCTIBLES: ANY AND ALL DEDUCTIBLES IN THE DESCRIBED INSURANCE POLICIES SHALL BE ASSUMED BY AND BE AT THE SOLE RISK OF THE CONTRACTOR AND SHALL BE INDICATED ON THE CERTIFICATE OF INSURANCE. DEDUCTIBLES AND/OR SELF-INSURED RETENTIONS EXCEEDING \$100,000 MUST BE APPROVED BY THE CITY'S FINANCE DIRECTOR. THE CITY MAY REQUIRE CONTRACTOR TO PRODUCE EVIDENCE OF VERIFIABLE FINANCIAL ABILITY TO SATISFY ITS DEDUCTIBLES AND/OR SELF-INSURED RETENTIONS; HOWEVER, THE CITY ASSUMES NO LIABILITY OR OBLIGATION AS A RESULT OF ITS EXAMINATION, ACCEPTANCE, OR REJECTION OF SAID INFORMATION PRESENTED. THE CITY SHALL HAVE THE SOLE DISCRETION TO ACCEPT OR REJECT DEDUCTIBLES AND/OR SELF-INSURED RETENTIONS EXCEEDING \$100,000 AS IT DEEMS APPROPRIATE.

- (1) PROJECT REFERENCE: THE PROJECT(S) AND LOCATION(S) SHALL BE REFERENCED IN THE COMMENT OR DESCRIPTION OF OPERATIONS SECTION OF THE CERTIFICATE OF INSURANCE.
- B. THE CONTRACTOR SHALL PROVIDE AT ITS OWN EXPENSE, PROOF OF THE FOLLOWING INSURANCE COVERAGE REQUIRED BY THE CONTRACT TO THE CITY BY INSURANCE COMPANIES AUTHORIZED TO DO BUSINESS IN THE STATE OF LOUISIANA. INSURANCE IS TO BE PLACED WITH INSURERS WITH AN A.M. BEST RATING OF NO LESS THAN A-, CATEGORY VII.
 - (1) COMMERCIAL GENERAL LIABILITY INSURANCE WITH A COMBINED SINGLE LIMIT FOR BODILY INJURY AND PROPERTY DAMAGE OF AT LEAST \$1,000,000 PER OCCURRENCE WITH A GENERAL AGGREGATE LIMIT OF AT LEAST \$2,000,000 PER PROJECT. THE INSURANCE SHALL PROVIDE FOR AND THE CERTIFICATE(S) OF INSURANCE SHALL INDICATE THE FOLLOWING COVERAGES:
 - (2) Premises Operations;
 - (3) BROAD FORM CONTRACTUAL LIABILITY;
 - (4) PRODUCTS AND COMPLETED OPERATIONS;
 - (5) PERSONAL INJURY;
 - (6) Broad form property damage;
 - (7) EXPLOSION, COLLAPSE AND UNDERGROUND COVERAGE.
- C. POLLUTION AND ENVIRONMENTAL LIABILITY INSURANCE IN THE MINIMUM AMOUNT OF \$1,000,000 PER OCCURRENCE, \$2,000,000 INCLUDING FULL CONTRACTUAL LIABILITY AND THIRD PARTY CLAIMS FOR BODILY INJURY AND/OR PROPERTY DAMAGE, FOR ALL SUCH HAZARDOUS WASTE, POLLUTANTS AND/OR ENVIRONMENTAL EXPOSURES THAT MAY BE AFFECTED BY THIS PROJECT STEMMING FROM POLLUTION/ENVIRONMENTAL INCIDENTS AS A RESULT OF CONTRACTOR'S OPERATIONS.

IF COVERAGE IS PROVIDED ON A CLAIMS-MADE BASIS, COVERAGE WILL AT LEAST BE RETROACTIVE TO THE EARLIER OF THE DATE OF THIS CONTRACT OR THE COMMENCEMENT OF CONTRACTOR SERVICES IN RELATION TO THE WORK. AND THE POLICY WILL OFFER AN EXTENDED DISCOVERY CLAUSE OF AT LEAST THREE YEARS. IF WRITTEN EITHER ON AN OCCURRENCE OR CLAIMS MADE BASIS, THIS COVERAGE WILL BE MAINTAINED THROUGH THE RENEWAL OF THIS INSURANCE TO COVER A LOSS ARISING OUT OF THE COMPLETED OPERATIONS OF THE INSURED FOR A PERIOD OF AT LEAST 2 YEARS AFTER WORK IS ACCEPTED AS COMPLETE BY THE PROPERTY OWNER OF THIS CONTRACT IS TERMINATED. EVIDENCE OF THIS COVERAGE WILL NOT BE REQUIRED UNLESS BOTH OF THE FOLLOWING ARE MET:

- (1) CONTRACTOR RECEIVES NOTICE TO PROCEED TO PERFORM SERVICES UNDER THIS CONTRACT; AND
- (2) IT HAS BEEN IDENTIFIED THAT SERVICES PERFORMED UNDER THIS CONTRACT WILL INCLUDE SUCH EXPOSURES.
- D. Business Automobile Liability insurance with a minimum Combined Single Limit of \$1,000,000 per Occurrence for bodily injury and property damage. This insurance shall provide coverage for the following:

- (1) ANY AUTOMOBILES; OR
- (2) OWNED AUTOMOBILES; AND
- (3) HIRED AUTOMOBILES;
- (4) NON-OWNED AUTOMOBILES;
- (5) Uninsured motorist.
- (6) MCS-90 AND CA9948 ENDORSEMENTS REQUIRED
- E. MARINE LIABILITY/PROTECTION AND INDEMNITY INSURANCE IS REQUIRED FOR ANY AND ALL VESSEL AND/OR MARINE OPERATIONS IN THE MINIMUM LIMITS OF \$1,000,000 PER OCCURRENCE/\$2,000,000 PER PROJECT GENERAL AGGREGATE. THE COVERAGE SHALL INCLUDE, BUT IS NOT LIMITED TO, THE BASIC COVERAGES FOUND IN THE COMMERCIAL GENERAL LIABILITY INSURANCE AND COVERAGE FOR THIRD PARTY LIABILITY.
- F. Workers' Compensation/Employers Liability Insurance: workers compensation as statutorily required; employers Liability coverage shall be a minimum of \$1,000,000 each accident, \$1,000,000 each disease, \$1,000,000 disease policy aggregate and when water activities are expected to be performed in connection with this project, coverage shall include USL&H, Jones Act, and/or Maritime Employers Liability. Coverage for owners, officers and/or partners in any way engaged in the project shall be included in the policy and a statement of such shall be made by the insuring producer on the face of the certificate.
- G. OWNERS PROTECTIVE LIABILITY (OPL) (FORMERLY OWNERS AND CONTRACTORS PROTECTIVE LIABILITY (OCP) INSURANCE) SHALL BE FURNISHED BY THE CONTRACTOR NAMING CITY AS THE NAMED INSURED AND SHALL PROVIDE COVERAGE IN THE MINIMUM AMOUNT OF \$1,000,000 COMBINED SINGLE LIMIT (CSL) EACH OCCURRENCE \$2,000,000 AGGREGATE FOR PROJECTS LESS THAN \$5,000,000; LIMITS FOR ANY PROJECT VALUED OVER \$5,000,000 SHALL BE SET BY THE FINANCE DEPT. THE POLICY LIMIT IS SUBJECT TO BE INCREASED WHEN THE TOTAL VALUE OF THE CONTRACT INCREASES. THE POLICY AND ALL ENDORSEMENTS SHALL BE ADDRESSED TO CITY OF MANDEVILLE, 3101 E. CAUSEWAY APPROACH, MANDEVILLE, LA 70448.
- H. EXCESS/UMBRELLA LIABILITY SHALL BE FURNISHED BY CONTRACTOR WITH LIMITS OF AT LEAST EQUAL TO \$3,000,000 PER OCCURRENCE ON A FOLLOW FORM BASIS, FOR ALL LIABILITY COVERAGES SET FORTH ABOVE EXCEPT FOR THE OPL/OCP. (FOR EXAMPLE: IF THE GENERAL LIABILITY IS \$1,000,000 PER OCCURRENCE, THEN THE EXCESS POLICY SHOULD BE AT LEAST \$2,000,000 PER OCCURRENCE THEREBY PROVIDING A COMBINED PER OCCURRENCE LIMIT OF \$3,000,000.)

- I. ALL POLICIES OF INSURANCE SHALL MEET THE REQUIREMENTS OF THE CITY PRIOR TO THE COMMENCING OF ANY WORK. CITY HAS THE RIGHT, BUT NOT THE DUTY, TO APPROVE ALL INSURANCE POLICIES PRIOR TO COMMENCING OF ANY WORK. IF AT ANY TIME, IT BECOMES KNOWN THAT ANY OF THE SAID POLICIES SHALL BE OR BECOMES UNSATISFACTORY TO CITY AS TO FORM OR SUBSTANCE OR IF A COMPANY ISSUING ANY SUCH POLICY SHALL BE OR BECOME UNSATISFACTORY TO CITY, THE CONTRACTOR SHALL PROMPTLY OBTAIN A NEW POLICY, TIMELY SUBMIT SAME TO THE CITY FOR APPROVAL AND SUBMIT A CERTIFICATE THEREOF AS PROVIDED ABOVE. THE CITY AGREES TO NOT UNREASONABLY WITHHOLD APPROVAL OF ANY INSURANCE CARRIER SELECTED BY CONTRACTOR. IN THE EVENT THAT THE CITY CANNOT AGREE OR OTHERWISE AUTHORIZE SAID CARRIER, CONTRACTOR SHALL HAVE THE OPTION OF SELECTING AND SUBMITTING NEW INSURANCE CARRIER WITHIN THIRTY (30) DAYS OF SAID NOTICE BY THE CITY. IN THE EVENT THAT THE SECOND SUBMISSION IS INSUFFICIENT OR IS NOT APPROVED, THEN THE CITY SHALL HAVE THE UNILATERAL OPPORTUNITY TO THEREAFTER SELECT A RESPONSIVE AND RESPONSIBLE INSURANCE CARRIER ALL AT THE COST OF CONTRACTOR AND THEREAFTER DEDUCT FROM CONTRACTOR'S FEE THE COST OF SUCH INSURANCE.
- J. Upon failure of Contractor to furnish, deliver and/or maintain such insurance as above provided, the contract, at the election of the City, may be forthwith declared suspended, discontinued or terminated. Failure of the Contractor to maintain insurance shall not relieve the Contractor from any liability under the contract, nor shall the insurance requirements be construed to conflict with the obligation of the Contractor concerning indemnification.
- K. CONTRACTOR SHALL MAINTAIN A CURRENT COPY OF ALL ANNUAL INSURANCE POLICIES AND PROVIDE SAME TO CITY ON AN ANNUAL BASIS OR AS MAY BE REASONABLY REQUESTED. PROVIDER FURTHER SHALL ENSURE THAT ALL INSURANCE POLICIES ARE MAINTAINED IN FULL FORCE AND EFFECT THROUGHOUT THE DURATION OF THE PROJECT AND SHALL PROVIDE THE CITY WITH ANNUAL RENEWAL CERTIFICATES OF INSURANCE EVIDENCING CONTINUED COVERAGE, WITHOUT ANY PROMPTING FROM THE CITY.
- L. It shall be the responsibility of Contractor to require that these insurance requirements are met by all sub-Contractors performing work for and on behalf of the Contractor. Contractor shall further ensure City is named as additional insured on all insurance policies provided by said Contractor and/or sub-Contractor throughout the duration of the project.
- M. CERTIFICATES OF INSURANCE (FORM ACORD 25 (2014/1) OR NEWER) SHALL BE ISSUED AS FOLLOWS:

CERTIFICATE HOLDER:

CITY OF MANDEVILLE, ITS OFFICERS, AGENTS, EMPLOYEES AND VOLUNTEERS 3101 E. CAUSEWAY APPROACH
MANDEVILLE, LA 70448
PROJECT/CONTRACT NAME AND/OR NUMBER

CERTIFICATES MAY BE SENT VIA EMAIL TO: RCHADWICK@CITYOFMANDEVILLE.COM

^{*}NOTICE: CITY RESERVES THE RIGHT TO REMOVE, REPLACE, MAKE ADDITIONS TO AND/OR MODIFY ANY AND ALL OF THE INSURANCE REQUIREMENTS AT ANY TIME.